

A stylized graphic of a rocket launch with wings and stars.

# LAUNCH AMERICA

COMMERCIAL CREW TRANSPORTATION  
THE MISSION IS IN SIGHT

# 10 things to know about COMMERCIAL CREW TRANSPORTATION

**The Goal:** CCtCap stands for Commercial Crew Transportation Capability. It is a contract for one or more American aerospace companies to complete development of a human space transportation system capable of carrying people into orbit, specifically to transport astronauts to the International Space Station and return them safely to Earth. To be certified to carry NASA astronauts, the systems must meet NASA safety standards. It's the last step in a cycle of five separate spacecraft transportation development Space Act Agreements and certification contracts NASA began in 2010.

**How it's Done:** NASA's Commercial Crew Program (CCP) will implement CCtCap in a similar manner used during each previous stage of the development process – as a public-private partnership. The industry partner is responsible for the development of its own spaceflight system, which it will own and operate. NASA's expert team of engineers and spaceflight specialists are working with the companies and certifying the systems to ensure any new crew transportation system is safe and reliable for NASA astronauts. For previous human spaceflight systems including the space shuttle, NASA designed, owned, and operated the systems, and the agency was responsible for the overall development.

**Buying a Service:** Once development is complete, NASA plans to buy a service – simply put, like getting a taxi ride to low-Earth orbit. Because the companies will own and operate the systems, they will be able to sell human space transportation services to other customers in addition to NASA, thereby reducing the costs.

**Innovation:** This new process lets industry partners apply innovations and corporate expertise into their designs. NASA provides a top-level set of requirements the companies must meet, but how they meet those requirements is up to them. Each company thoroughly tests its materials and mechanisms to prove its design is sound, and NASA certifies that the systems meet the agency's requirements.

**Commercial Investment:** Industry partners are investing their own resources into the development, too. In this way, NASA and industry share the cost of development and both are invested in and committed to a successful outcome.

**Contract Terms:** NASA's contract, whether with one company or more, will include at least one crewed flight test per company to verify the integrated rocket and spacecraft system can launch, maneuver in orbit, and dock to the space station, as well as validate all its systems perform as expected. Once the test program has been successfully completed and the systems achieve NASA certification, the contractor/s also conduct at least two, and as many as six, crewed missions to the space station, effectively ending the nation's reliance on foreign providers.

**Award:** NASA has not specified a set number of awards under CCtCap. In late August or September, the agency will select the company or companies that will build an operational space transportation system. While the procurement process is ongoing, the agency cannot answer specific questions about the proposals received or the award decision-making process.

**Open Competition:** CCtCap is an open competition using FAR-based procedures that will result in a firm fixed-price contract. Any U.S. company could have submitted a proposal for a CCtCap contract. It is not limited to companies that earned previous contracts. However, all companies that submitted proposals should have demonstrated a level of maturity equivalent to the first phase of NASA certification efforts during the agency's Certification Products Contract (CPC)

**Safe Haven:** The spacecraft must be able to serve as a lifeboat, able to safely and quickly evacuate the space station's crew in an emergency. It also must demonstrate it can serve as a 24-hour safe haven during an emergency in space and be able to stay docked to the station for at least 210 days.

**Journey to Mars:** By encouraging private companies to provide human transportation services to and from low-Earth orbit – a region NASA's been visiting since 1962 – the nation's space agency can focus on getting the most research and experience out of America's investment in the International Space Station. NASA also can focus on building spacecraft and rockets for deep space missions, including flights to Mars in the 2030s.