VA Office of Inspector General

OFFICE OF AUDITS AND EVALUATIONS

Veterans Health Administration

Review of Alleged Mismanagement of the Service-Oriented Architecture Research and Development (SOARD) Pilot Project

August 5, 2015
14-00545-343

ACRONYMS

ADUSH	Assistant Deputy Under Secretary for Health
APMF	Acquisition Program Management Framework
DME	Development, Modernization, and Enhancement
FY	Fiscal Year
IT	Information Technology
MS&C	Medical Support and Compliance
OALC	Office of Acquisition, Logistics, and Construction
OGC	Office of General Counsel
OIG	Office of Inspector General
OI&T	Office of Information and Technology
PMAS	Project Management Accountability System
SAM	Strategic Asset Management
SOARD	Service-Oriented Architecture Research and Development
USH	Under Secretary for Health
VA	Department of Veterans Affairs
VHA	Veterans Health Administration

Report Highlights: Review of Alleged Mismanagement of VHA's SOARD Pilot Project

Why We Did This Review

The VA Office of Inspector General (OIG) conducted this review in response to allegations received by our Hotline Division. We evaluated the merits of four allegations that the Veterans Health Administration (VHA) mismanaged Service-Oriented Architecture Research and Development (SOARD).

What We Found

We substantiated an allegation that VHA misused Medical Support and Compliance (MS&C) appropriations to pay for SOARD instead of using congressionally mandated Information Technology (IT) Systems appropriations. This occurred because the former Assistant Deputy Under Secretary for Health for Administrative Operations inappropriately authorized $2.6 million of MS&C appropriations for SOARD.

In addition, the former Under Secretary for Health (USH) inappropriately approved an additional $48.8 million of MS&C appropriations to deploy Maximo the underlying software for SOARD, nationwide. VA's Office of Information and Technology (OI&T) subsequently denied VHA's request for additional IT Systems appropriations for SOARD, thus ending nationwide deployment of Maximo before VHA could obligate the $48.8 million.

Although OI&T used Project Management Accountability System (PMAS) to manage SOARD, OI&T lacked controls to prevent VHA's improper use of MS&C appropriations before using PMAS to manage IT projects. We did not substantiate the other two allegations.

What We Recommended

We recommended the USH establish an oversight mechanism, remedy all MS&C appropriations used to pay for SOARD, and determine if VA should take administrative action against VHA senior officials involved in SOARD funding decisions. We also recommended the Executive in Charge, OI&T obtain Chief Financial Officer certifications that VA is using proper appropriations to fund IT projects.

Agency Comments

Generally, the Interim USH and Executive in Charge, OI&T concurred with our recommendations and provided plans to complete all corrective actions by October 2015. We considered the planned actions generally acceptable and will follow up on their implementation.

LINDA A. HALLIDAY
Deputy Inspector General

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INTRODUCTION

Purpose of the Review

In October 2013, the VA Office of Inspector General (OIG) Hotline received four allegations that the Veterans Health Administration (VHA) mismanaged the Service-Oriented Architecture Research and Development (SOARD) information technology (IT) pilot project. Specifically, the complainant alleged VHA:

- Misused Medical Support and Compliance (MS&C) appropriations to pay for SOARD
- Did not manage the SOARD pilot project under the Project Management Accountability System (PMAS)
- Did not comply with the Acquisition Program Management Framework (APMF) requirement to provide Office of Information and Technology (OI&T) acquisition decision authority
- Did not conduct an analysis of alternatives before selecting Maximo asset management software as the underlying software

SOARD Project

SOARD is the result of OI&T canceling in October 2011 further development of VHA's Strategic Asset Management (SAM) project after missing three deliverables under the PMAS.[1] In December 2012, VHA established a partnership with OI&T to replace SAM with SOARD. VHA intends SOARD to modernize and enhance current operating asset management systems with a single web-based, integrated, enterprise-level system. VHA initiated the SOARD pilot project in December 2012 and OI&T ended the project in PMAS due to lack of funding in August 2013.

Prior OIG Report

In March 2015, the OIG reported VHA's former Deputy Chief Business Officer in the Chief Business Office violated appropriations law by improperly obligating $92.5 million of MS&C appropriations to finance the development of VHA's Health Care Claims Processing System.[2] The misuse of MS&C appropriations occurred because VHA did not seek the required IT Systems appropriations to fund development of the Health Care Claims Processing System.

Other Information

Appendix A discusses the details on our scope and methodology.

[1] In 2010, the OIG reported VA did not effectively control SAM's cost, schedule, and performance *Audit of the FLITE Strategic Asset Management Pilot Project*, Report No. 09-03861-238, September 14, 2010.

[2] *Review of Alleged VHA Misuse of VA Funds To Develop the Health Care Claims Processing System*, Report No. 14-00730-126, March 2, 2015.

RESULTS AND RECOMMENDATIONS

Allegation 1 VHA Misused Medical Support and Compliance Appropriations To Pay for SOARD

Assessment

We substantiated the allegation that VHA misused Medical Support and Compliance (MS&C) appropriations to pay for SOARD instead of using Congressionally mandated IT Systems appropriations. The former Assistant Deputy Under Secretary for Health (ADUSH) for Administrative Operations inappropriately authorized the obligation of $2.6 million of MS&C appropriations for the SOARD pilot project instead of seeking IT System appropriations.[3]

In addition, the former Under Secretary for Health (USH) inappropriately approved an additional $48.8 million of MS&C appropriations to deploy Maximo, the underlying software for SOARD, nationwide.[4] VHA also requested $2.3 million of additional IT Systems appropriations from OI&T for long-term hosting of SOARD. OI&T denied VHA's request for $2.3 million of additional IT Systems appropriations for long-term hosting of SOARD, thus ending nationwide deployment of Maximo before VHA could obligate the $48.8 million.[5]

Criteria

Congress established Federal appropriation laws to ensure agencies and departments properly authorize expenditure of public funds. Section 1301, Title 31, United States Code, Money and Finance, states that appropriations will be used for "the objects for which the appropriations were made except as otherwise provided by law." Additionally, under the Consolidated and Further Continuing Appropriation Act, transfers between MS&C and IT Systems appropriations are only authorized after the Secretary of Veterans Affairs requests from the Committees on Appropriations of both Houses of Congress, the authority to make the transfer and an approval is issued.

