NASA Is Outsourcing Future Spaceflight

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HOUSTON (AP) — How America gets people and stuff into orbit is about to be outsourced in an out-of-this-world way.

With the space shuttle's retirement Thursday, no longer will flying people and cargo up to the International Space Station be a government program where costs balloon. NASA is turning to private industry with fixed prices, contracts and profit margins. The space agency will be the customer, not the boss.

At least when it comes to the routine part of going to and from the space station, NASA hopes to rely on companies that will be the space version of FedEx and Yellow Cab.

The company that has been leading the commercial space race is hoping to launch its privately built rocket and capsule to the space station late this year. It won't carry astronauts, but if all goes well the unmanned ship will dock with the station and deliver food, water and clothing. And its major private cargo competitor may only be a month or two on its heels.

Getting people to orbit on a new American ship is a different story. Some ambitious companies hope to launch astronauts that way in three years, maybe four. Until then, the Russians will fly astronauts on a pay-for-play basis. Some space veterans like John Glenn, the first American in orbit, think five to 10 years is more realistic.

But two of the major players have surprised people before — the tech tycoons who founded PayPal and Amazon.

NASA has hired two companies — Space Exploration Technologies Corp. of Hawthorne, Calif., and Orbital Sciences of Dulles, Va. — to deliver 40 tons of supplies to the space station in 20 flights. The cost is $3.5 billion, about the same price per pound as it was during the space shuttle's 30-year history.

"It's time. Once NASA blazes the trail, creates the technology and it's available for private companies to take advantage of, this is the time" for the private firms to take over, said NASA commercial cargo chief Alan Lindenmoyer.

NASA met on Wednesday with companies wanting to taxi astronauts to the station. The agency hopes the money it saves by not flying the shuttle can be spent on new deep-space missions that will send astronauts to an asteroid and on to Mars.

Six private companies are working with NASA to send ships to the space station — either unmanned cargo ships or eventually astronauts in crew capsules.

For well more than a decade, boosters of commercial space have said they are

ready to take over the job of going into low-Earth orbit on their own nongovernment ships, but hadn't done it.

Now one has: Space Exploration Technologies, which often goes by the name SpaceX and is run by risk-embracing PayPal founder Elon Musk, launched his unmanned Dragon capsule into orbit last December. Now his company is lining up for the first private visit to the space station. The lower and upper stages of the rocket are at Cape Canaveral, Fla. The capsule is almost finished.

"What we want to do is get back into space as quickly as possible and as sustainably as possible," said former astronaut Garrett Reisman, who now runs SpaceX's "Dragon Rider" program.

And maybe a month or two later, Orbital hopes to have its first test flight to the station. First, it has to finish building its launch site at Wallops Island, Va., which should be done in just a few weeks. Then later this year it will have a test launch of its new rocket, the Taurus II, and finally it will use that new rocket to launch its capsule, Cygnus, to the space station, said company spokesman Barron Beneski.

"Just like a person hires FedEx to deliver a package across the country and you pay him 50 bucks, we're delivering a 2,000-kilogram package to space, a few hundred miles above Earth, for a fixed price," Beneski said.

Four companies are building spaceships to take astronauts to the space station on a pay-per-seat basis. They are all constructing ships that would be launched on top of private rockets.

SpaceX appears to be leading the pack. Right behind it is Boeing, a giant in aerospace, which hopes to launch astronauts using its capsule as early as 2014. A third company, Sierra Nevada Corp., is taking a different route, proposing a shuttle-like spaceplane instead of a capsule. It is hoping to launch around 2015. And Amazon's Jeff Bezos is heading a fourth company, Blue Origin, that is much more circumspect about its plans for a gumdrop-shaped ship.

A fifth company, United Launch Alliance, just signed an agreement with NASA. It hopes to get its Atlas V rockets eventually approved for use in launching humans. Normally, Atlas rockets are used to put satellites in orbit. SpaceX is building its own private rockets, the Falcon series.

The crew of the final shuttle flight, Atlantis, left on the space station a small U.S. flag that flew on the inaugural shuttle voyage in 1981. The flag is the prize for the first rocket maker that brings Americans back to the station on a mission launched from the U.S.

President Barack Obama described it last week as "a capture-the-flag moment here for commercial spaceflight."

For these companies, it's also about capturing the cash. NASA will soon be paying the Russians about $63 million for each U.S. astronaut who flies on that country's

Soyuz rocket to the space station.

Boeing's Jon Elbon, manager of the CST-100, which is what the company is calling its ship, said Boeing's prices will be competitive with what the Russians are charging. Boeing is also working with Bigelow Aerospace on bringing paying tourists up to a potential private space hotel.

Musk, who also started an electric sports car company and hopes to someday send his rockets to the Mars and fly families for $1 million for one-way tickets, promises to undercut the Russians' price substantially.

For all the talk of launching soon, George Abbey, former director of NASA's Johnson Space Center, remains skeptical: "I'm not sure it will happen anytime soon."

Former astronaut Glenn likes the idea; he just doesn't think it will happen as quickly as the companies do.

"To me that's not all bad," he said. "The government has always stepped out and done the things that private industry wouldn't or couldn't do" and then let companies run it when it is more affordable. He pointed to the Pentagon-inspired Internet.

NASA is hoping these companies are ready.

Just minutes after Atlantis lifted off on the final space shuttle mission, NASA spokesman Bob Jacobs turned to his counterpart from SpaceX and told him, "It's your turn now."

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