

SpaceTech Market Watch

March 2024

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Extract for demonstration purposes

calista
DIRECT INVESTORS

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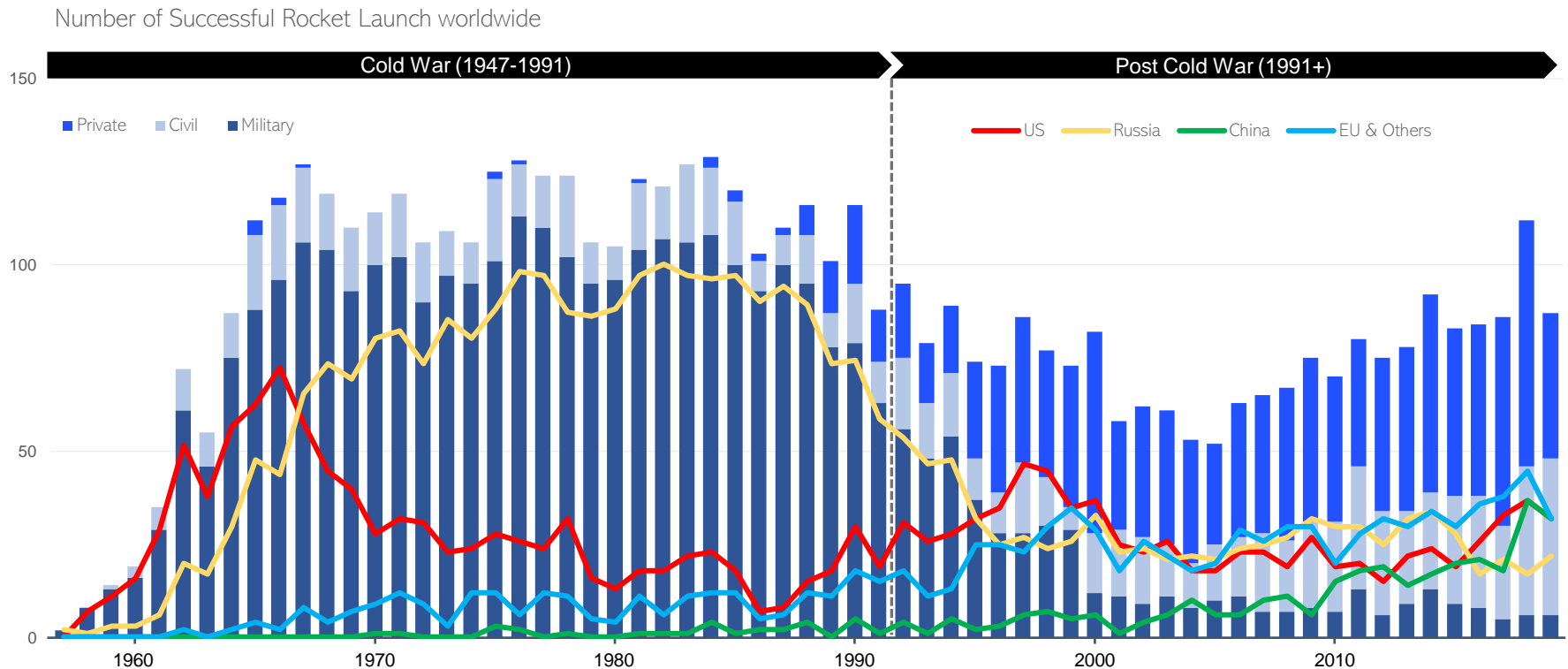
