

Why GAO Did This Study

In 2014, NASA awarded two firm-fixed-price contracts to Boeing and SpaceX, worth a combined total of up to \$6.8 billion, to develop crew transportation systems and conduct initial missions to the ISS. In July 2018, GAO found that both contractors continued to delay their certification dates and that further delays were likely. NASA must certify the contractors' crew transportation systems before the contractors can begin operational missions to the ISS. The contractors were originally required to provide NASA all the evidence it needed to certify that their systems met its requirements in 2017.

The House Committee on Appropriations included a provision in its 2017 report for GAO to continue to review NASA's human space exploration programs. This is the latest in a series of reports addressing the mandate. This report examines the extent to which the Commercial Crew Program and its contractors have made progress towards certification.

To do this work, GAO analyzed contracts, schedules, and other documentation and spoke with officials from the Commercial Crew Program, Boeing, and SpaceX.

What GAO Recommends

GAO continues to believe that NASA should develop a contingency plan to ensure uninterrupted access to the ISS if delays persist beyond September 2020. NASA generally agreed with GAO's findings.

View [GAO-19-504](#). For more information, contact Cristina T. Chaplain at (202) 512-4841 or chaplainc@gao.gov.

NASA COMMERCIAL CREW PROGRAM

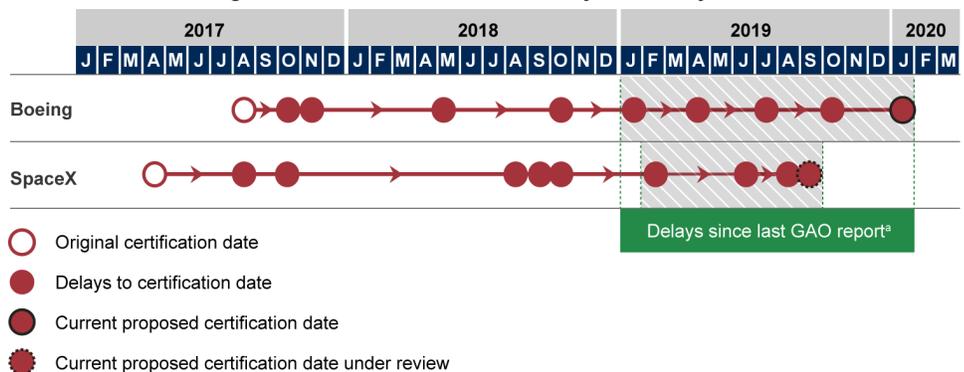
Schedule Uncertainty Persists for Start of Operational Missions to the International Space Station

What GAO Found

Both of the Commercial Crew Program's contractors, Boeing and SpaceX, have made progress on their crew transportation systems. However, neither is ready to begin carrying astronauts into space as both continue to experience delays to certification. Certification is a process that the National Aeronautics and Space Administration (NASA) will use to ensure that each contractor's spacecraft, launch vehicle, and ground support systems meet its requirements for human spaceflight before any operational missions to the International Space Station (ISS) can occur. Factors contributing to schedule uncertainty include:

Fluctuating schedules. As the contractors continue to build and test hardware—including SpaceX's March 2019 uncrewed test flight—their schedules for certification change frequently. As of May 2019, both contractors had delayed certification nine times, equating to more than 2 years from their original contracts (see figure). This includes several delays since GAO last reported in July 2018.

Commercial Crew Program: Contractor Certification Delays as of May 2019



Source: GAO analysis of National Aeronautics and Space Administration data. | GAO-19-504

^aGAO reported that Boeing's current proposed certification date was January 2019 and SpaceX's was February 2019. See [GAO-18-476](#).

Program Workload. NASA's ability to process certification data packages for its two contractors continues to create uncertainty about the timing of certification. The program has made progress conducting these reviews but much work remains. In addition, the program allowed both contractors to delay submitting evidence that they have met some requirements. This deferral has increased the amount of work remaining for the program prior to certification.

In February 2019, NASA acknowledged that delays to certification could continue, and announced plans to extend U.S. access to the ISS through September 2020 by purchasing seats on the Russian Soyuz vehicle. However, this arrangement does not fully address GAO's July 2018 recommendation to develop a contingency plan for ensuring access to the ISS until a Commercial Crew Program contractor is certified. NASA concurred with the recommendation but has not yet implemented it. Continued NASA attention on this issue is needed given the uncertainty associated with the final certification dates.