

# SpaceX plans to get humans on Mars

August 3 2011, by Deborah Braconnier

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At an August conference hosted by the American Institute of Aeronautics and Astronautics, SpaceX CEO Elon Musk revealed plans for how they hope to get humans on Mars within the next 20 years.

In order to get to [Mars](#), they need to be able to transport a significant amount of cargo and people and this, according to Musk, will require a fully reusable rocket and they are working to make their Falcon 9 rocket just that. The Falcon 9 rocket is designed to generate 1700 metric tons of thrust which would make it easily capable of transporting satellites, cargo and humans.

Unfortunately creating a fully reusable rocket is not proving easy. With just 0.3 percent of the Falcon 9 launch cost being propellant, the target is to create a complete launch system that is fully reusable in order to reduce the cost of launches. So far engineers have not been able to provide the level of protection needed to be able to reuse the first and second stages.

On paper, they have created something that they hope will prove effective. They are looking at restarting the engines in order to slow down the first stage and shed some of the velocity. However, in order to do this, they have to look at payload loss of fuel in orbit, better thermal shielding and increased structural margins for recovery.

Musk announced plans to demonstrate a new Falcon Heavy rocket in the later part of 2012 or the first part of 2013. This rocket will be capable of delivering 10 to 15 metric tons, but they hope to make it capable of delivering 50 metric tons and be fully reusable in the future.

They are discussing a project with [NASA](#) to use their Dragon capsule and Falcon rocket for an exploratory mission to Mars and they hope to be ready for this mission by 2018.

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