In November 2005, Congress established VA's IT Systems appropriation (Public Law 109-114, Military Quality of Life and Veterans Affairs Appropriations Act, 2006) to provide direct control and visibility over IT funding and project level management. VA used fiscal year (FY) 2013 appropriations for the SOARD pilot project. VA's FY 2013 appropriation (Public Law 113-6, Consolidated and Further Continuing Appropriations Act, 2013), states IT Systems appropriations will be used for necessary expenses for information technology systems and telecommunications support. This includes developmental information

[3] The former ADUSH for Administrative Operations resigned in January 2015.
[4] The former USH resigned in May 2014.
[5] As of April 2015, Maximo was deployed at the Cleveland and Iowa City VA medical centers, the Northern California Healthcare System, and the OIG.

systems and operational information systems; for pay and associated costs; and for the capital asset acquisition of information technology systems, including management and related contractual costs of said acquisitions.

VHA's MS&C appropriation was established (Public Law 111-81, Veterans Health Care Budget Reform and Transparency Act, 2009) to provide necessary expenses in the administration of medical, hospital, nursing home, domiciliary, construction, supply, and research activities. Public Law 113-6 states MS&C appropriations will be used for necessary expenses in the administration of the medical, hospital, nursing home, domiciliary, construction, supply, and research activities.

What We Did

To address whether VHA misused MS&C appropriations to develop SOARD, we reviewed appropriation laws and VA's 2006 policy memo, *Use of Information Technology Systems Appropriation.* We analyzed project documentation including contractor invoices and payments. We also reviewed memos and emails from VHA, the Office of General Counsel (OGC), and OI&T discussing types of funding options that VHA could use to develop SOARD. Additionally, we interviewed the former ADUSH; Deputy Chief Information Officer for Architecture, Strategy, and Design; the OI&T Chief Financial Officer; and VHA program officials.

Misuse of MS&C Funds

VHA misused MS&C appropriations for the SOARD pilot project. Funds are misused when they are inappropriately obligated and expended. VA policies require VHA's Chief Financial Officer to annually certify that obligations comply with applicable laws, assets are safeguarded against unauthorized use and misappropriation, and expenditures are properly accounted for to maintain accountability. By obligating and spending about $2.6 million of MS&C appropriations to pay for the SOARD pilot project, VHA did not comply with VA appropriation laws and did not comply with VA policies.

SOARD is the result of OI&T canceling in October 2011 further development of VHA's SAM project after missing three deliverables under PMAS. When the Assistant Secretary for Information and Technology canceled the SAM project, he noted OI&T would provide partial project management resources while VHA works through its priorities with VA's unfunded IT prioritized project list.

Project documentation describes SOARD as a multi-year program to replace VHA's asset management systems with a single web-based, integrated, enterprise-level system that provides functionality services to other software applications. VHA designed SOARD to help modernize and enhance management of equipment and supplies by improving the ability to track and capture data and remove limitations inherent in VA's current asset management systems.

SOARD Funding Did Not Comply With Appropriation Laws

During FY 2012, VHA and OI&T decided to use Maximo as the underlying asset management software for SOARD. OI&T spent about $3.3 million of IT Systems appropriations to pay for Maximo license maintenance and support from FY 2012 through FY 2014. From January 2013 through March 2014, VHA paid two SOARD contractors a total of about $7.2 million from VHA's MS&C appropriations account. One contractor provided IT-related services such as project, asset, and requirements management along with strategic planning and acquisition support.

VHA paid a total of $3.6 million of MS&C appropriations to the second contractor for IT-related services, such as configuration, data transformation, testing, and infrastructure support for Maximo. VHA did not comply with appropriations law by using about $2.6 million of MS&C appropriations instead of the required IT Systems appropriations.

SOARD Funding Did Not Comply With VA Policies

VHA also did not comply with VA policies on using IT Systems appropriations. VA's policy memo, *Use of Information Technology Systems Appropriation*, outlines specific criteria to help VA program officials decide when to use the IT Systems or other appropriations, such as MS&C appropriations, for IT purchases and services. In a June 2012 memo, the Deputy Assistant Secretary for IT Resource Management discussed how he had assessed whether VA could fund IT projects with MS&C appropriations, explaining that he based his determination on VA's policy memo and whether the IT projects were:

- Procured from an open source and/or commercial off-the-shelf software
- Licensed on a subscription from a contractor
- Hosted by the contractor
- Support direct patient care

Software for the SOARD pilot project is available as commercial off-the-shelf software and licensed on a subscription from a contractor. However, SOARD does not meet the other two criteria. VHA does not have an agreement with a contractor to host SOARD. Instead, OI&T hosted the pilot sites on VA's network and VHA has requested that OI&T host the national deployment of Maximo. Furthermore, SOARD is an asset management system and is not similar to the examples of software systems supporting direct patient care discussed in VA's policy memo.

Reason VHA Failed To Use Proper Funds

The former ADUSH for Administrative Operations inappropriately authorized the obligation of $2.6 million of MS&C appropriations for the SOARD pilot project instead of seeking IT System appropriations. The ADUSH for Administrative Operations had overall VHA authority and responsibility for the planning and execution of SOARD.

Near the end of the SOARD pilot project, the Project Director of SOARD requested VA's OGC to provide an opinion regarding the use of MS&C appropriations for SOARD. The request stated VHA leadership believed the expenditure of medical care funds was appropriate. The OGC Senior Attorney for Appropriations/Fiscal Law did not comment on the use of MS&C appropriations for SOARD. Instead, the attorney stated that OI&T is in the best position to address whether IT Systems appropriations should be used for SOARD.

