

## SpaceX: brainchild of Elon Musk

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The main reasons for creating SpaceX program are characterized. The benefits of travel in space are described.

We live in the 21st century, in a world that is developing very fast where the main character who populates science, is no one else than Elon Musk. Elon is a founder of many noisy companies, but Tesla is one of the most popular. Elon owns 20% of this company and according to profit for 2019, the company earned 7.4 billion \$, so after the stock price went up 12% and amounted to 649 \$, therefore, owning 20% of the company, Elon earned 2.3 billion \$.

But profit is brought to Elon not only by the Tesla company, no less popular and no less profitable company is SpaceX. Elon Musk founded this company in 2002 year. The main goal of this project is to reduce the cost of flights into space and to open the path to colonization on Mars.

Despite a series of failed launches of the Falcon 9 rocket, he managed to create a multi-stage rocket that can be launched into space several times. The Falcon 9 launch vehicle was first launched on June 4, 2010. Falcon 9 v1.0 was used from 2010 to 2013, all five launches were successful. To replace version 1.0 came the improved Falcon 9 v1.1, with a minimum launch cost of \$ 61.2 million.

In 2013, a SpaceX offering with a price of 56.5 million \$ for one launch of the launch vehicle became the cheapest in the space industry.

On December 22, 2015, after the launch of 11 Orbcomm-G2 satellites into orbit, the first stage of the Falcon 9 FT launch vehicle first landed successfully on the landing zone 1. On April 8, 2016, as part of the SpaceX CRS-8 mission, the first stage of the Falcon 9 rocket for the first time in rocket science, FT successfully landed on the offshore platform. On March 30, 2017, the same stage, after maintenance, was re-launched as part of the SES-10 mission and again successfully landed on the offshore platform.

The first stage of the Falcon 9 can be reused, equipment for returning and vertical landing on the landing site or floating platform autonomous spaceport drone ship is installed on it.

The Falcon 9 booster is capable of successfully completing a flight even when two of the nine first-stage engines shut down abnormally. In such a situation, flight computers recalculate the flight program, and the remaining engines run longer to achieve the required speed and altitude.

Elon believes that in the future it will help to cheaper to transport people between the planets. According to him: Settling Mars is the only reliable way to save humanity. He believes that by 2100, about 1 million people should already live on Mars.

The main reasons for creating such a program:

1) The population of a neighboring planet will allow us to preserve civilization if a catastrophe occurs on our planet.

2) The population of the planets of the solar system is like a springboard for humanity in a journey through the universe.

Starting in 2018, SpaceX began sending a satellite to Mars every two years, because every two years Mars and the earth are at the closest distance from each other.

As for flights to other star systems, Musk has not yet been planning such missions. They are long-term, appropriate technologies have not yet been created, and whole generations of cosmonauts will have to participate in the project. First, it is worth settling on Mars, then - flying to the satellites of Jupiter and Saturn, to asteroids. And only then think about moving to the interstellar level.

The fight against coronavirus also affected the Elon Musk.

The founder of SpaceX and Tesla CEO Elon Musk considers the panic that arose due to the spread of a new type of coronavirus infection stupid. He wrote about this on his Twitter page. In the comments, users reminded Musk that, despite his statement, the coronavirus had a negative effect on Tesla. Shares of the company on March 5 set a record drop in price. Before that, they grew for six days.

Elon bought and donated 1255 mechanical ventilation devices to California for free.

### **References:**

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