CHALLENGE 3

THEME OF THE CHALLENGE

Fly to moon and beyond

Redefining Frontiers: Self-Sustained Space Pioneers

Imagine embarking on a mission to establish self-sustaining bases on the Moon and Mars, utilizing local resources and resource recycling to the greatest extent possible.

CHALLENGE FROM

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FROM SPACE

On the Moon, the abundant regolith found on the lunar surface would be processed and used to construct habitats, infrastructure, and shielding against radiation. On Mars, the local soil and atmospheric resources would be harnessed to build and maintain the base.
For energy, solar panels could be deployed on the Moon, while on Mars, power could be harnessed from the atmosphere.
Autonomous rovers and advanced robotics, both on the surface and in aerial operations, would perform tasks such as resource extraction, construction, and maintenance.
Deployable structures would play a key role in the project's success. These versatile and adaptable habitats and workplaces could be expanded or reconfigured as needed, providing flexibility to accommodate changing mission requirements and future growth. It would also facilitate rapid deployment and setup of the bases, reducing the time and resources needed for construction.
By first validating technologies on Earth, the project would mitigate risks and enhance the likelihood of success in establishing extraterrestrial bases.

TO THE CHALLENGE

Your challenge is to propose applicable ideas and technologies in one of the proposed field, identify potential private and governmental partners who can contribute expertise, funding, and resources, such as space agencies, aerospace companies, research institutions, and technology providers. First focus on applying the necessary technologies on Earth, ensuring their effectiveness before deployment in space. Develop a business plan that outlines the key elements for success, including market analysis, funding strategies, and revenue models to ensure the success of this venture.

BUSINESS SECTORS FOR THIS CHALLENGE

#SpaceExploration #Robotics #RenewableEnergy