



NATIONAL
ARCHIVES

OFFICE *of*
INSPECTOR GENERAL

Date : January 31, 2013

Reply to : Office of Inspector General (OIG)

Subject : Advisory Report No. 13-07, Status Update of the Electronic Records Archives
Executive Office of the President System Upgrade

To : David S. Ferriero, Archivist of the United States (N)

The purpose of this Advisory Report is to update you on the current effort to upgrade the Electronic Records Archives (ERA) Executive Office of the President (EOP) System. We initially brought our concerns about this effort to your attention on October 18, 2012 in Management Letter No. 13-02, "Status of the Upgrade to the ERA EOP System" discussing incomplete deliverables and a disconnect between NARA and the contractor on the scope of work. These conditions exist because NARA did not clearly articulate all of the work required to upgrade the EOP System in the Statement of Objectives (SOO). We also identified that this project did not go through NARA's Capital Planning and Investment Control (CPIC) process. As a result, the value of the contract to upgrade the EOP System has increased to over \$8.1 million, more than double the value of the original contract.

The ERA is a major information system that is intended to preserve and provide access to massive volumes of all types and formats of electronic records, independent of their original hardware or software, including Presidential records. The current EOP System was deployed in December 2008 and is NARA's private, internal archival management system to ingest, store, and manage electronic Presidential records.

As part of the OIG's ongoing effort to review the ERA Program, in 2012 we asked NARA officials what actions, if any, were being taken to plan for the possible receipt of the current administration's electronic records should a change in administration take place in 2013. We found that a firm-fixed-price contract was issued to ViON Corporation on August 16, 2012 for around \$3.6 million to provide planning, architectural design, engineering, integration, testing, acceptance and security authorization upgrades to the EOP System. According to the SOO in the contract, the EOP System requires upgrades to storage capacity, hardware, and software to be ready in the event that the current administration is one term in duration, necessitating a sizeable transfer of electronic records in January 2013 under the Presidential Records Act.

The Presidential Records Act gives the Archivist of the United States responsibility for the custody, control, and preservation of Presidential records upon the conclusion of a President's term of office. The Act states the Archivist has an affirmative duty to make such records available to the public as rapidly and completely as possible consistent with the provisions of the Act. Should there have been a change in administration, NARA would immediately need to be able to respond to time-sensitive and often high-visibility special access requests for these records. Such special access requests come from former and incumbent Presidents, the courts, and the Congress.

With the outcome of the election acknowledged, and knowing that the current administration will be two terms we questioned NARA officials about the need to continue with the upgrade. A senior NARA official told us the primary reason for establishing the EOP upgrade (i.e., EOP 44 instance) was as risk mitigation due to planned hardware/software obsolescence by the manufacturer. In mid-FY12 NARA was notified by Hitachi that the existing EOP instance (i.e., EOP 43) would no longer be supported as of December 31, 2012. A decision was made by the EOP team and Information Services management that the risk of maintaining presidential records on unsupported hardware and software was too great and that the build of the EOP 44 instance was the most appropriate mitigation. In parallel, NARA worked with Hitachi to ensure that additional support (through June of 2013) will be provided for EOP 43 – to allow for the completion of the EOP 44 upgrade which is scheduled for March 31, 2013.

Statement of Objectives (SOO)

According to NARA officials, the ViON contract was intended as a turnkey solution for upgrading the EOP System. In other words NARA planned on having a fully implemented, usable system from the contractor. However, about a month into the contract a disconnect arose between the contractor and NARA. The contractor inquired about the availability of 240 Ethernet ports¹ needed at the Allegany Ballistics Lab (ABL)² to install the upgraded EOP System. A NARA official at ABL stated he did not have 240 ports available. This NARA official added that the contractor believed NARA had the available ports and the contractor would simply plug their product, the Hitachi Data Systems (HDS) Content Archive Platform (HCAP)³, into them. During a discussion between NARA and the contractor it was agreed the SOO did not include all of the necessary requirements to fully implement the upgraded EOP System. Based on this discussion, the contractor prepared a revised proposal based on a different set of assumptions.

NARA's Director, Strategic Systems Management Division stated the SOO did not fully explain the effort required causing functional gaps and the work effort initially priced by the contractor did not fully include the entire scope of the EOP upgrade due to the gaps. He also stated there were several disconnects between the needs expressed in the SOO and the vendor's

¹ An Ethernet port is an opening on computer network equipment that Ethernet cables plug into.

² The ABL is in Rocket Center, West Virginia and is the ERA System's production data center.

³ The HCAP is the main archival storage component for the EOP System.

understanding of those needs. Specifically, regarding what constituted comprehensive products and services. In some cases the gaps were due to evolving programmatic requirements from external EOP business customers and in other cases NARA provided additional technical requirements after determining the vendor had initially made incorrect assumptions about the required services.

According to the contractor, the primary difference between the revised proposal and their prior assumptions is this effort is not a Government-led, Contractor-supported effort, but rather a Contractor-led, Government-supported project. This statement indicates that the contractor will have a more active role in designing, managing, configuring, and installing the upgrade. As a result, on December 7, 2012 a contract modification was issued for over \$4.4 million to address the required, but missing technical requirements. The modification states the original contract did not include the total requirements for transport and ingest services at ERA/ABL, integration of the production EOP System at ABL including full system backup and restore, cables, switches, and did not include equipment for the Ingest Working Store or software including Operating System or required labor to install and configure all software components.

