



Commercial Crew Program

NASA's Commercial Crew Program (CCP) is an innovative partnership to help the aerospace industry in the United States develop space transportation systems that can safely launch humans to low-Earth orbit and potentially astronauts to the International Space Station (ISS).

CCP builds on NASA's 50-year history of human spaceflight by developing a new transportation industry geared toward opening space travel up to more people than ever before.

A little more than one year after the retirement of the space shuttle, NASA returned cargo resupply missions launched from U.S. soil. The agency acquired transportation services through commercial providers and brought the jobs associated with this work back to America. Through CCP, NASA's commercial space partners are making important progress toward a launch of astronauts from U.S. soil by 2017.

Using a non-traditional approach featuring public partnerships, NASA is facilitating the development of several designs of spacecraft, enabling NASA

to choose which ones it wants to use to send astronauts into space. The end result could be multiple systems providing safe, reliable and affordable access to space. CCP integrates industry's innovative capabilities to advance technology with NASA's five decades of human spaceflight experience.

NASA requirements for potential commercial crew space transportation include delivering four astronaut crew members and equipment to the space station and returning them to Earth at least twice a year. The providers also must assure crew safety in the event of an emergency on the launch pad and during launch and ascent to orbit. The spacecraft 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.

Aerospace companies have the freedom to let technological ingenuity flourish in developing and demonstrating space transportation capabilities. NASA's technical expertise and resources are

accessible to companies throughout the development phases. CCP developed and released requirements and set safety standards for launches, in-orbit operations, landings and missions. Several aerospace companies are starting programs aimed at fulfilling NASA's CCP goals.

Although this collaborative approach with commercial companies has not been implemented before for human spaceflight, it is similar to other successful NASA programs, such as the Launch Services Program, which buys launch vehicles commercially for a wide variety of scientific, non-crewed spacecraft.

Through this program, NASA also is spurring economic growth as potential new space markets are created. The costs of developing human-capable spacecraft will be shared because the spacecraft companies can sell flights to customers other than NASA.

CCP is primarily based at NASA's Kennedy Space Center in Florida, the space agency's launch site for crewed space missions.

