GAO Highlights

Highlights of GAO-25-107569

A Report to Congressional Committees June 2025

Weapon Systems Annual Assessment

DOD Leaders Should Ensure That Newer Programs Are Structured for Speed and Innovation

NAVY ARMY AIR FORCE SPACE FORCE

Future Long Range Assault Aircraft (FLRAA), LGM-35A Sentinel, and GPS III Follow-On (GPS IIIF)

Source: Bell Textron, Inc.; U.S. Air Force; and Lockheed Martin Corporation, respectively. | GAO-25-107569

Why GAO Did This Study

DOD plans to invest nearly $2.4 trillion to develop and acquire its costliest weapon programs. But it continues to struggle with delivering timely and effective solutions to the warfighter. Weapon systems are more complex and software-driven than ever before. DOD implemented recent reforms intended to lead to faster results, but slow, linear development approaches persist.

This report, GAO's 23rd annual assessment, responds to a provision Congress included in statute for GAO to annually review selected DOD acquisition programs and efforts. It assesses the characteristics and performance of 106 of DOD's costliest weapon programs.

It further analyzes selected programs' implementation of leading practices for product development, as described in GAO-23-106222, among other objectives.

GAO identified programs for review based on cost and acquisition status; collected program documents; used a questionnaire to obtain data from program offices; and interviewed DOD officials.

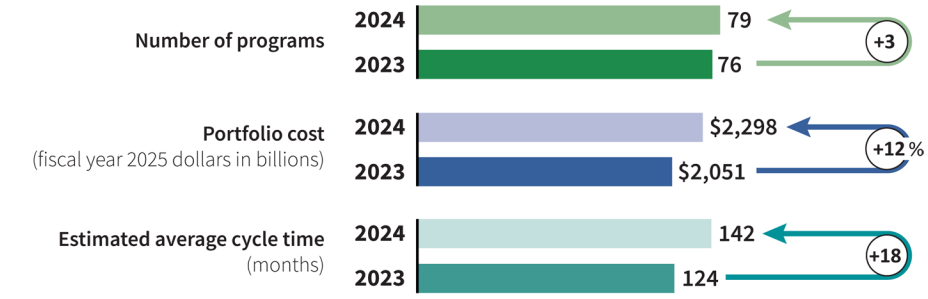
What GAO Found

The Department of Defense (DOD) continues to struggle with delivering innovative technologies quickly and within budget. Since its last annual assessment, GAO found:

- Program development delays and inflation, among other things, contributed to cost growth in the major defense acquisition program (MDAP) portfolio.
- Programs spent development time on efforts with low levels of maturity while using the middle tier of acquisition (MTA) pathway intended for speed.
- Future major weapon acquisitions (newer efforts that have yet to begin on a pathway) did not take full advantage of product development practices that lead to efficiencies.

Program challenges and inflation drove major defense acquisition program portfolio costs. Combined total estimates increased by $49.3 billion for 30 MDAPs also included in last year's report. The Air Force's Sentinel missile program accounted for over $36 billion (73 percent) of this increase.

Major Defense Acquisition Programs Continue to Delay Capability Deliveries



Source: GAO analysis of Department of Defense data. | GAO-25-107569

DOD plans to invest $44.5 billion across 20 of its most expensive MTA programs—intended to be completed in 2 to 5 years. Combined costs increased by about 3 percent for 14 programs we also assessed last year—despite one program reducing the number of units it intended to buy and another program ending earlier than planned.

