

The logo for ISRU UK is located in the top right corner. It features a stylized graphic of a rocket launch or explosion, composed of red and blue geometric shapes and a trail of red and blue dots. To the right of this graphic, the text "ISRU" is stacked above "UK" in a white, bold, sans-serif font.

**ISRU  
UK**

# Global Britain to Galactic Britain: **ISRU Capabilities Across the Value Chain**

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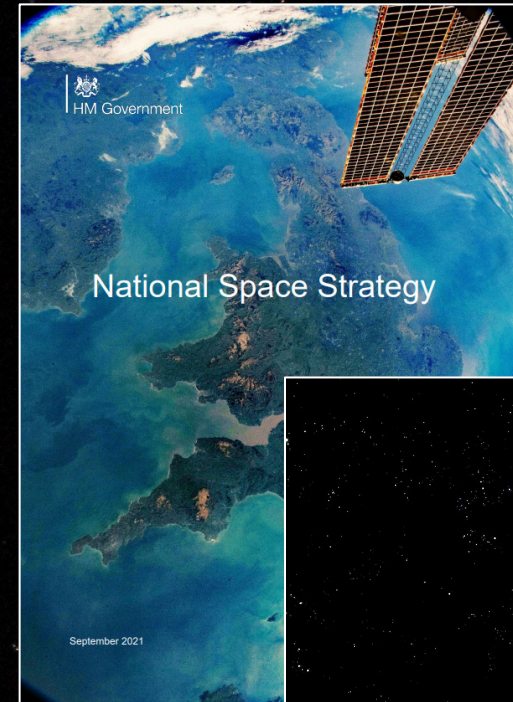
Secretariat, UK ISRU Representative Group



## Introduction & Context

# ISRU: A National Strategic Priority

- **Strategic Alignment:**
  - **UK National Space Strategy (2021)** recognises ISRU as vital to maintaining and enhancing the UK's competitive advantage in space.
  - **Space Exploration Technology Roadmap (2023)** identifies ISRU as an enabling exploration technology
- **Economic & Industrial Impact:**
  - Supports high-value sectors, fostering economic growth and job creation.
  - Enables the UK to develop globally competitive technologies and specialist services for future exploration missions.
- **International Leadership & Influence:**
  - Strengthens the UK's role in setting global standards for responsible and sustainable resource use in space.
  - Encourages partnerships and collaboration with major, reinforcing UK's thought leadership in international space policy.





# Coordinating the UK's Vision for ISRU

## ISRU - UK



- **Purpose:**

- To **represent and coordinate** the UK's expertise in ISRU across academia, industry, and government.
- To **advise government** on strategic directions, policy-making, and funding priorities.
- To **facilitate collaboration** within the UK's ISRU ecosystem, aligning activities along the entire value chain from resource prospecting to manufacturing and governance.

