



INFORMATION TECHNOLOGY

Agencies Need to Improve the Implementation and Use of Earned Value Techniques to Help Manage Major System Acquisitions

Highlights of [GAO-10-2](#), a report to the Chairman, Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

In fiscal year 2009, the federal government planned to spend about \$71 billion on information technology (IT) investments. To more effectively manage such investments, in 2005 the Office of Management and Budget (OMB) directed agencies to implement earned value management (EVM). EVM is a project management approach that, if implemented appropriately, provides objective reports of project status, produces early warning signs of impending schedule delays and cost overruns, and provides unbiased estimates of anticipated costs at completion.

GAO was asked to assess selected agencies' EVM policies, determine whether they are adequately using earned value techniques to manage key system acquisitions, and evaluate selected investments' earned value data to determine their cost and schedule performances. To do so, GAO compared agency policies with best practices, performed case studies, and reviewed documentation from eight agencies and 16 major investments with the highest levels of IT development-related spending in fiscal year 2009.

What GAO Recommends

GAO is recommending that the selected agencies modify EVM policies to be consistent with best practices, implement EVM practices that address identified weaknesses, and manage negative earned value trends. Seven agencies that commented on a draft of this report generally agreed with GAO's results and recommendations.

[View GAO-10-2 or key components.](#)
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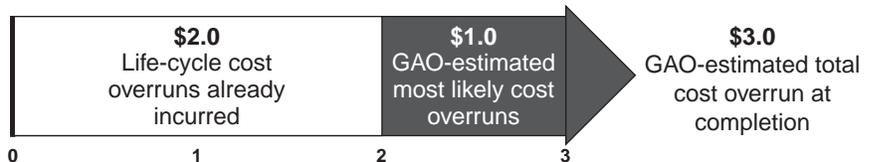
What GAO Found

While all eight agencies have established policies requiring the use of EVM on major IT investments, these policies are not fully consistent with best practices. In particular, most lack training requirements for all relevant personnel responsible for investment oversight. Most policies also do not have adequately defined criteria for revising program cost and schedule baselines. Until agencies expand and enforce their EVM policies, it will be difficult for them to gain the full benefits of EVM.

GAO's analysis of 16 investments shows that agencies are using EVM to manage their system acquisitions; however, the extent of implementation varies. Specifically, for 13 of the 16 investments, key practices necessary for sound EVM execution had not been implemented. For example, the project schedules for these investments contained issues—such as the improper sequencing of key activities—that undermine the quality of their performance baselines. This inconsistent application of EVM exists in part because of the weaknesses contained in agencies' policies, combined with a lack of enforcement of policies already in place. Until key EVM practices are fully implemented, these investments face an increased risk that managers cannot effectively optimize EVM as a management tool.

Furthermore, earned value data trends of these investments indicate that most are currently experiencing shortfalls against cost and schedule targets. The total life-cycle costs of these programs have increased by about \$2 billion. Based on GAO's analysis of current performance trends, 11 programs will likely incur cost overruns that will total about \$1 billion at contract completion—in particular, 2 of these programs account for about 80 percent of this projection. As such, GAO estimates the total cost overrun to be about \$3 billion at program completion (see figure). However, with timely and effective management action, it is possible to reverse negative trends so that the projected cost overruns may be reduced.

Cost Overruns Incurred and Projected Overruns of 16 Programs



Source: GAO analysis of program data.