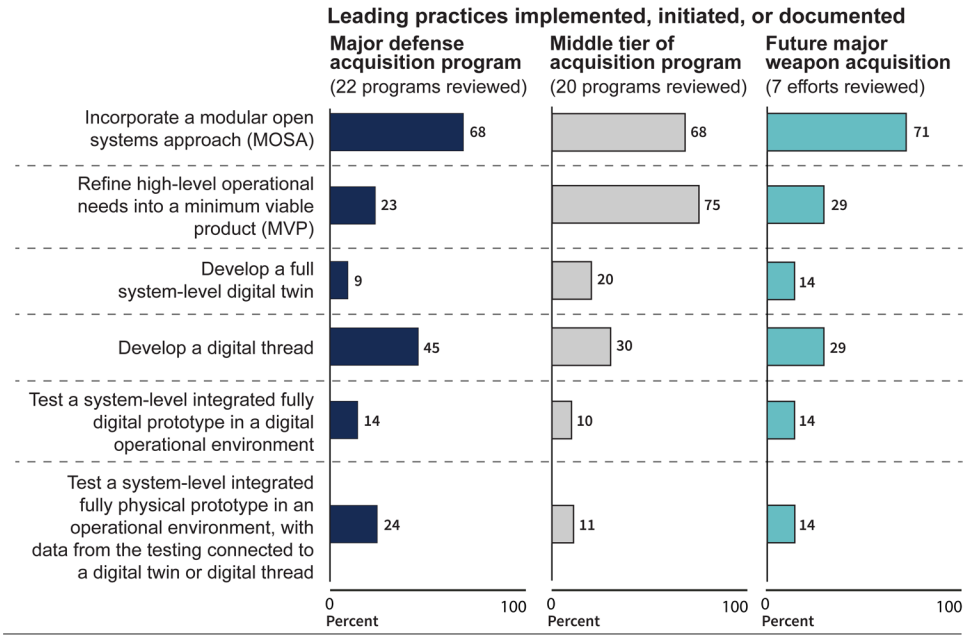
Further, schedule delays persisted. The expected time for MDAPs to provide even an initial capability increased this year by 18 months, up to almost 12 years from the program's start—an average that includes MDAPs that began as MTAs. Several MDAPs reported delays to expected initial operational capability by more than a year, while some MTA programs plan to deliver initial capability to the warfighter multiple years after the current MTA programs end.

Some programs used the MTA pathway to develop critical technologies. Some programs entered the MTA pathway—used for rapid prototyping and rapid fielding efforts—with low levels of technology maturity, resulting in lengthy development instead of the speed for which that pathway was designed. GAO also reviewed seven former MTA programs with low levels of technology maturity at MTA initiation. GAO found that none were ready for production or fielding when the effort ended and will continue to monitor this issue.

Future programs do not plan to fully use leading practices before initiation. Opportunities exist for future major weapon acquisitions that have yet to start on an adaptive acquisition pathway to leverage leading practices during the earliest stages of the program—before they become locked into rigid requirements, budgets, and development approaches. These future programs reported that they intended to incorporate leading practices generally at levels at or below the levels reported by current MDAPs or MTAs. This is because decision-makers in DOD and across the military services do not take steps to ensure that future programs include leading practices (discussed below). Incorporating leading practices prior to formally starting a new program can help programs take full advantage of the efficiencies they provide.

Most programs GAO reviewed do not fully implement leading practices in concert to achieve efficiencies. For example, most programs reported using a modular open systems approach—generally required by statute—which allows them to easily add or replace weapon parts over time. Few, however, reported plans to establish a minimum viable product (an initial set of capabilities that can be iterated upon), use digital twinning (a virtual representation of a physical product), or use digital threads (real-time data to inform decision-making). These practices are most effective when they are used together as part of an iterative approach to product development.

Most Programs GAO Reviewed Do Not Fully Implement Leading Practices, Including Future Efforts That Are Newer and Have Opportunities to Do So



Source: GAO analysis of programs' questionnaire responses. | GAO-25-107569

GAO made seven recommendations in March 2022 and December 2024 for DOD and military services to update acquisition policies and guidance to reflect leading practices that facilitate speed and innovation. DOD concurred with six recommendations and partially concurred with one to the Army, stating that the Army did not consider it fully applicable to a specific pathway. GAO maintains its applicability.

What GAO Recommends

GAO is recommending that DOD leadership take steps to ensure that future major weapon acquisition programs include leading practices for product development during the earliest stages of the programs. DOD concurred with the recommendations.

View GAO-25-107569. For more information, contact Shelby S. Oakley at oakleys@gao.gov.