

Off World Living

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The Bartlett

UCL

Scope of this presentation

To consider the motivation

To consider our point of inflection and reflection

To consider the challenge

To consider the rationale for OWLI



We have a history of pushing boundaries and venturing into the unknown



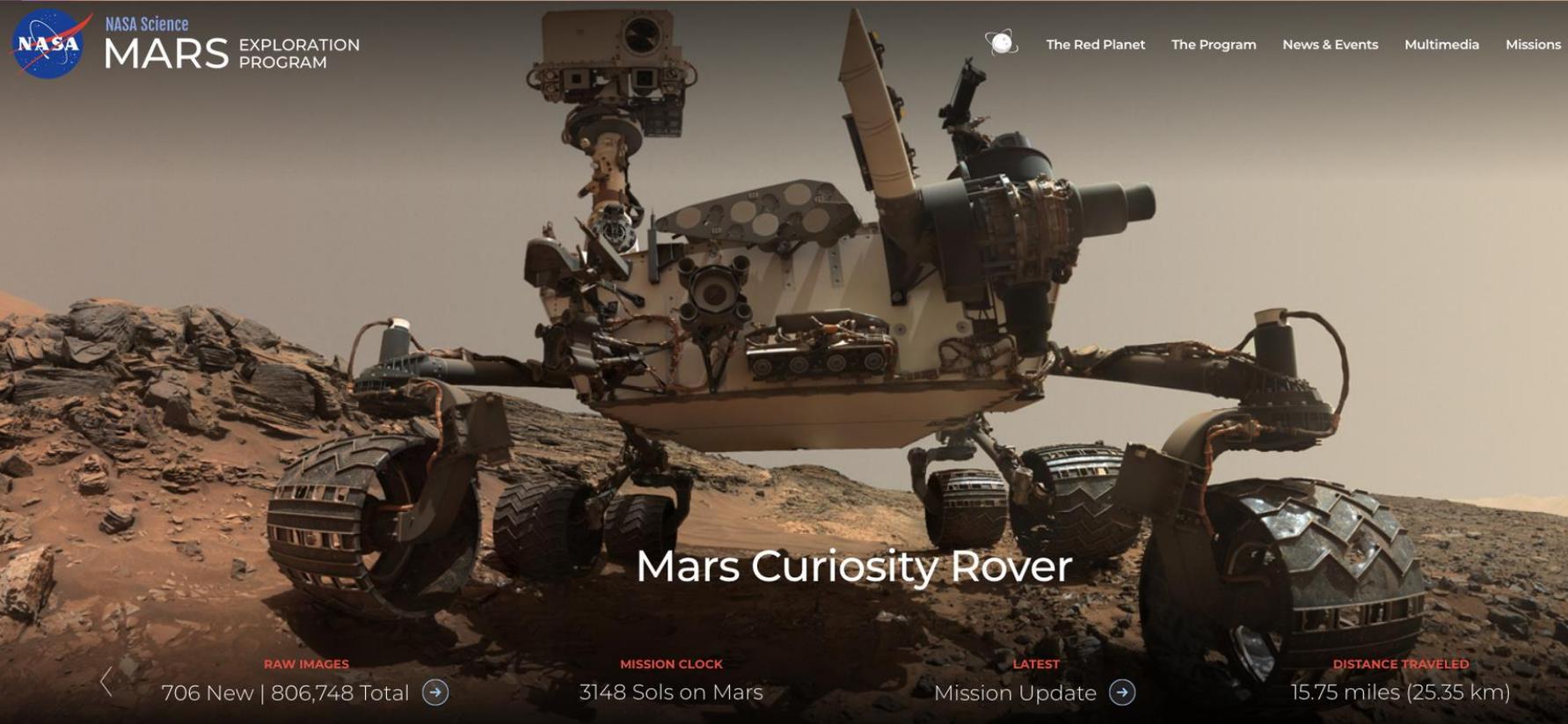


**Big player interest:
east and west,
public and private**



РОСКОСМОС





Mars Curiosity Rover

RAW IMAGES

706 New | 806,748 Total

MISSION CLOCK

3148 Sols on Mars

LATEST

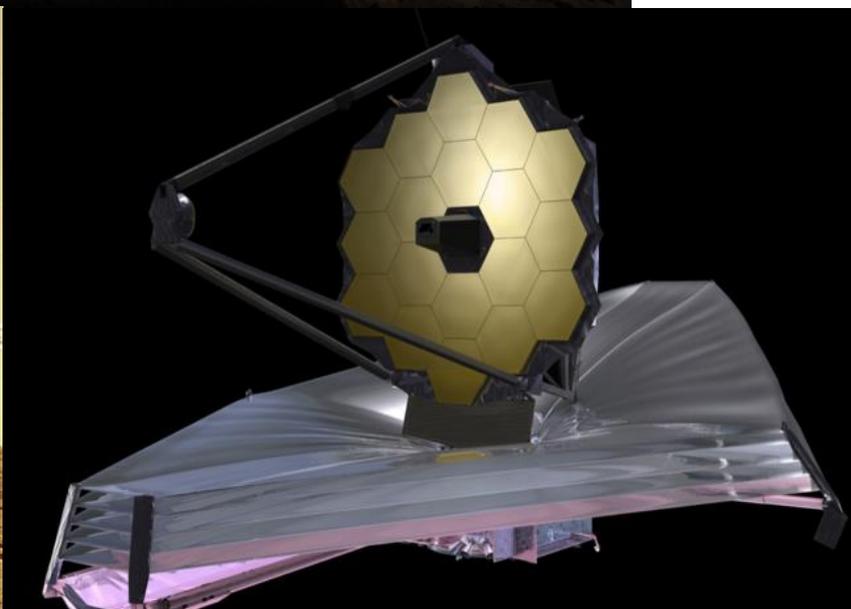
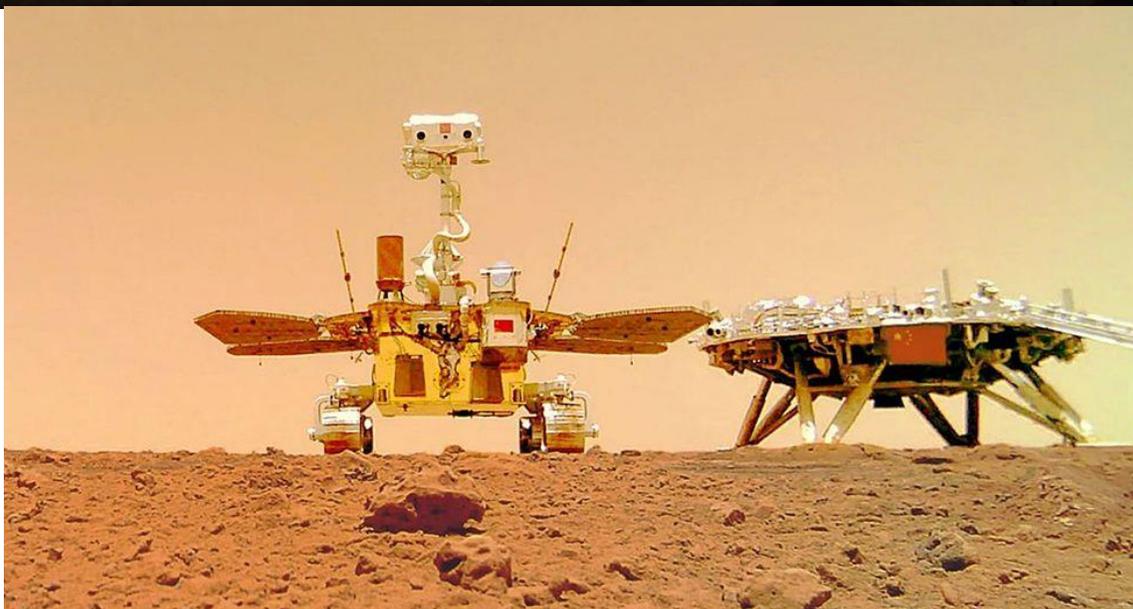
Mission Update

