

## Why GAO Did This Study

Since 2001, the National Archives and Records Administration (NARA) has been working to develop an Electronic Records Archive (ERA) to preserve and provide access to massive volumes and all types of electronic records. However, in acquiring this system, NARA has repeatedly revised the program schedule and increased the estimated costs for completion from \$317 million to \$567 million. NARA is to manage this acquisition using, among other things, earned value management (EVM). EVM is a project management approach that, if implemented appropriately, provides objective reports of project status and unbiased estimates of anticipated costs at completion.

GAO was asked to (1) assess whether NARA is adequately using EVM techniques to manage the acquisition and (2) evaluate the earned value data to determine ERA's cost and schedule performance. To do so, GAO compared agency and contractor documentation with best practices, evaluated earned value data to determine performance trends, and interviewed cognizant officials.

## What GAO Recommends

GAO recommends, among other things, that NARA establish a comprehensive plan for all remaining work; improve the accuracy of earned value performance reports; and engage executive leadership in correcting negative trends. NARA generally concurred with GAO's recommendations.

View [GAO-11-86](#) or key components. For more information, contact David A. Powner at (202) 512-9286 or [pownerd@gao.gov](mailto:pownerd@gao.gov).

# ELECTRONIC RECORDS ARCHIVE

## National Archives Needs to Strengthen Its Capacity to Use Earned Value Techniques to Manage and Oversee Development

### What GAO Found

NARA has, to varying degrees, established selected best practices needed to manage the ERA acquisition through EVM, but weaknesses exist in most areas (see table). For example, the scope of effort in ERA's work breakdown structure is not adequately defined, thus impeding the ability to measure progress made on contractor deliverables. These weaknesses exist in part because NARA lacks a comprehensive EVM policy, training, and specialized resources and also frequently replans the program. As a result, NARA has not been positioned to identify potential cost and schedule problems early and thus has not been able to take timely actions to correct problems and avoid program schedule delays and cost increases.

#### Assessment of EVM Best Practices for ERA Program

EVM practice	GAO assessment
Define the scope of effort using a work breakdown structure	●
Identify who in the organization will perform the work	●
Schedule the work	●
Estimate the labor and material required to perform the work and authorize the budgets	●
Determine objective measure of earned value	●
Develop the performance measurement baseline	●
Execute the work plan and record all costs	●
Analyze EVM performance data and record variances	●
Forecast estimates at completion	○
Take management action to mitigate risks	●
Update the performance measurement baseline as changes occur	○

● practice fully implemented      ● practice partially implemented      ○ practice not implemented

Sources: GAO analysis of agency and contractor data.

ERA's earned value data trends do not accurately portray program status due to the program's weaknesses in implementing EVM; however, historical program trends indicate that future cost overruns will likely be between \$195 million and \$433 million to fully develop ERA as planned and between \$205 and \$405 million at program end (see table). In contrast, the contractor's estimated cost overrun is \$2.7 million. Without more useful earned value data, NARA will remain unprepared to effectively oversee contractor performance and make realistic projections of program costs.

#### Projected Cost Overruns for ERA Program

Estimate at completion	Current NARA estimate	GAO estimate <sup>a</sup>	Net change (percentage change)
Development phase	\$567 million	\$762 million to \$1 billion	\$195 to \$433 million (34 to 76 percent)
Life cycle	\$995 million	\$1.2 to \$1.4 billion	\$205 to \$405 million (21 to 41 percent)

Sources: GAO analysis of agency and contractor data.

<sup>a</sup>These estimates are being reported as a range since they reflect rough estimates and thus incorporate assumptions made in the absence of validated cost inputs.