



Highlights of [GAO-06-634](#), a report to congressional committees

Why GAO Did This Study

The National Aeronautics and Space Administration's (NASA) James Webb Space Telescope (JWST) is being designed to explore the origins and nature of the universe. It should allow scientists to look deeper into space—and thus farther back in time—than ever before. The program, however, has experienced cost growth of more than \$1 billion and its schedule has slipped nearly 2 years. NASA recently restructured the program and now anticipates a launch no sooner than June 2013. Because of the cost and schedule problems, under the Comptroller General's authority, we reviewed the JWST program to determine the extent to which this procurement follows NASA acquisition policy and GAO best practices for ensuring that adequate product knowledge is used to make informed investment decisions.

What GAO Recommends

GAO recommends that the NASA administrator: (1) direct the JWST program to fully apply a knowledge-based acquisition approach to ensure that adequate knowledge is attained at key decision points and also to hold the program accountable and (2) instruct the JWST program to continue to adhere to NASA acquisition policy and go forward only after demonstrating that it is meeting incremental knowledge markers and has sufficient funds to execute the program. NASA concurred with GAO's recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-06-634.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Allen Li at (202) 512-4841 or lia@gao.gov.

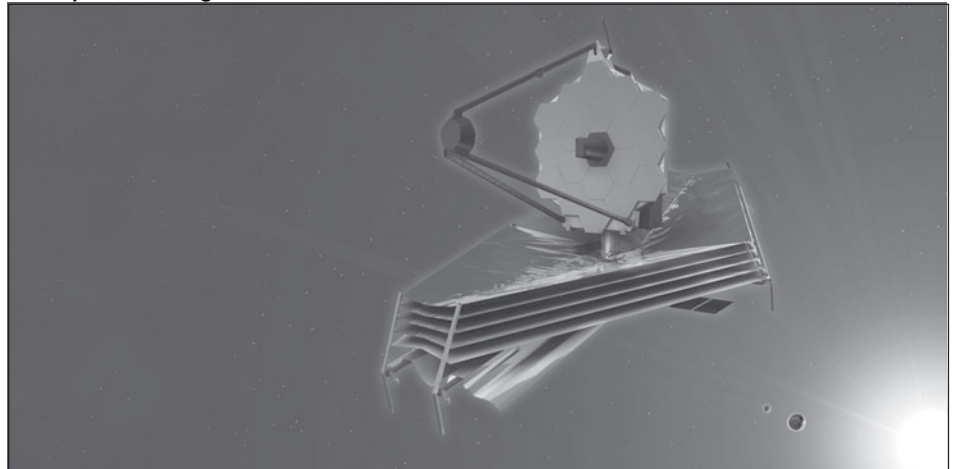
NASA'S JAMES WEBB SPACE TELESCOPE

Knowledge-Based Acquisition Approach Key to Addressing Program Challenges

What GAO Found

Although the JWST program recently revised its acquisition strategy to conform to NASA's acquisition policies, the program still faces considerable challenges because it has not fully implemented a knowledge-based approach, which our past work has shown is often a key factor in program success. In a recent report, we made recommendations that NASA take steps to ensure that projects follow a knowledge-based approach for product development. NASA concurred and revised its acquisition policy. When we initiated our work and before the JWST program's recently revised acquisition strategy, program officials intended to have NASA commit to program start, which is the end of the formulation phase and the beginning of the implementation phase, with immature technologies, according to best practices, and without a preliminary design. During our review, we discussed these shortfalls with NASA officials, and they revised their acquisition strategy to conform to NASA policy. However, the current strategy still does not fully incorporate a knowledge-based approach which ensures that resources match requirements in terms of knowledge, time, and money before program start. If program officials follow the current plan, the maturity of key technologies may not be adequately tested prior to program start. In addition, it appears the program will not have sufficient funding resources to ensure the program's success. In light of the fiscally constrained environment the federal government and NASA will face in the years ahead, adopting a knowledge-based approach will not only increase the JWST program's chances for success but also lay the foundation for comparison between competing programs.

Conceptual Drawing of NASA's JWST



Source: Northrop Grumman Corporation.