



Highlights of [GAO-08-1061T](#), a testimony before the Subcommittee on Seapower and Expeditionary Forces, Committee on Armed Services, House of Representatives

Why GAO Did This Study

The U.S. Navy is about to begin construction of the first Zumwalt-class destroyer (DDG 1000) amid considerable uncertainties and a high likelihood of cost and schedule growth. Significant cost growth and schedule delays are persistent problems that continue to compromise the Navy's shipbuilding goals. This testimony focuses on (1) the challenges faced by the DDG 1000 program and (2) the strain such challenges portend for long term shipbuilding plans.

What GAO Recommends

While GAO is making no new recommendations in this testimony, GAO has made numerous recommendations through the years to improve business cases for Navy acquisitions as well as other Department of Defense weapon acquisitions. The Department's acquisition policies largely incorporate these recommendations, but program execution has fallen short.

To view the full product, including the scope and methodology, click on [GAO-08-1061T](#). For more information, contact Paul Francis at (202) 512-4841 or francis@ga.gov.

DEFENSE ACQUISITIONS

Zumwalt-Class Destroyer Program Emblematic of Challenges Facing Navy Shipbuilding

What GAO Found

From the outset, DDG 1000 has faced a steep challenge framed by technical sophistication, demanding mission requirements, and a cost and schedule budget with little margin for error. The Navy has worked hard to manage the program within these competing goals. Yet recently, the Navy has discussed canceling construction of the remaining five DDG 1000 ships. Although a cancellation may stem from fiscal necessity, it reflects poorly on the acquisition, requirements, and funding processes that produced the DDG 1000 business case. Future success in shipbuilding depends on understanding why the weaknesses in the DDG 1000 business case, which now seem to threaten the program, did not prompt a similar re-examination several years ago.

The current program of record faces significant execution risks. The Navy will be pressed to complete a large amount of design work in time for the start of construction in October 2008. Demonstration of key components—particularly, the deckhouse, the volume search radar, and the integrated power system—have fallen behind. Despite restructuring the construction schedule, margins between several major events are gone. For example, land-based tests of the integrated power system are now scheduled after installation on the lead ships. Software development has also proven challenging; the Navy certified the most recent software release before it met about half of its requirements. Further, the full costs of constructing the two lead ships have not been entirely recognized or funded. The complexity and unique features of DDG 1000, along with the design work, testing, and actual construction experience to come, make cost growth beyond budgeted amounts likely.

The challenges confronted by DDG 1000 are not unique. Across the shipbuilding portfolio, executing programs within cost and schedule estimates remains problematic, largely because of unexecutable business cases that allow programs to start with a mismatch between scope and resources. Collectively, problems in individual programs erode the buying power of the Navy's long-range construction budget. The Navy compensates for near-term construction deferrals by increasing construction in the out-years, but this will require significant funding increases in the future, which are unlikely. Near-term tradeoffs could have long-term consequences for maintaining a rational balance between mission capability, presence, industrial base, and manning.

The Navy's consideration of cutting the DDG 1000 program back comes after over 10 years of development and \$13 billion have been invested. Clearly, changes are needed in how programs are conceptualized and approved. Although the elements needed for success are well known, unrealistic compromises are made to make business cases conform to competing demands. An examination of the root causes of unexecutable business cases must be done or shipbuilding programs will continue to produce unsatisfactory outcomes. This examination must begin with an honest appraisal of the competing demands made on new programs early in the acquisition process and how to strike a better balance between them.