After obtaining OGC's response, the Project Director of SOARD submitted an executive decision memo to the former USH to request $48.8 million of MS&C appropriations to fund Maximo deployment nationwide. The former USH approved this request. The Director's memo also stated VHA needed to request about $2.3 million of additional funds from OI&T's IT Systems appropriations for long-term hosting of SOARD. However, OI&T denied the request for the $2.3 million, thus ending nationwide deployment before VHA could obligate the $48.8 million.

After OI&T's denial, VHA explored other non-IT Systems appropriation options to obtain the funding needed to host nationwide deployment of Maximo, the underlying software for SOARD. The following statements made in emails between VHA and Office of Acquisition, Logistics, and Construction (OALC) officials highlight VHA's efforts to find other funding sources.

- **August 25, 2014, 1:44 PM EST—From VHA to OALC.** *Staff are telling me we have a decision on the table to see if Supply Fund can be used for SOARD. This is in response to need other than Med Services funds for supporting IT portion of the program.*
- **August 25, 2014, 2:44 PM EST—From OALC to VHA.** *Apparently this has been around the block looking for a funding home. Started with yourselves, then I heard it was trying to tap OI&T and then the Franchise Fund and now they are looking to the Supply Fund. That's about the extent that I know of it, no specifics other than they are looking for a funding source. What happened to the allocation you reserved when this kicked off?*
- **August 27, 2014, 5:22 AM EST—From VHA to OALC.** *Thank you for the reply. VHA has provided funds, but the problem is that, together with OGC, OI&T and OALC, we have come to the conclusion that we will require OI&T or OALC franchise funds to pay for the IT hosting costs. Those are the only two colors of funds appropriations attorneys are telling us we can use to pay for the known IT costs.*

The former ADUSH for Administrative Operations and Project Director of SOARD believed the expenditure of MS&C appropriations for the project was appropriate because Maximo, the underlying software for SOARD, is an

available commercial off-the-shelf product designed to be used in a similar manner as Microsoft Office products. However, VHA could not provide us documentation showing how project managers determined expenditure of MS&C appropriations for SOARD met the requirements of appropriation laws and OI&T policies. In fact, the executive decision memo requesting the additional $48.8 million of MS&C appropriations cited the potential of negative publicity of VHA's long-standing inability to address concerns of oversight agencies.

VA's *Financial Policy Volume 2, Appropriations, Funds, and Related Information,* assigns responsibilities to Under Secretaries, Assistant Secretaries, and other key officials for ensuring compliance with the Volume's policies and procedures, including that funds are expended solely for the purposes for which they are appropriated, except as otherwise provided by law. In order to avoid future misuse of appropriations, VHA needs to strengthen its oversight and hold senior leaders accountable, and ensure correct appropriations are used to fund their prospective IT projects.

Effects of Misuse

VHA misused about $2.6 million of MS&C appropriations to pay for the SOARD pilot project. Additionally, VHA increased the risks of future improper use of appropriations by approving approximately $48.8 million of MS&C appropriations for national deployment of Maximo. OI&T subsequently denied VHA's request for additional IT Systems appropriations for SOARD, thus ending nationwide deployment of Maximo before VHA could obligate the $48.8 million.

Recommendations

1. We recommended the Under Secretary for Health establish an oversight mechanism to ensure the use of proper appropriations for Veterans Health Administration information technology projects.

2. We recommended the Under Secretary for Health remedy all Medical Support and Compliance appropriations used to pay for Service-Oriented Architecture Research and Development.

3. We recommended the Under Secretary for Health confer with VA's Office of Accountability Review regarding administrative actions against Veterans Health Administration senior officials, beyond those individuals who have left VA employment, who were involved with Service-Oriented Architecture Research and Development funding decisions and ensure that action is taken, if appropriate.

Management Comments

Generally, the Interim Under Secretary for Health (USH) concurred with our recommendations. The Interim USH concurred with Recommendation 1 and stated VHA will issue written guidance regarding the use of medical care

funds in accordance with appropriation laws, and VHA's Chief Financial Officer will work with program offices to monitor activities.

The Interim USH partially concurred with Recommendation 2 and agreed that about $2.6 million of the $7.2 million MS&C appropriation VHA spent on SOARD should have been funded by IT Systems appropriations. The Interim USH stated it was appropriate to use MS&C appropriations for the remaining $4.6 million because SOARD is a program, not an IT system, and the expenses were necessary in the administration of supply activities and in support of capital asset policies. The Interim USH further stated that VHA used the $4.6 million to purchase SOARD program support and fund replacement activities. VHA plans to remedy $2.6 million of MS&C funds, or, if appropriate, provide an explanation of alterations to the remedy. VHA also plans to conduct a review of previously approved FYs 2014 through 2016 MS&C funds for SOARD and redirect the portion that qualifies for IT Systems appropriations.

The Interim USH did not concur or nonconcur with Recommendation 3. However, the Interim USH will implement the recommendation by requiring the Acting Deputy Under Secretary for Health for Operations and Management to confer with VA's Office of Accountability Review regarding administrative actions against VHA senior officials involved with SOARD funding decisions, and ensure that action is taken, if appropriate.

The Interim USH's comments also requested revisions to the report to address two technical concerns related to including the OIG as another SOARD pilot site and using Maximo instead of SOARD when discussing nationwide deployment. The Interim USH plans to complete all corrective actions by October 2015. Appendix C includes the full text of the Interim USH's comments.

