

Weapon Systems Acquisition: Progress and Challenges on GAO's High Risk List

AIR FORCE AND SPACE FORCE	ARMY	JOINT DOD	NAVY AND MARINE CORPS	
				
Precision Strike Missile F-15EX	Source: Lockheed Martin, U.S. Air Force, and BAE, respectively. GAO-22-105230		Armored Multi-purpose Vehicle	

Anne McDonough, Assistant Director
Contracting and National Security Acquisitions

GAO's High Risk List through the Years

2003

2023

United States General Accounting Office

GAO

January 2003

High-Risk Series

An Update

GAO
Accountability • Integrity • Reliability

GAO-03-119

GAO
Accountability • Integrity • Reliability

Highlights

Highlights of a high-risk area discussed in GAO's Performance and Accountability Series report on the Department of Defense (GAO-03-08)

Why Area Is High Risk

Acquiring high performance weapons is central to the Department of Defense's (DOD) ability to fight and win wars. Also, DOD's investment in weapons is growing rapidly— from \$11.0 billion in fiscal year 2002 to about \$17 billion by fiscal year 2007—as DOD pushes to transform itself to meet a new range of threats. Nevertheless, while DOD's acquisition process has produced the best weapons in the world, it also routinely yields undesirable outcomes—cost increases, schedule delays, and performance shortfalls. Consequently, GAO has designated this as a high-risk area since 1990.

What Remains to Be Done

GAO has recommended that DOD take additional steps to achieve outcomes on par with leading organizations. These include:

- planning product development so that design and manufacturing decisions are based on better data,
- ensuring testing does not get deferred until late in the development cycle, and
- considering joint mission needs in establishing weapon requirements.

These steps should be taken in tandem with providing a better environment for starting and managing weapons programs—one that more closely resembles the knowledge-based process followed by leading organizations.

www.gao.gov/cgi-bin/gettr?GAO-03-08

For additional information about this high-risk area, click on the link above or contact Jack E. Brock, Jr. at (202) 512-4841 or brockj@gao.gov.

January 2003

HIGH-RISK SERIES

Department of Defense Weapon Systems Acquisition

What GAO Found

DOD continues to experience problems in developing and acquiring weapon systems. GAO has consistently found that acquisitions take a much longer time and cost much more than originally anticipated, causing disruptions to DOD's overall investment strategy and significantly reducing its buying power. Programs are also at risk because they are moving forward with immature technologies and/or they are using late stage tests as a vehicle for discovering problems that should have been identified and addressed much earlier. Such problems were evident, for example, in GAO's reviews of DOD's Joint Strike Fighter, V-22 aircraft, F-22, and other programs. In addition, DOD and the military services often do not consider options to acquire systems jointly to avoid costly duplication and interoperability problems. This was particularly apparent in efforts to acquire new sensor-to-shooter systems, antiair munitions, and combat identification systems.

Many of the problems GAO has uncovered are rooted in DOD's environment and its culture. The acquisition process tends to assert pressures on programs to promise more than they can deliver and to push programs forward without sufficient knowledge about a weapon's technology, design, and production. The intense competition to get programs approved and funded encourages setting requirements that will make the proposed weapon system stand out from others. In addition, DOD officials who establish requirements often aim for the most capability possible, since it may be many years before they get another opportunity to acquire a new weapon system of the same type. This has led to overpromising capabilities and underestimating costs.

DOD is changing its policies to achieve better outcomes. It has focused primarily on (1) ensuring technologies are demonstrated to a high level of maturity before beginning a weapon system program, (2) taking an evolutionary, or phased, approach to developing a system, and (3) making more realistic cost estimates in programs. These are positive steps that should help curb incentives to overpromise the capabilities of new weapon systems and lead to more realistic cost estimates when pricing programs. Implementation on individual programs will be the measure of the policies' success, but early experience has been mixed, underscoring the challenge DOD managers face in translating the policies into better program outcomes.

