

Revealed today, Elon Musk's new space vision took us from Earth to Mars, and back home again

September 29 2017, by Sarah Keenihan



Credit: AI-generated image ([disclaimer](#))

In front of a huge [SpaceX](#) multimedia slide presentation, the company's founder Elon Musk today said that in 2022 he will send cargo missions to Mars, and manned missions by 2024.

"We've already started building the systems. Five years seems like a long time to me."

Just a few hours earlier, [Lockheed Martin](#) unveiled its highly anticipated lander, the newest element of its Mars Base Camp Deep Space Transport program enabled by NASA's exploration vision. The company hopes to use it "in about a decade".

Both groups were attending the [2017 International Astronautical Congress](#) in Adelaide, South Australia.

But how important is it when big names come to scientific conferences and describe their big vision projects? Would it matter if they didn't show up?

"I have been 'doing' Mars for about 15 years, and I know that my colleagues of all ages involved in Mars research would carry on regardless – Mars itself is the inspiration," said University of SA Associate Professor Graziella Caprarelli.

"But somebody with the vision and drive of Elon Musk will certainly be inspirational to younger generations and generate more interest in the topic across broader sections of the public."

"It's about believing in the future." [@elonmusk](#) shares why we must explore at [#IAC2017 pic.twitter.com/o5ozRktfB8](#)

— Planetary Society (@exploreplanets) [September 29, 2017](#)

Postdoctoral researcher Eriita Jones, a colleague of Caprarelli's, agrees.

"Seeing money being injected into space, and particularly planetary exploration definitely encourages me to be hopeful about career

opportunities in the future," she said.

"Those of us in the Mars research field are blessed both with a wealth of data from the many successful missions to the planet ([NASA](#), [ESA](#) and others), and with a generally high level of public engagement with our research."

Jones said it was exciting to see entrepreneurs like Musk championing the importance of Mars exploration.

Caprarelli said SpaceX activities do rely on a scientific foundation.

"The success of the [Falcon 9](#) rocket program is proof - it does not happen by chance," she said.

"I have met SpaceX team members who come to our scientific meetings to engage with scientists, and sometime propose collaborations."

TUNE IN: We're debuting our Mars Lander concept at [#IAC2017](#). US: 9/28, 6 pm ET; ACST: 9/29, 7:30 am.
<https://t.co/3PfvUUiiC6> pic.twitter.com/ZU3KWDg8Ny

— Lockheed Martin (@LockheedMartin) [September 27, 2017](#)

But many challenges still remain.

"Can we provide sufficient resources to support an initial human presence on the surface?" asks Jones.

"Can we transport humans from Mars safely back to Earth if they wish to return? And, what are the ethical implications of placing consenting human beings in such a high risk scenario while all of planet Earth watches on?"

Other considerations include the risk of contaminating the martian environment with Earth biology, which may undermine future experiments conducted on Mars, particularly our ability to answer the question of whether life ever arose or currently exists on Mars, said Jones.

Another big question is budget.

Musk opened his presentation with a statement on the Mars project,

"I think we've figured out how to pay for it."

The room laughed.

But then he came full circle after 50 minutes of *sotto voce* technical details. Musk finished his presentation with a new vision.

"If you can build a ship that's capable of going to Mars, then what if you take that ship and use it on Earth? Most long-distance trips around the world can be completed in less than 30 minutes. "

SpaceX will use a commercial, Earth-based model of its transport systems to fund interplanetary exploration.

Sydney to New York in half an hour? That was a vision the [IAC2017](#) audience loved.

Sarah Keenihan, Section Editor, Science and Technology, [The Conversation](#)

This article was originally published on [The Conversation](#). Read the [original article](#).

Provided by The Conversation

Citation: Revealed today, Elon Musk's new space vision took us from Earth to Mars, and back home again (2017, September 29) retrieved 27 April 2024 from <https://phys.org/news/2017-09-revealed-today-elon-musk-space.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.