OIG Response

In the Interim USH's comments and during our review VA has provided a number of explanations for its IT systems funding practices, some of which appear to be internally inconsistent or difficult for VA employees to always understand what funding source should be used for IT development activities. When VA does not clearly state these distinctions in policies, even well-meaning VA employees may not be able to comply with the proper application of appropriations. If VA does not revise its policy to better clarify the definition of IT development and to come in line with current appropriations language, there is the potential for future misuse of funds. As such, the current opaque system of funding IT projects may not achieve Congress' intent to enable better oversight of IT system development.

Since VHA is a member of OI&T's IT Planning, Programming, Budgeting and Execution Board's IT/Non-IT Working Group, VHA needs to work with other group members to assist OI&T in establishing a

revised VA IT funding policy. Once OI&T establishes the revised IT funding policy it is critical that VHA incorporate the policy into the oversight mechanism established in response to our Recommendation 1.

The Interim USH's comments to the draft report included significant information not previously provided during OIG's review. After evaluating this information and reviewing invoices and VA Financial Management System data to verify the accuracy of the $2.6 million discussed in the Interim USH's comments, we updated our report to state VHA misused $2.6 million of MS&C appropriations instead of $7.2 million. The USH agreed to remedy the $2.6 million or, if appropriate, provide an explanation of alteration to the remedy.

We also updated the report to address the Interim USH's two technical concerns by including OIG as a SOARD pilot site and clarified VHA's nationwide deployment of Maximo instead of SOARD. We will follow up on VHA implementation of our recommendations and continue to monitor VHA's use of MS&C appropriations.

Allegation 2 VHA's SOARD Pilot Project Was Not Managed Under PMAS

Assessment

From December 2012 through July 2013, OI&T used PMAS to manage the SOARD pilot project. However, in the course of reviewing this and the previous allegation, we did find PMAS lacked sufficient controls to detect and prevent VHA's improper use of MS&C appropriations to fund SOARD.

Criteria

In 2009, the VA Secretary announced a strict accountability process for IT project management and mandated OI&T use PMAS to manage all new IT programs with estimated costs above $250,000. PMAS is an incremental development approach that helps to ensure timely delivery of new IT functionality to customers. PMAS helps to ensure early identification and correction of failing IT projects and requires managers to establish project milestones with deliverables not to exceed 6 months. PMAS also requires OI&T to evaluate projects that do not achieve planned milestones. If a project misses three deliverables, OI&T may evaluate the project to determine whether the project should be paused or closed.

What We Did

To address whether the SOARD pilot project was managed under PMAS, we analyzed project reports and interviewed the Assistant Deputy Under Secretary for Health for Operations and Management for Administrative Operations, and VHA's Director of Special Project Teams. We also interviewed VA's Deputy Chief Information Officer.

PMAS Used To Manage SOARD

OI&T used PMAS to manage the SOARD pilot project from December 2012 through July 2013 when the pilot project ended. PMAS reports showed milestones and end dates for starting the pilot project and completing the new start and planning phases. In addition, documentation maintained by the project manager provided additional evidence that OI&T used PMAS to manage the project. For example, documentation from PMAS showed completion of requirement specifications, an outcome statement, acceptance of criteria, and operational acceptance plans.

Although OI&T used PMAS to manage SOARD, OI&T lacked sufficient controls to detect and resolve VHA's improper use of MS&C appropriations to fund SOARD. Before using PMAS to manage IT projects, OI&T should examine the adequacy and appropriateness of funding as this represents a major risk to the success on any IT project.

Recommendation

4. We recommended the Executive in Charge, Office of Information and Technology, obtain Chief Financial Officer certifications from responsible VA Administrations or Staff Offices that proper appropriations will be used before using any non-Information Technology

Systems appropriations for any information technology project, including projects managed by the Project Management Accountability System.

Management Comments

The Executive in Charge, OI&T, concurred with the OIG's recommendation. OI&T will implement the appropriate internal controls through its planning, programming, budgeting, and execution process, as well as providing oversight for compliance through its' planning, programming, budgeting, and execution board that is chaired by the Deputy Assistant Secretary for IT Resource Management/IT Chief Financial Officer. OI&T plans to complete these actions by August 2015. Appendix D includes the full text of the Executive in Charge, OI&T's comments.

OIG Response

We considered OI&T's planned actions acceptable and will follow up on their implementation.

Allegation 3 VHA Did Not Comply With Requirements To Provide OI&T Acquisition Decision Authority Over SOARD

Assessment

We did not substantiate the allegation that VHA did not comply with the Acquisition Program Management Framework (APMF) requirement to provide OI&T acquisition decision authority over the SOARD pilot project. VHA was not required to provide OI&T acquisition decision authority because the pilot project ended before VA implemented APMF requirements for IT projects.

Criteria

On May 1, 2013, VA's Strategic Management Council unanimously approved APMF and assigned VA's Office of Acquisition, Logistics, and Construction (OALC), Acquisition Program Support, overall responsibilities for APMF implementation. On May 10, 2013, the Acting Assistant Secretary for Policy and Planning signed an APMF implementation memo, which explained that immediate implementation would not be possible across all VA programs and that OALC would develop a phased implementation plan. APMF provides the overall guidance and structure for acquisition program management to support the orderly acquisition of needed capabilities across VA.

What We Did

To address whether VHA did not comply with the APMF requirement to provide OI&T acquisition decision authority over SOARD, we reviewed PMAS reports and evaluated APMF implementation documents. We also interviewed the following officials:

- Assistant Deputy Under Secretary for Health for Operations and Management for Administrative Operations
- VHA's Director of Special Project Teams
- Deputy Assistant Secretary for Acquisition and Logistics
- Associate Deputy Assistant Secretary, Office of Acquisition Program Support

SOARD Not Subject to Requirement

VHA initiated the SOARD pilot project in December 2012 and ended the pilot project in July 2013. The Acting Assistant Secretary for Policy and Planning signed the implementation memo in May 2013, and OALC's implementation plan required IT projects to begin complying with APMF requirements after September 30, 2014. The pilot project was not subject to the requirement to provide OI&T acquisition decision authority because the pilot project ended in July 2013, before the compliance deadline of September 2013 for IT projects. According to VHA executives, SOARD will comply with the APMF requirement to provide OI&T acquisition decision authority if VHA proceeds with a national deployment of Maximo. We did not make any recommendations because we did not substantiate the allegation.

