

SYM-AM-22-080



EXCERPT FROM THE
PROCEEDINGS
OF THE
NINETEENTH ANNUAL
ACQUISITION RESEARCH SYMPOSIUM

**Acquisition Research:
Creating Synergy for Informed Change**

May 11–12, 2022

Published: May 2, 2022

Approved for public release; distribution is unlimited.

Prepared for the Naval Postgraduate School, Monterey, CA 93943.

Disclaimer: The views represented in this report are those of the author and do not reflect the official policy position of the Navy, the Department of Defense, or the federal government.



ACQUISITION RESEARCH PROGRAM
DEPARTMENT OF DEFENSE MANAGEMENT
NAVAL POSTGRADUATE SCHOOL

The research presented in this report was supported by the Acquisition Research Program at the Naval Postgraduate School.

To request defense acquisition research, to become a research sponsor, or to print additional copies of reports, please contact any of the staff listed on the Acquisition Research Program website (www.acquisitionresearch.net).



ACQUISITION RESEARCH PROGRAM
DEPARTMENT OF DEFENSE MANAGEMENT
NAVAL POSTGRADUATE SCHOOL

Critical Technologies: How is the DoD Protecting These Valuable Assets?

Erin Butkowski—is a Senior Analyst with the U.S. Government Accountability Office (GAO). She is a member of the GAO's Contracting and National Security Acquisitions team and has written reports on a variety of topics, including Coast Guard cutters, disaster response contracting, critical technologies, and the DoD's pursuit of artificial intelligence. [butkowskie@gao.gov]

Abstract

Critical technologies—such as elements of artificial intelligence and biotechnology—are those necessary to maintain U.S. technological superiority. As such, they are frequently the target of theft, espionage, and illegal export by adversaries. Prior Department of Defense (DoD) efforts to identify these technologies were considered by some military officials to be too broad to adequately guide protection. This presentation examines (1) the DoD's recent efforts to identify and protect its critical technologies and (2) opportunities for these efforts to inform government-wide protection efforts.

Background

The federal government spends billions annually to develop and acquire advanced technologies. It permits the sale and transfer of some of these technologies to allies to promote U.S. national security, foreign policy, and economic interests. However, the technologies can be targets for adversaries. The John S. McCain National Defense Authorization Act for Fiscal Year 2019 requires the Secretary of Defense to develop and maintain a list of acquisition programs, technologies, manufacturing capabilities, and research areas that are critical for preserving U.S. national security advantages. Ensuring effective protection of critical technologies has been included on the Government Accountability Office's (GAO's) high-risk list since 2007.

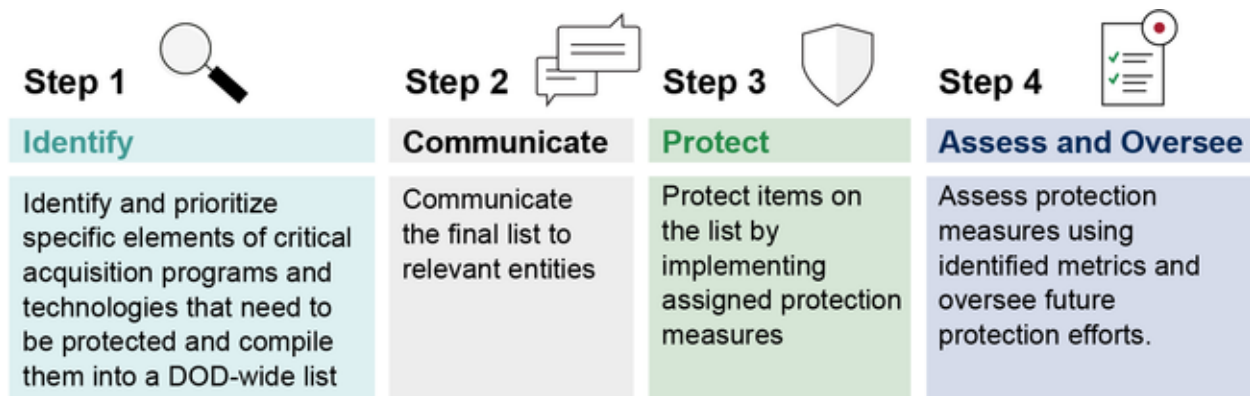
Objectives, Scope, and Methodology

This report examines (1) the Department of Defense's (DoD's) efforts to identify and protect its critical technologies and (2) opportunities for these efforts to inform government protection activities. The GAO analyzed DoD critical acquisition program and technologies documentation and held interviews with senior officials at the DoD and other federal agencies responsible for protecting critical technologies.

Summary

Critical technologies—such as elements of artificial intelligence and biotechnology—are those necessary to maintain U.S. technological superiority. As such, they are frequently the target of theft, espionage, and illegal export by adversaries. The DoD has outlined a revised process to better identify and protect its critical technologies, including those associated with acquisition programs throughout their life cycle or those early in development. Prior DoD efforts to identify these technologies were considered by some military officials to be too broad to adequately guide protection. The revised process is expected to address this by offering more specificity about what elements of an acquisition program or technology need to be protected and the protection measures the DoD is expected to implement. It is also expected to support the DoD's annual input to the National Strategy for Critical and Emerging Technologies, which was first published in October 2020.





Source: GAO depiction of Department of Defense's (DOD) process. | GAO-21-158

Figure 1. Overview of the DoD's Revised Process to Identify and Protect Critical Acquisition Programs and Technologies

The DoD began implementing this process in February 2020 with an initial focus on identifying critical acquisition programs and technologies that need to be protected and how they should be protected. As of February 2022, it has not yet determined which metrics it will use to assess the sufficiency of protection measures.

Once completed, the revised process should also inform the DoD and other federal agencies' protection efforts. Military officials stated they could use the list of critical acquisition programs and technologies to better direct resources. Officials from the Departments of State, Commerce, and the Treasury stated that they could use the list, if it is effectively communicated, to better understand what is important to the DoD to help ensure protection through their respective programs.

For additional information, see GAO-21-158 as well as prior related GAO work, including GAO-15-288 and GAO-21-119SP.





ACQUISITION RESEARCH PROGRAM
NAVAL POSTGRADUATE SCHOOL
555 DYER ROAD, INGERSOLL HALL
MONTEREY, CA 93943

WWW.ACQUISITIONRESEARCH.NET