

# Could Cornwall be the site of Britain's first spaceport?

## To Newquay—and beyond

by Miles Carden / June 14, 2018 /

Of the many US headlines that emerged from April's Space Symposium in Colorado, there was one in particular that caught my attention: "The British are coming—for the rocket-launching industry." And it's true. I was there to promote Britain as a launch-site for spacecraft, and more specifically Spaceport Cornwall, as Europe's premier location for commercial spaceflight.

At which point you say, "Cornwall? Really? Are you serious?" And I reply, "yes—very." So serious in fact that we believe that, within the next decade, the space industry could become a major employer in Cornwall.

We have cause for confidence. The proposed site of our spaceport is Cornwall Airport Newquay, one of the UK's fastest growing and most modern airports. We are not talking about launching rockets from the ground. Our plan is to launch conventional aircraft that carry spacecraft, which will then be launched from the air (see artist's impression, right). To do that you need a long runway, and the one at Newquay is 1.7 miles long.

There are numerous satellite launch systems being developed around the world that use aircraft as a mobile launch platform for satellites. It's cheap (comparatively), reusable, and can use existing airport infrastructure. We also have something no one else has—Goonhilly Earth Station. Already well-known as the world's largest satellite-receiving station, it will soon be upgraded thanks to an £8.4m investment from our Local Enterprise Partnership. It will become part of the deep space network, capable of communicating with future missions to the Moon and Mars.

A combination of these two means Cornwall can offer both a launch solution for commercial space flight, and a tracking communications service for spacecraft. As well as this, southwest England has the largest concentration of aerospace and defence capabilities in Europe.

And all this is being driven by the burgeoning global space economy, and the UK government's desire to win a much greater slice of it. Britain already produces around 44 per cent of the world's small satellites, but we lack any means to get them into space. We want to increase the UK's share of the global space sector from 6.5 to 10 per cent by 2030, and if the UK can build spaceports, it will be able to tap into the rapidly-expanding launch market—worth an estimated £10bn over the next decade.

Such ambitions prompted a search for suitable spaceport locations in 2014, resulting in a shortlist of eight—Newquay was the only site in England. Last year the UK Space Agency launched a funding call for spaceport bids from locations and potential operators. And the government set aside £50m to support satellite launches and low gravity space flights from UK spaceports in its Industrial Strategy last November.

In March the government's Space Industry Act became law, setting the legislative framework for the first commercial space launch from UK soil in history.

We want that launch to be from Spaceport Cornwall, which we estimate could create 480 jobs and contribute £25m a year to the local economy. The wider space sector is projected to create thousands more jobs in Cornwall and by 2030 could be worth £1bn a year.

The other real driver of course is new technology. In March, Elon Musk's booster rockets from the Falcon Heavy rocket landed safely back on earth ready for re-use. The images of Musk's Tesla Roadster floating around in space sent Twitter into a frenzy.

In late April, the Blue Origin rocket company launched its reusable six-man New Shepard capsule 66 miles into space, its highest altitude ever. The rocket landed back in the American desert and the capsule floated back to earth by parachute. The company hopes for human spaceflight tests later this year.

These were both “vertical,” rocket-style launches, but what we’re targeting in Cornwall is the “horizontal” launch market for satellites—where the space vehicle is carried by a conventional aircraft—and, in time, human space flight.

But we see no reason why Cornwall can’t attract human horizontal launch systems in the future, like that being developed by Virgin Galactic. Its VSS Unity spaceship completed its first supersonic, rocket-powered flight in May having been taken to an altitude of 46,000 feet by its mother ship, WhiteKnightTwo, which takes off like a conventional aircraft.

If you combine these technological advances with a fast-growing global industry, a UK government hungry for market share in a post-Brexit world, and some world-class hardware perfectly located next to the Atlantic Ocean, we see no reason why Cornwall shouldn’t be aiming high.