Allegation 4 VHA Did Not Conduct Analysis of Alternatives Before Selecting Maximo

Assessment

We did not substantiate the allegation that VHA did not conduct an analysis of alternatives before selecting Maximo as the underlying software for SOARD. Before selecting Maximo, VHA completed a business case analysis that included an analysis of alternatives.

Criteria

Office of Management and Budget policy memorandum, *Conducting Acquisition Assessments under OMB Circular A-123*, requires agencies to consider an analysis of alternatives when making IT capital investments. This analysis assesses whether the agency has considered the necessity of the investments. Agencies must also have processes in place to ensure justification of capital project requests that include decision or investment packages, such as business cases. Internal controls must ensure appropriate levels of management review, analysis, and approval for IT capital investment before initiating projects.

What We Did

To address whether VHA failed to conduct an analyses of alternatives before selecting Maximo, we reviewed the SOARD business case analysis. We also interviewed VA's Deputy Chief Information Officer for Architecture, Strategy, and Design; the Assistant Deputy Under Secretary for Health for Operations and Management for Administrative Operations; and VHA's Director of Special Project Teams.

Maximo Approval

In September 2011, a VHA business case analysis recommended using existing resources with limited contractor support to configure and deploy Maximo across the enterprise. A month later, VA's Chief Information Officer canceled the SAM System and approved Maximo for SOARD.

The analysis considered advantages of an existing enterprise license and VA's ownership of Maximo, as well as accumulated intellectual capital, experience, and hardware requirements. The analysis cited VA's ownership of the Maximo software license, familiarity with operations, performance history, and expected potential savings of about $183 million during the first 5 years, as justification for selection. During FYs 2012 through 2014, OI&T spent about $3.3 million of IT Systems appropriations to pay for Maximo license maintenance and support. We did not make any recommendations because we did not substantiate the allegation.

Appendix A Scope and Methodology

We conducted our review from March through November 2014. Our focus was on VHA's management and funding of the SOARD pilot project during FYs 2013 and 2014. We conducted onsite work at VACO in March 2014, which included the following:

- Examining SOARD and Maximo planning and justification documents and Financial Management System expenditure data
- Interviewing officials from VHA and VA's OI&T and Office of Acquisition Logistic and Construction
- Reviewing applicable laws and VA and VHA regulations, policies, procedures, handbooks, and guidelines related to the allegations

We did not evaluate or validate VHA's need for SOARD, or the progress of Maximo development and deployment.

Data Reliability

We reviewed the accuracy of computer-processed data obtained from PMAS to determine whether OI&T used PMAS to manage SOARD. To test the reliability of these data, we compared relevant computer-processed data with hardcopy documents, such as documentation showing the completion of SOARD requirement specifications, outcome statements, acceptance criteria, and operational acceptance plans. We concluded the computer-processed data from PMAS were sufficiently reliable for the review objective.

Government Standards

We conducted this review in accordance with the Council of Inspectors General on Integrity and Efficiency's Quality Standards for Inspection and Evaluation. We planned and performed the review to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our review objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our review objectives.

Appendix B Potential Monetary Benefits in Accordance With Inspector General Act Amendments

Recommendation	Explanation of Benefits	Better Use of Funds	Questioned Costs
2	Remedy all Medical Support and Compliance appropriations used to pay for Service-Oriented Architecture Research and Development.	$0	$2,600,000
	Total	**$0**	**$2,600,000**

Appendix C Under Secretary for Health Comments

Department of Veterans Affairs

Memorandum

Date: May 04, 2015

From: Interim Under Secretary for Health (10)

Subj: Office of Inspector General (OIG) Draft Report: Veterans Health Administration Review of Alleged Mismanagement of Service Oriented Architecture Research and Development (VAIQ 7566955)

To: Assistant Inspector General for Audits and Evaluations (52)

1. Thank you for the opportunity to review the draft report on Department of Veterans Affairs' (VA) and Veterans Health Administration's (VHA) program management for pilot deployment and implementation of VA's commercial off the shelf (COTS) software for asset and service management. VHA does not concur with the report's findings that VHA misused about $7.2 million of Medical Support and Compliance (MS&C) appropriations to pay for the SOARD program from January 2013 through March 2014. Additionally, VHA provides general and technical comments on the report.

2. Upon learning of OIG's findings in this draft report, VHA and the Office of Information &Technology (OI&T) conducted a retrospective, detailed review of the deployment activities funded by MS&C appropriations during the timeframe of OIG's review. VHA and OI&T, in consultation with VA's Office of General Counsel, agree that $2,602,274.72 should have been funded by the Information Technology (IT) Systems appropriation based upon previously established VA funding practices. This dollar figure represents a portion of the $7.2 million cited by OIG in the draft report.

3. The new COTS software, called Maximo, is the industry standard for asset and service management. In 2002, VA acquired a perpetual, enterprise-wide license for Maximo. This license allows VA to deploy Maximo to an unlimited number of end users. When the IT Systems Appropriation was established in 2006, VA's OI&T assumed responsibility for the annual software maintenance contract and funded it, ensuring that VA benefits from the new IBM version releases of the Maximo software. These releases typically occur 2 to 3 times per year.

4. The new Maximo software has many capabilities that do not exist in the current legacy asset management software. Maximo has a built in-patient safety equipment recall tracker called the ECRI Alert Tracker. The ECRI Alert Tracker promptly notifies VHA about manufacturer recalls, such as recalls on unsafe medical devices that are in use at medical facilities. Once a manufacturer alert has been issued, Maximo pinpoints the recalled assets' locations and issues work orders against the assets so the item can be removed quickly from inventory and out of patient care until it is rendered safe. In addition, the new Maximo software has built in integrations with modern building automation systems, allowing for close monitoring and prevention of safety issues such as Legionella in the water system.

