

## THE OFF-WORLD PROJECT

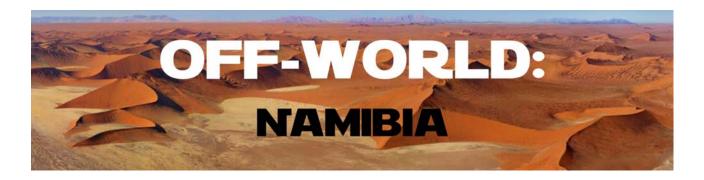
Proudly Human's Off-World Project will demonstrate human resilience, sustainability and community spirit in even the most extreme environments through grit, imagination, research and innovation. The project prepares for life on the Moon, Mars and beyond, as well as empowering people living in harsh conditions here on Earth. Over 18 months, Proudly Human will run a series of habitation experiments, building communities and off-grid infrastructure from scratch in the most extreme environments on the planet, from the desert, to the poles of the Earth, to under the ocean. Each experiment will last several weeks, generate exploration-driven innovation and research, and be filmed for a documentary series, MISSION: Off-World.

## "THE REASON I WANT TO EXPLORE IS SIMPLE: THE ALLURE OF THE UNKNOWN IS FAR MORE POWERFUL THAN THE COMFORT OF THE KNOWN."



DR ADRIANA MARAIS is on a mission. In 2019 she left her position as Head of Innovation at SAP Africa to found Proudly Human, towards her vision of a future we can be proud of, whatever planet we are on. She has visited Antarctica, Norway, deserts in the US, Middle East and Africa, the Aquarius Reef Base underwater habitat and submarine naval bases on location scouts for Proudly Human's Off-World Project. She has drawn on her extensive global network to create Proudly Human teams of advisors, technology partners and community members for the Off-World Project. The Project is a series of off-grid habitation experiments in the most extreme environments on the planet, in preparation for life on the Moon, Mars and beyond, as well as a more sustainable future here on Earth.

Adriana has a background in theoretical physics, her award-winning PhD and postdoctoral work in quantum biology focused on photosynthesis and the origins of the building blocks of life in space. She is currently developing a blockchain-based economic system for extreme and resource-constrained environments towards a second PhD. Adriana is a Research Fellow at Stellenbosch University, South Africa; Director at the Foundation for Space Development Africa, developing Africa's first mission to the Moon, the Africa2Moon Project; Scientific Moderator on Space Resources with the Geneva Science and Diplomacy Anticipator; Global Chair of Science, Technology & Innovation at Tod'Aérs Aeronautics & Space Research; a member of the South African Government task team on the 4th Industrial Revolution; and Faculty at the Singularity University and Duke Corporate Education.



The Namib is the oldest and one of the driest deserts on Earth. Like Mars, the sand has a distinctive rust colour from the iron oxide content, geology is characterised by ancient water flows, and water management is critical to survival in the now extremely arid environment. A carefully selected team will live as a research community in the desert for 40 days during the driest months of the year, utilising local resources like sunlight and sand. They will build their infrastructure from scratch, including shelter, power, water, food and communication systems.



The conditions during winter in the Arctic Circle provide a unique research opportunity to prepare for life on Mars, with average temperatures of around -40 degrees Celsius and weeks of complete darkness; conditions very few living organisms can endure. Tapping into abundant resources such as wind and ice, a carefully selected team will live as a research community for 40 days of polar night. They will augment the infrastructure from the Namibian experiment to adapt to the extreme conditions of polar winter, including shelter, power, water, food and communication systems.



The culmination of the series of experiments will entail a final selection of six experts living underwater in the Aquarius Reef Base in the Florida Keys. The conditions of isolation and confinement within a habitat providing necessary life-support in an environment without breathable air has parallels with the long-duration spaceflight necessary to travel to Mars or beyond. The team will live as a community, operating and augmenting existing infrastructure including power, water, air, food and communication systems for a mission objective of 78 days underwater: the return flight duration to Mars and back on Ad Astra's experimental VASIMR rocket, as well as a new world record.