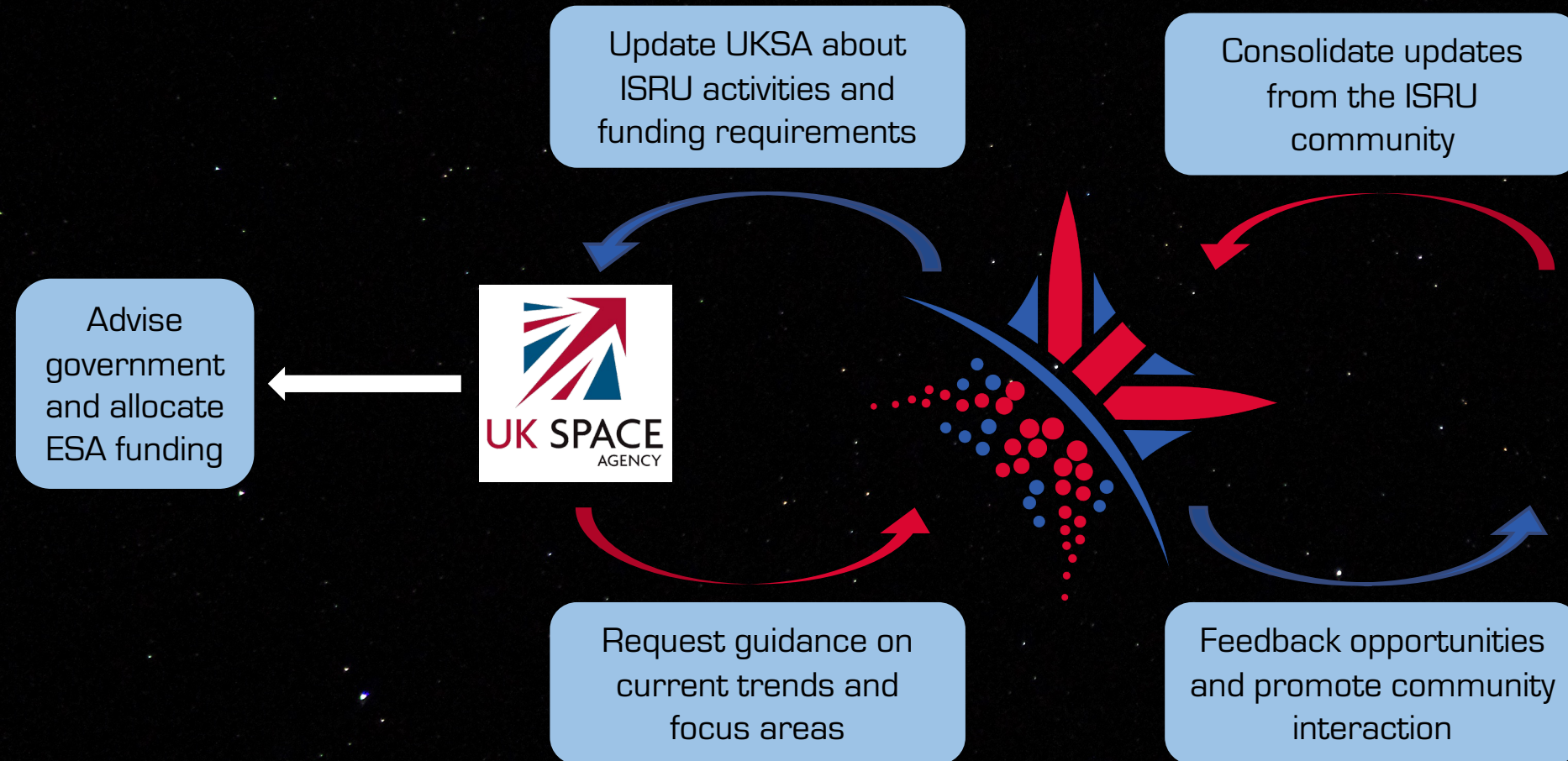
- **Mandate:**

- Independent advisory role to the UK Space Agency (UKSA).
- Promotion of sustainable, responsible, and internationally collaborative ISRU practices.



## Approach

# A New Vision for ISRU in the UK





Membership

# Who Are We?



University  
of Glasgow



Birkbeck  
UNIVERSITY OF LONDON



IMPERIAL



The University of Manchester



The Open  
University



UNIVERSITY OF  
SURREY



UNIVERSITY OF  
OXFORD



UNIVERSITY OF  
LEICESTER



# Across the Value Chain



## Prospecting & Resource Evaluation



Prospecting  
Remote Sensing  
Analysis Tools  
Machine Learning

## Extraction & Processing



Beneficiation  
Molten Salt  
Electrolysis  
Hydrogen  
Reduction

## Manufacturing & Construction



Additive  
Manufacturing  
Sintered Bricks  
Structural  
Design

## Infrastructure & Planetary Protection



Legal and Ethical  
Frameworks  
Policy for Space  
Development  
UK Leadership



## Conclusions



# Strategic Outlook

- Near-future missions: Lunar prospecting (mid-2020s), demonstration ISRU plants (2030s).
- UK's strategic leadership in responsible lunar exploration and resource utilisation.
- Collaborative ethos driving international ISRU initiatives.
- Major Output: UK ISRU Technology Roadmap (to be released in early 2026).





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message to the linked email  
address]

Visit our Website!



Read the Roadmap!