5. The new Maximo software will be implemented in a single instance to replace the 123 individual instances of VHA's 30-year old, "home-grown" legacy software that was put in place in the 1980's. Maximo provides VA with data- driven metrics based on key performance indicators (KPIs) that allow real-time measurement of critical hospital operations and business performance across the enterprise. KPIs are a powerful management tool that provides VHA leadership and VAMC staff, across multiple user communities, with much needed visibility into local hospital operations as well as provides the ability to more effectively track and monitor the performance of VA's assets and inventory. This capability does not exist in the current legacy asset management software.

6. In an effort to improve its asset and service management, VHA established a program called Service Oriented Architecture Research and Development (SOARD). SOARD program's governance consisted of an Executive Leadership Council, which included members from VHA, OI&T, and Office of Acquisition, Logistics, and Construction; and a SOARD Board of Directors consisting of Program Directors from VHA's clinical support functions.

7. The SOARD program's responsibilities included putting together deployment and implementation processes for piloting the new Maximo software at three sites and upon OIG's request, deployed Maximo at the VA Office of Inspector General in Washington, DC. VHA requests OIG correct the misstatement in footnote five to include Maximo was deployed by SOARD at the VA Office of Inspector General in Washington, DC; Iowa City VA Medical Center (VAMC); Northern California VA Health Care System (HCS); and Cleveland VAMC.

8. During fiscal years 2013 and 2014, the SOARD program successfully deployed and implemented Maximo at all four pilot sites. All data from the legacy database was successfully migrated to Maximo. The Maximo asset and service management capabilities were stood up, tested, and demonstrated efficiency and proficiency. The SOARD program received VHA approval to deploy and implement Maximo nationwide beginning this year and is proceeding as planned.

9. As background, on October 27, 2011, the Assistant Secretary for Information & Technology issued a memorandum in which he stated that VHA was authorized to independently use the IBM Maximo Asset Management product to address the business needs of the VHA medical inventory and asset management communities. Later that fiscal year, the Assistant Secretary for Information & Technology endorsed VHA's SOARD program and officially partnered with VHA to jointly deploy Maximo VA enterprise-wide.

10. In February 2013, the Assistant Secretary for Information & Technology and VHA signed a Memorandum of Understanding (MOU) that established a new VA operating model for deploying Maximo.

11. The MOU delineated which elements of Maximo deployment are the responsibility of the SOARD program using VHA appropriations, and which are the responsibility of OI&T using IT appropriations. Both parties remained true to the signed agreement; the SOARD program used VHA's MS&C appropriations; OI&T used IT appropriations.

12. VHA requests OIG correct the inaccurate statement that VHA sought "additional MS&C appropriations for nationwide deployment of SOARD...." VHA program offices, such as SOARD, are not deployable. Subsequent to successful pilot testing of Maximo software deployment at the four pilot sites, VHA sought funding to deploy the new COTS software nationwide. VHA requests OIG correct the statement in the executive summary and throughout the document to reflect "nationwide deployment of Maximo software."

13. As a point of clarification, OI&T did not end nationwide deployment of Maximo. In February 2013, OI&T raised concerns that IT Systems appropriations were insufficient to fund long-term hosting of Maximo nationwide because other VA IT projects had higher funding prioritization. VHA's request for IT Systems funding for hosting Maximo was placed on the unfunded requirements list, which meant that should funding become available, it could be used to fund Maximo hosting. SOARD paused actions to deploy Maximo software beyond the four pilot sites.

14. Consistent with leadership guidance to explore all options for funding items on the "unfunded requirements list," VHA and OI&T explored whether the Franchise Fund or Supply Fund qualified as potential sources for Maximo hosting. Neither are appropriate funding sources at this time.

15. VHA's SOARD program was not authorized to and did not perform any development, customization, modernization, or enhancement of Maximo source code. VHA did not use any MS&C funds to develop, customize, modernize, or enhance Maximo source code. SOARD's approach to deployment entailed adjusting the workflows in Maximo, using front-end Maximo functions to upload legacy data from the old data base, and reengineering internal VHA business processes to accommodate the software's out of the box capabilities.

16. VA's OI&T was and continues to be responsible for using IT Systems appropriations to fund the following aspects of Maximo:

    - Maximo License Renewal (i.e., software maintenance contract)
    - Mobile Software Solution Support
    - Hosting Infrastructure and Associated Support
    - Assessment and Authorization (in accordance with Project Management Accountability System (PMAS))
    - VA Legacy and Emerging System Support
    - Coordination with OI&T Infrastructure Efforts

17 If you have any questions, please contact Karen Rasmussen, Director, Management Review Service (10AR) at VHA10ARMRS2@va.gov.

(Original signed)

Carolyn M. Clancy, MD

cc: Executive in Charge and Chief Information Officer for Information & Technology (005)

Attachment

Attachment

VHA's Comments to the Office of Inspector General's (OIG) Report

VETERANS HEALTH ADMINISTRATION (VHA)
Action Plan

Office of Inspector General, Veterans Health Administration, Review of Alleged Mismanagement of Service Oriented Architecture Research and Development

VHA's Comments to the Office of Inspector General's (OIG) Report

Date of Draft Report: January 15, 2015

Recommendations/ Actions	Status	Completion Date

Recommendation 1. We recommended the Interim Under Secretary for Health establish an oversight mechanism to ensure the use of proper appropriations for Veterans Health Administration information technology projects.

Comments: Concur

VHA and the Office of Information &Technology (OI&T) agree that robust oversight mechanisms are needed to ensure the use of proper appropriations for complex VHA projects that involve both IT and non-IT elements.

