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World Space
Week SPAIN SEVILLA

INNOVATIVE REGIONAL POLICIES TO SUPPORT SPACE INDUSTRY

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#SemanaEspacioSevilla
#WSW2023

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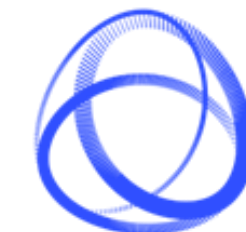
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Actors in space

- Space Agencies STATES
- Intergovernmental space agencies STATES
- International institutions NON STATE
- Commercial entities – as contractors to Space Agencies STATE?
- Commercial entities – working alone NON STATE
- Regions – NON STATE
- Individuals - NON STATE

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UN Treaties for Outer Space



Outerspace Treaty

requires non-state actors to have authorisation and continual state supervision.

Responsibility for compliance is 'borne by the state party'

The state party from whose territory it is launched, is liable for any damage caused by space exploration.



Rescue and Return

States must help astronauts who are lost or in distress

States must pay for the return of anything that was launched from their soil



Liability

The launching state is liable for any damage caused by launch or space craft



Registration

The launching state must register any objects sent into space with the relevant UN authority



Moon Treaty

States must work together

States must not make a sovereign claim on the moon



UNOOSA Principles: State based

BUT 80% of outerspace activity is Commercial

Five sets of principles support that body of law. These are the declaration of legal principles governing the activities of States in Outer Space (1963), the principles relating to international direct television broadcasting (1982), the principles relating to remote sensing of the Earth (1986), the principles on the use of nuclear power sources (1992) and the declaration on international cooperation in the exploration and use of outer space (1996).

Other resolutions adopted by the Assembly to strengthen the framework include a means for States that are not party to the Registration Convention to provide information on their satellites (1721 B of 1961) and recommendations to facilitate the application of the concept of the "launching State" (59/115 of 2004) and for the enhancement of registration practices (62/101 of 2007).

Artemis Accords October 2020

- 28 signatories (India signed in June 2023)
- Aim to get humans on the moon by 2025 – including first POC and first woman
- “With numerous countries and private sector players conducting missions and operations in cislunar space, it’s critical to establish a common set of principles to govern the civil exploration and use of outer space.”

Critiques:

Use of space resources

USA’s allies only

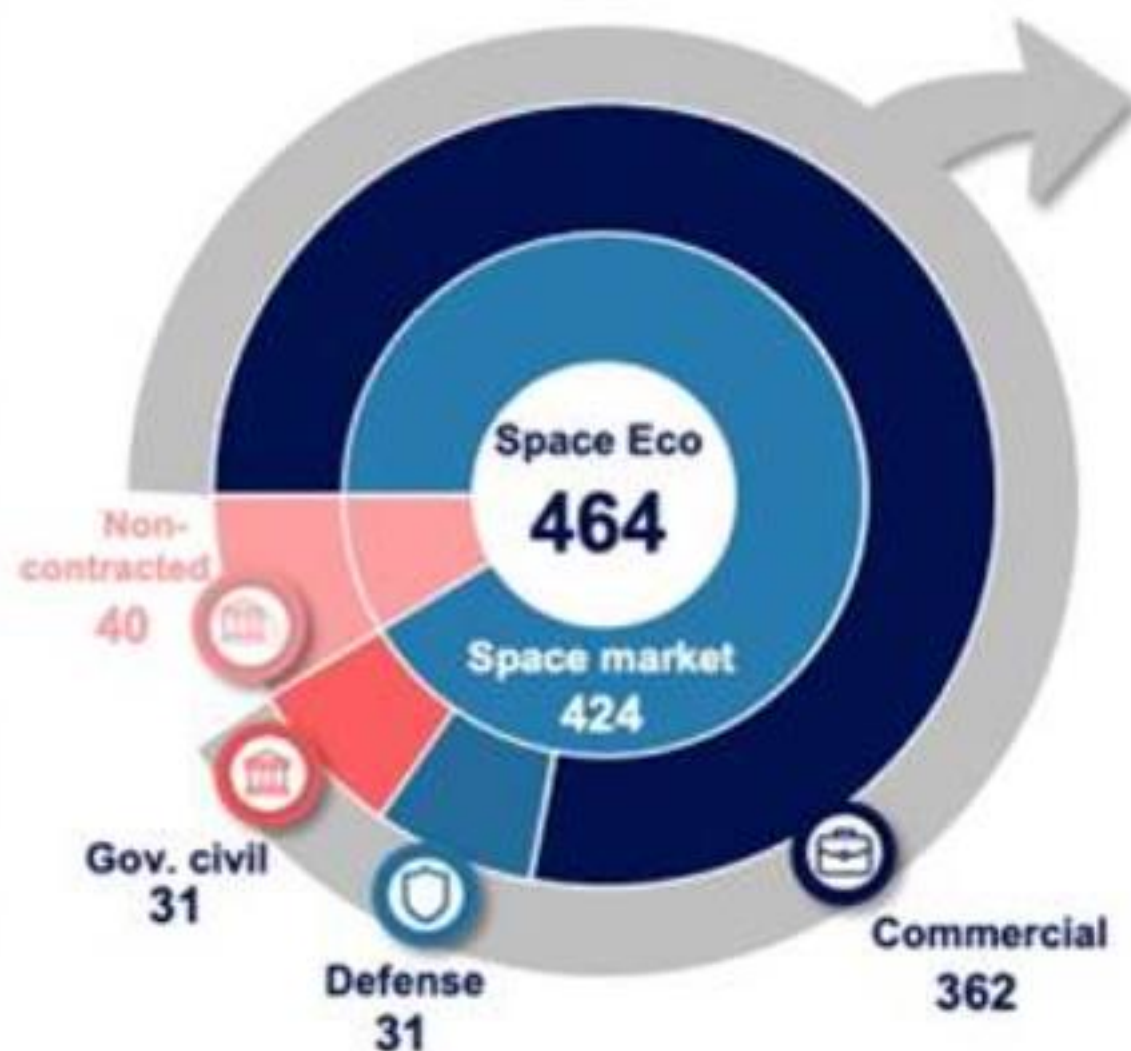
Political benefit rather than scientific