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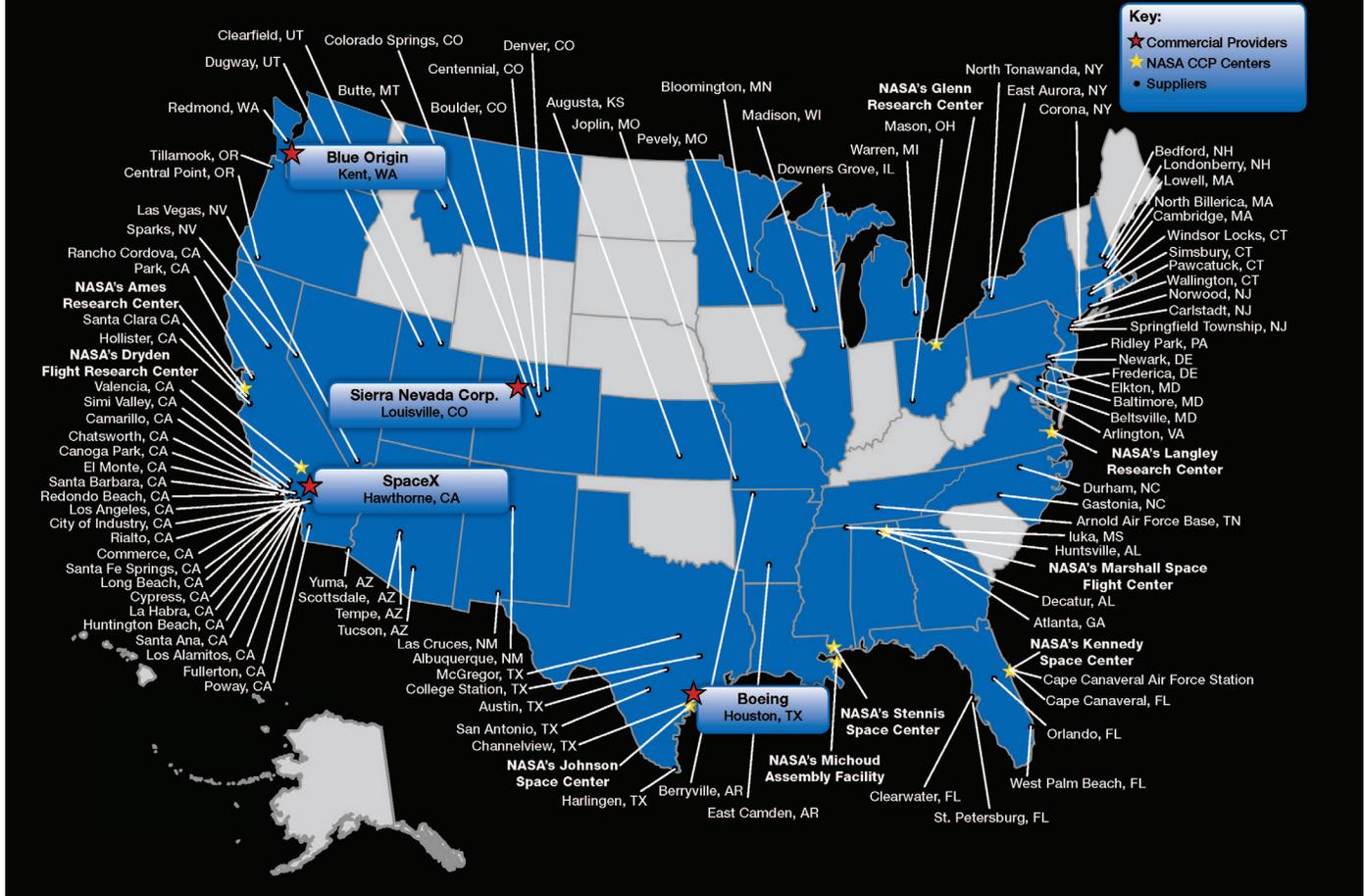
Commercial Crew Integrated Capability Partners

Through NASA's Commercial Crew Integrated Capability (CCICap) initiative, The Boeing Company, Sierra Nevada Corp. (SNC) Space Systems and Space Exploration Technologies (SpaceX) are advancing integrated crew transportation systems that could become available for the government or commercial customers in the future.



Commercial Providers and Suppliers

There are more than 100 aerospace providers and suppliers working in 34 states to get American astronauts back into space on U.S. led spacecraft and rockets.



The program began as the Space Transportation Planning Office, which produced commercial crew strategies and planning. There are about 200 people working in CCP, with almost half involved in the work at other NASA centers, including Johnson Space Center in Houston.

To accelerate the program's efforts and reduce the gap in American human spaceflight capabilities, NASA awarded more than \$1.4 billion in Space Act Agreements (SAAs) under two Commercial Crew Development (CCDev) and the Commercial Crew Integrated Capability (CCiCap) initiatives.

The agreements are helping several companies move promising concepts forward in subsystem, system and integrated system design efforts. Those concepts range from capsules to winged

spacecraft and use a variety of launch vehicles.

NASA also selected three companies to conduct activities under the first contract phase, known as the Certification Products Contract (CPC). The contracts, valued around \$30 million total, are enabling future certification of commercial systems as safe to carry NASA astronauts to the station. Advances made by companies during CPC are

beginning the process of ensuring integrated crew transportation systems meet agency safety requirements and standards.

The second phase of certification efforts, called Commercial Crew Transportation Capability (CCtCap), will result in separately competed contracts awarded in 2014. Services contracts will follow.

More online

To find out more about the beginning of a new era in space exploration and NASA's Commercial Crew Program, go to www.nasa.gov/commercialcrew.

To view the latest Kennedy Space Center fact sheets, go to <http://go.nasa.gov/11KR0r6>.

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