VHA already has a formalized process to review project funding requests. Each VHA project is discussed to ensure it supports VHA's strategic plan and is approved by multiple VHA subcommittees before it is allowed to proceed to the VHA Resource Management Committee and then to the National Leadership Council for review and final funding approval.

The Service Oriented Architecture Research and Development (SOARD) Executive Decision Memorandum (EDM), requesting Medical Support &Compliance (MS&C) funds for a portion of SOARD program activities, was vetted and approved through established VHA governance bodies (see Table 1). The Under Secretary for Health at the time (Dr. Petzel) approved the use of MS&C funds on September 6, 2013, for deployment of the commercial-off-the-shelf (COTS) product named Maximo to replace VHA's outdated legacy asset management and service software, specifically: Automated Engineering Management System/Medical Equipment Reporting System (AEMS/MERS), Generic Inventory Package (GIP), and Prosthetics Inventory Package (PIP).

Table 1: VA approval process for usage of MS&C appropriations to fund non-IT elements of the SOARD program

VHA Committee	Approval Date
Capital and Logistics Subcommittee	May 14, 2013
IT Subcommittee	June 6, 2013
Resource Management Committee	June 18, 2013
National Leadership Council	August 20, 2013

Additionally, prior to launching the SOARD program, VHA and OI&T agreed on which elements of this complex program required IT funding and which elements required non-IT funding. Despite the extensive oversight and review, upon learning of OIG's findings in this draft report, VHA and OI&T conducted a retrospective, detailed review of the replacement activities funded by MS&C appropriations during the timeframe of OIG's review. VHA and OI&T, in consultation with VA's Office of General Counsel, agree that some elements of the program should have been funded with IT appropriations based upon OI&T funding practices that occurred during the same timeframe.

To strengthen OI&T's oversight mechanisms, the IT Planning, Budgeting & Budget Execution (PBBE) Board established a standing IT/Non-IT Working Group in 2013. This working group is chaired by the

Director of IT Financial Management & Oversight; the membership includes VHA, Office of General Counsel, Veterans Benefits Administration, and others. If this working group determines that a VHA project requires non-IT funding, VHA will institute the administration's oversight mechanism for usage of medical care appropriations.

To improve monitoring the VHA-Chief Financial Officer will issue guidance and work with program offices to monitor SOARD activities.

To complete this action, VHA will provide the following documentation:

1. Written guidance regarding use of medical care funds in accordance with appropriation laws.

Status	Target date for Completion
In Progress	October 2015

Recommendation 2. We recommended the Interim Under Secretary for Health remedy all Medical Support and Compliance appropriations used to pay for Service Oriented Architecture Research and Development.

Comments: Partially Concur

Deployment of commercial over the shelf (COTS) products in VA uses an operating model where there is shared responsibility and associated funding for the various activities required to acquire, configure, deploy, operate, and sustain COTS products. Following SOARD's successful deployment of Maximo to four pilot sites, operations and maintenance (O&M) costs for Maximo software should be funded by IT appropriations in accordance with past VA budgeting and funding practices.

VHA did not use any MS&C appropriations to fund development, customization, modernization, or enhancement of Maximo source code. VHA did not use any MS&C appropriations for the capital asset acquisition or management of the capital asset acquisition of Maximo. Starting in 2006, OI&T used IT Systems appropriations to maintain the Maximo software license purchased in 2002.

VHA used MS&C appropriations to fund two contracts. The first contract, for $3,594,058.20, funded SOARD program support. This contract paid for: project management activities for the SOARD program; meeting facilitation; communications; SOARD SharePoint management; strategic planning; research analysis and technical writing on a range of program activities; business requirements documentation; management of risks, issues, and lessons-learned; SOARD program budget and cost estimations, life cycle cost modeling, budget execution workbooks, budgeting dashboards; resource planning for the SOARD program; and facility readiness toolkit to help the site prepare for replacement of the old software with Maximo. This contract also provides consultation services to the multiple program offices that use Maximo, such as consultations on the impact of Maximo on current policies, downstream impact of Maximo on current facility operations, and environmental scans.

Use of MS&C appropriations to fund work performed under this contract is authorized by Public Law 113-6, Consolidated and Further Continuing Appropriations Act 2013, because these are necessary expenses in the administration of supply activities and in support of capital policy activities. IT appropriations do not apply to the work under the first contract because the SOARD program is not an information technology system; the SOARD program is not a telecommunications system; and the SOARD program is neither a developmental information technology system nor an operational technology system. Additionally, the SOARD program is not responsible for the capital asset acquisition, management, or related contractual costs of the IBM Maximo COTS product.

The second contract for $3,582,489.58 funded the necessary activities to effectively replace VHA's old legacy capital asset and service management software with the new Maximo software at the four pilot sites (Washington, DC, VA Office of Inspector General; Iowa City VA Medical Center (VAMC); Northern California VA Health Care System (HCS); and Cleveland VAMC). Deployment required adjusting workflows in Maximo and testing them to ensure smooth transition, using front-end Maximo functions to upload legacy data from the old database, testing reporting and tracking functions once the data had uploaded, reengineering internal VHA business processes to accommodate the software's out of the box capabilities, translating technical user guides so VHA and OIG end-users could understand them, demonstrating the new software to the end users, training the end-users on how to use the new software and on the reengineered business processes, monthly progress reporting on the vendor's

deliverables infrastructure support, system administration, and a help desk function to aid VHA and OIG end-users in transitioning to the new software.

Upon learning of OIG's findings in this draft report, VHA and OI&T conducted a retrospective, detailed review of the replacement activities funded by MS&C appropriations during the timeframe of OIG's review. VHA and OI&T, in consultation with VA's Office of General Counsel, agree that some task orders in the second contract should have been funded with IT appropriations based upon OI&T funding practices that occurred during the same timeframe.

