



Highlights of [GAO-05-718T](#), a testimony before the Senate Subcommittee on Science and Space, Committee on Commerce, Science, and Transportation, U.S. Senate

Why GAO Did This Study

The National Aeronautics and Space Administration's (NASA) space shuttle program is key to implementing the President's vision for space exploration, which calls for completing the assembly of the International Space Station (ISS) by the end of the decade. Currently, the space shuttle, which is to be retired after ISS assembly is completed, is the only launch system capable of transporting ISS components. To meet the goals of the President's vision and satisfy ISS's international partners, NASA is examining alternative launch vehicles and ISS configurations.

Retiring the space shuttle and, in the larger context, implementing the President's vision, will require NASA to rely on its most important asset—its workforce. Because maintaining a skilled workforce through retirement will be challenging, GAO was asked to discuss the actions NASA has taken to sustain a skilled space shuttle workforce and the challenges it faces in doing so—findings reported on in March 2005 (see *GAO, Space Shuttle: Actions Needed to Better Position NASA to Sustain Its Workforce through Retirement*, GAO-05-230).

What GAO Recommends

In its March 2005 report, GAO recommended that NASA take steps aimed at sustaining a critically skilled space shuttle workforce through retirement. NASA concurred with the recommendation.

www.gao.gov/cgi-bin/getrpt?GAO-05-718T.

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.

SPACE SHUTTLE

Status of NASA's Efforts to Address Workforce Issues Related to the Space Shuttle's Retirement

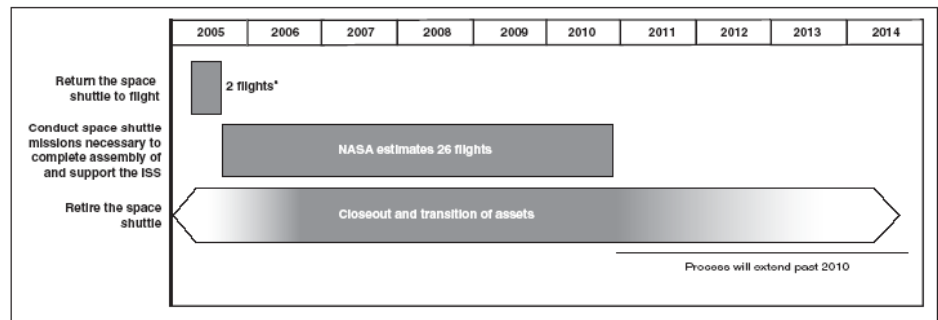
What GAO Found

While NASA recognizes the importance of sustaining a critically skilled workforce to support space shuttle operations, it has made limited progress toward developing a detailed long-term strategy to do so. At the time of our March 2005 review, the Space Shuttle Program had identified lessons learned from the retirement of comparable programs, and United Space Alliance—NASA's prime contractor for space shuttle operations—had begun to prepare for the impact of the space shuttle's retirement on its workforce. However, timely action to address workforce issues is critical given their potential impact on NASA-wide goals. Significant delays in implementing a strategy to sustain the space shuttle workforce would likely lead to larger problems, such as overstretched funding and failure to meet NASA program schedules. NASA and United Space Alliance acknowledge that sustaining their workforces will be difficult, particularly if a career path beyond the space shuttle's retirement is not apparent. Fiscal challenges facing the federal government also make it unclear whether funding for retention tools, such as bonuses, will be available.

Our March 2005 report identified several factors that have hampered the Space Shuttle Program's workforce planning efforts. For example, the program's near-term focus on returning the space shuttle safely to flight has delayed other efforts that will help the program determine its workforce requirements, such as assessing hardware and facility needs. Program officials also noted that due to uncertainties in implementing the President's vision for space exploration, requirements on which to base workforce planning efforts have yet to be defined. Despite these factors, our work on strategic workforce planning has shown that even when faced with uncertainty, successful organizations take steps, such as scenario planning, to better position themselves to meet future workforce requirements.

Since we issued our report and made our recommendation, NASA has publicly recognized, at its Integrated Space Operations Summit, that human capital management and critical skills retention will be a major challenge for the agency as it progresses toward retirement of the space shuttle.

Estimated Timeline for the Process of Retiring NASA's Space Shuttle



Source: NASA; GAO presentation.