

GAO Highlights

Highlights of [GAO-16-5](#), a report to congressional committees

Why GAO Did This Study

After the Soviet Union launched the first satellite into orbit in 1957, the U.S. government made a commitment to initiate, rather than react to, strategic technological surprises. DOD relies on DARPA's disruptive innovations to maintain this promise, backed by congressional appropriations of over \$2.9 billion in fiscal year 2015 alone. In April 2015, DOD reported that U.S. technological superiority is again being challenged by potential adversaries and renewed efforts to improve its products. Meanwhile, GAO found deficiencies in DOD's technology transition processes that may hinder these efforts and DARPA's goals.

Senate Report 113-176 included a provision for GAO to review DOD's technology transition processes, practices, and results. This report focuses on DARPA and assesses its (1) effectiveness at transitioning technologies since fiscal year 2010, including identifying factors that contribute to successful transitions, and (2) implementation of DOD policies and programs intended to facilitate technology transition. GAO reviewed DARPA programs completed since 2010; identified transition factors by analyzing program documentation for a random sample of 10 cases; reviewed DOD policies; and interviewed DOD officials.

What GAO Recommends

DARPA should regularly assess technology transition strategies, refine training requirements, and increase dissemination of technical data for completed programs. DOD did not agree to take GAO's recommended actions, which remain warranted, as discussed in the report.

View [GAO-16-5](#). For more information, contact Michael J. Sullivan at (202) 512-4841 or sullivanm@gao.gov.

November 2015

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

Key Factors Drive Transition of Technologies, but Better Training and Data Dissemination Can Increase Success

What GAO Found

Since 2010, the Defense Advanced Research Projects Agency (DARPA) has had success in technology transition—the process of migrating new technologies from the research environment to military users, including Department of Defense (DOD) acquisition programs and warfighters. However, inconsistencies in how the agency defines and assesses its transition outcomes preclude GAO from reliably reporting on transition performance across DARPA's portfolio of 150 programs that were successfully completed between fiscal years 2010 and 2014. These inconsistencies are due in part to shortfalls in agency processes for tracking technology transition. Nevertheless, GAO's analysis of 10 selected programs identified four factors that contributed to transition success, the most important being military or commercial demand for the planned technology and linkage to a research area where DARPA has sustained interest. Both of these factors were generally evident at the time a program started, while the other two factors were observed later, once the program was underway. The figure below highlights the four factors.

Factors That Contributed to Successful Technology Transition in Selected DARPA Programs



Source: GAO analysis of Defense Advanced Research Projects Agency (DARPA) information. | GAO-16-5

DARPA's implementation of DOD programs intended to foster technology transition has been limited and neither DOD nor DARPA have defined policies for managing transition activities. DARPA has also largely elected not to participate in DOD technology transition programs, with the exception of federally mandated small business programs, citing challenges in meeting program requirements within DARPA's typical three- to five-year timeframe for executing its research initiatives. Instead, DARPA primarily focuses its time and resources on creating radically innovative technologies that support DOD's warfighting mission and relegates technology transition to a secondary priority. DARPA leadership defers to its program managers to foster technology transition, but provides limited related training. Moreover, while its leadership conducts oversight of program managers' activities through periodic program reviews, these reviews do not regularly assess technology transition strategies. GAO has found that this approach does not consistently position programs for transition success. Further, while DARPA disseminates information on its past programs within DOD, to the public, and among private companies, it does not take full advantage of government-sponsored resources for sharing technical data, which may obscure visibility into its programs and lead to missed transition opportunities.