DISTANCE TRAVELED

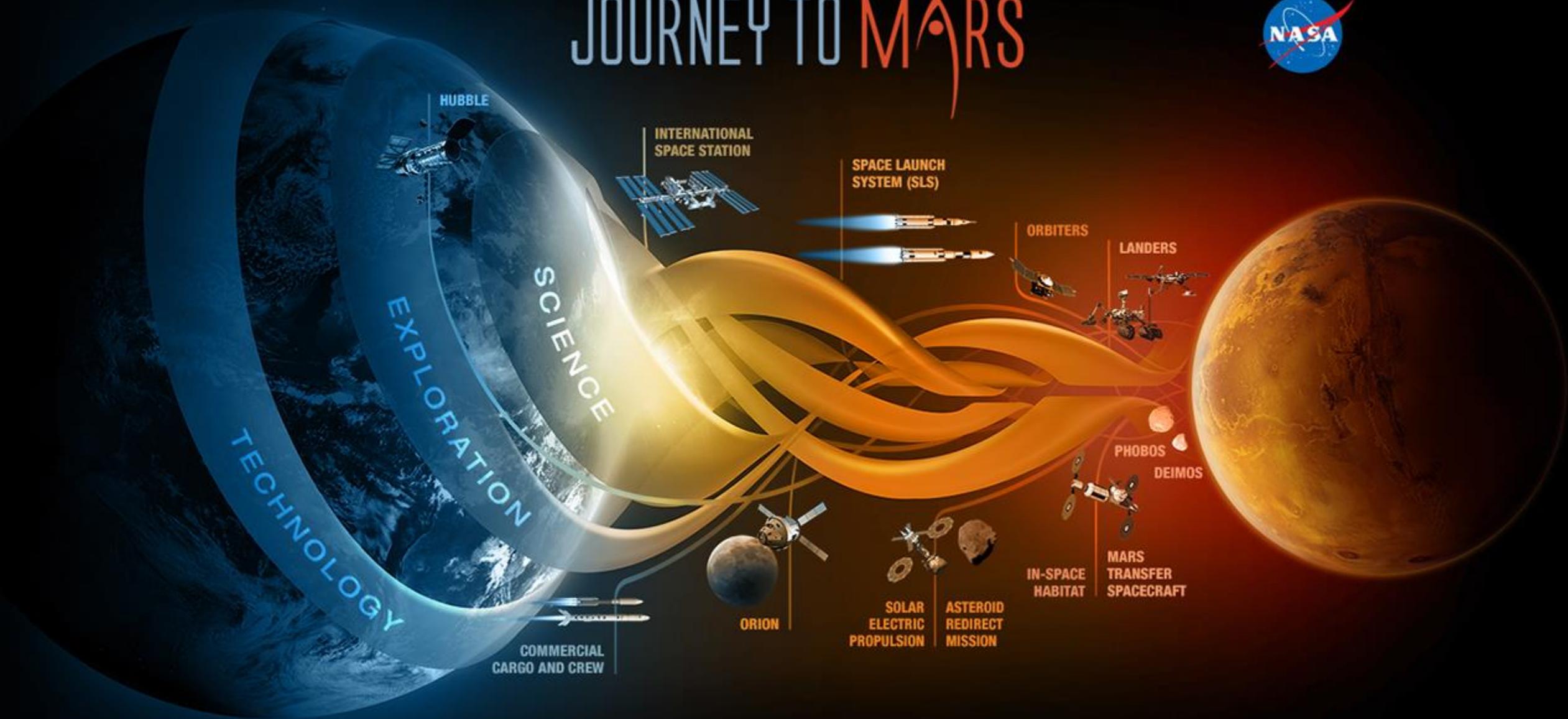
15.75 miles (25.35 km)



**What we can
achieve with our
technology and
ingenuity**



JOURNEY TO MARS





A time of Crisis

The Challenge of Off World Living

- **The Power and Determination needed - over the timescale required:**

- Political leadership (capital and lowercase)
- Public and media support
- Regulatory regime
- Money

- **The Science and Knowledge**

- Hard/soft; pure/applied; natural/social - all sciences - and new blended and new emergent
- Gathered knowledge coupled with modelling, simulation and rehearsal

- **Technologies**

- Traditional
- Emergent
- New
- Yet to be imagined:
 - Challenge 'pull'
 - Trajectory 'push'

