

# COSMIC BRITANNIA

How the UK can succeed  
in the new space age

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# WHY SPACE?

*“Rocket ships are exciting but so are roses on a birthday”*

Leonard Nimoy (Spock)

# WHY SPACE?

## PRESTIGE

Space has “street cred”. Successes in space can inspire a generation, bringing prestige to the countries that achieve them. Examples include Lunar exploration such as the Apollo programme or more recently Artemis.

## PROSPERITY

Directly or indirectly space is integral to enabling the modern economy. It offers avenues for technological innovation, economic growth, and job creation. Examples include communications for remote regions and Earth observation to improve crop yields.

## SOVEREIGNTY

Space is strategic. Space underpins countries’ economic prosperity and their ability to defend themselves – this drives a desire for sovereignty and control of space assets by countries and nations.

Any activity in space can be justified by a combination of these 3 factors

A large, stylized image of the Union Jack flag, the national flag of the United Kingdom, serving as a background for the title. The flag is shown with a slight wave and is centered on the page.

# FOCUSING THE UK VISION

*“We will build one of the most innovative and attractive space economies in the world, and the UK will grow as a space nation. We will protect and defend UK interests in space, shape the space environment and use space to help solve challenges at home and overseas. Through cutting-edge research, we will inspire the next generation and sustain the UK’s competitive edge in space science and technology.”*

# THE UK WANTS IT ALL

## PROSPERITY

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## SOVEREIGNTY

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## PRESTIGE

*Through cutting-edge research, we will inspire the next generation and sustain the UK’s competitive edge in space science and technology.”*

UK National Space Strategy 2021

Progression of the UK National Space Strategy since 2021:

NATIONAL SPACE  
STRATEGY  
(2021)

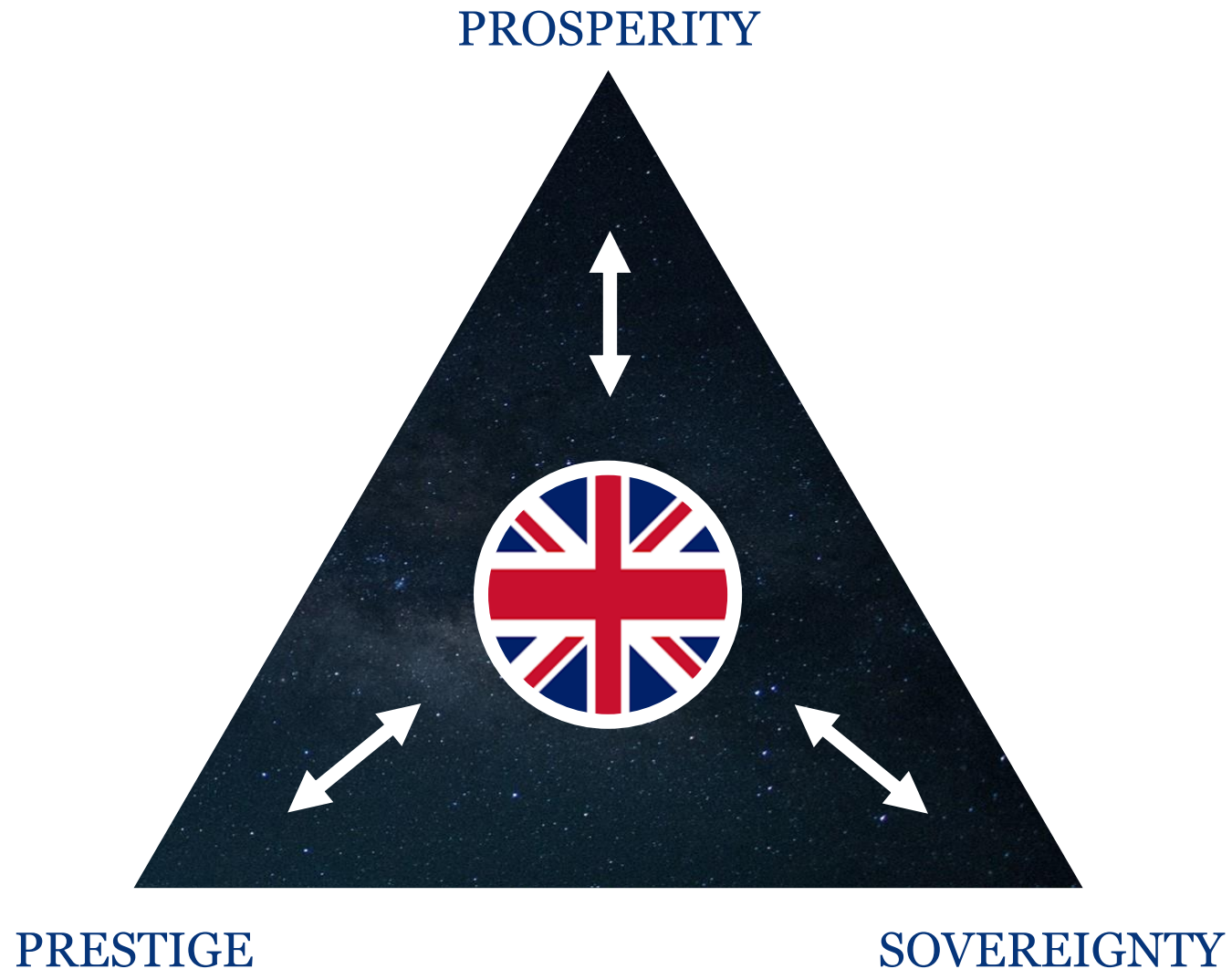
DEFENCE SPACE  
STRATEGY  
(2022)