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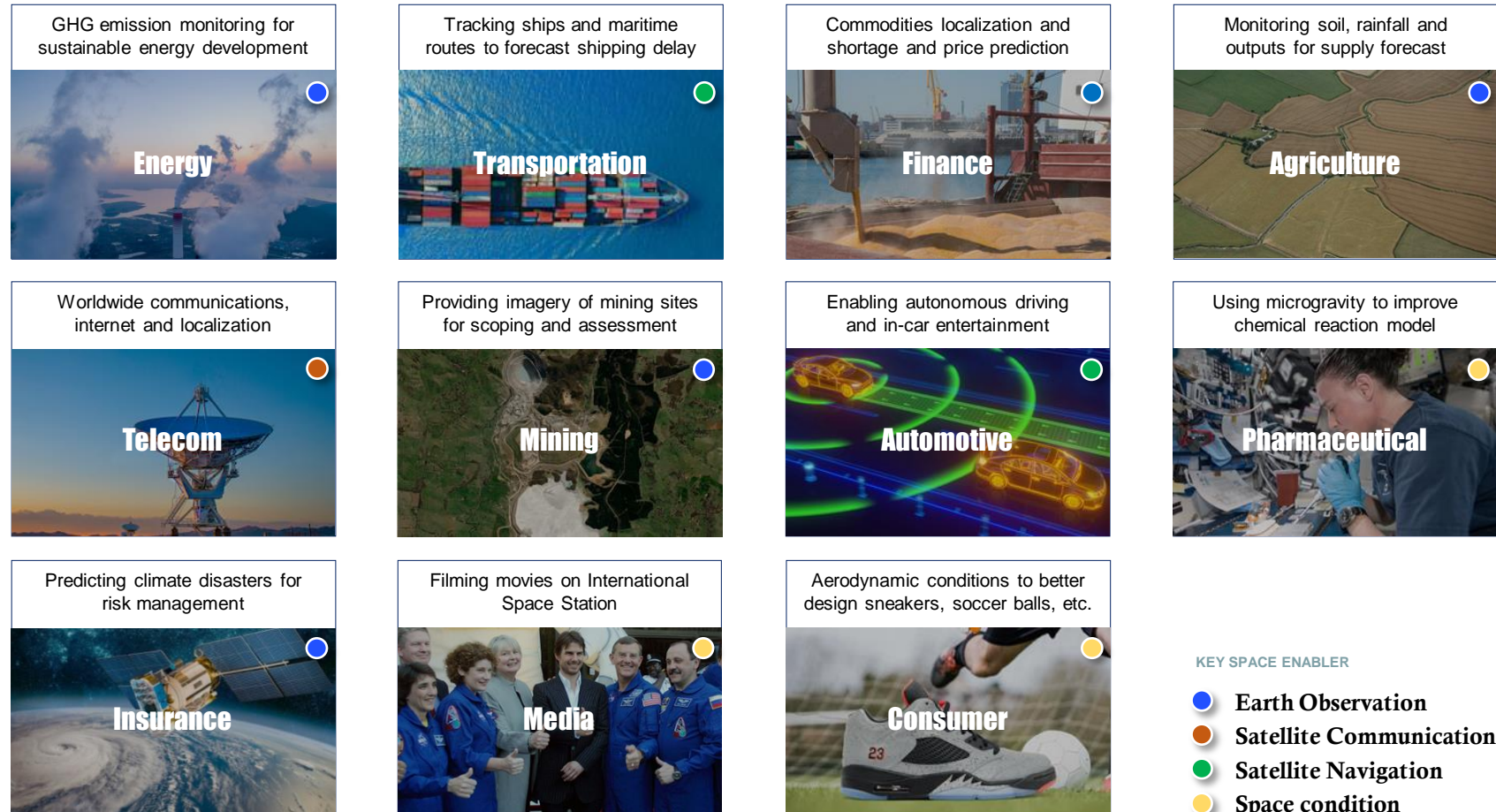
After the cold war ended in 1991, we see there is a fundamental shift from military competition to civil and private driven activities, presenting a new chapter for Space democratization and globalization



