## Space race 2020: is this the next big thing?

Humans first landed on the moon in 1969. Apollo 11's spaceflight was televised for audiences across the globe who saw Neil Armstrong become the first person to step foot on the moon. Now 50 years later, space is becoming an accessible arena for startup companies on earth, outside of NASA and a new race has begun.

After the digital revolution through the 1950s to the 1970s and the onset of apps in the late noughties, it's been hard to decipher what piece of technology will be the next big thing. Each year, thousands of new startups are set up throughout the country and world, aiming to tap into profitable industries and steadily grow. Though one thing is for sure, time is moving quicker and new developments in business as well as technology, are happening faster than ever before. However, with industries advancing at a fast rate, there's always something new to look to that will enhance and eventually take over the way that we do business and the way that we live.

Space technology is defined as technology created by space science and the aerospace industry for space exploration and today, it's looking like it may become a part of our lives and our businesses more than ever before.

## **New Space**

An emerging private space industry, predominantly based in the USA is referred to as 'new space' companies. They work outside of the government to make space a profitable industry open to be experienced by consumers. Most of the companies' primary focus is on commercial travel to space and how data from space can be used to improve and eventually <u>revolutionise human life</u> on Earth.

Space giants NASA recently made public that they will be partnering with several 'new space' companies to work on developing space tech that will help us to scale The Moon and quite possibly, Mars. The companies include Blue Origin, SpaceX, OxEon Energy, Skyre Inc and more. NASA is investing \$45M into their chosen companies in an effort to eventually send American astronauts to the Moon and Mars. What's more, over 20% of the companies are owned by women or are from underrepresented communities.

Amongst these innovative new space companies that will benefit from this investment are <u>Blue Origin</u>, an aerospace company, founded in 2000 that eventually aims to "build a road to space." Blue Origin ultimately have the goal of producing rockets that operate like aeroplanes and so can be used over and over again. They also believe that by discovering and utilising the resources in space, we will have unlocked an important key to preserving life on Earth and will bring on another revolution in how we work and live.

<u>SpaceX</u> will also receive funding and were founded in 2002 by Elon Musk. SpaceX aims to reduce space transportation costs and to colonize Mars. The company, based in California first accomplished sending and returning a spacecraft from low Earth orbit (an area that has an altitude of between 160 to 2,000 km above the Earth's surface) in 2010 and had their own spacecraft deliver cargo to and from the International Space Station (a station in low Earth orbit) in 2012. SpaceX design and manufacture rockets and spacecraft and ultimately aim to enable humans to live on many other planets.

Another company to receive support from NASA are OxEon Energy who are working towards the pioneering idea of making it possible for humans to live and work on the Moon and Mars. One of the biggest challenges that face this mission is the fact that there is no oxygen on Mars. Though, the company are already onto solving this problem via their solid oxide electrolysis technology that will use the carbon dioxide in Mars' atmosphere and separate the carbon and oxygen ions in it, creating oxygen that is breathable for humans.

## What are they doing 'out there'?

To date, 565 people hailing from 38 countries have reached space, which includes people from various backgrounds, not solely astronauts.

However, today's aims for conquering space are much more than just stepping foot into the atmosphere. The companies being funded by NASA are oozing with innovative and unprecedented ideas to make space just as accessible as any part of the Earth. Consumer tourism consisting of micro-satellites allowing people to experience space via virtual reality are amongst the plans, as well as harvesting the valuable natural resources provided by planets other than Earth.

Furthermore, some companies are focusing on researching humanity's effect on space and creating a satellite constellation that will provide global mobile and internet connectivity, while others are concentrating on how deciphering satellite data will help to predict economic and environmental trends here on Earth.

## The race to space

This inspiring new arena sounds like something out of Star Trek but is actually a very tangible and professional industry with millions of dollars in backing. Perhaps it's too soon to start seeing space suits sold at supermarkets, yet space technology is arguably the most thrilling <u>new technology</u> trend to get behind.

With the life-altering industrial and digital revolutions behind us, it's exciting to ponder on how tapping into outer space, the Moon and other planets will revolutionise life on Earth and perhaps for the first time in human history, create living conditions for us on other parts of the universe. The startups that get out into the cosmos and far corners of our galaxy first will likely go down in history.

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