Mars One.

Mars One is an organization that has proposed to land the first humans on Mars and establish a permanent human colony there by 2032.[1][2]

Mars One consists of two entities: the not-for-profit Mars One Foundation, and the for-profit company Mars One Ventures. The Mars One Foundation, based in the Netherlands, implements and manages the mission. Mars One Ventures holds all monetization rights, including broadcasting rights.

The private spaceflight project is led by Dutch entrepreneur Bas Lansdorp, who announced the Mars One project in May 2012.[3]

Mars One's original concept included launching a robotic lander and orbiter as early as 2020 to be followed by a human crew of four in 2024 and one in 2026.

Organizers plan for the crew to be selected from applicants to become the first permanent residents of Mars with no plan of returning to Earth.

Partial funding options include a proposed television documentary program documenting the journey.

The project's schedule, technical and financial feasibility, and ethics, have been criticized by scientists, engineers and those in the aerospace industry.[4][5][6][7][8][9][10][11]

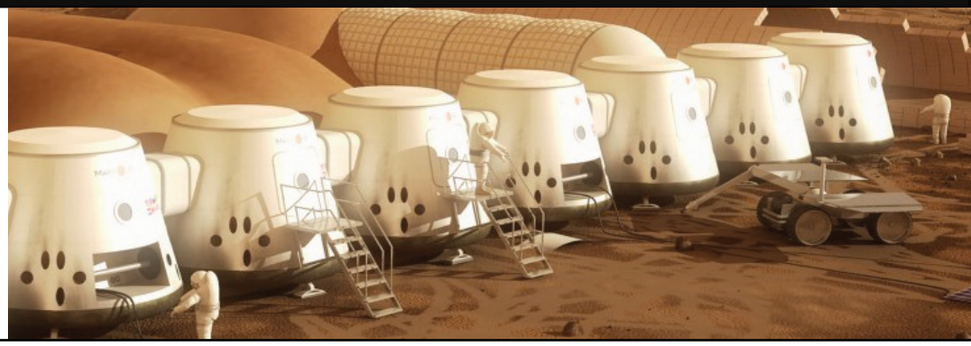
In February 2015, the primary contractors on the initial pre-Phase A contracts had completed all studies paid for by Mars One at that time.[12] The current state of the Mission Plan Deliverables (either in the form of Studies or actual Hardware) will be tracked in Table 2 in the Technology section.

The Mars One organization is the controlling stockholder of the for-profit Interplanetary Media Group.

Image: https://www.mars-one.com/

Mars One.

History



The concept for Mars One began in 2011 with discussions between the two founders, Bas Lansdorp and Arno Wielders.[13]

Mars One publicly announced the concept in May 2012 for a one-way trip to Mars, with the intention of an initial robotic precursor mission in 2020 and transporting the first human colonists to Mars in 2024.[15] In a 2015 debate, Bas Lansdrop clarified that "we're not going to do, I think, the current design of the mission" and "Mars One's goal is not to send humans to Mars in 2032 with a $6 billion budget and 14 launches. Our goal is to send humans to Mars, period."[16] According to Mars One's website, "It is Mars One's goal to establish a permanent human settlement on Mars."[17]

In December 2013, Mars One announced its concept of a robotic precursor mission in 2020, two years later than had been conceptually planned in the 2012 announcements. The robotic lander would be "built by Lockheed Martin based on the design used for NASA's Phoenix and InSight missions, as well as a communications orbiter built by Surrey Satellite Technology Ltd."[27] In February 2015, Lockheed Martin and Surrey Satellite Technology confirmed that contracts on the initial study phase begun in late 2013 had run out and additional contracts had not been received for further progress on the robotic missions. Plans have been disclosed to raise the US$200 million or more needed to support the initial robotic mission,[12][27] but some critics do not find the economic plans to raise money from private investors and exclusive broadcasting rights to be sufficient to support the initial, or follow-on, mission(s).

Mars One selected a second-round pool of astronaut candidates in 2013 of 1058 people—"586 men and 472 women from 107 countries"—from a larger number of 202,586 who initially showed interest on the Mars One website, although this number is heavily disputed. Former Mars One candidate Dr. Joseph Roche claims the number of initial applicants was only 2,761,[28] which Mars One later conceded via YouTube video.[29]

Mars One announced a partnership with Uwingu on 3 March 2014, stating that the program would use Uwingu's map of Mars in all of their planned missions.[30][31] Kristian von Bengtson began work on Simulation Mars Home for crew on 24 March 2014.

The second-round pool was whittled down to 705 candidates (418 men and 287 women) in the beginning of May 2014. 353 were removed due to personal considerations.[32] After the medical physical requirement, which was similar to a normal FAA exam plus EKG, due either to financial, health or access reasons, only 660 candidates remained.[29] Notably, some applicants were notified of life-threatening conditions such as early-stage cancer and were able to immediately begin treatment.[33] These selected persons will then begin the interview process following which several teams of two men and two women will be compiled. The teams will then begin training full-time for a potential future mission to Mars, while individuals and teams may be selected out during training if they are not deemed suitable for the mission.[32]

Mars One selected a third-round pool of astronaut candidates in 2015 of 100 people — "50 men and 50 women who successfully passed the second round. The candidates come from all around the world, namely 39 from the Americas, 31 from Europe, 16 from Asia, 7 from Africa, and 7 from Oceania".

In a video posted on 19 of March 2015, Lansdorp said that because of delays in the robotic precursor mission, the first crew will not set down on Mars until 2027.[36] In August 2015, Lansdorp reiterated that their 12-year plan for landing humans on Mars by 2027 is subject to constant improvement and updates.[37]

Propsals

Image: https://www.huffingtonpost.com/2014/03/03/peoples-map-of-mars_n_4892362.html

Mars One.

Proposals

According to their schedule as of March 2015, the first crew of four astronauts would arrive on Mars in 2025, after a seven-month journey from Earth. Additional teams would join the settlement every two years, with the intention that by 2035 there would be over twenty people living and working on Mars.[19] The astronaut selection process began on 22 April 2013.[41]

As of July 2015, the fourth round astronaut selection process, planned for Sept 2016, by which Mars One will

- First robotic mission in 2022
- More preparatory missions in 2024, 2026,
- 2029
- Human departure in 2031
- Human landing on Mars in 2032
- Additional crews every 2 years

2013 unmanned lander mission[edit]

Artist's impression of the Phoenix spacecraft as it lands on Mars.
In December 2013, mission concept studies for an unmanned Mars mission were contracted with Lockheed Martin and Surrey Satellite Technology for a demonstration mission to be launched in 2017 and land on Mars in 2018. It would be based on the design of the successful 2007 NASA Phoenix lander,[43] and provide proof of concept for a subset of the key technologies for a later permanent human settlement on Mars.[44] Upon submission of Lockheed Martin's Proposal Information Package,[43] Mars One released a Request for Proposals[45] for the various payloads on the lander.

2022 unmanned lander mission[edit]

In 2022, an unmanned rover will be launched to Mars in order to pick a landing site for the 2027 Mars One landing and a site for the Mars One colony. At the same time, a communication satellite will be launched, enabling continuous communication with the Mars One colony.[46]

2024 cargo missions launch[edit]

In 2020, the 6 cargo missions will be launched in close succession, consisting of two living units, two life-support units, and two supply units.[46]

2024 Mars One launch[edit]

A spacecraft containing four astronauts will be launched from Earth to meet a Transit vehicle bound for Mars.[46]

2025 Mars One landing[edit]

In 2025, the landing module is said to land on Mars, containing four astronauts. They are said to be met by the rover launched in 2020, and taken to the Mars One colony.[46]