



INFORMATION TECHNOLOGY

DHS Needs to Improve Its Independent Acquisition Reviews

Highlights of GAO-11-581, a report to congressional committees

Why GAO Did This Study

Since its creation in 2003, the Department of Homeland Security (DHS) has been developing new information technology (IT) systems to perform both mission-critical and support functions; however, it has faced challenges in developing these systems. One way to manage the inherent risks of developing and acquiring systems is through independent verification and validation (IV&V)—a process conducted by a party independent of the development effort that provides an objective assessment of a project’s processes, products, and risks throughout its life cycle and helps ensure that program performance, schedule, and budget targets are met.

GAO was asked to determine (1) how DHS’s IV&V policies and procedures for IT acquisitions compare with leading practices and (2) the extent to which DHS has implemented IV&V on its large IT system acquisitions. To do so, GAO assessed DHS’s policy against industry standards and leading practice guides, as well as analyzed how eight selected IT programs had implemented IV&V.

What GAO Recommends

GAO recommends that DHS (1) update its acquisition policy to reflect elements of effective IV&V, (2) monitor and ensure implementation of this policy on applicable new and ongoing IT programs, and (3) collect data on IV&V usage and use it to evaluate the effectiveness of these investments. DHS concurred with GAO’s recommendations and described actions planned or under way to address them.

What GAO Found

DHS recognizes the importance of IV&V and recommends its use on major IT programs. Nevertheless, its acquisition policy does not address the elements of leading practices for IV&V. Specifically, the department has not established risk-based decision making criteria for determining whether, or the extent to which, programs should utilize IV&V. In addition, department policy does not define the degree of independence required of agents and does not require that programs determine and document the planned scope of their efforts, including the program activities subject to review; the resources required; roles and responsibilities; and how the results will be reported and acted upon. Moreover, the policy does not address overseeing DHS’s investment in IV&V. Thus, officials were unaware of the extent to which it was being used on major IT acquisition programs, associated expenditures, or if those expenditures are producing satisfactory results. Absent such policy elements and more effective oversight, the department’s investments in IV&V efforts are unlikely to provide optimal value for the department and, in some cases, may even fail to deliver any significant benefits.

Many large IT acquisition programs across DHS reported using IV&V as part of their acquisition and/or development processes. Nevertheless, the eight major IT acquisition programs that GAO analyzed did not consistently implement the elements of leading practice. For example, the eight did not fully apply a structured, risk-based decision making process when deciding if, when, and how to utilize IV&V. (The table summarizes use of leading practices on the eight programs.) In part, these weaknesses are due to the lack of clear departmentwide guidance regarding the use of such practices. As a result, the department’s IV&V efforts may not consistently contribute toward meeting IT acquisition cost, schedule, and mission goals.

Summary of DHS’s Implementation of IV&V Leading Practices on Eight Large IT Acquisitions

| IV&V leading practice | DHS program | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H |
| Establish risk-based decision criteria | ● | ● | ● | ● | ○ | ● | ○ | ○ |
| Establish standards for independence | ● | ● | ● | ● | ● | ● | ● | ● |
| Define the scope of the effort | ● | ● | ● | ● | ○ | ● | ● | ● |
| Determine the resources required | ● | ● | ○ | ● | ○ | ○ | ● | ● |
| Establish program oversight | ● | ● | ● | ● | ○ | ● | ● | ● |

Source: GAO analysis of DHS data, using code letters assigned by GAO.
 Key: ● The program provided evidence that fully satisfied all elements.
 ● The program provided evidence that satisfied some, but not all elements.
 ○ The program provided evidence that did not satisfy any elements, or provided no evidence.

View GAO-11-581 or key components. For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov.