September 2012

BIOSURVEILLANCE

DHS Should Reevaluate Mission Need and Alternatives before Proceeding with BioWatch Generation-3 Acquisition

GAO Accountability * Integrity * Reliability

Highlights

Highlights of GAO-12-810, a report to congressional requesters

Why GAO Did This Study

The 2001 anthrax attacks brought attention to the potentially devastating consequences of a biological attack. DHS operates a program, known as BioWatch, intended to help detect such an attack by airborne pathogens. The currently deployed technology can take 12 to 36 hours to confirm the presence of pathogens. DHS has been pursuing a third generation of the technology that will perform automated testing, potentially generating a result in under 6 hours and reducing labor costs.

GAO was asked to examine issues related to the Gen-3 acquisition. This report addresses the extent to which (1) DHS used its acquisition life cycle framework to justify the need and consider alternatives; (2) DHS developed reliable performance, schedule, and cost expectations; and (3) steps remaining before Gen-3 can be deployed. GAO reviewed acquisition documentation and test results and interviewed agency officials from the BioWatch program and other DHS components with development, policy, and acquisition responsibilities.

What GAO Recommends

GAO recommends that before continuing the acquisition, DHS reevaluate the mission need and alternatives and develop performance, schedule, and cost information in accordance with guidance and good acquisition practices. DHS concurred with the recommendations, but not the implementation timeline. DHS plans to proceed with the acquisition while implementing them to avoid further delays. However, GAO believes the recommendations should be enacted before DHS proceeds with the acquisition as discussed in this report.

View GAO-12-810. For more information, contact Bill Jenkins at (202) 512-8757 or jenkinswo@gao.gov.

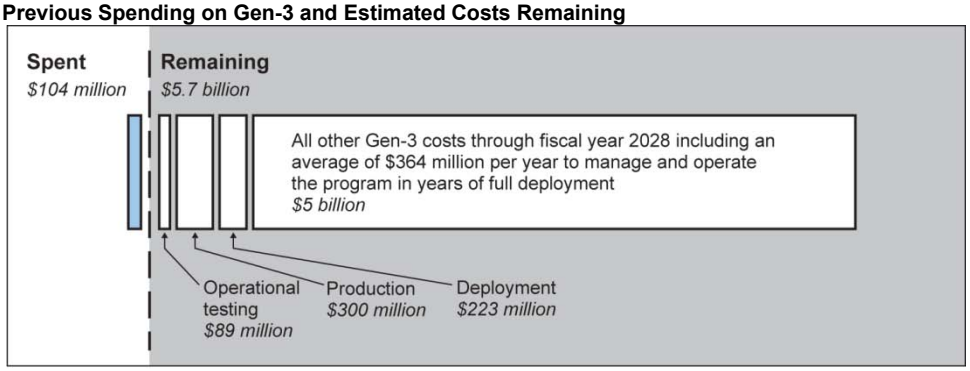
What GAO Found

The Department of Homeland Security (DHS) approved the Generation-3 (Gen-3) acquisition in October 2009, but it did not fully engage in the early phases of its acquisition framework to ensure that the acquisition was grounded in a justified mission need and that it pursued an optimal solution. Critical processes in the early phases of DHS's framework are designed to (1) justify a mission need that warrants investment of resources and (2) select an optimal solution by evaluating viable alternatives based on risk, costs, and benefits. BioWatch program officials said that these early acquisition efforts were less comprehensive and systematic than the DHS framework calls for because there was already departmental consensus around the solution. Without a systematic effort to justify the need for the acquisition in the context of its costs, benefits, and risks, DHS has pursued goals and requirements for Gen-3 with limited assurance that they represent an optimal solution. Reevaluating the mission need and systematically analyzing alternatives could provide better assurance of an optimal solution.

The performance, schedule, and cost expectations presented in required documents when DHS approved the acquisition were not developed in accordance with DHS guidance and good acquisition practices—like accounting for risk in schedule and cost estimates. BioWatch program officials said that DHS leadership directed them to prepare information quickly for the 2009 decision, which was accelerated by more than 1 year. Since DHS approved the acquisition in October 2009, the estimated date for full deployment has been delayed from fiscal year 2016 to fiscal year 2022, and the original life cycle cost estimate for the 2009 decision—a point estimate unadjusted for risk—was $2.1 billion. In June 2011, DHS provided a risk-adjusted estimate at the 80 percent confidence level of $5.8 billion. Comprehensive and systematic information developed using good practices for cost and schedule estimating, could help ensure more reliable performance, schedule, and cost information for decision makers.

Several steps remain before DHS can deploy and operate Gen-3. First, DHS must conduct additional performance and operational testing. This testing—estimated to take 3 years and cost $89 million—is intended to demonstrate full system performance, including the information technology network. To do so, the BioWatch program must address testing challenges including limitations on the use of live pathogens, among others. Following operational testing, DHS intends to decide whether to authorize the production and deployment of Gen-3. If Gen-3 is approved, the BioWatch program plans to prepare for deployment by working with BioWatch jurisdictions to develop location-specific plans to guide Gen-3 operations. DHS estimates show that about $5.7 billion of the $5.8 billion life-cycle cost remains to be spent to test, produce, deploy, and operate Gen-3 through fiscal year 2028.

Previous Spending on Gen-3 and Estimated Costs Remaining



Source: GAO analysis of BioWatch program documents.