

# AI & ROBOTICS FOR MOON EXPLORATION

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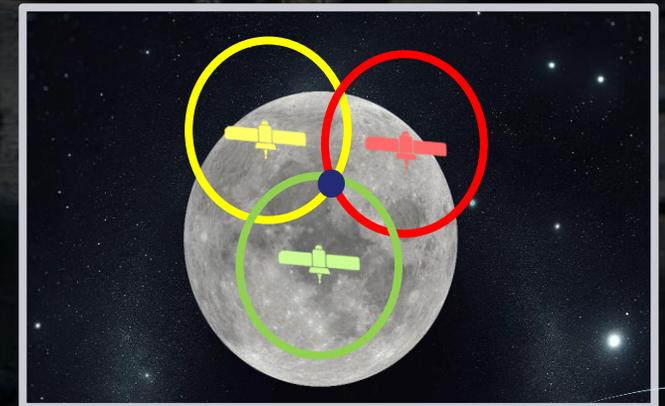
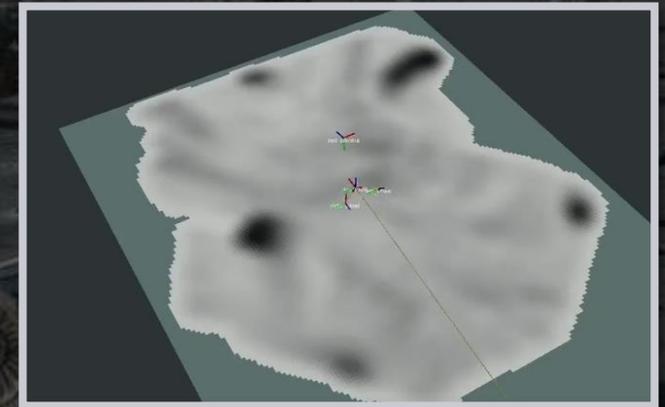
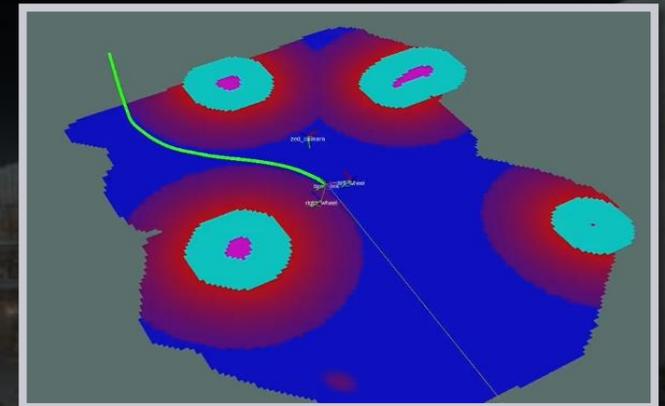


# ROVER AUTONOMOUS NAVIGATION

AI helps in the identification of safe trajectories in complex environments (e.g. moon, mars)

Main Rover/Robotic Tasks:

- Material extraction
- Infrastructure repair operations
- Construction
- Exploration



