

Lunar analog facilities and energy projects at EAC

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- FLEXHab project
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Introduction

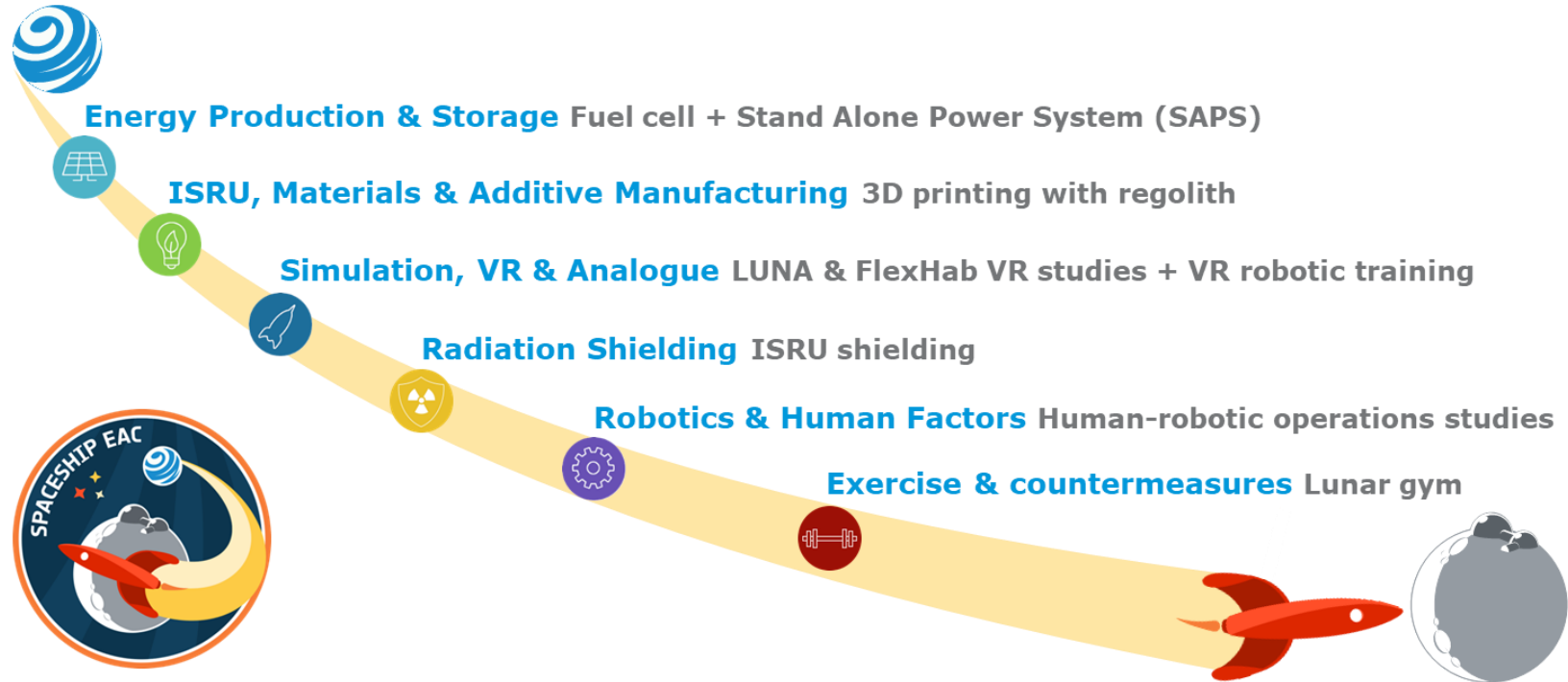
ESA and EAC

- Established in 1990;
- Home base of ESA astronauts;
- Training Centre for ESA flight elements and payloads of the International Space Station;
- Space Medicine Centre for astronaut medical support;
- Training Centre for ground controllers.