Various Weapon Systems

Source: Department of Defense

United States Government Accountability Office

GAO

Report to Congressional Committees

April 2023

High-Risk Series

Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas

DOD Weapon Systems Acquisition

DOD WEAPON SYSTEMS ACQUISITION

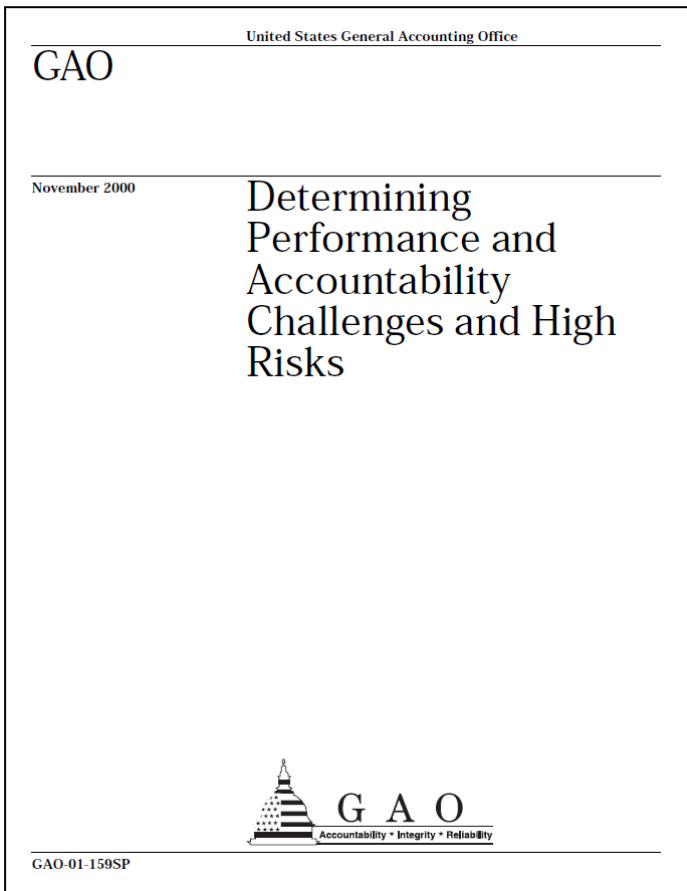


The Department of Defense (DOD) needs to improve oversight of its weapon systems and make better informed investment decisions to ensure the timely delivery of critical capabilities to the warfighter.

Why Area Is High Risk

DOD is continually challenged to rapidly deliver capabilities to its warfighters in an increasingly innovative and ever-changing global environment. Further, DOD programs are more software driven than ever before and face global cybersecurity threats. As of December 2021, DOD expected to spend more than \$1.9 trillion dollars to acquire weapon systems. It identified the modernization of its weapon systems as critical to the nation's ability to achieve competitive advantage with potential adversaries. Legislation, such as acquisition reforms outlined in the National Defense Authorization Acts for Fiscal Years 2016 and 2017, has prompted DOD to take actions to improve the outcomes of systems that were consistently costing more, taking longer to develop, and performing at lower-than-anticipated levels. We [added](#) this area to our High-Risk List in 1990.

What Defines a High Risk Program?



- GAO's High-Risk Series identifies government operations with vulnerabilities to fraud, waste, abuse, and mismanagement, or in need of transformation.
- Qualitative factors considered include significance of risk to national security and national defense. Quantitative factors include potential risk to at least \$1 billion in major assets, among others.
- GAO's full methodology for identifying challenges that merit a high-risk designation is outlined in a November 2020 report.

What Is GAO Looking For?

	LEADERSHIP COMMITMENT Demonstrated strong commitment and top leadership support.
	CAPACITY Agency has the capacity (i.e., people and resources) to resolve the risk(s).
	ACTION PLAN A corrective action plan exists that defines the root cause and solutions and provides an approach for substantially completing corrective measures, including steps necessary to implement solutions we recommended.
	MONITORING A program has been instituted to monitor and independently validate the effectiveness and sustainability of corrective measures.
	DEMONSTRATED PROGRESS Ability to demonstrate progress in implementing corrective measures and in resolving the high-risk area.

Consistent Themes in 2023 Rating

DOD Weapon Systems Acquisition



Rating changes since last update

No changes.

Criteria still needing attention

Capacity, Action Plan, Monitoring, and Demonstrated Progress



GAO's Methodology Is Evolving to Reflect Key Areas of Risk

- For 2023, we divided the overall high-risk area into four segments:
 - acquisition policy and oversight,
 - software and cybersecurity,
 - defense industrial base, and
 - innovation investments.