The table below summarizes some of the changes in approach based on the revised proposal.

Table 1: ViON’s revised approach to meet the objectives and requirements of the SOO

EOP Components	Prior Approach	Revised Approach
Network	<ul style="list-style-type: none"> • NARA-provided network connectivity 	<ul style="list-style-type: none"> • ViON-provided and integrated networking, to include additional Cisco switches and cabling
Transport	<ul style="list-style-type: none"> • Single Transport Array installed once at a single location • No on-site copying or pre-processing capabilities 	<ul style="list-style-type: none"> • Two transport arrays, local network switch, workstation, and preprocessing/copying servers during the period of performance.
Ingest	<ul style="list-style-type: none"> • Utilize current NetApp storage and servers 	<ul style="list-style-type: none"> • New storage and servers consistent with overall upgraded environment
Testing	<ul style="list-style-type: none"> • ViON support of Government-led activity • Government does all CAT testing 	<ul style="list-style-type: none"> • Government support of ViON-led and executed activity • Resources to perform unit, integration, and CAT testing (under NARA oversight)
Security	<ul style="list-style-type: none"> • Government provides resources for pre-scanning as well as scanning 	<ul style="list-style-type: none"> • ViON provides resources for pre-scanning; Government performs final scans once pre-scanning is complete
Backup	<ul style="list-style-type: none"> • Solution will leverage existing backup infrastructure 	<ul style="list-style-type: none"> • New backup infrastructure needed based on age (speed) and capacity (utilization) of existing tape library.

The SOO was subject to varying interpretations and assumptions because it did not clearly (1) articulate all of the technical requirements to implement the EOP upgrade, and (2) delineate the responsibilities of NARA and the vendor.

NARA's Capital Planning and Investment Control (CPIC) Process

We also identified the EOP upgrade did not go through NARA's CPIC process. The CPIC process is a structured approach used to manage information technology (IT) investments, legislatively mandated by the Clinger-Cohen Act of 1996, and used by all Federal Agencies. CPIC relies on systematic selection, control, and continual evaluation of processes to ensure that an investments' objectives are met efficiently and effectively. NARA's CPIC process applies to any project that invests new resources for IT⁴ including system development or modernization efforts, operations and maintenance efforts, and software or hardware upgrades.

A NARA official, tasked with oversight of the CPIC process, stated that the upgraded EOP System did not go through the CPIC process. This individual stated that throughout the development phases of ERA, these projects have not been managed through CPIC, but now that ERA is in an operations and maintenance phase, NARA is investigating how to best utilize CPIC for its planning activities. Additionally, NARA's Program Manager for Systems Development Lifecycle Coordination stated he understood there to be general discussion between CPIC and ERA Program Management Office officials in early 2012, but did not recall any requests coming from CPIC related to the EOP upgrade. He did not know why a request was not made by CPIC.

Because the upgraded EOP system did not go through the CPIC process, staff time spent on procurement activities related to the upgraded EOP system were increased due to additional meetings and related discussions on the disconnects with the SOO and in preparing modifications to the original contract. In addition, the opportunity to identify potential issues with the system was diminished. For example, the CPIC process includes a comprehensive selection process where costs, business needs, strategic alignment, cost-benefit analysis, risk and technical requirements are examined. However, because the upgraded EOP System did not go through the CPIC process, these reviews did not occur.

Indeed, the NARA official tasked with oversight of the CPIC process stated that if the EOP upgrade had gone through NARA's CPIC process he believed at least some of these issues and missing requirements would have been flushed out during discussion and review. The OIG plans to initiate an audit of NARA's CPIC process during the current Fiscal Year.

A senior NARA official stated the design and architecture of the upgraded EOP System will allow for future administrations to be included. He added however, given the velocity of change with technology products (i.e., upgrades to hardware and software, and increased storage and indexing requirements) it is possible that portions of the EOP System will need to be refreshed in order to support future administrations. We suggest that for any future upgrades or development

⁴NARA 801 defines IT as any equipment or interconnected system or subsystem or equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.

activities related to the ERA System and any of its instances the SOO or the Statement of Work clearly articulate the technical requirements and the roles and responsibilities of NARA and the vendor. Although we understand that requirements may change, the more clearly they are defined up front, the less likely they are of being misinterpreted or subjected to incorrect assumptions. We also agree with the NARA official overseeing the CPIC process that had the EOP upgrade gone through the CPIC process some of these issues may have been alleviated. Discussions during the CPIC process may have identified some of the disconnects and gaps prior to the original contract being issued.

Our review effort consisted primarily of reviewing applicable EOP System documentation such as the ViON contract, the Statement of Objectives, NARA's CPIC directive and interviews with responsible NARA officials. We will continue to monitor NARA's efforts to upgrade the EOP System.

As with all OIG products, we will determine what information is publicly posted on our website from this Advisory Report. Should you or management have any redaction suggestions based on FOIA exemptions, please submit them to my counsel within one week from the date of this letter. Should we receive no response within this time frame, we will interpret that as confirmation NARA does not desire any redactions to the posted report. If you have any questions concerning the information presented in this Advisory Report, please do not hesitate to contact me at (301) 837-3000.



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cc: Michael Wash (I)
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