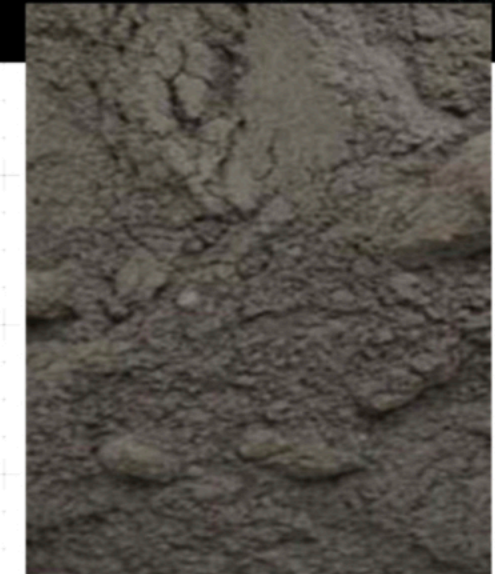
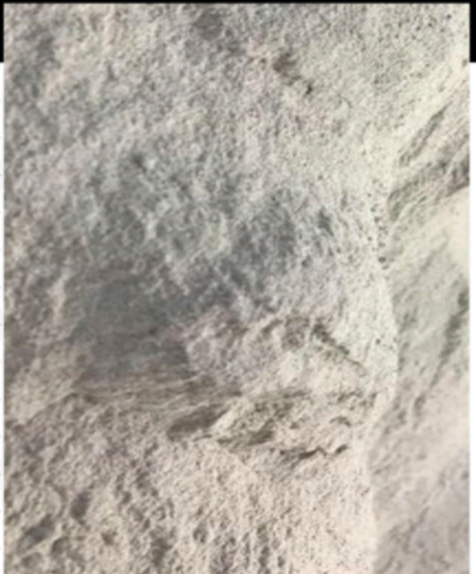


Luwex: Water from the Moon

Of all the natural resources, water is, by far, the most versatile and most needed resource in space exploration



Simulant Mare

This simulant replicates the characteristics of lunar regolith found in the maria regions. It consists of finely ground basaltic material with high iron and magnesium content, and includes ice crystals within the regolith particles to represent the presence of water ice in Regolith Mare.

Simulant 3

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Simulant LHS-1

This simulant imitates lunar regolith found in highland regions. It comprises a mixture of fine dust, small rocks, and larger boulders, resembling highland terrain. Small ice crystals are included within the regolith particles to mimic trace amounts of water ice in certain highland areas.



55 x 200



REGOLITH SIMULANT
The experiment uses regolith simulants with 5% ice content.

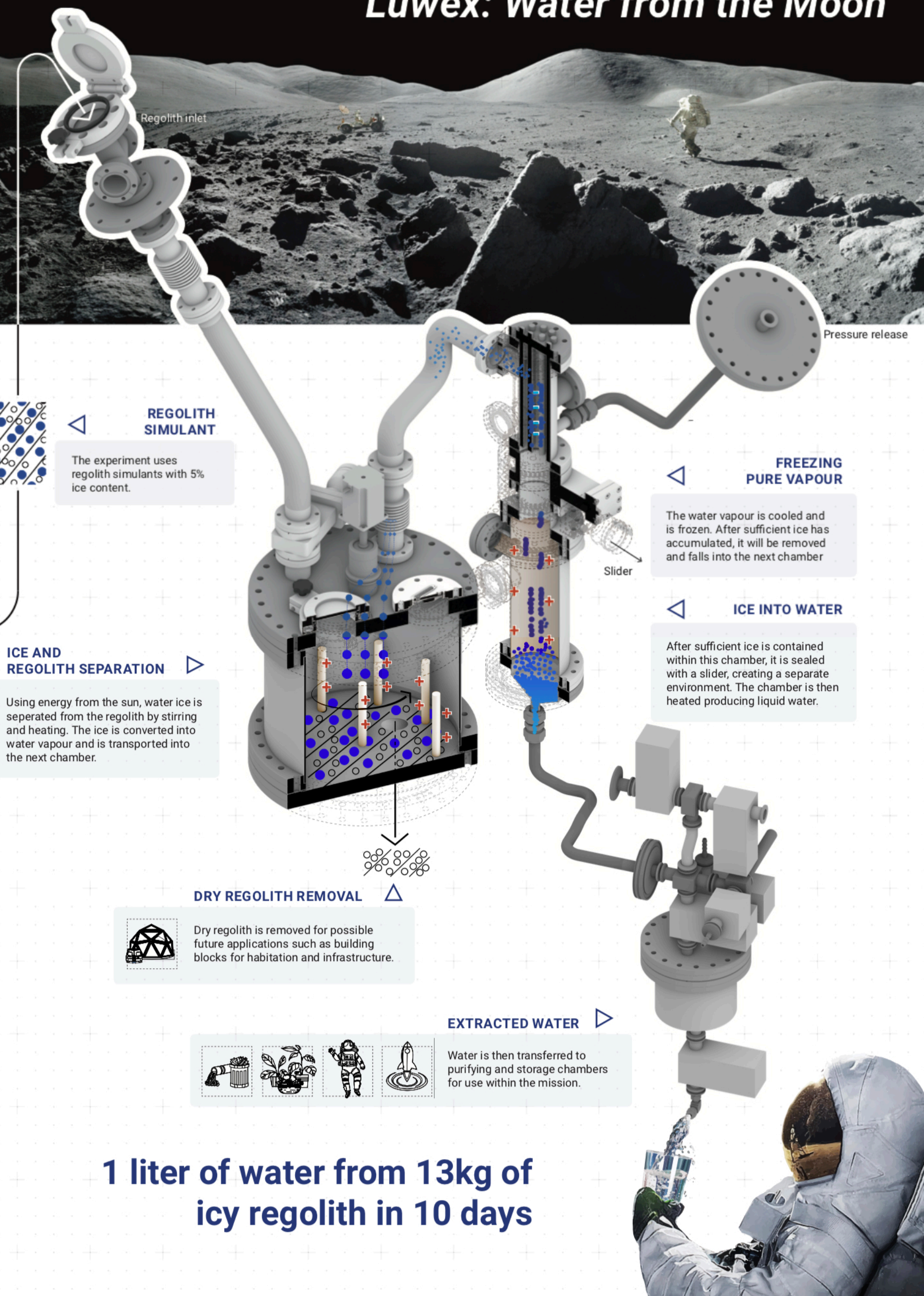
ICE AND REGOLITH SEPARATION
Using energy from the sun, water ice is separated from the regolith by stirring and heating. The ice is converted into water vapour and is transported into the next chamber.

DRY REGOLITH REMOVAL
Dry regolith is removed for possible future applications such as building blocks for habitation and infrastructure.

EXTRACTED WATER
Water is then transferred to purifying and storage chambers for use within the mission.

FREEZING PURE VAPOUR
The water vapour is cooled and is frozen. After sufficient ice has accumulated, it will be removed and falls into the next chamber.

ICE INTO WATER
After sufficient ice is contained within this chamber, it is sealed with a slider, creating a separate environment. The chamber is then heated producing liquid water.



1 liter of water from 13kg of icy regolith in 10 days