

# US military hopes one day to move supplies, maybe troops, on SpaceX's Starship

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While NASA is rooting for SpaceX to achieve Starship success so it can land humans on the moon, the U.S. military has plans of their own for the massive rocket that could include launches from Florida's Space

Coast.

Elon Musk's next-generation rocket currently in development at SpaceX's southeast Texas facilities is gearing up for its third suborbital test flight as soon as this month after its first two ended in explosions last year. It's part of the company's long-term plans for a completely reusable spacecraft with more payload capacity into space than any other rocket ever.

Starship's potential also includes flying quickly from one spot on Earth to another, which is what has the Department of Defense interested. That was discussed during the Space Mobility Conference held by the Space Force at the Orange County Convention Center earlier this month.

"Rocket cargo point-to-point is not the reason we're building Starship," said SpaceX senior adviser Gary Henry. "We're building Starship to get to Mars." [But] "what we're finding is it's a system we're putting together that has profound impacts for national security, and one of them just happens to be rocket point-to-point."

The big driver of that is the potential the military could use the rocket to send supplies, and perhaps even troops in the future, to anywhere in the world in less than an hour. Defense department officials began looking at the idea two decades ago but only recently has it come closer to reality.

"Envision a number of containers sitting in a warehouse down in [Cape] Canaveral, we go to an alert level, we pull them up, you start putting them on the rocket," said Gregory Spanjers, chief scientist for the U.S. Air Force Research Lab. "At each successive alert level, your time to launch shrinks and shrinks and shrinks, and we can we get it down to one hour."

Spanjers said teams have already been making mockups of Starship's cargo bay figuring out how to take advantage of a quick supply run.

Speed is the obvious draw, but the cost is dropping and getting closer to existing expenses for moving supplies.

Henry said SpaceX's current fleet of Falcon 9 rockets with boosters originally designed to fly 10 times, but with future boosters that might go up as many as 40 times, have brought the price of flying payloads from about \$4,500 per pound to about \$900 per pound.

The Falcon 9's have a capacity of 44,000 pounds to 132,000 pounds.

"But Starship is a very different animal," he said. "Starship is fundamentally meant to be rapidly reusable ... We designed the vehicle from the outset to fly 100 times, not 10 times, and it's going to deliver [220,000 to 250,000 pounds] 100 to 115 metric tons to low-Earth orbit."

He said Starship would bring the cost trajectory down to a starting point of \$90 per pound. Musk has said he could see that dropping even more to \$9 a pound down the road.

Henry said these are prices close to what one gets using a C-17 cargo plane transport, the supply workhorse of the military, but with flights that take hours instead of minutes.

He also stressed just how often SpaceX plans to launch.

"In a few years, we will be launching Starships hundreds, and soon thereafter, thousands of times a year," he said. "And if just assuming you have a rapidly reusable system that could let's say launch twice a day, from a single launch base, you're going to find very, very quickly, we're going to run out of places to launch."

Right now SpaceX has one usable launch tower at Starbase in Texas, but it is already building out more. Steel girders constructed at SpaceX's Kennedy Space Center facilities were loaded Wednesday on a barge to make their way to Starbase. SpaceX is also building out a Starship launch tower at KSC.

To meet its launch plans, it will need multiple launch towers from its existing launch sites at KSC, Texas and California, but SpaceX could spread its footprint to new launch sites down the line as well, and that could feed into point-to-point plans the military is interested in, Henry said.

"I think the answer is we're going to need both as a company, but also as a nation, to fully leverage Starship," he said. "We're going to need a proliferation of launch sites [within the continental U.S.] and maybe even globally to fully capture this."

It's one of the facets of China's growing [space program](#) that is starting to outpace the U.S.

During a talk at the conference, Space Force intelligence analyst Chief Master Sgt. Ronald Lerch with Space Systems Command said China was beginning to build out more launch sites and advance their rocket types to catch up to the U.S.

"There's a bottleneck that they need to alleviate so they're doing something about it," he said noting it performed its first sea launch in the South China Sea as well.

He also noted their price points are projected to fall as well with China's Long March 5 rocket flying at around \$1,360 per pound, but the Long March 9 rocket is aiming to be completely reusable with a price cut in half down to \$680 per pound.

"China is moving very, very close, It is full speed ahead in terms of reusability," he said, and that it too is relying on commercial launches, and not just government rockets.

This thrust feeds into China's stance as a superpower in space as it continues to build out its low-Earth orbit space station and has plans to pursue a crewed lunar landing before the end of the decade. On top of any sort of lunar competition, China's saber-rattling in terms of trying to reunify with Taiwan has U.S. military concerned.

"Right now we have a very aggressive adversary," said Space Force Col. Nathan Vosters, director for requirements, resources, and programs for the Indo-Pacific region.

He said the ability for rapid delivery to that part of the world ties directly to ensuring a free and open region, which generates 60% of the world's gross domestic product.

"This technology, I think, has the opportunity to both promote a continued free and open Indo-Pacific while also contributing directly to the war fight if and when that time would come," he said. "At the very least, this changes the calculus problem a little bit for our adversaries in the region."

Spanjers said getting over the technological hurdle that Starship is attempting is essential but everyone on the board felt it was just a matter of time.

"I hope that we see a successful demonstration here very quickly," he said. "I think we're all in your corner, because it advances where we're going."

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