



Highlights of [GAO-06-367](#), a report to congressional committees

## Why GAO Did This Study

The Department of Defense (DOD) anticipates that the Future Combat System (FCS) will modernize the U.S. Army's ability to move, shoot, and communicate on the battlefield. It is an impressive concept that is the product of holistic, non-traditional thinking. The Army describes FCS as one of the most complex weapon acquisition programs ever executed because it involves developing and integrating a family of 18 systems and an information network. Army leadership started the program early as part of its effort to change Army culture and believes that the program risks are manageable.

GAO is required by law to review the program annually. In this report, GAO analyzes FCS's acquisition business case and assesses requirements stability, technology maturity, soundness of the acquisition strategy, and reasonableness and affordability of program costs.

## What GAO Recommends

In order to improve the FCS's business case, GAO is making recommendations to the Secretary of Defense that involve setting clear expectations for progress and evaluating that progress by 2008. DOD partially concurred with our recommendations. This report also contains matters for congressional consideration to ensure FCS has a sound business case before future funding commitments are made.

[www.gao.gov/cgi-bin/getrpt?GAO-06-367](http://www.gao.gov/cgi-bin/getrpt?GAO-06-367).

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

## DEFENSE ACQUISITIONS

# Improved Business Case Is Needed for Future Combat System's Successful Outcome

## What GAO Found

The FCS entered the development phase in 2003 and has not yet reached the level of knowledge it should have attained in the pre-development stage. The elements of a sound business case—firm requirements, mature technologies, a knowledge-based acquisition strategy, a realistic cost estimate, and sufficient funding—are still not demonstrably present. The Army will continue building basic knowledge in areas such as requirements and technologies for several more years.

**Requirements stability.** The Army has reached agreement on FCS system of systems requirements—about 11,500—that help define how FCS units are expected to work as a whole. But the Army must continue to work out the technical feasibility and expected costs of the requirements for individual FCS systems. These requirements may not be completely stabilized until 2008. Until then, the Army expects the system-level requirements to change and to make trade-offs to offset technical risks and cost.

**Technology maturity.** None of FCS's 49 critical technologies was at a level of maturity recommended by DOD policy at the start of a program. Some technologies may not reach full maturity until after production starts. Not having firm requirements matched with mature technologies at the start of development is a key indicator of program risk. Also, the Army is depending on 52 complementary programs, each of which is essential for FCS to perform as intended. Some of these programs have significant technical challenges; some do not have the funding needed to complete development.

**Soundness of acquisition strategy for design and production.** The current acquisition strategy for FCS is improved over the original strategy but still calls for maturing technologies, designing systems, and preparing for production at the same time. Even if requirements and technologies proceed without incident, FCS design and production process maturity will not be demonstrated until after the production decision is made. Although production representative prototypes will not be available, the Army plans to test all FCS systems before committing to production. If problems are discovered in testing at that stage, they will be very expensive to correct.

**Reasonableness and affordability of program costs.** The estimated cost of the FCS program now stands at \$160.7 billion, a 76 percent increase since program start. This is a better estimate than the original, as it embodies a more realistic schedule and scope. Including the total investment for the 52 essential complementary programs, the FCS program cost estimate would reach the \$200 billion range. The Army has taken steps it believes will control FCS costs. Yet, the current level of knowledge about FCS is low, which makes it difficult to have a solid basis for cost projections. FCS's long-term affordability depends on the accuracy of cost estimates, an increased level of procurement funding, and the level of competing demands.