

Jeff Bezos to take on Elon Musk and Richard Branson with Cape Canaveral rocket launches



Amazon CEO Jeff Bezos details plans to build rockets at Cape Canaveral, Fla. (Phelan M. Ebenhack / Associated Press)

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Amazon.com Chief Executive Jeff Bezos said Tuesday that his private aerospace company, Blue Origin, will build and launch rockets at Cape Canaveral on Florida's Space Coast as it competes against rival projects from fellow billionaires Elon Musk and Richard Branson.

Blue Origin's new home will be at Launch Complex 36 at Cape Canaveral and will manufacture reusable orbital launchers near Kennedy Space Center, Bezos said. Keeping vehicle assembly close to the launch pad will make transportation of the "really big rockets" easier, he said.

The fleet of rockets will be ready to launch later this decade, Bezos said. The orbital launch vehicle — dubbed "Very Big Brother" by the team — will be certified to carry humans. But the

first flights will ferry only supplies or satellites to gain experience before people go aboard, Bezos said. No date has been set for the first human flight.

Bezos, Musk and Branson are among the major players in the burgeoning commercial space market, where rockets are being designed, built and tested to send humans and cargo to space.

Musk's company, SpaceX, already has been ferrying cargo to the International Space Station. Virgin Galactic hopes to join Blue Origin in carrying tourists to space, along with building rockets for launching satellites and other payloads.

Virgin Galactic on Monday announced revamped plans to use its LauncherOne rocket for blasting small satellites into orbit. And SpaceX said it would launch two satellites from Cape Canaveral between late 2017 and 2018.

Analyst William Ostrove of the research firm Forecast International said of Bezos, Musk and Branson: "In some ways, they're all visionaries who see this as future technology that could revolutionize the world, and they want to be at the forefront of it." It's also a market that already totals several billion dollars in government and commercial contracts, he said.

But the space firms also have had to endure major setbacks in the past year. Virgin Galactic's SpaceShip Two crashed during a test flight last October, killing one of the two pilots. And a SpaceX rocket on a cargo mission to the Space Station blew up in June.

Bezos' Blue Origin has been established for more than a decade, and the hard-driving Amazon CEO said in announcing the firm's Cape Canaveral plans that he was inspired by the Saturn V missions. Blue Origin's Complex 36 also carries historical significance: It was the launchpad for the first U.S. spacecraft to visit other planets.

"This is something I've been thinking about and dreaming about since I was a little boy," Bezos said in an interview. "I'm very passionate about space and the exploration of space.

He said Blue Origin's BE-4 rocket engine, which is being developed through a partnership between Blue Origin and the Boeing Co.-Lockheed Martin Corp. joint venture called United Launch Alliance, also will be tested in Florida.

United Launch Alliance is an established builder of launch vehicles. The BE-4 engine will power the first flight of United Launch Alliance's Vulcan rocket, Bezos said.

The BE-4 engine, as well as the liquid hydrogen/liquid oxygen BE-3 engine, will be key to powering "Very Big Brother," Bezos said. The rocket's booster will be fully reusable.

"Reusability is the key to lowering the cost of getting into space," Bezos said.

Blue Origin will keep its primary engineering headquarters in Kent, Wash., about 20 miles south of Seattle, and will continue to test suborbital flights and develop the BE-4 engine in West Texas, Bezos said.

The continued growth in the commercial space industry has a significant impact on California. United Launch Alliance is based in San Diego, and SpaceX is headquartered in Hawthorne. Virgin Galactic's SpaceShip Two was designed and tested in the Mojave Desert area.

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