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Highlights

Highlights of [GAO-09-306SP](#), a report to congressional committees

Why GAO Did This Study

The National Aeronautics and Space Administration (NASA) plans to invest billions in the coming years in science and exploration space flight initiatives. The scientific and technical complexities inherent in NASA's mission create great challenges in managing its projects and controlling costs. In the past, NASA has had difficulty meeting cost, schedule, and performance objectives for some of its projects. The need to effectively manage projects will gain even more importance as NASA seeks to manage its wide-ranging portfolio in an increasingly constrained fiscal environment.

Per congressional direction, this report provides an independent assessment of selected NASA projects. In conducting this work, GAO compared projects against best practice criteria for system development including attainment of knowledge on technologies and design as well as various aspects of program management. The projects assessed are considered major acquisitions by NASA—each with a life-cycle cost of over \$250 million. No recommendations are provided.

To view the full product, including the scope and methodology, click on [GAO-09-306SP](#). For more information, contact Cristina Chaplain at (202) 512-4841 or chaplainc@gao.

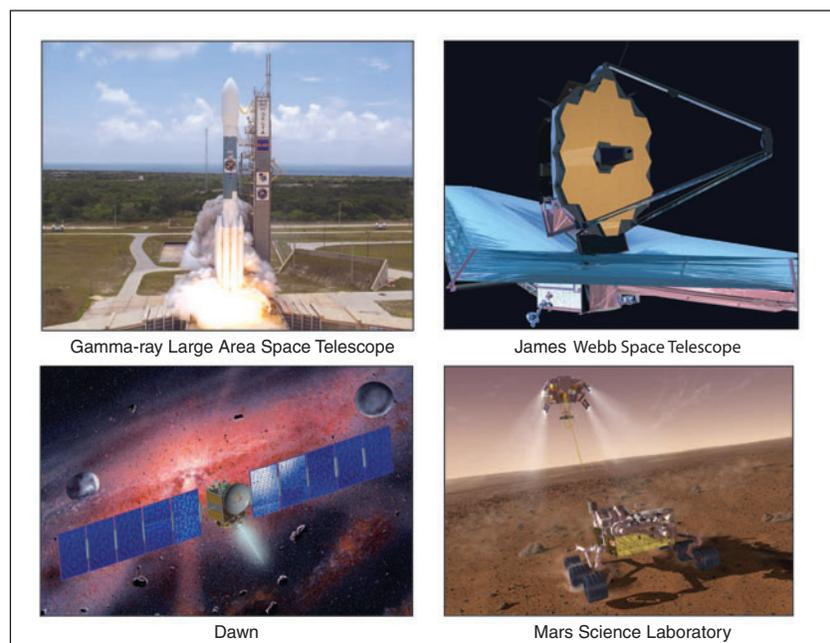
NASA

Assessments of Selected Large-Scale Projects

What GAO Found

GAO assessed 18 NASA projects with a combined life-cycle cost of more than \$50 billion. Of those, 10 out of 13 projects that had entered the implementation phase experienced significant cost and/or schedule growth. For these 10 projects, development costs increased by an average of 13 percent from baseline cost estimates that were established just 2 or 3 years ago and they had an average launch delay of 11-months. In some cases, cost growth was considerably higher than what is reported because it had occurred prior to the most recent baseline. Many of the projects we reviewed experienced challenges in developing new technologies or retrofitting older technologies as well as in managing their contractors, and more generally, understanding the risks and challenges they were up against when they started their efforts.

GAO's previous work has consistently shown that reducing the kinds of problems this assessment identifies in acquisition programs hinges on developing a sound business case for a project. In essence, this means establishing firm requirements, maturing technologies, and assuring other vital resources, such as time and funding, are sufficient before making long-term commitments to acquisitions. NASA has acted to adopt practices that would ensure programs proceed based on a sound business case and undertaken an array of initiatives aimed at improving program management, cost estimating, and contractor oversight. Continued attention to these efforts should help maximize NASA's acquisition investments.



Source: Kennedy Space Center, Cape Canaveral. JWST Project Office; NASA/JPL/McREL; Background: William K. Hartmann, UCLA; Mars Science Laboratory.