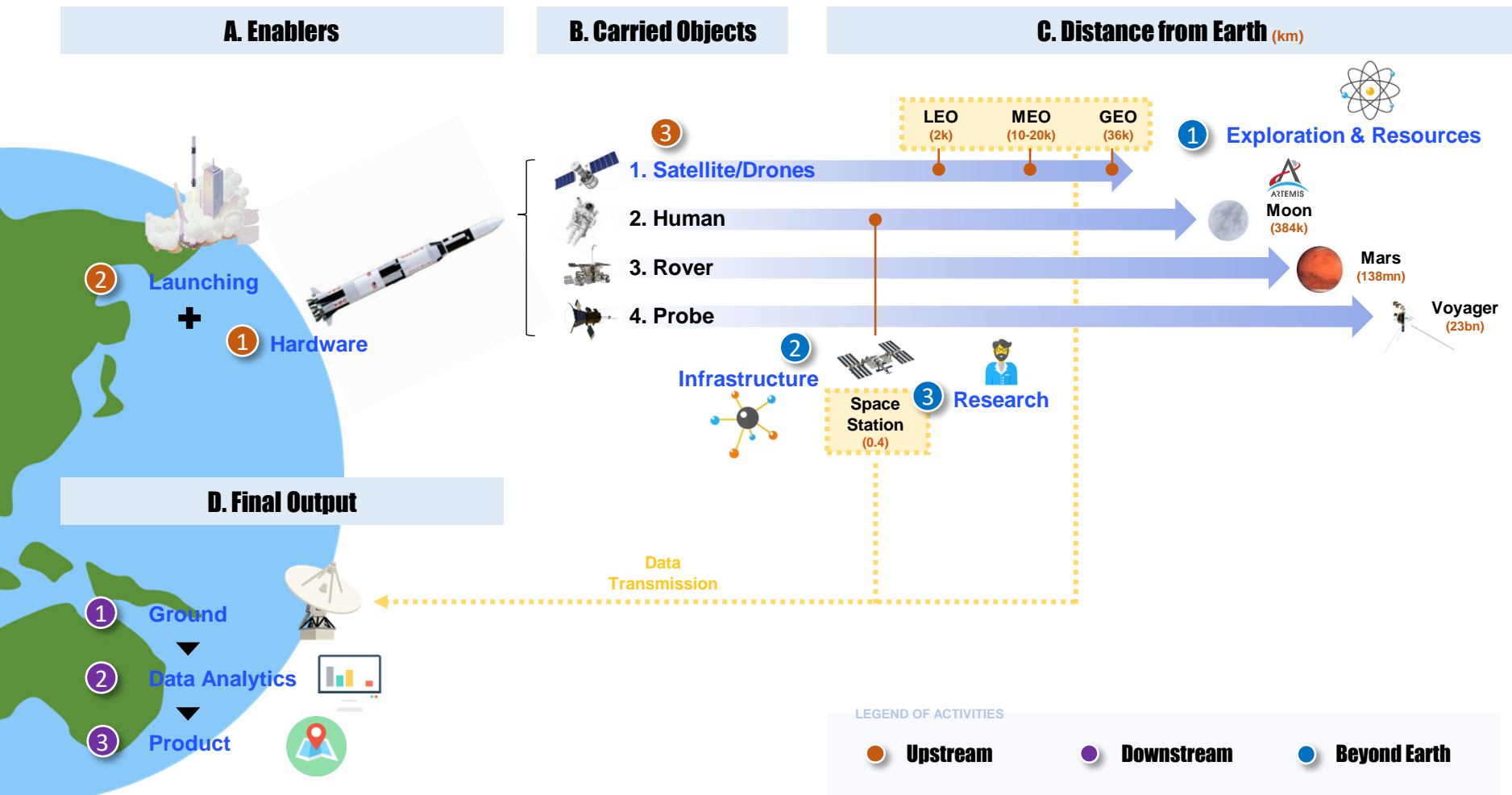
	# Cumulative launches	CAGR Post Cold War	Key Players	Key Drivers
Military	3,357	-8%	<ul style="list-style-type: none"> United States Soviet Union 	<ul style="list-style-type: none"> Military competition: spy, communication, and navigation satellites for intelligence gathering
Civil	1,034	+4%	<ul style="list-style-type: none"> Government space agencies, such as NASA, ESA 	<ul style="list-style-type: none"> Advances in SpaceTech regarding R&D, exploration, etc., with more international collaborations
Private	1,138	+6%	<ul style="list-style-type: none"> Contracted private companies Independent companies 	<ul style="list-style-type: none"> Commercial opportunities, such as imaging, sensors, and communication, enabled by self-built hardware