Agreements are bi-lateral with the USA

Bi-lateral agreements with SpaceX?

In billion USD

Space Economy



The value of commercial space

- In 2022 the global space economy was \$464B
- In 2023 it is \$564B
- The Space Foundation estimate it will reach \$800B in the next 5 years
- The satellite industry generates the majority of the global space economy
- And the majority of satellites are commercially owned
- (The global economy is \$105 trillion)

Commercial Space

- Commercial activity in outer space is NOT new
- BUT Commercial activity has changed and expanded since the end of the Cold War
- Change to the International political economy of space
- Change to the state / market nexus
 - Commercial profit making



Who built Apollo?

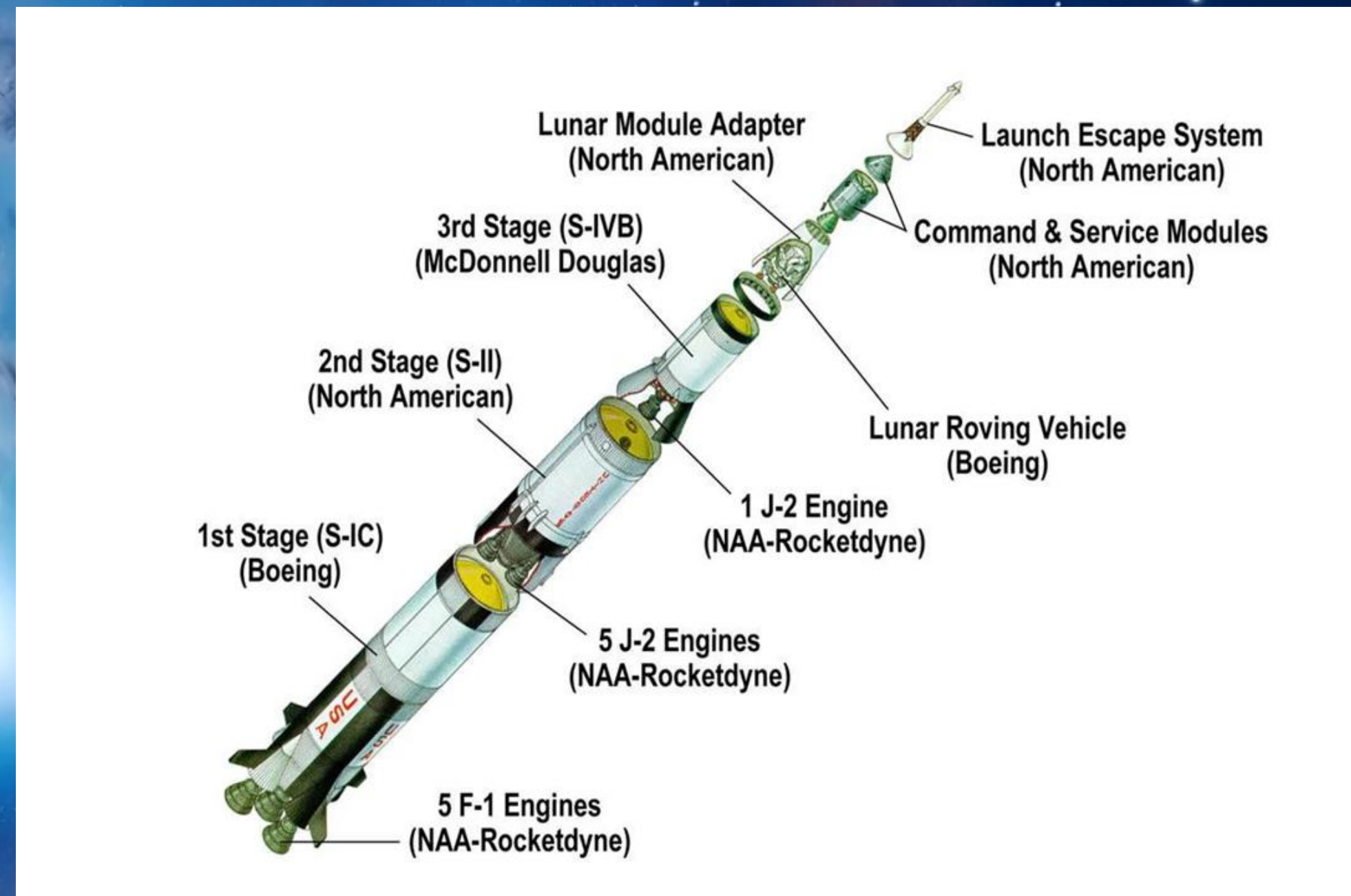
The USA's space agency – NASA

Six main aerospace companies contracted by NASA

- Boeing, North American Aviation, Douglas Aircraft, McDonnell Aircraft, Northrop and Gruman

These commercial entities were NOT considered to be space actors

Working for an actor in space



Commercial input into state programmes

- NASA and SpaceX – working together on Artemis and other aspects of space faring
- ESA and ClearSpace – private initiative to clear up space debris.
- Indian Space Research Organisation – opened up for use by private entities. Draft Space Activities Bill – to promote public private cooperation and work with the USA
- UAE National Space Policy – To increase private and academic sector involvement in space



New Space Law initiatives

- International
 - UN Working Group on Space 2021 aimed at prevention of an arms race in space
 - Artemis Accords
 - Latin American & Caribbean Space Agency
 - Basic Space Plan (Japan)
 - Indian Space Activities Bill
 - UAE Federal Law No.(12) of 2019
- EU
 - European Space Programme Agreement (2020)
 - EU Space Regulation (2021)
- UK
