

SPACE X MARS PLAN

ELON MUSK has unveiled a spectacular plan to send humans to Mars. Last week at the International Astronautical Congress in Guadalajara, Mexico, the Space X founder laid out his vision for building the largest rocket ever, to launch a 100-person spaceship on an 80 day trip to Mars.

Once at the Red Planet, the spaceship will land on its feet using retro rockets, and the astronauts will emerge on to a cold, dusty world. Meanwhile, the spaceship will make its own methane fuel for a return journey to pick up more settlers. Musk also plans to send supplies to Mars every two years, starting in 2018.

Much of this is clever and innovative, but it may not be enough. **Musk wants to send the first humans in roughly 2024, although he was "intentionally a bit fuzzy about this timeline". That only gives Space X three chances to launch enough kit. This is where the plan breaks down. Musk seems to think his job stops once people reach Mars, and that keeping them alive is someone else's problem. His only mention of growing food on Mars assumed that we had already terraformed the planet. He was vague on how the settlers would generate energy. He said nothing about Martian dust, which covers solar panels and could harm astronauts.**

When asked about health risks in transit, Musk suggested they would be minor. That runs counter to data from the Curiosity rover, which found that a round trip to Mars would expose astronauts to seven times the radiation dose they would get during six months on the International Space Station - well over NASA's safety limits.

It may be that none of these issues are show-stoppers for Space X. But equally they seem not to be the first problems on Musk's list. And that's odd, considering his Mars colony is meant to be humanity's back-up plan. "The thing that Mars really represents is life insurance, ensuring that the light of consciousness is not extinguished. backing up the biosphere" he said. "It's not about everybody moving to Mars, it's about becoming multiplanetary."

So who will found this brave new world? The rich. Musk hopes to get the cost of a ticket to Mars down to around \$200,000 and described the trip as a luxury cruise, with restaurants, movies and zero-G games. But life on the Red Planet will be much less cushy: "Mars will have a labour shortage for a long time, so jobs will not be in short supply," he said.

So, you spend your life savings on a one-way Musk cruise, followed by a lifetime of physical labour on a cold and airless desert! Sign me up.

That's not Musk's vision, of course. SpaceX's video of the plan ends with Mars quickly growing more blue and lush, as if by magic. But if we are going to assume future magical terraforming powers, we should perhaps practice them first on the one planet we can already live on and keep Earth habitable.

**"Spend your life savings on a one-way cruise,
followed by a lifetime of physical labour?
Sign me up!"**

And what is the estimated cost for the project? Musk said the initial mission will cost around \$10 billion, and wants backers for a public-private partnership. Still, even talking about sending humans to Mars in a semi-realistic way is thrilling. Musk is highly driven and while vague, his plan is not impossible.

What about the 2024 timeline, though? Musk himself admits that staying on schedule is not his forte. Even his presentation talk started half an hour late!



Elon Reeve Musk born June 28, 1971 is a South African-born Canadian-American business magnate, investor, engineer and inventor.

He is the founder, CEO, and CTO of SpaceX; co-founder, CEO, and product architect of Tesla Motors; co-founder and chairman of SolarCity; co-chairman of OpenAI; co-founder of Zip2; and founder of X.com which merged with PayPal of Confinity. As of June 2016, he has an estimated net worth of US\$12.7 billion.

His many goals include reducing global warming through sustainable energy production and reducing the "risk of human extinction" by "making life multiplanetary" by creating a human colony on Mars.