The Space sector already plays a role in many non-Space industries, with significant economic benefits that in turn support Space development, mainly through Earth Observation and Satellite navigation and communication

Selected industries using SpaceTech applications



Within the Space value chain, Rockets are critical enablers to bridge Earth and Space, carrying human and devices that help collect and transmit data and research output, to realize the tangible commercial value



The upstream is centered on Rocket building and launching, with players such as Elon Musk's SpaceX and Jeff Bezos' Blue Origin, supported by a wide hardware ecosystem in order to deliver satellites and human into Space

Upstream Activities

1

Hardware (manufacturing of rocket and satellite)



A Space hardware

Building & selling satellites, drones, autonomous systems. Components, sub-systems, complete systems

B Componentry & engineering

Sensors, software (i.e. control system), hybrid (i.e. machine vision)

2

Launching (rocket launching)



A Building & launchers

Design and manufacture, Launchers

B Launch-related services

Mission management, separator & deployment systems

C Deliver

Near-earth new air mobility (i.e. air taxis, drone delivery)

D Space tugs

Spacecraft used to transfer spaceborne cargo

3

Satellite & Drones (satellite communication and data collection)



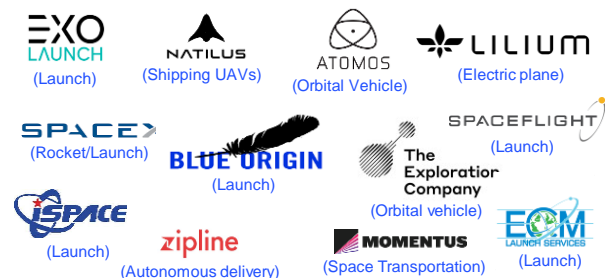
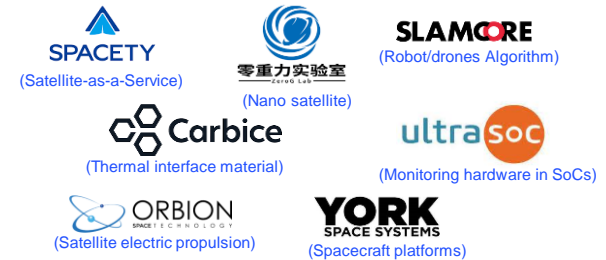
A Satellite

Remote sensing, connectivity, and satellite communication

B Drones & UAV

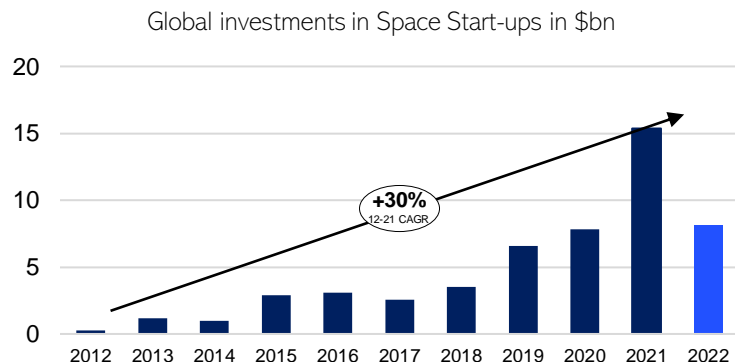
Data collection through drones or unmanned aerial vehicle (UAV)