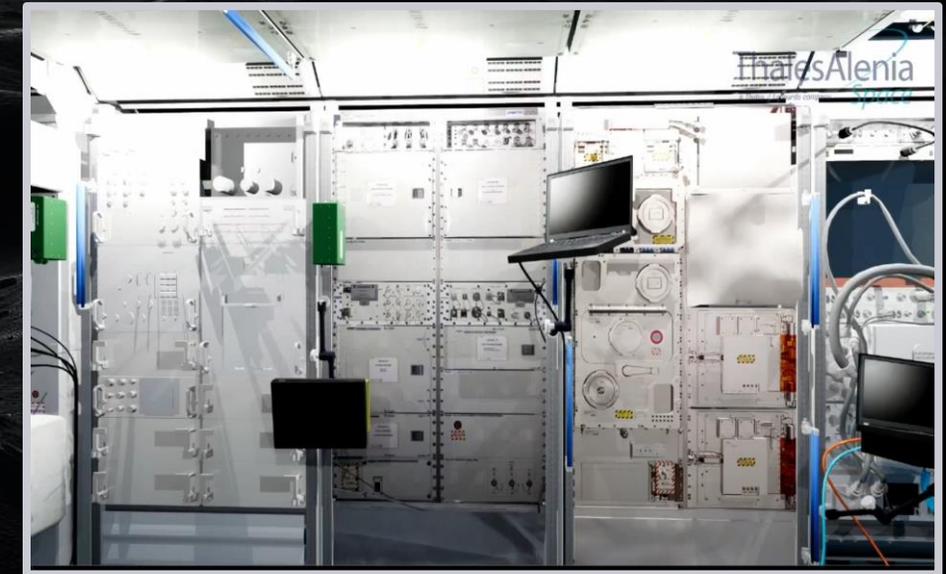
# DEEP LEARNING PERFORMANCE TESTS

# VIRTUAL ASSISTANT

## AI ASSISTED DECISION MAKING

Complexity is steeply increasing in Space Systems

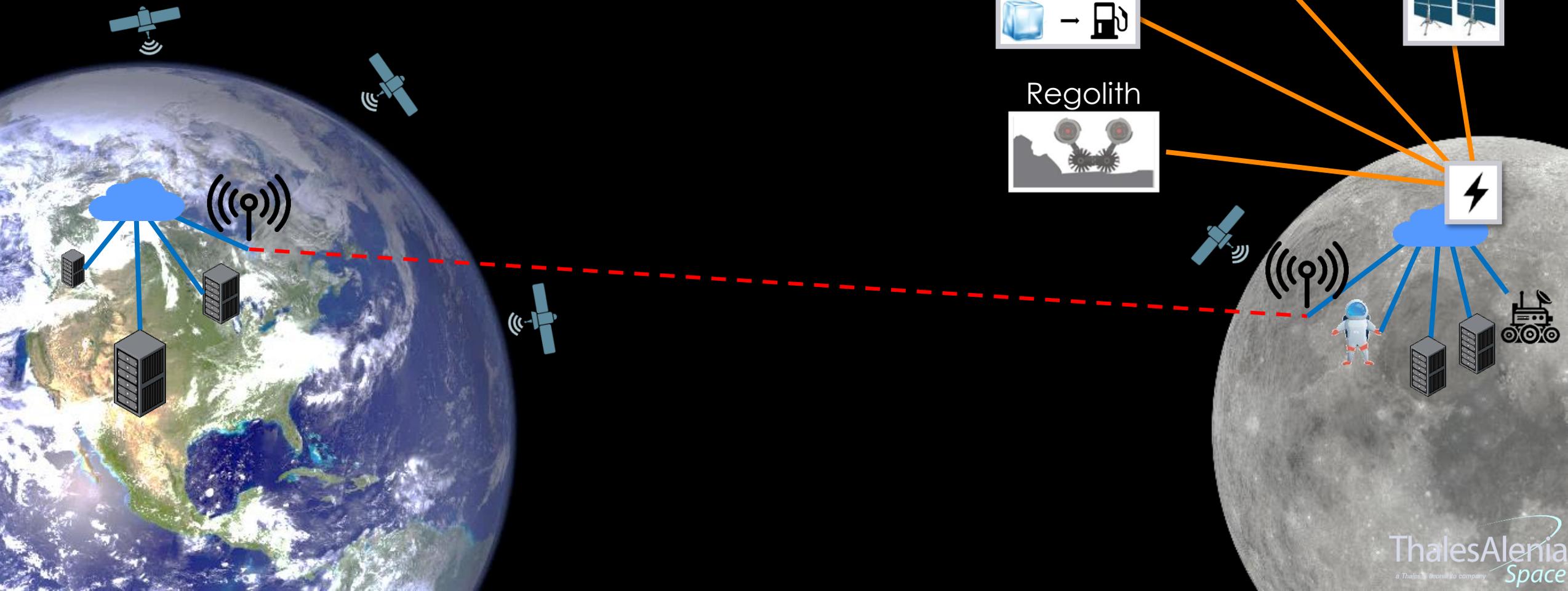
Virtual assistants and AR/VR can help the astronaut in planning, monitoring and the managing the operations