Introduction

Spaceship EAC



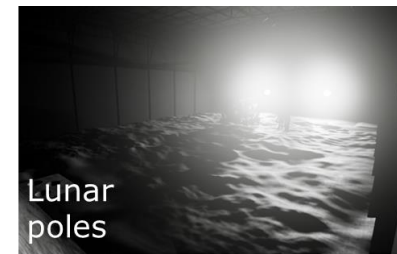
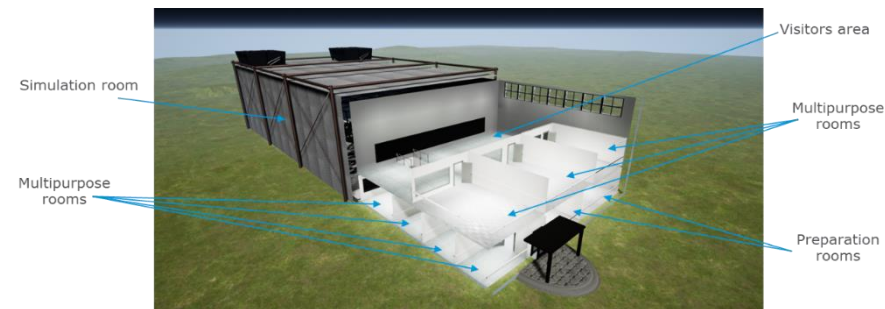
LUNA project

Current status (VR rendering)

External view



Internal view



FLEXHab project



Current status



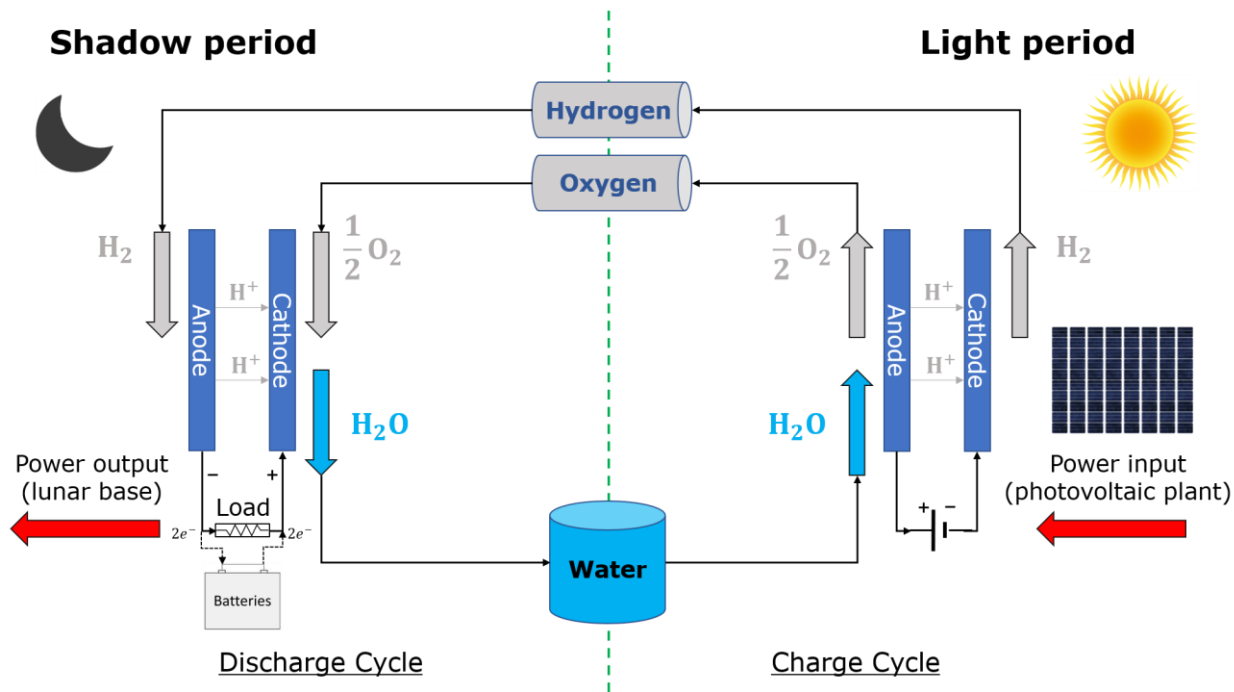
- Future Lunar EXploration Habitat (FLEXHab);
- 1-day mission: crew size up to 4 people;
- Rack system with exchangeable experiments;
- Evolvable concept;
- More-COTS architecture.