 - Space Industry Act 2018 (SIA) &
 - UK National Space Strategy (2021)



What does national legislation need to cover?

- National implementation of UNOOSA laws
- Regulations and binding guidelines for commercial space sector
 - Safety guidelines
 - Insurance levels to protect the state
 - End of life clearance – space environment protection
- State market nexus
 - Who owns hardware following public-private projects
- And a lot of other details

What about the local?

- Regions are not actors on the international stage
- Regions are not actors as per UNOOSA
- However: Network of European Regions Using Space Technologies (NEREUS) is working with regions to boost innovation, economic growth, high level employment
 - pushing for release of Copernicus and Galileo data to allow regions to benefit
- Catalonia launched its first nano-satellite in March 2021, and its second in January 2023
- Scotland is a moving fast to become the first European launching state



At the regional level

- Regions need to be careful not to overlap with state level space activity
- Regions need to be careful not to spread too thin / cover too many topics
- Regions need to decide what they want to achieve
 - Scotland = launch capabilities?
 - Catalonia = its own constellation
- Potential Benefits
 - Boost the economy?
 - Democratiser outer space?
- Potential Problems
 - Cost / Return : space activity is very expensive
 - Military provocation
 - The legality of establishing a government agency / space agency at the regional level



From the global to the local

Regions cannot compete with big space players

Regions should focus attention on one area of space expertise

Regions should work with state level space actors to create preferential legislation

Regions should work with commercial space actors and ask 'what do you need?'

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