



Highlights of [GAO-05-230](#), a report to congressional requesters

## Why GAO Did This Study

The President's vision for space exploration (Vision) directs the National Aeronautics and Space Administration (NASA) to retire the space shuttle following completion of the International Space Station, planned for the end of the decade. The retirement process will last several years and impact thousands of critically skilled NASA civil service and contractor employees that support the program. Key to implementing the Vision is NASA's ability to sustain this workforce to support safe space shuttle operations through retirement.

Because of the potential workforce issues that could affect the safety and effectiveness of operations through the space shuttle's retirement, GAO was asked to identify (1) the progress of efforts to develop a strategy for sustaining the space shuttle workforce through retirement and (2) factors that may have impeded these efforts.

## What GAO Recommends

GAO is recommending that NASA take steps aimed at better positioning the agency to sustain a critically skilled space shuttle workforce through retirement. In particular, we are recommending that the Space Shuttle Program begin identifying its future workforce needs based upon various future scenarios the program could face. In commenting on a draft of this report, NASA concurred with our recommendation.

[www.gao.gov/cgi-bin/getrpt?GAO-05-230](http://www.gao.gov/cgi-bin/getrpt?GAO-05-230).

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](mailto:lia@gao.gov).

## SPACE SHUTTLE

# Actions Needed to Better Position NASA to Sustain Its Workforce through Retirement

## What GAO Found

The Space Shuttle Program has made limited progress toward developing a detailed long-term strategy for sustaining its workforce through the space shuttle's retirement. The program has taken preliminary steps, including identifying the lessons learned from the retirement of programs comparable to the space shuttle, such as the Air Force Titan IV Rocket Program, to assist in its workforce planning efforts. Other efforts have been initiated or are planned, such as enlisting the help of human capital experts and revising the acquisition strategy for updating the space shuttle's propulsion system prime contracts; however, actions taken thus far have been limited. NASA's prime contractor for space shuttle operations has also taken some preliminary steps to begin to prepare for the impact of the space shuttle's retirement on its workforce, such as working with a consulting firm to conduct a comprehensive study of its workforce. However, its ability to progress with these efforts is reliant on NASA making decisions that impact contractor requirements through the remainder of the program. Making progress toward developing a detailed strategy, however, will be important given the potential impact that workforce problems would have on NASA-wide goals. For example, a delay to the space shuttle's schedule due to workforce problems would delay the agency's ability to proceed with space exploration activities. NASA and its prime contractor for space shuttle operations have already indicated that they could face challenges sustaining their critically skilled workforces if a career path beyond the space shuttle's retirement is not apparent. In addition, governmentwide fiscal realities call into question whether funding will be available to support the use of incentives, such as retention bonuses, that could help NASA sustain its space shuttle workforce.

Several factors hamper the Space Shuttle Program's ability to develop a detailed long-term strategy to sustain the critically skilled workforce necessary to support safe space shuttle operations through retirement. For example, because of the program's near-term focus on returning the space shuttle to flight, other efforts, such as assessing hardware and facility needs that will ultimately aid the program in determining workforce requirements, are being delayed. In addition, program officials indicated that they are faced with uncertainties regarding the implementation of future aspects of the Vision and lack the requirements needed on which to base their workforce planning efforts. Despite these factors, our prior work on strategic workforce planning has shown that there are steps, such as scenario planning, that successful organizations take to better position themselves to address future workforce needs.