Stand Alone Power System (SAPS) development

- Cooperation among commercial, research and institutional actors;
- Demonstrate and promote such an energy supply system;
- Provide a platform for studying operational and system aspects;
- In-house simulators development for analysis and real operations.

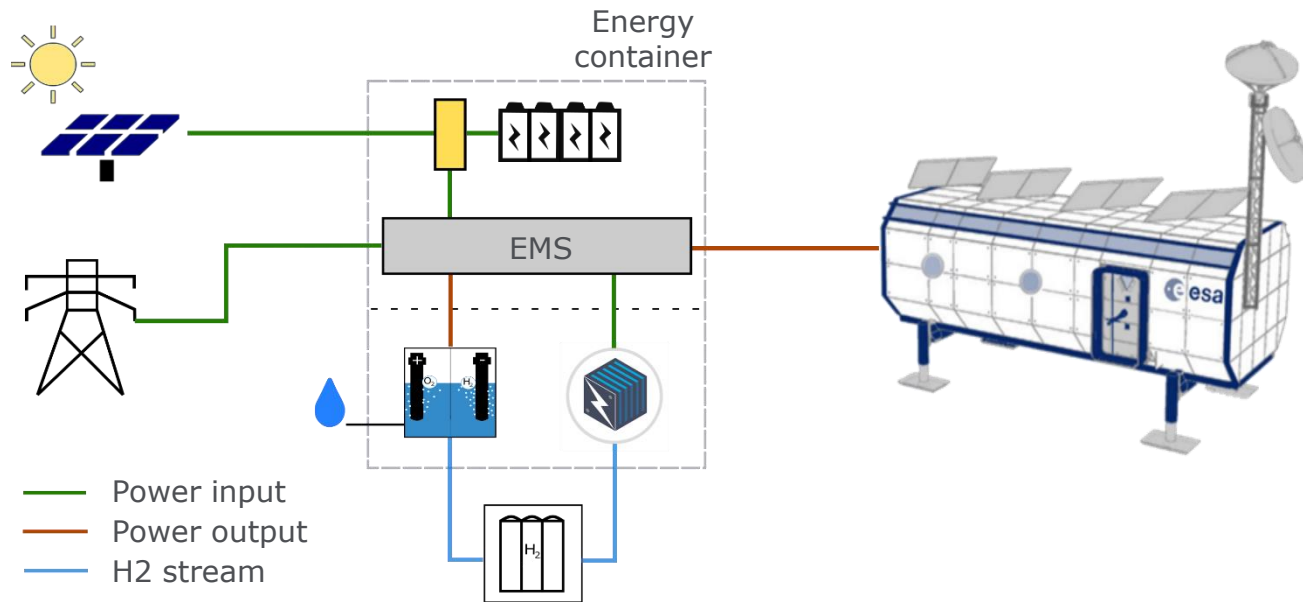
Energy projects

Concept for a lunar surface base



Energy projects

Implementation at Cologne site



A detailed illustration of a lunar base on the Moon's surface. The base consists of several interconnected, dome-shaped habitats with a metallic, ribbed texture. Some habitats have small, yellow, box-like structures on top. A large, white, ribbed dome is prominent in the foreground. The lunar surface is dark, rocky, and covered in craters. In the background, the Earth is visible as a blue and white sphere against the blackness of space. The words "THANK YOU" are written in large, white, sans-serif capital letters across the upper right portion of the image.

THANK YOU

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European Space Agency