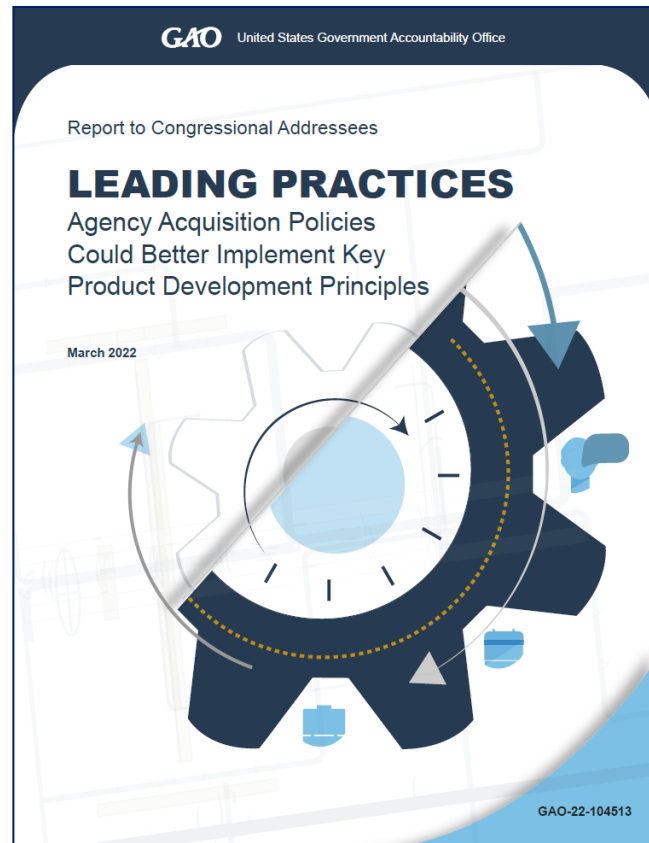
Acquisition Policy and Oversight

February 2023

MIDDLE-TIER DEFENSE ACQUISITIONS

Rapid Prototyping and
Fielding Requires
Changes to Oversight
and Development
Approaches