NATIONAL SPACE  
STRATEGY IN ACTION  
(2023)

SPACE INDUSTRIAL  
PLAN  
(2024)

# BUT WHAT CAN THE UK ACHIEVE?

- The UK needs to decide what it wants to achieve in space as it can not afford to achieve it all
- The UK had just **1.2%** of global government space expenditure in 2023\* and **2.8%** of global equity space investment over the last 10 years\*
- The future success of the UK space industry hinges on how well the UK allocates its scarce resources\*\* as determined by the UK's focus on Prosperity, Prestige, and Sovereignty
- Confusion on why projects are supported between investors, industry, and government can lead to the misallocation of resources



# PRESTIGIOUS SOLAR SYSTEM EXPLORERS?

Will the UK seek to go out beyond  
Earth seeking to explore the  
moon and planets beyond?



# PROSPEROUS BANKERS FOR THE HEAVENS?

Will the UK seek to leverage its financial sector to dominate funding for space?





# SOVEREIGN SPACE ENERGY GIANT?

Will the UK seek to achieve energy independence through space like no nation before?



LIKE THE APOLLO ERA IN THE US,  
THE UK NEEDS A MORE FOCUSED LONG-  
TERM VISION TO RALLY AROUND

A large, stylized Union Jack flag, the national flag of the United Kingdom, featuring a red cross on a white field with a blue border. The flag is shown with a slight wavy motion.

# VISION FOR SUCESS

The vision that the UK sets will shape the capabilities that are created and  
the investments that investors and industry should make

Only by concentrating its resources will the UK build world-leading  
sustainable capabilities that other countries lack

A wide-angle photograph of Earth from space, showing the curvature of the planet and the blue atmosphere. A portion of a space station or satellite is visible in the upper left corner. The title text is overlaid on the center of the image.

