



Commercial Crew Program NAC Status Brief

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Program Goals

Commercial Crew Program Goal

- ❖ Facilitate the development of a U.S. commercial crew space transportation capability with the goal of achieving safe, reliable, and cost effective access to and from low Earth orbit (LEO) and the ISS.

CCiCap Strategic Goals

- ❖ Advance multiple integrated crew transportation systems (CTS) to crewed orbital demo by mid-decade
- ❖ Commercial Provider investment
- ❖ Affordable development costs leading to cost effective access to LEO
 - Develop a capability to LEO that supports potential customers



CCiCap SAA Structure



❖ CCIcap is divided into two periods:

- Base Period: 21 months, August 2012 – May 2014. Multiple awards with expected range of \$300M – \$500M per award.
- Optional Milestones Period: Following the Base Period through orbital crewed flight demonstration. Two sets of optional milestones are requested.
 - Optimum Funding Profile (during optional period): An optimized schedule to achieve a crewed orbital flight demonstration by the middle of the decade.
 - Fixed Funding (during optional period): A fixed funding amount of \$400M/yr per award available for optional milestones through crewed orbital flight demonstration.



CCiCap SAA Goals



❖ Base Period Goals

- Detailed integrated design of CTS
- Demonstrate a process to analyze, quantify, and understand risks
- Risk reduction activities (e.g., uncrewed flight test, pad abort test, drop test)
- Criteria and plan for industry certification of crewed demonstration flight

❖ Optional Milestone Goals

- Complete test activities leading to industry certification for demonstration flight
- Final milestone of an orbital crewed demonstration flight
 - Mission Duration: Minimum of 3 days on-orbit
 - Orbital Altitude: Achieve an orbit with a minimum altitude of 200nm
 - Demonstrate controlled orbital maneuverability (for example: a simulated rendezvous)
 - Demonstrate system sizing sufficient for four crew members

