

DEFENSE ACQUISITIONS

Assessments of Major Weapon Programs

Why GAO Did This Study

The weapons the Department of Defense (DOD) develops have no rival in superiority. How they are developed can be improved, without sacrificing the superiority of the outcome. GAO's reviews over the past 20 years have found consistent problems with weapon investments—cost increases, schedule delays and performance shortfalls—along with underlying causes, such as pressure on managers to promise more than they can deliver. The best practices of successful product developments offer a knowledge-based approach DOD can use to improve the way it develops new weapons.

This report is new for GAO, and draws on its work in best practices for product development. GAO's goal for this report is to provide congressional and DOD decision makers with an independent, knowledge-based assessment of defense programs that identifies potential risks, and offers an opportunity for action when a program's projected attainment of knowledge diverges from the best practice. It can also highlight those programs that employ practices worthy of emulation by other programs. GAO plans to update and issue this report annually to the congressional defense committees.

What GAO Recommends

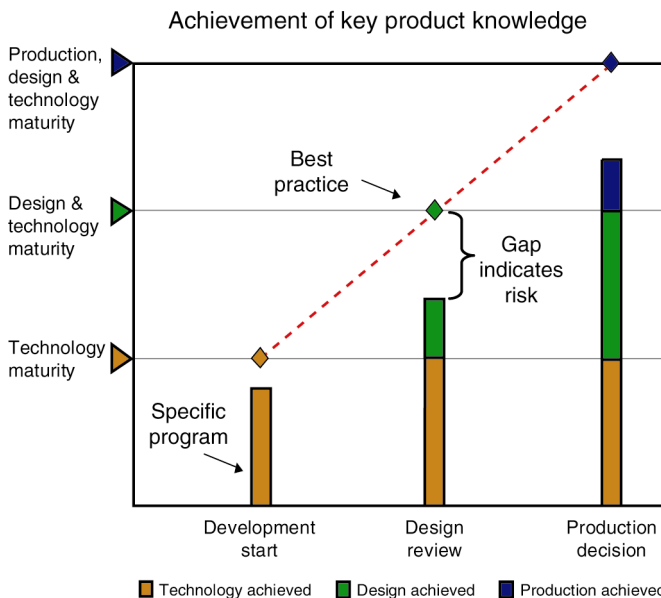
GAO makes no recommendations. Program office comments are included in the assessments of each individual program.

www.gao.gov/cgi-bin/getrpt?GAO-03-476.

To view the full report, including the scope and methodology, click on the link above. For more information, contact Paul Francis at (202) 512-4841 or francisp@gao.gov.

What GAO Found

GAO assessed 26 defense programs ranging from the Marine Corps' Advanced Amphibious Assault Vehicle to the Missile Defense Agency's Theater High Altitude Area Defense system. GAO's assessments are anchored in a knowledge-based approach to product development that reflects best practices of successful programs. This approach centers on attaining high levels of knowledge in three elements of a new product or weapon—technology, design, and production. If a program is not attaining this level of knowledge, it incurs increased risk of technical problems, accompanied by cost and schedule growth (see figure). If a program is falling short in one element, like technology maturity, it is harder to attain knowledge in succeeding elements.



All of the programs GAO assessed proceeded with less knowledge at critical junctures than suggested by best practices, although several came close to meeting best practice standards. GAO also found that programs generally did not track statistical process control data, a key indicator for production maturity. Program stakeholders can use these assessments to recognize the gaps in knowledge early and to take advantage of opportunities for constructive intervention—such as adjustments to schedule, trade-offs in requirements, and additional funding.

GAO has summarized the results of its assessments in an easy to read two-page format. Each two-page assessment contains a profile of the product that includes a description; a timeline of development; a baseline comparison of cost, schedule, and quantity changes to the program; and a graphical and narrative depiction of how the product development knowledge of an individual program compared to best practices. Each program office submitted comments and they are included with each individual assessment as appropriate.