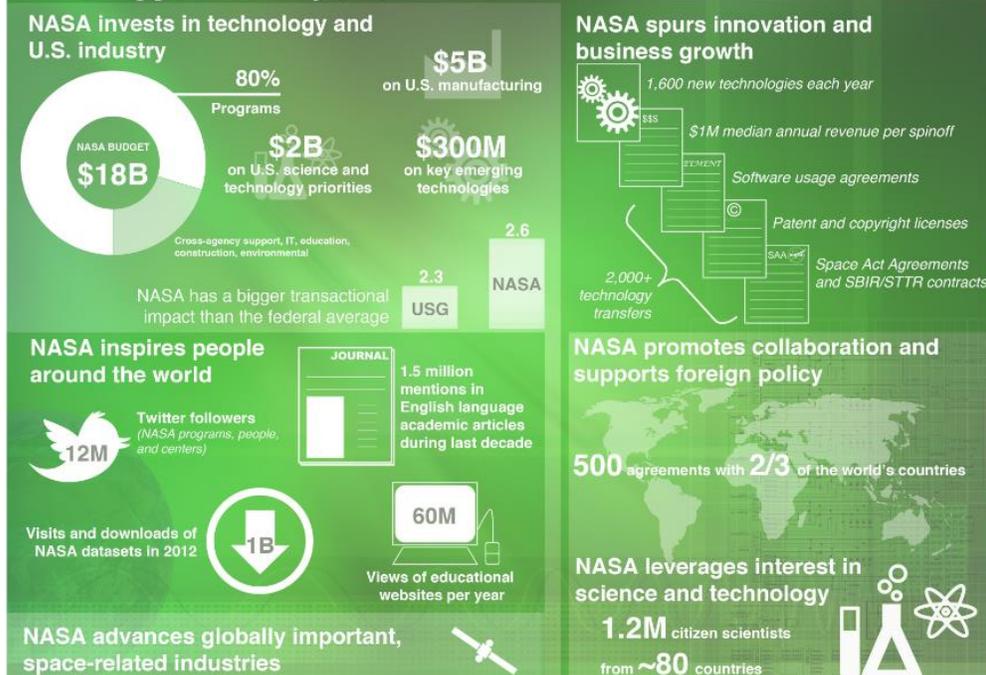


We realise the challenge we face

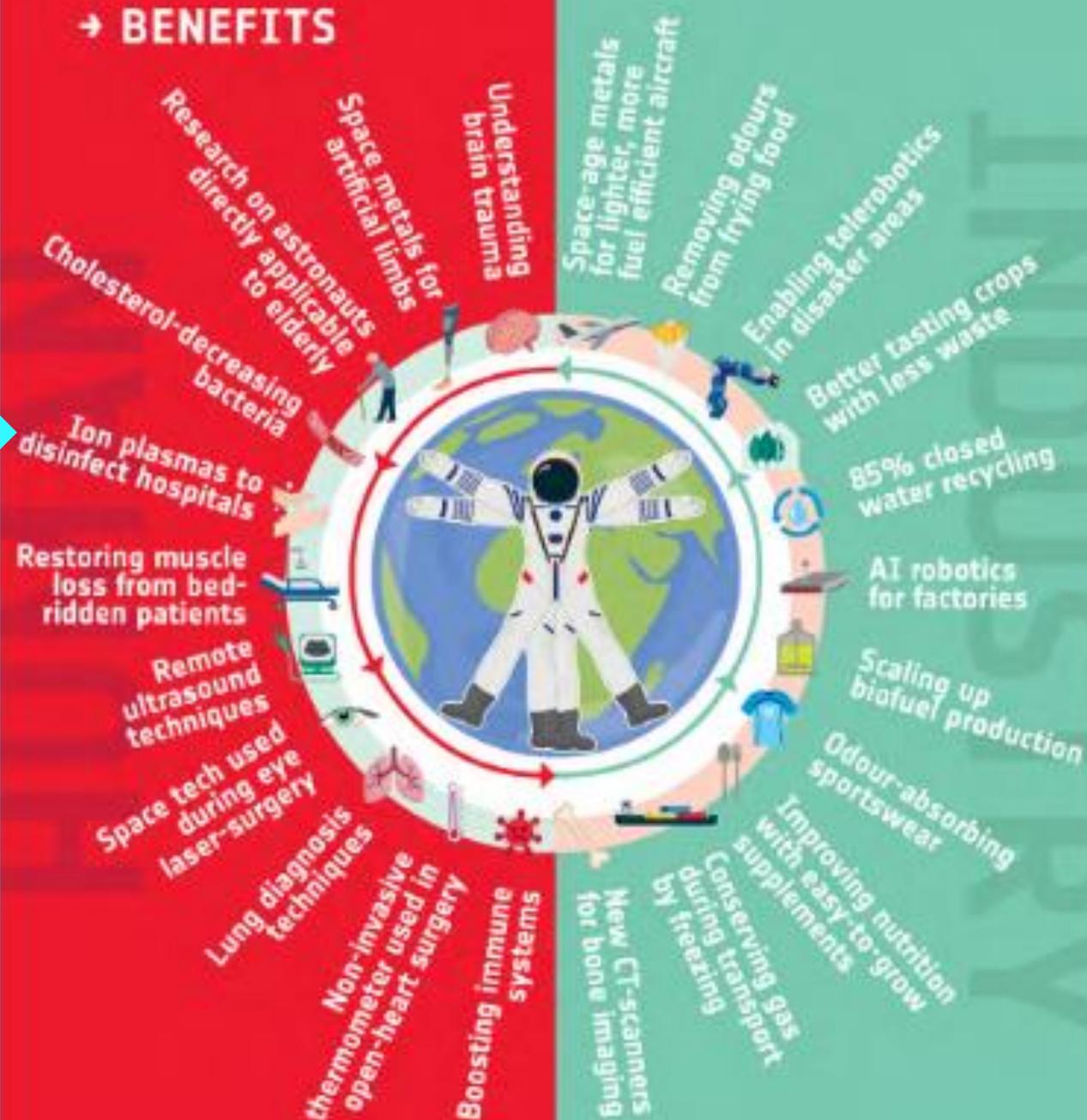
We need to draw on all sources of possible solution