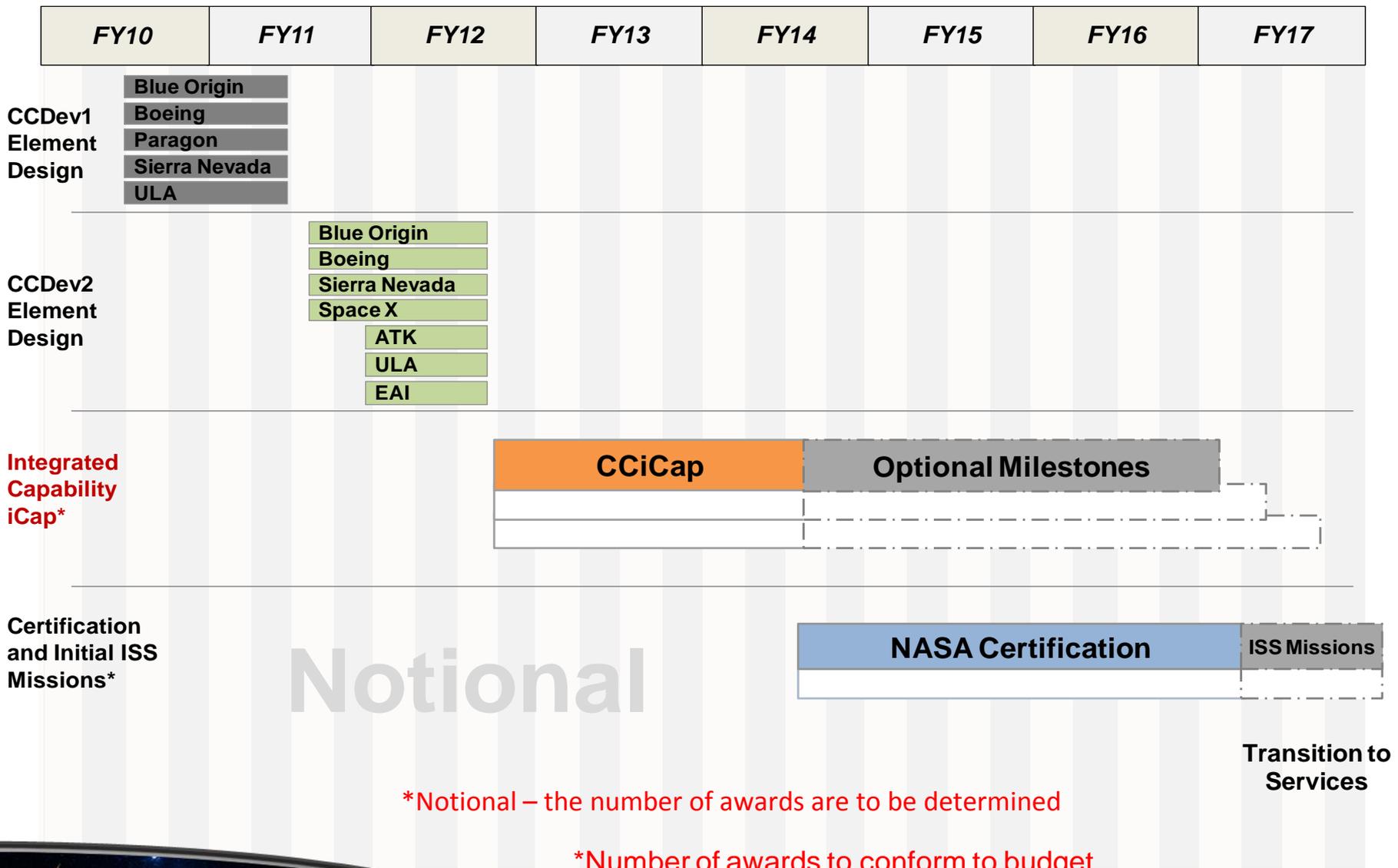
❖ Safety Goals

- Foster a strong safety culture in the commercial space flight industry
- Demonstrate safety processes that include healthy tension, strong internal checks and balances, and value added independent review





Overall Strategy



Notional

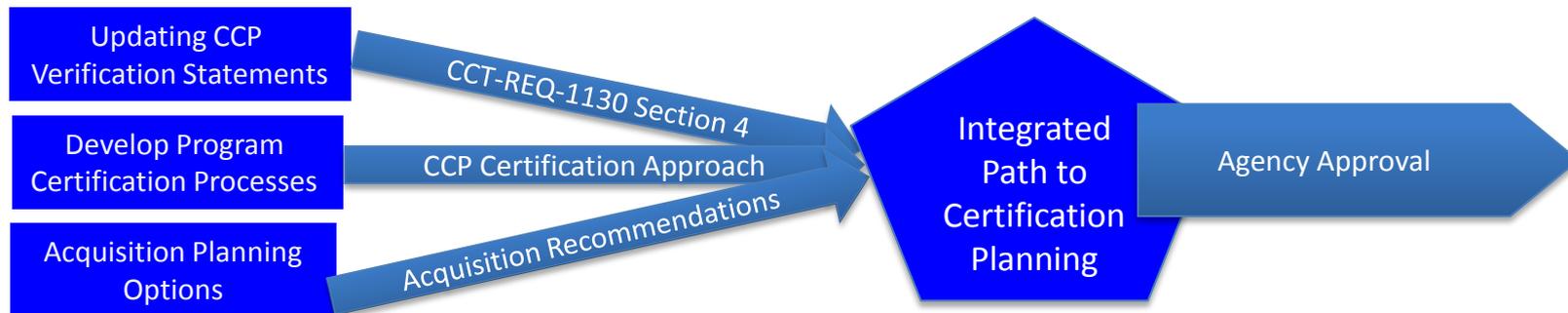
*Notional – the number of awards are to be determined

*Number of awards to conform to budget



Certification Planning

- ❖ Content and scope of certification activity is evolving
- ❖ Several near-term certification activities are in work
 - Reviewing and updating CCP verification statements
 - Developing Program certification processes and CTS Certification Plan
 - CCP Acquisition Planning Team developing and assessing options that enable NASA certification and ISS services



Summary



- ❖ CCP has laid out a near term path to continuing integrated design
- ❖ CCP has begun detailed planning leading to an integrated path for a comprehensive certification process

- ❖ Bottom Line:
 - Overall success of the CCP (both Government and Industry) is predicated upon a comprehensive and streamline certification process