# CHALLENGES FOR THE UK TO OVERCOME

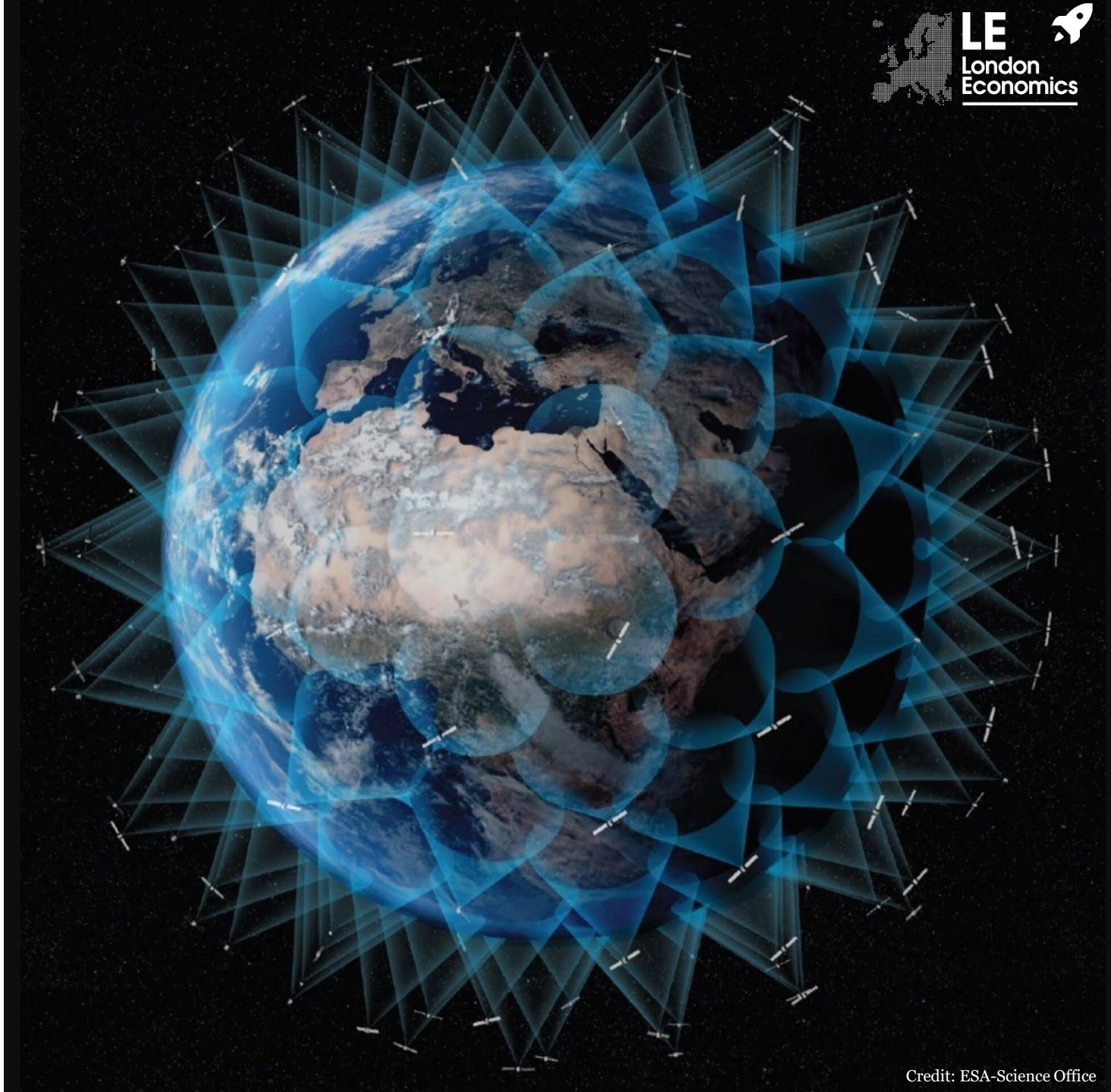
*“Vision without execution is delusion”*

