Observations on the Cancellation of BioWatch Gen-3 and Future Considerations for the Program

What GAO Found

In September 2012, GAO reported that the Department of Homeland Security (DHS) approved the Office of Health Affairs (OHA) acquisition of a next generation biosurveillance technology (Gen-3) in October 2009 without fully following its acquisition processes. For example, the analysis of alternatives (AoA) prepared for the Gen-3 acquisition did not fully explore costs or consider benefits and risk information in accordance with DHS’s Acquisition Life-cycle Framework. To help ensure DHS based its acquisition decisions on reliable performance, cost, and schedule information, GAO recommended that before continuing the Gen-3 acquisition, DHS reevaluate the mission need and alternatives. DHS concurred with the recommendation and in 2012 decided to reassess mission needs and conduct a more robust AoA. Following the issuance of the AoA in December 2013, DHS decided in April 2014 to cancel Gen-3 acquisition and move the technology development back to the Science and Technology Directorate (S&T). According to DHS’s acquisition decisions memorandum, the AoA did not confirm an overwhelming benefit to justify the cost of a full technology switch to Gen-3. Moreover, DHS officials said the decision to cancel the Gen-3 acquisition was a cost-effectiveness measure, because the system was going to be too costly to develop and maintain in its current form.

GAO’s prior work on DHS research and development (R&D) highlights challenges DHS may face in shifting efforts back to S&T and acquiring another biodetection technology. In September 2012, GAO reported that while S&T had dozens of technology transition agreements with DHS components, none of these had yet resulted in a technology developed by S&T being used by a component. At the same time, other DHS component officials GAO interviewed did not view S&T’s coordination practices positively. GAO recommended that DHS develop and implement policies and guidance for defining and overseeing R&D at the department that includes a well-understood definition of R&D that provides reasonable assurance that reliable accounting and reporting of R&D resources and activities for internal and external use are achieved. S&T agreed with GAO’s recommendations and efforts to address them are ongoing. Addressing these coordination challenges could help to ensure that S&T’s technology development efforts meet the operational needs of OHA.

Cancellation of the Gen-3 acquisition also raises potential challenges that the currently deployed Gen-2 system could face going forward. According to DHS officials, DHS will continue to rely on its Gen-2 system as an early indicator of an aerosolized biological attack. However, in 2011, National Academy of Sciences raised questions about the effectiveness of the currently deployed Gen-2 system. While Gen-2 has been used in the field for over a decade, the National Academy of Sciences reported that information about the technical capabilities of the system, including the limits of detection, is limited. In April 2014, DHS officials also indicated that they will soon need to replace laboratory equipment of the currently deployed Gen-2 system and readjust life cycle costs since there will be no Gen-3 technology to replace it.