Key Players



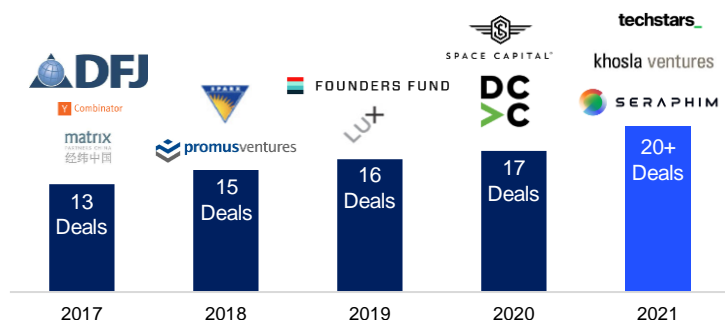
In private markets, 2021 has seen the peak of Space start-up funding, mainly boosted by generalist VC and IPO/SPAC mega deals in the US and the UK

2021 has been a record year for Space Start-up funding, which amassed \$15bn, 30% of the total funding since 2000



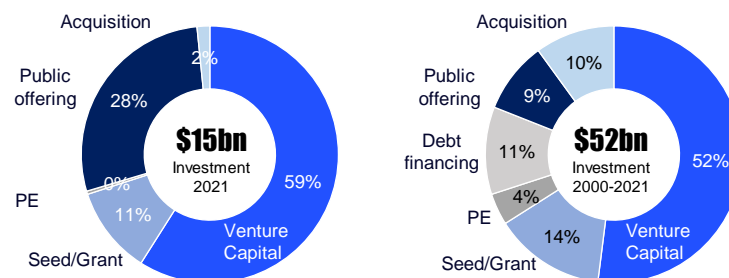
Considering Specialist funds, Seraphim has made most of VC deals, followed by Space Capital

Top 5 VC with Space start-up deals since 2000



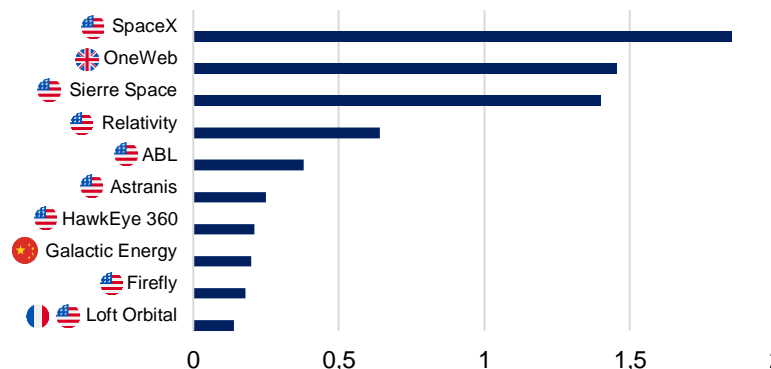
VC is the main source of funding to Space start-ups, twice higher than public offering that has seen more IPO/SPAC over the year

2021 total global Space investments Cumulative total global Space investments



The mega funding still mainly goes to US and UK players, concentrated on Launch sector

Top 10 VC investment recipients by total investment in \$bn



Public markets were traditional routes for Space company as a more favorable environment for long-term and high-Capex projects, but the 2022 turmoil took a toll on most of the sectors, especially SPAC deals



Appendix IX: Case study on governmental impact and regulatory risk on Space economy, which is worth attention when investing in companies exposed to potential hurdles

Kayros to remove EIB as investor



- As of December 2022, Kayros had €15m convertible notes round from EIB, with 6-7% interest rate, not drawn yet
- Kayros is looking at new investors in C+ round to replace EIB in balance sheet for exit considerations, with valuation currently at \$150m from \$91m in C round 2021
- It is said the EIB would hamper potential US M&A transactions

Oneweb concerns over Chinese equity



- As of Q3 2022, the proposed takeover of British satellite company OneWeb by French rival Eutelsat has caught scrutiny over national security
- Eutelsat, is partly owned by China Investment Corporation (CIC) – a sovereign wealth fund which manages part of the People's Republic of China's foreign exchange reserves