# EDGE COMPUTING FOR LUNAR EXPLORATION

MAKING AI APPLICABLE

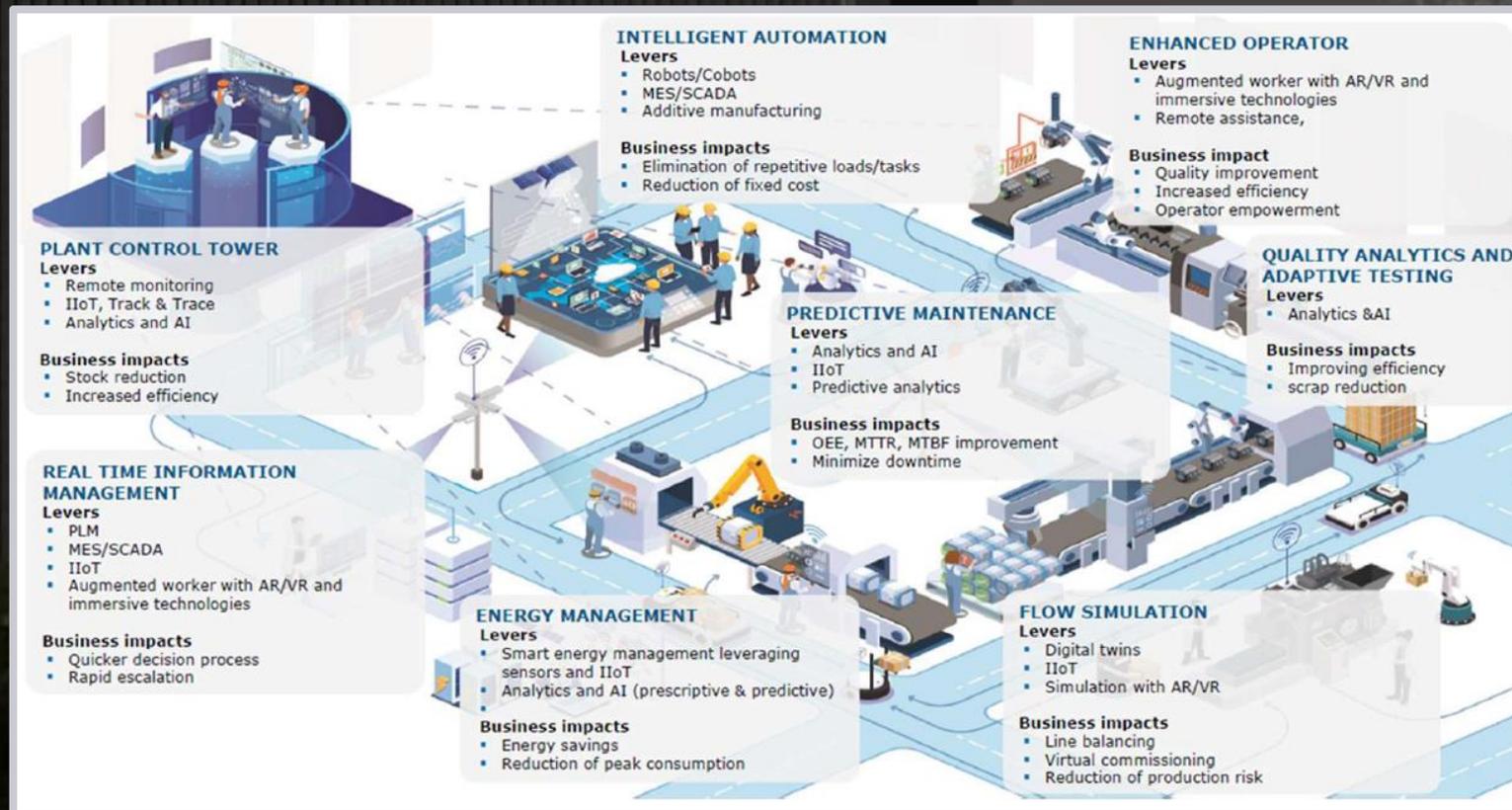
AI needs HW infrastructures to process large quantities of data: CLOUD in SPACE



# MANUFACTURING

4.0

Advanced technologies throughout all stages of design, assembly, integration and testing, including digital twins, virtual and augmented reality



VR/AR assisted production



Data driven manufacturing



Digital twin simulations



# MAIN COOPERATIONS WITH THE ITALIAN ACADEMY ON SPACE TECHNOLOGIES

