



Ground Control to Major Tom

Words: Jamie Christian Desplaces

Images: Mars One

NASA's Curiosity Rover recently discovered the presence of water in the soil of Mars. "This dirt is interesting because it seems to be about the same everywhere you go," writes Laurie Leshin in the journal, *Science*. "If you are a human explorer, this really is good news because you can quite easily extract water from almost anywhere."



It will certainly have aroused the interest of Bas Lansdorp, Dutch entrepreneur and founder of Mars One; a project to send volunteer 'astronauts' to settle a human colony on the red planet. It is a mission with a rather substantial catch: it's strictly a one-way trip. With echoes of the *Truman Show*, the space explorers will be filmed 24 hours a day 365 days a year in what would be the most audacious social experiment in history.

"Looking at the images of the Mars surface Sojourner rover in 1997 as a young student made me want to go to Mars myself," says Lansdorp. "As I explored the idea in the following years with friends and colleagues, each piece of the puzzle seemed to fall into place. When I solved the last piece of the puzzle, I sold part of my shares in my previous company to finance the start-up of Mars One." Since 2011, it has been a full-time gig.

Dreams of reaching Mars are by no means a modern-day phenomenon. As far back as 1880, Percy Grey penned *Across the Zodiac* whose central character made the trip, and in 1908 Alexander Bogdanov published *Red Star* in which the planet was portrayed as a socialist utopia. There were countless other stories throughout the 20th century, including ones by esteemed scribes such as C.S. Lewis (*Out of the Silent Planet*) and Kurt Vonnegut (*The Sirens of Titan*). Cinemas too were awash with Martian tales like the 1990 smash hit *Total Recall* with Arnold Schwarzenegger as the lead (also loosely based on a short story written by Philip K. Dick). The movie saw humans settle in a similar fashion to that proposed by Mars One.

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quarter were American, with India, China, the UK, Russia and Canada making up the majority of the remaining list. New Zealand produced ten applicants. Come 2015, 40 hopefuls will embark upon an eight-year training programme and from those only four will make the final cut. They leave in 2023. Once there, they will prepare the settlement and further inhabitants will be sent at two-yearly intervals. Physicality aside, the psychological impacts of an endeavour of such isolation are mind-boggling. Should anything go wrong, an SOS could take up to 22 minutes to reach Earth, depending on planetary alignment, and the current quickest rocket ship would then take six months to arrive.

Missions through history have been plagued with failure. The first took place in 1960, with the vast majority having been carried out by the USA and the USSR. Japan and the European Space Agency have conducted one each. The success rate has been less than

50%. Though, out of eight American attempts to land on the red planet, only one has so far failed. The technological advancements too in the last half-century have been meteoric.

Mars is of course the most habitable known planet (for humans at least) after our own. There is a slight atmosphere to offer protection from radiation and gravity is 38% that of Earth's, a figure scientists believe the human body will adapt to over time. The planet's rotation is almost identical to ours, with days measuring in just shy of 25 hours. Solar panels, rather than nuclear reactors, will be used to generate power. Using electrolysis, oxygen will be extracted from the water in the soil, which, along with the naturally occurring nitrogen in the atmosphere will be pumped into the habitats as breathable air. In the habitats, farming will also take place. The ultimate aim is for the new human colony to become totally self-sustaining.

"The human condition by its very nature is to push through crises," says Dr Norbert Kraft, former NASA and current Mars One advisor. "History has been made when the impossible is made possible. The question is not whether we will make it to Mars, but whether we will succeed when we get there. The ability to build not only a physical community, but an emotional one, will determine whether we succeed or fail."

It is estimated the project will cost \$8 billion, money expected to be recouped through media and television rights. A real-life *Truman Show* it might well be, but should any of the stars decide that life was after all better on Earth, there will be no cloud-painted studio doors through which they can flee.