

Spacing Out:

Houston's new spaceport promises endless development opportunities

BY BRANDI SMITH

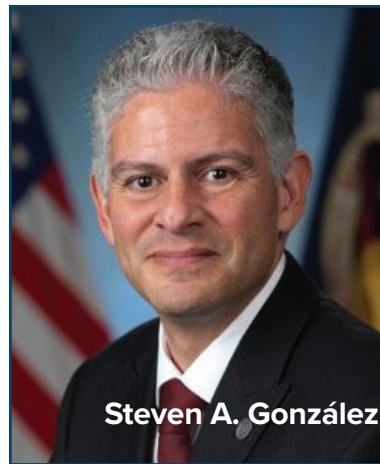
International travel is about to take a wild detour, offering expedited trips just about anywhere in the world thanks to a network of spaceports cropping up all over the globe. One of those, the tenth in the U.S., is the Houston Spaceport at Ellington Airport.

Put simply, a spaceport is a site from which spacecraft are launched. Those craft could carry freight or passengers, depending on its intended use, though it's likely space tourism will come first as a means of paying for future development.

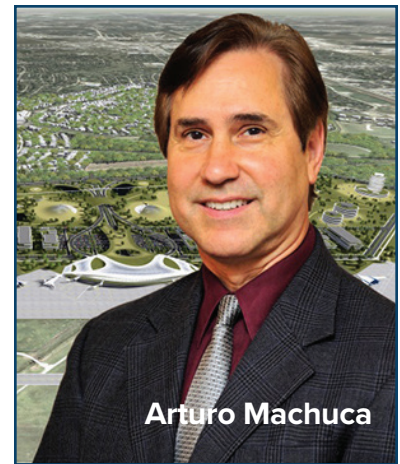
"The technology would start off by having joy rides to space with paying customers for \$200,000," said Steven A. González, the associate manager of the Strategic Partnership Office at the NASA Johnson Space Center. "Eventually [it] will allow for proven technology to get us over to China in four hours or to get to Australia in four hours. It's probably still a dozen years away for that, but that is the plan."

The means of transportation will be vehicles created not by NASA, but by private companies, such as SpaceX, Virgin Galactic and Blue Origin.

"Richard Branson's vehicle flies over the Gulf. Underneath it is the rocket, but once it gets over the Gulf, it drops the rocket," González explained. "The plane flies back and then the rocket goes up about 70 or 80



Steven A. González



Arturo Machuca



HOUSTON SPACEPORT

miles over the Gulf, floats around for about five minutes and comes back down again. Then \$200,000 dollars later, you've gotten to fly for five minutes."

XCOR, by comparison, offers an integrated vehicle that doesn't drop the rocket. Instead, González said, "It has an airborne engine that turns into a rocket and then comes back down again and flies like an airplane."

"The long-term vision for a spaceport is to be able to enable point-to-point travel, anywhere in the world in four hours" - Steven A. Gonzalez

The space tourism industry was meant to have taken off more than a decade ago. After all, when Sir Richard Branson, CEO of Virgin, first launched Virgin Galactic, he suggested commercial passengers would be able to visit the edge of space by 2009. Though more than 700 would-be space visitors have paid up to \$250,000 for the promised trip, none have gone up. Yet.

It only seems natural that Space City, being the home of NASA, would help propel these efforts forward. In addition to its aerospace roots, Houston also offers additional incentive for technology companies to invest in its spaceport.

"Houston has commerce through the airports, through the Port of Houston, through the rail system and through the

interstate," said González.

"Now it can leverage those commerce legs in order to support spaceport operations, because the long-term vision for a spaceport is to be able to enable point-to-point travel, anywhere in the world in four hours."

When it was approved by the Federal Aviation Administration last August, Houston's spaceport was the tenth such project in the country. Others can be found in Oklahoma, California and New Mexico. But Houston-area leaders feel theirs holds an advantage over the others: it is the only one located in a metropolitan city.

"I know that Arturo Machuco, the director of Ellington, likes to talk to Richard Branson and Virgin Atlantic and tell them, 'You know, you can go to New Mexico, but when you're finished paying \$200,000 and you land, what have you got? What do you have to see? Come to Houston. Afterward, you can go down to take a cruise of Galveston. You can go see a show. You can at least stay at a nice four- or five-star hotel. Not too many of them right there next to [New Mexico's] Spaceport America,'" González said.

Far from competition with other spaceports, managers of Houston's site are working with others in the Lone Star State to develop what González called a "Texas strategy." That includes properties in Midland and Brownsville.

"Let's not compete against one another; let's work together. Each has a unique business model and a unique community that they are targeting," said González. "For example, we have the expertise here in Houston with the

NASA Johnson Space Center. Brownsville doesn't have the expertise yet. Is there a way to develop things in Houston and be able to partner up with the community down there?"

As commercial space travel generates more money and draws new interest, development will continue at the Houston Spaceport. Currently, crews are working on an innovation center.

"We are developing infrastructure of the future and we're just getting it started," said Arturo Machuca, the spaceport's general manager. "We still have plenty of good challenges in development ahead of us."

"[The goal is] to be able to attract technology companies, to attract startup companies, to attract universities and industries that are able to see the potential of what happens when this new commerce exit is introduced to Houston," González said.

The innovation park is in the design phase and will go out for bids for construction after that, according to González. In the meantime, spaceport managers are also building economic partnerships that will lead to long-term investments.

"[They are working on] two very major aerospace deals to come in there," González

said. "They're exciting companies. They will transform the community because it really will be pushing the envelope as far as the technology that they are able to introduce, and bring Houston into the next generation of space exploration."

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- Arturo Machuca**

Already, the spaceport has a tenant: Intuitive Machines, a company that develops "engineering solutions at the unimagined intersections between energy, medicine and aerospace," moved into a 53,000-square-foot office building neighboring NASA's Neutral Buoyancy Lab on Aug. 1.

"It's a great opportunity and experience for us," said Health Mooney, director of production facilities management at Intuitive Machines. "We're the first ones (tenants) here. This is a burgeoning industry that will only grow and we want to be a part of it."

"[Machuco]'s also negotiating deals with an international company called Catapult, which specializes in satellite imagery data and analysis for industry," said González.

"He's also looking at a couple other innovative startup companies to go in there. They're quickly starting to fill up that facility."

This month, the Houston Spaceport will likely be a focus of the 2017 Space Commerce Conference and Exposition (or SpaceCom) at the George R. Brown Convention Center. The conference, touted as the "largest dedicated space commerce event in the U.S.," runs from Nov. 15 to Nov. 17. González said more than 39 U.S. states and 32 countries will be represented by the more than 1,700 expected attendees.

"It's wonderful for the city to come to NASA to say, 'We would like to create an event that will reclaim our Space City identity,'" González said.

Reclaim it, Houston has. Decades after NASA's creation, the city once again leads the way, blazing a new path forward with space and technology. ●