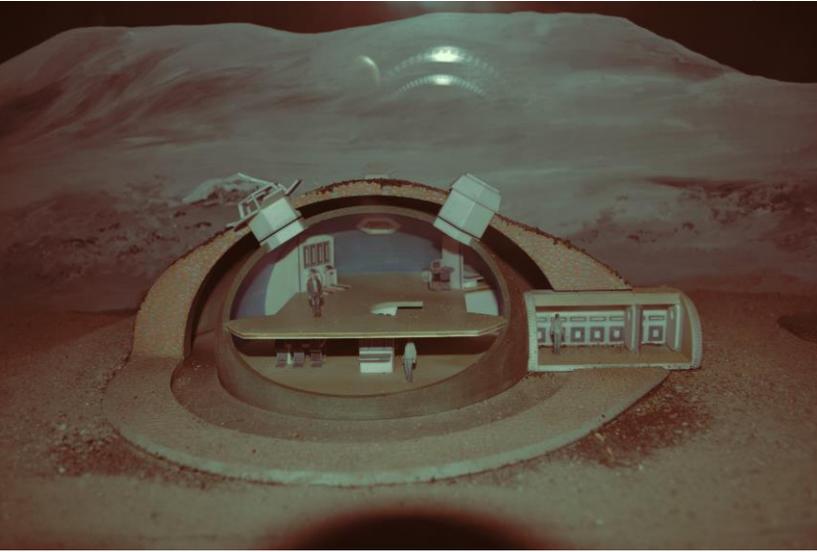


NASA's Annual Socio-economic Impacts
...are bigger than any one number



→ BENEFITS





UCL: radical, realistic and exploratory

UCL: large and 'full' university with excellent connections across sectors and geographies

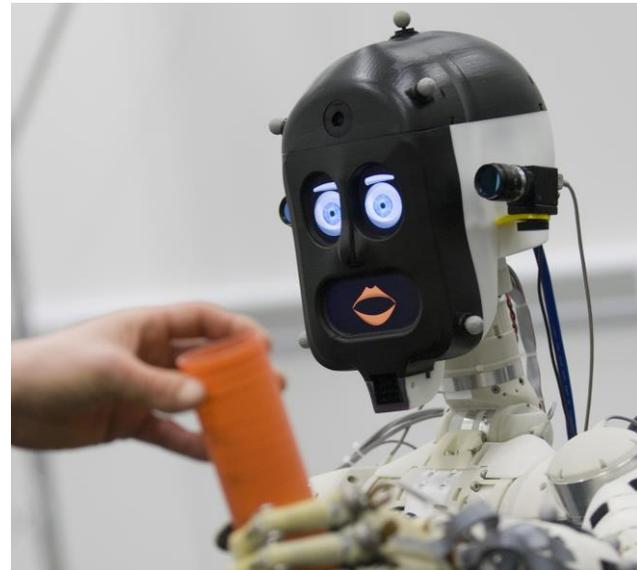
Off World Living is a topic that is 'ripe' for UCL to focus on and contribute to



The rationale for OWLI

With research in UCL's DNA, the opportunities look interesting:

- Evolving the known - engineering / architecture / anthropology / laws / policy
- Developing the emerging - autonomous robotics / new material creation (e.g. regolith + lunar water) / AI/ML / 3D printing
- Founding the new - OWL new scientific areas, e.g. one-stop autonomous local material creation, manipulation and habitat formation





- Owls sit well in trees
- OWLI sits well at UCL
- UCL with OWLI has potential for the next 100 years to:
 - **T**each new students OWL issues, challenges and topics - and how we can apply them to our precious planet at a precarious time
 - **R**esearch the many (many) topics that we will need to master
 - **E**ngage with those working on and fascinated by OWL
 - **E**nterprise opportunities for new invention, innovation, collaboration and knowledge exchange



So, what have we learned?

- If humans can – humans will try
- Our state of knowledge, technology and confidence is driving the quest to get humans to other worlds
- To achieve the quest of off world living will require tenacity, collaboration and new solutions and discoveries – with potential payoffs for our planet at a time of need
- The role for a university such as UCL in considering 'all things OWL' is clear, obvious and truly exciting



Thank you

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