GAO-23-105008



February 2022

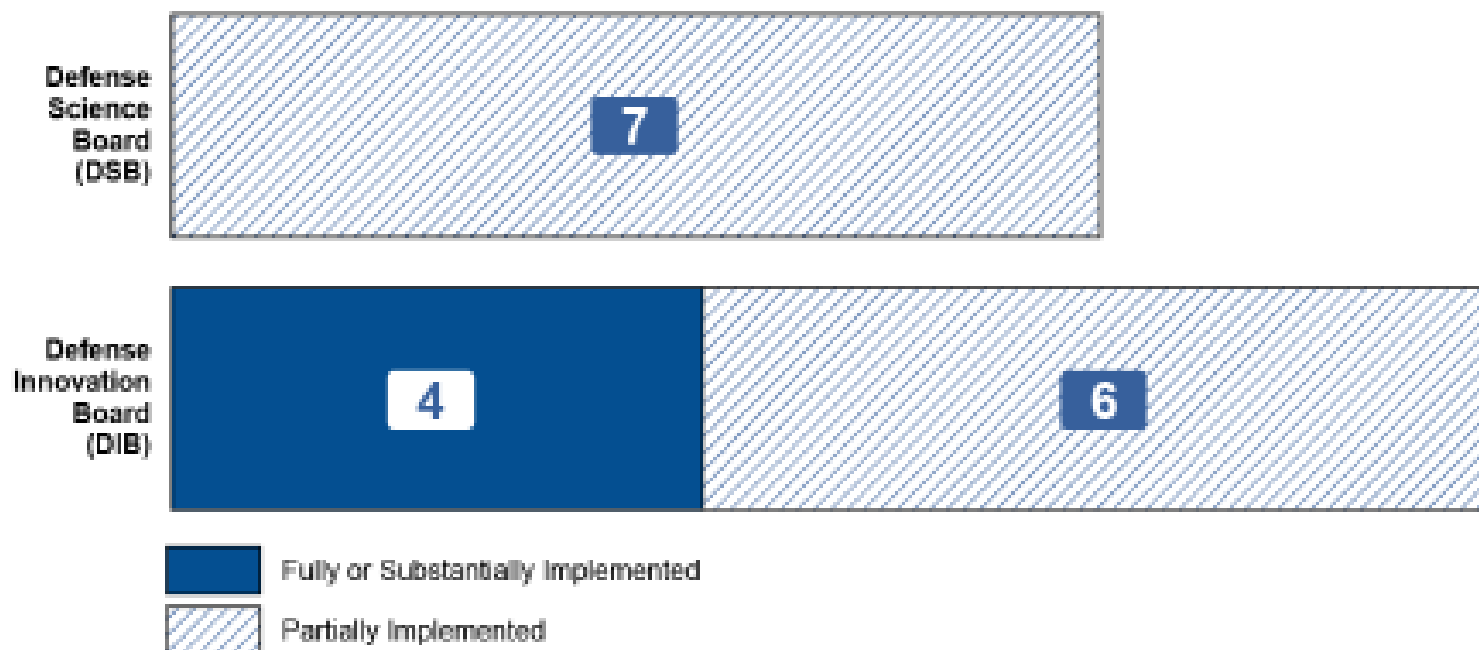
DEFENSE ACQUISITIONS

Additional Actions
Needed to Implement
Proposed
Improvements to
Congressional
Reporting

GAO-22-104687

Software and Cybersecurity

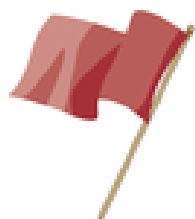
DOD Has at Least Partially Implemented All of the DIB and DSB Recommendations



Source: GAO analysis of Department of Defense (DOD) information and interviews with DOD officials. | GAO-23-106611

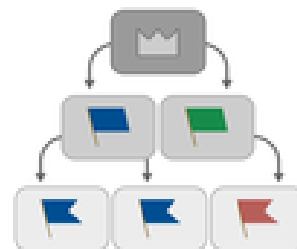
Defense Industrial Base

Elements Not Fully Addressed in DOD's Industrial Base Strategy



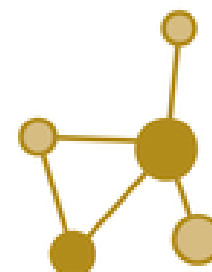
All strategy goals
All milestones
Performance measures

Where all resources should be targeted



Information on which organizations are responsible for mitigating specific risks

Implementation plans



Source: GAO-04-408T and GAO analysis of Department of Defense (DOD) documents. | GAO-22-104154

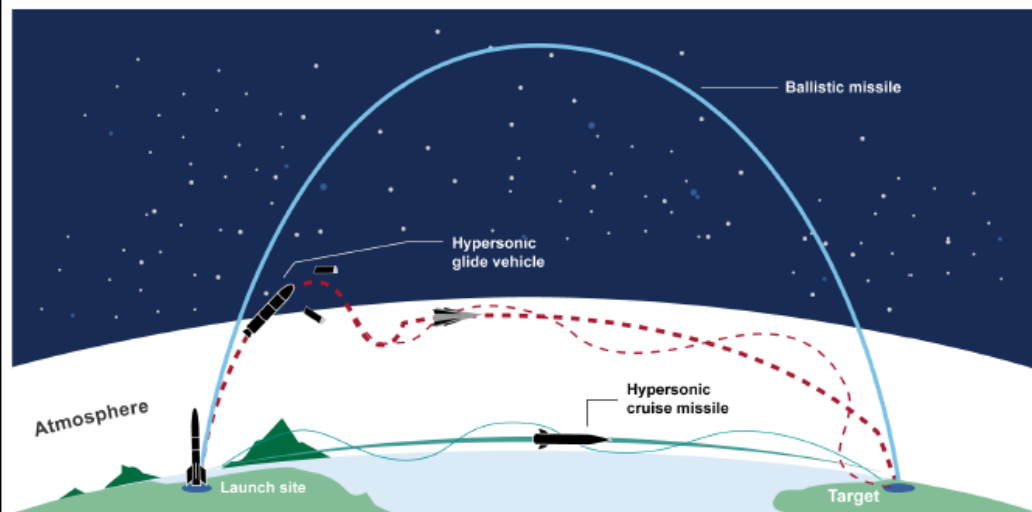
Innovation Investments

Prototype of a Robot Surface Ship



Source: U.S. Navy/Mass Communication Specialist 2nd Class Thomas Gooley/dvidshub.net. | GAO-22-104567

Figure 1: Comparison of Ballistic and Hypersonic Flight Trajectories



Source: GAO analysis of Department of Defense data. Figure not drawn to scale. | GAO-21-378