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Commercial Crew - Commercial ISS Programs

Lisa Colloredo
Deputy Program Manager, NASA

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Deputy Program Manager

COMMERCIAL CREW
Commercial ISS Programs
The NASA vision of commercial human spaceflight to low-Earth orbit is a robust, vibrant enterprise with many launch providers and a wide range of government and public uses.
GOAL

A successful commercial human space transportation system will fortify the International Space Station, allow NASA to focus on its Moon mission, reduce the cost of access to space and significantly contribute to the world’s economy.

CCP’s NASA Purpose
Safe transport of NASA and NASA-sponsored astronauts to and from the space station

CCP’s Public Purpose
Support the development of non-NASA markets for commercial human transportation services to and from low-Earth orbit
Unique Government-Industry Model

- Defined goal: end-to-end transportation solution
- Clearly stated safety requirements
- Competitive selection of service providers
- Firm-fixed price contracts
- Milestone-based agreements that support competition, development, testing and demonstration of spaceflight systems
- Range of launch vehicle and spacecraft combinations
- Commercial industry investment
Inter-Agency Support of Commercial Spaceflight

Federal Aviation Administration (FAA) and Department of Commerce (DOC)
- “Government Astronaut” classification
- Third-party indemnification
- Mission licensing: launch, re-entry, launch site and operator
- Public health and safety protections
- Jurisdiction and authority during different phases of flight
- Cross waivers for government payloads/property

Department of Defense (DoD)
- Launch and Entry Steering Group
- Synergizing certification efforts

Federal Communications Commission (FCC) & National Telecommunications and Information Administration (NTIA)
- Ensure secure communication pathway availability
- Spectrum usage and authorization

National Transportation and Safety Board (NTSB)
- Independent investigation authority
NASA Crew Advise and Assistance

- Veteran astronauts work directly with Boeing and SpaceX as part of team
- Provide human in-the-loop understanding and insight
- Share best practices
- Offer advise based on previous experience with variety of spacecraft and launch vehicles
- Help prepare for both test and operational missions
### Progress Timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Crew Insight and Feedback, Parachute Testing, Launch Pad Modifications, DM-1 Spacecraft Qual. Testing, Prop Module, Crew Training Ongoing, Order PCMs 3-6, GVT/EQT TRK.</td>
</tr>
</tbody>
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**Timeline Notes:**
- **First PCM** or **First PCM Complete** indicates the initial step in a series of events.
- **Test Flights to ISS** are scheduled for the crew to travel to the International Space Station (ISS).
- **Annual Review** and **Crew Assignment** are ongoing processes throughout the years.
- **Test Flights to ISS** and **Spacecraft Qual. Testing** are ongoing throughout the years.
- **Crew Insight and Feedback** are provided throughout the years.
- **Agency Certification Approvals** are pending at the end of the timeline.
NASA will continue working to evolve the relationship between government and industry.

Commercial Crew will help to define safety, mitigate risks and advance commercial spaceflight capabilities in order to support the International Space Station.
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