

Transportation Command considers next steps for potential space logistics

By Michael P. Kleiman, U.S. Transportation Command Public Affairs 30 November 2020



Starship, first test vehicle. Transporting cargo in the cosmos may seem unimaginable now, but the innovative capability could become a reality in the not too distant future. (Courtesy of SpaceX Flickr Photostream)

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SCOTT AIR FORCE BASE, Ill. – Transporting cargo in the cosmos may seem unimaginable now, but the innovative capability could become a reality in the not too distant future.

U.S. Transportation Command (USTRANSCOM) certainly thinks so.

“Think about moving 80 short tons, the equivalent of a C-17 payload, anywhere on the globe in less than an hour,” U.S. Army Gen. Stephen R. Lyons, commander, USTRANSCOM, said during his virtual remarks at the Airlift/Tanker Association’s (A/TA) Conference on Oct. 28. “We should challenge ourselves to think differently about how we will project the force in the future, and how rocket cargo could be part of that.

Lyons reiterated the combatant command’s commitment in partnering with industry as they develop – within the next 5 to 10 years – a space transportation prototype that may allow the command to complement its air, sea, and land logistics operations.

"I've seen how fast some commercial space transportation providers are developing game-changing capabilities, and a 2021 proof of principle to deliver, perhaps, humanitarian assistance somewhere around globe, on a rocket transport mission, is well within the realm of possibility," Lyons told the virtual audience. Proof of principle refers to early stage trials and experiments.

Three weeks earlier, as a keynote speaker at the virtual National Defense Transportation Association Fall Meeting, Lyons initially announced the organization's interest in investigating space's potential to rapidly move cargo during time-critical contingencies or transport humanitarian aid.

"USTRANSCOM has identified that commercial, point-to-point space transportation may provide a unique capability, enabling the command to better support moving equipment and eventually people quickly around the globe to meet our national objectives, global emergencies, and natural disasters," said U.S. Air Force Lt. Col. Nirav Lad, principal investigator for space transportation Cooperative Research and Development Agreements (CRADA), USTRANSCOM's Strategic Plans, Policy and Logistics Directorate. "We continue to assess point-to-point space transportation from multiple perspectives to determine the viability for USTRANSCOM to be among the customers of a healthy commercial space transportation market."

USTRANSCOM's next steps in assessing a potential space logistics capability commences next year. First, the command plans to continue leveraging collaborations with industry and fellow combatant commands to enable a long-range, point-to-point, proof of concept trial in 2021. Testing will allow USTRANSCOM and the Department of Defense (DOD) to evaluate the capabilities, limitations, and technical/policy gaps, as well as exercise current policies and procedures.

Second, doctrinal, diplomatic, statutory, and organizational issues will be addressed to facilitate the standardization of high-frequency, commercial, point-to-point, space launches. USTRANSCOM is examining these subjects and appraising capability usefulness to meet national defense needs, while commercial space transportation providers lead and advance research and development to meet commercial launch requirements.

"Forward thinking like this enhances the options of dynamic force employment. It also places global logistics at the tip of the spear and will provide commanders new options," stated U.S. Air Force Col. Max Bremer, North American Aerospace Defense Command /U.S. Northern Command

and U.S. Space Command liaison officer to USTRANSCOM. "The use of space for military logistics could be the biggest game changer since the development of cargo aircraft."

On March 3, 2020, USTRANSCOM signed a CRADA with Space Exploration Technologies Corporation (SpaceX), titled Space Transportation Capability for the Joint Force. The two-year collaborative arrangement helps the command assess space launch capability and capacity. It also allows for the collaborative investigation of using commercial space transportation mode to expedite global delivery of DOD materiel and personnel.

Five weeks after signing the SpaceX CRADA, on April 10, 2020, the command executed another one with Exploration Architecture Corporation (XArc), titled Space Transportation Basing and Support Concepts for the Defense Transportation System (DTS). This two-year agreement assists the command in understanding the requirements to leverage space transportation systems-basing and support DTS concepts. In addition, the CRADA enables the collaborative investigation of supporting technologies and infrastructure interfaces of ground and orbit facilities to support space transportation to expedite delivery of DOD materiel and personnel.

The partnership with industry allows USTRANSCOM to assess the business case for both government and commercial parties to enter into long-term space transportation surge capability agreements, similar to the current Civil Reserve Air Fleet (CRAF) agreement.

"We are thinking about this in a very similar model to CRAF, where you have a commercial partner that presents capability to the Department of Defense," said Lyons. "Like CRAF today, we will be able to leverage commercial development of the rocket capability in near the future."

The CRAF is a cooperative, voluntary program involving the Department of Transportation, DOD, and the U.S. civil air carrier industry in a partnership to augment DOD aircraft capability during a national defense-related crisis where air carriers volunteer their aircraft to the CRAF program through contractual agreements with USTRANSCOM.

Finishing his comments to the A/TA virtual audience, Lyons expressed his optimism for space logistics to happen in the near future and the appreciation he has for the entire Joint Deployment and Distribution Enterprise.

"This is not a fantasy," Lyons said. "They're making a lot of progress ... it's

a very exciting time and I look forward to being fully engaged in the journey.”

In his concluding comments Lyons lauded the A/TA and Air Mobility Command, “Please allow me to express my gratitude for all that the Mobility Air Force does for our Joint Force, and I remain your number one fan. It is incredible to watch this machine every single day and what you're capable of. And from the other combatant commanders, from the Chairman of the Joint Chiefs of Staff and from the Secretary of Defense, let me pass on their personal gratitude for all that you do every day.”

USTRANSCOM exists as a warfighting combatant command to project and sustain military power at a time and place of the nation's choosing. Powered by dedicated men and women, USTRANSCOM underwrites the lethality of the Joint Force, advances American interests around the globe, and provides our nation's leaders with strategic flexibility to select from multiple options, while creating multiple dilemmas for our adversaries