Bumpy road to Exxelia acquisition



- As of January 2023, French company Exxelia joined the American group Heico Corporation
- Exxelia produced precision components for aircraft such as F-35 and Ariane 6
- The green light was finally granted by French politicians that initially intended to block the deal due to security concern

UK Gov Space stance lacks dynamics

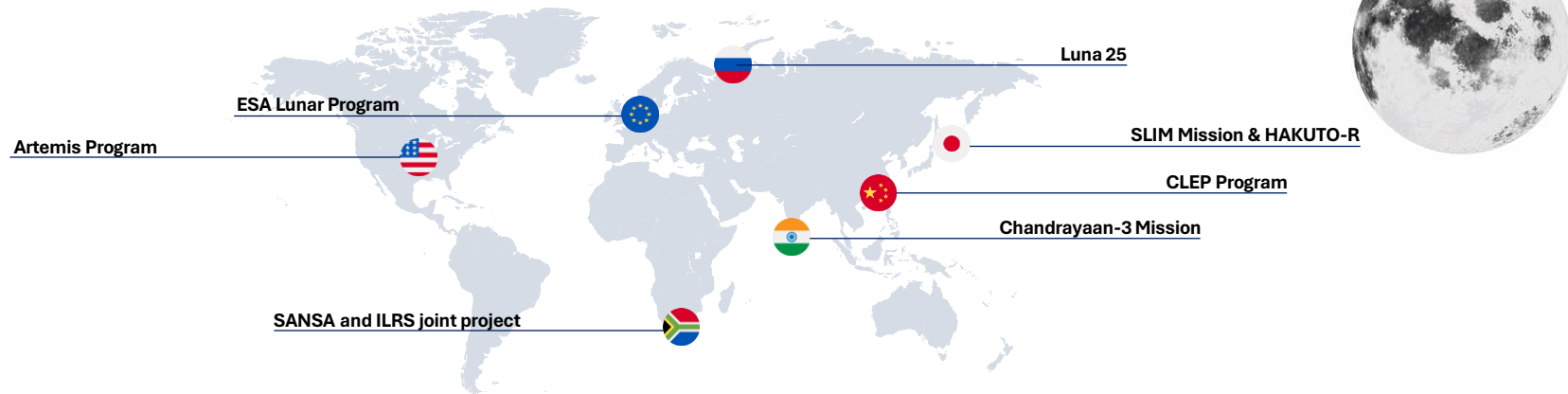


- It is estimated that 17% of the UK's non-financial business GDP was dependent on satellites, which however lack governmental coordination and investments
- OneWeb, supported by UK government, kept revealing funding shortage
- Licensing delays also impact business, e.g., Virgin Orbit plane launch at Cornwall Spaceport

Appendix XI: The moon race has been recently reignited, and the private sector emerges as a key strategic player and accelerator for the competition around the world

Key Space powers with Moon program

Detailed in the next slide



Why is Moon race interesting?

- Returning to the Moon is much more than an international competition, it's essential for **scientific research**, and **resource exploitation** while establishing a **lunar base** as a **launch pad for deeper space missions**.
- Today more than **80 countries** have a presence in space. Around **10 countries** are **gearing up for lunar exploration** within the upcoming years, with a prevailing trend towards leveraging domestic enterprises to expedite the process and optimize cost-efficiency.

What is the Moon race dynamic?

- In 2023, **six countries launched lunar missions**. Several nations have set up **international collaborations** to enable the exchange of technologies between countries and private companies (South Africa, Japan, EAU...).
- Furthermore, developing countries such as **India** can achieve substantial results despite extremely **limited budgets**, thanks to **competitive local private companies** and a **cost-effective workforce**, thereby driving down costs.

What is EU's current position?

- The European (ESEA) Moon program currently faces a **significant competitiveness gap** and lags behind its international counterparts. The Ariane program, in particular, is increasingly **losing its competitive edge** on the global stage.
- As a result, Europe may **pivot towards greater reliance on private companies**, notably in the USA (including SpaceX), to expedite its technological development and bridge the gap, potential leading to a **negative impact on the European space ecosystem**.

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