Thomas Edison

# NATURAL MONOPOLIES

## Thriving in an age when bigger is better

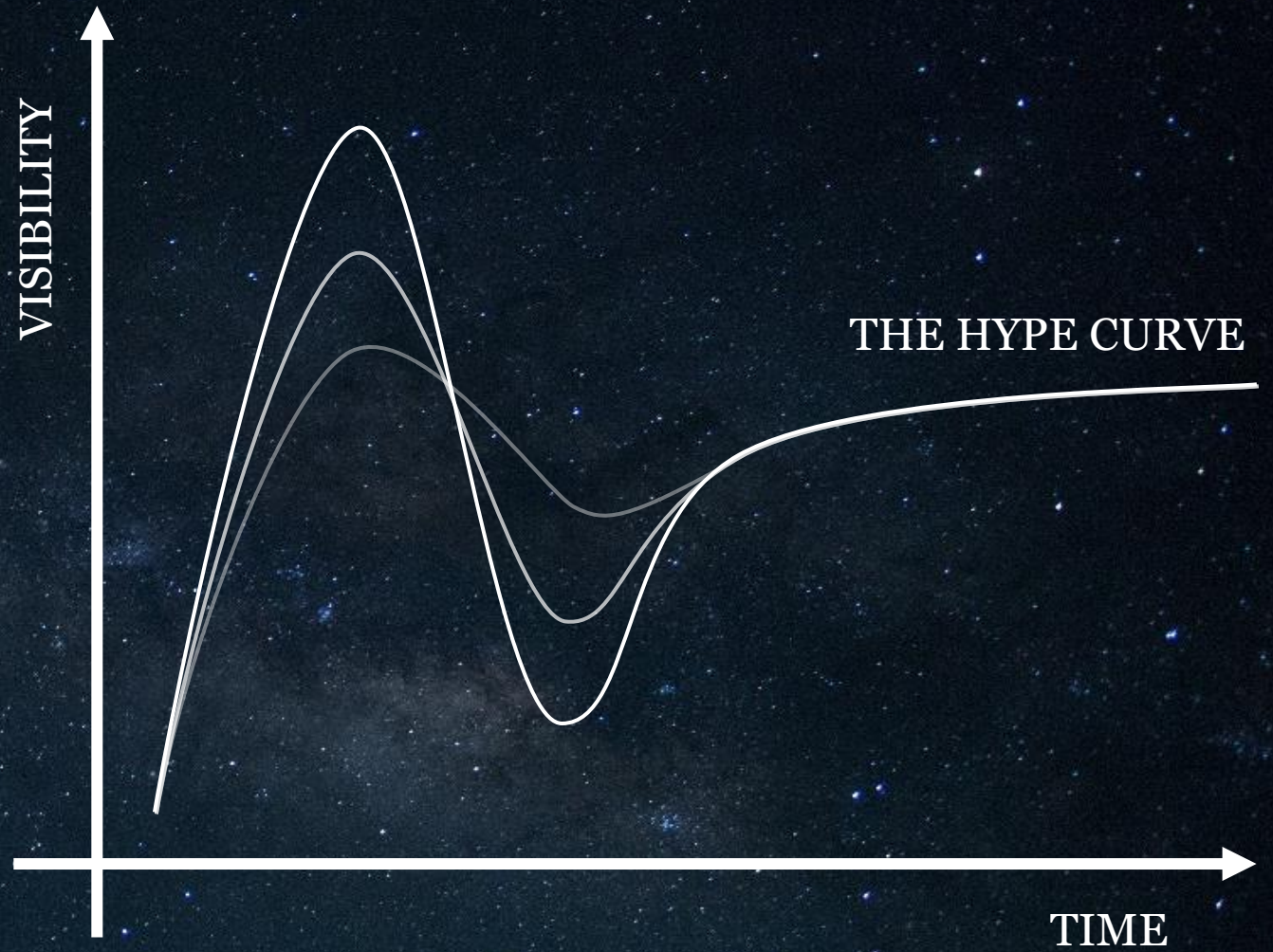
- Space capabilities are consolidating into the hands of fewer and fewer organisations
- In 2023, around two-thirds of all satellites launched were owned by SpaceX
- Economically, LEO constellations favour consolidation given the massive capital requirements and the inherently global nature of their capabilities
- This poses a challenge for smaller countries, such as the UK, that seek to maintain sovereignty, as they lack the scale of demand to justify the massive investment required to build and sustain these constellations



# NAVIGATING THE HYPE

## Ensuring only the viable survive

- The space market has boomed. Private capital has flowed in with around \$300bn over the last 10 years according to Space Capital
- However, space is hard. It is characterised by very long investment horizons and high capital requirements which are required to solve substantial scientific or engineering challenges
- While many new companies have been created during this boom period, many of their business models have yet to be validated
- The UK needs to be disciplined in the areas it promotes so that those that are viable survive



# ROLE OF GOVERNMENT

## Backing the right horses

- Governments are central to a thriving space industry and can be a major competitive advantage – Government space budgets are around a third of the entire space economy\*
- Globally governments have been seeking to take on a smaller role in space - contrary to the trend observed in the rest of the economy
- While the UK has successfully created numerous space start-ups – as they grow, they will likely need more, not less, government support to be competitive on a global stage. This will be challenging to fund without focusing scarce resources
- How the government supports industry should vary based on the market, in some cases, it should be the market, in others a bystander
- Governments can change the rules of the game by altering market structures. E.g., in niche markets where there can only be one domestic sustainable provider they can back “National champions”



# HOW TO ACHIEVE COSMIC BRITANNIA?

## Refine the UK vision for space

A focused vision brings clarity. Like the Apollo era in the US, the UK needs a more focused long-term vision to rally both investors and industry.

## Greater focus of scarce resources

The UK needs to refine which of the 22 capabilities outlined in the National Space Strategy in Action needs to be sovereign and which should be achieved through collaboration.

## Tailor the role of government

The government can shape its procurement approach for competitive advantage. UK space companies will likely need more support, not less, as they grow. National champions in niche markets can be more viable than open competition.



The UK should prioritise the capabilities where it can be most competitive and tailor its procurement approach market by market to best support industry



# ACHIEVING COSMIC BRITANNIA

“Success is stumbling from failure to failure with no loss of enthusiasm.”

Winston S. Churchill



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