

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Commercial Human Spaceflight Programmes (2)

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NASA'S DEVELOPMENT OF COMMERCIAL LOW EARTH ORBIT

Abstract

The near future of human spaceflight in low Earth orbit (LEO) is on the cusp of a major transformation. Driven by NASA's vision of partnerships between the agency and private industry to develop safe, reliable, and cost-effective commercial LEO destinations (CLDs) owned and operated by the private sector, this paradigm shift in the nature of human spaceflight is led by NASA's Commercial LEO Development Program (CLDP). This paper will provide an overview and status of CLDP, established to ensure a sustained access to and presence in LEO for NASA and its international partners, facilitating a new era of scientific discovery in LEO after retirement of the International Space Station (ISS), currently planned for 2030. NASA's goal is a LEO marketplace where NASA is one of many customers, and the private sector leads the way to develop free-flying orbital destination capabilities. NASA is using a two-phase strategy:

- Phase 1 – A period of formulation and design by private industry, in coordination with NASA, of CLD capabilities determined to be most suitable for potential Government and private sector customer needs; and
- Phase 2 – A competitive procurement by NASA of services in LEO which would include certification by NASA of the transportation and accommodations of NASA crew and payloads on CLDs.

Numerous CLDs as well as additional commercial LEO technologies and capabilities are in development with NASA through both funded and unfunded agreements. This paper will describe the role that NASA is playing to encourage development of CLD services in LEO and demand for those services, status of Phase 1 development, and NASA's plan for Phase 2. The paper will also describe questions to be addressed in the transition of the government-operated ISS to CLDs, such as whether an international partnership would continue.