National Aeronautics and Space Administration

Office of the Administrator
Mary W. Jackson NASA Headquarters
Washington, DC 20546-0001

March 14, 2023

General Lester L. Lyles, USAF (Ret.)
Chair, NASA Advisory Council
NASA Headquarters
Washington, DC 20546

Dear General Lyles:

Enclosed is NASA's response to the NASA Advisory Council (NAC) Recommendation 2022-01-01: Financial Commitment to the Commercial low-Earth orbit Destinations. This recommendation was publicly deliberated during the NAC virtual meeting held on March 1-2, 2022.

Please do not hesitate to contact me if you or the Council would like further background on NASA's response.

I look forward to receiving continued advice from the NAC.

Sincerely,

Bill Nelson

Enclosure

NASA Advisory Council Recommendation

Financial Commitment to the Commercial LEO Destinations
2022-01-01

Name of Committee:	Human Exploration and Operations Committee
Chair of Committee:	Mr. Wayne Hale
Date of Council Public Deliberation:	March 1, 2022
Short Title of Recommendation:	Financial Commitment to the Commercial LEO Destinations

Recommendation:
The Council recommends that NASA should determine its demand for low-Earth orbit (LEO) services as soon as practical, but well in advance of International Space Station (ISS) retirement. This demand should be translated into a contractual commitment as soon as practical. NASA should begin transitioning its needs to the commercial providers well before the ISS is retired.

Major Reasons for the Recommendation:
Business viability of the Commercial LEO Destinations (CLDs) is as important as technical viability. The CLD contractors will regard NASA as an anchor tenant. A firm commitment by NASA will be essential in enabling the CLDs to attract additional customers and close the business case.

Consequences of No Action on the Recommendation:
Long term availability of commercial LEO services depends on the business viability of the services providers. A lack of firm commitment by NASA as a customer will dramatically reduce the business viability of the providers.

NASA Response:
NASA concurs. NASA has developed a long-term strategy to enable a robust LEO economy. Part of this long-term strategy is to take a phased approach on the design and development of CLDs. A phased approach allows NASA to explore designs that are mutually beneficial to NASA and industry. It also helps to reduce risk by enabling industry to mature concepts and NASA to mature future requirements prior to the commitment of a services contract.

CLD Phase 1 is well underway, and NASA already has agreements in place investing in the design and development of four future commercial LEO destinations. Phase 1 is the 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.

CLD Phase 2 is planned to be 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 CLD. In Phase 2, NASA would seek to purchase via a Federal Acquisition Regulation-based acquisition an end-to-end CLD service including transportation to/from and accommodation of NASA crew on CLD; transportation of NASA payloads to CLD; transportation of samples, materials, and crew equipment to CLD and return to Earth; and disposal of waste and payloads no longer required by NASA.

NASA has communicated its preliminary demand for LEO destination services to industry already. This demand includes the need for at least two NASA crewmembers on-orbit continuously and the ability to perform approximately 200 research experiments, both internal pressurized experiments and external unpressurized experiments. NASA has also stated the plan to spend approximately $1 billion annually on LEO destination services (see "ISS Transition Report" transmitted to Congress in January 2022).

While this demand is preliminary, NASA is in the process of refining our anticipated service requirements, which will form the basis for a contractual commitment as part of the Phase 2 procurement cited above. NASA intends to initiate the Phase 2 procurement in the mid-part of this decade. NASA believes that the results of Phase 1 are needed to fully inform the Phase 2 procurement.

NASA's goal is to have one or more CLDs providing services by 2028. With the retirement of the ISS planned for 2030, our strategy includes an approximately two-year overlap period with the ISS to begin the process of transitioning our needs to CLD providers as soon as practicable.