Table 2 summarizes the task orders in the second contract that were funded by MS&C appropriations and demonstrates that $2,602,274.72 of these task orders should reasonably have been funded by IT appropriations. IT appropriations apply to the identified task orders because these replacement activities are necessary expenses for the operation of Maximo software. MS&C appropriations apply to task orders for monthly progress reporting by the vendor, Maximo demonstration and user guides for VHA and OIG end-users, Help desk for VHA and OIG end-user transition, and travel because these replacement activities are necessary for VHA staff to perform the duties of their positions but are not essential to the function of Maximo software.

Table 2: Retrospective review of second contract task orders delineating which task orders should have been funded by the IT Systems appropriation:

Replacement Activities	Task orders funded by MS&C funds	Task orders that should have been funded by IT appropriations
Adjusting Workflows (Configuration)	$992,336.00	$992,336.00
Data Uploads (Data transformation)	$518,256.00	$518,256.00
Testing Workflows, Reporting, and Tracking Functions (Testing)	$926,370.72	$926,370.72
Infrastructure Support	$110,208.00	110,208.00
System Administration	$ 55,104.00	$ 55,104.00
Monthly progress reporting by vendor (Program Management)	$159,848.00	
Maximo demonstration and user guides for VHA and OIG end-users (Demo, User Guides)	$708,432.00	
Help desk for VHA and OIG end-user transition to Maximo (Help Desk)	$110,208.00	
Travel	$1,726.86	
Total	**$3,582,489.58**	**$2,602,274.72**

Given the findings from the retrospective detailed review and input from VHA's Office of Finance, Office of Procurement and Logistics, VA's OI&T, and the Office of General Counsel, VHA will conduct a similar detailed review of the previously approved MS&C funds budgeted for fiscal years 2014-2016 SOARD program and redirect funding for the portion for services that qualify as IT costs to the IT Systems appropriations.

To complete this action, VHA will provide the following documentation:

1. Transaction documentation demonstrating the remedy to the MS&C funds for $2,602,274.72 or, if appropriate, explanation of alteration to the remedy.
2. The revised fiscal years 2014-2016 SOARD budget, based on the detailed review.

Status	Target date for Completion
In Progress	July 2015

Recommendation 3. **We recommended the Interim Under Secretary for Health confer with VA's Office of Accountability Review regarding administrative actions against VHA senior officials beyond those individuals that have left VA employment who were involved with Service Oriented Architecture Research and Development funding decisions, and ensure that action is taken, if appropriate.**

Comments:

The Acting Deputy Under Secretary for Health for Operations and Management (DUSHOM) will confer with VA's Office of Accountability Review regarding administrative actions against VHA senior officials who:

1. Remain employed in VA; and

2. Were involved in funding decisions for Service Oriented Architecture Research and Development (SOARD), that resulted in the Memorandum of Understanding dated December 12, 2012, signed by the Assistant Deputy Under Secretary for Health for Administrative Operations and the Assistant Secretary for Information and Technology. This is the decisional document that established which elements of SOARD would be funded with non-IT appropriations and which would be funded with IT Systems appropriations.

The Acting DUSHOM, subsequent to conferring with the Office of Accountability Review, will determine whether administrative actions are warranted, and the office responsible for ensuring action is taken, if appropriate.

Status	Target date for Completion
In Progress	July 2015

Recommendation 4. We recommended the Executive in Charge, Office of Information & Technology obtain Chief Financial Officer certifications from responsible VA Administrations or Staff Offices that proper appropriations will be used before using any non-Information Technology Systems appropriations for any information technology project, including projects managed by the Project Management Accountability System.

l/USH concurrence does not apply to recommendation 4. This content is provided for l/USH situational awareness only. OIG made the recommendation to the Office of Information & Technology (OI&T) and OI&T provided their response back to OIG.

OIT Response: Concur.

VA's Office of Information and Technology will implement the appropriate internal controls through its' planning, programming, budgeting and execution (PPBE) process as well as providing oversight for compliance through its' PPBE Board which is chaired by the Deputy Assistant Secretary for IT Resource Management/IT Chief Financial Officer.

Target Completion: August 2015

Appendix D Executive in Charge of Information and Technology

Department of Veterans Affairs

Memorandum

Date: April 7, 2015

From: Executive in Charge and Chief Information Officer, Office of Information Technology (005)

Subj: OIG Draft Report, Review of Alleged Mismanagement of Service Oriented Architecture Research and Development

To: Assistant Inspector General for Audits and Evaluations (52)

Thank you for the opportunity to review the subject draft Office of Inspector General report. The Office of Information and Technology submits a conditional concurrence with the finding and provides the attached written comment for recommendation three. If you have any questions, contact me at 202-461-6910 or have a member of your staff contact Luwanda F. Jones, Acting Deputy Assistant Secretary for IT Resource Management, at 202-461-7198.

(Original signed)

Stephen W. Warren

Attachment

Attachment- 005 Comments

Office of Information and Technology

Response to draft OIG Report

"Review of Alleged Mismanagement of Service Oriented Architecture Research and Development"

OIG Recommendations

1. We recommended the Executive in Charge, Office of Information & Technology obtain Chief Financial Officer certifications from responsible VA Administrations or Staff Offices that proper appropriations will be used before using any non-Information Technology Systems appropriations for any information technology project, including projects managed by the Project Management Accountability System.

OIT Response: Concur.

VA's Office of Information and Technology will implement the appropriate internal controls through its' planning, programming, budgeting and execution (PPBE) process as well as providing oversight for compliance through its' PPBE Board which is chaired by the Deputy Assistant Secretary for IT Resource Management/IT Chief Financial Officer.

Target Completion: August 2015

Appendix E Office of Inspector General Contact and Staff Acknowledgments

OIG Contact	For more information about this report, please contact the Office of Inspector General at (202) 461-4720.
Acknowledgments	Kent Wrathall, Director Earl Key Steve Wiggins, Sr.

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