



Agenzia Spaziale Italiana

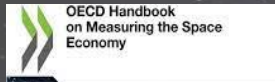
# Netval Annual Conference 2023

Monopoli 18-20 settembre 2023

*Augusto Cramarossa - Italian Space Agency (ASI)*

*Head of Strategic Area Coordination & Space Economy Unit*

# BUT WHAT DOES IT MEAN SPACE ECONOMY..?



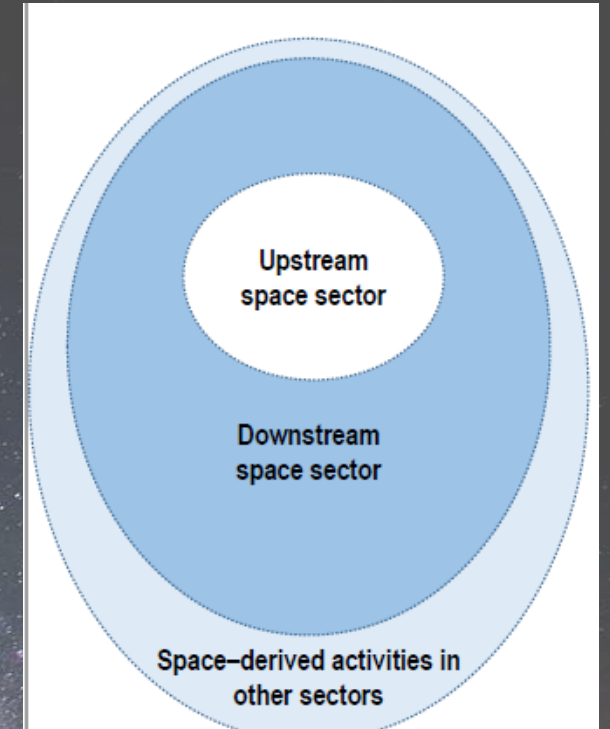
## OECD, 2014 → 2022

The **Space Economy** is defined as the full range of activities and the use of resources in the course of exploring, researching, understanding, managing, and utilizing Space.

## US BUREAU OF ECONOMIC ANALYSIS, 2020

The **Space Economy** consists of space-related goods and services, both public and private. This includes goods and services that:

- Are used in space, or directly support those used in space
- Require direct input from space to function, or directly support those that do;
- Are associated with studying space





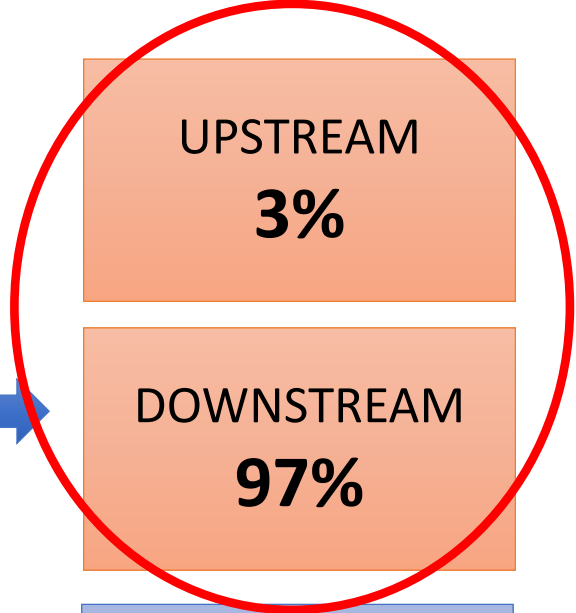
**464 B€**

COMMERCIAL MARKET

**362 B€**

PUBLIC SPENDING

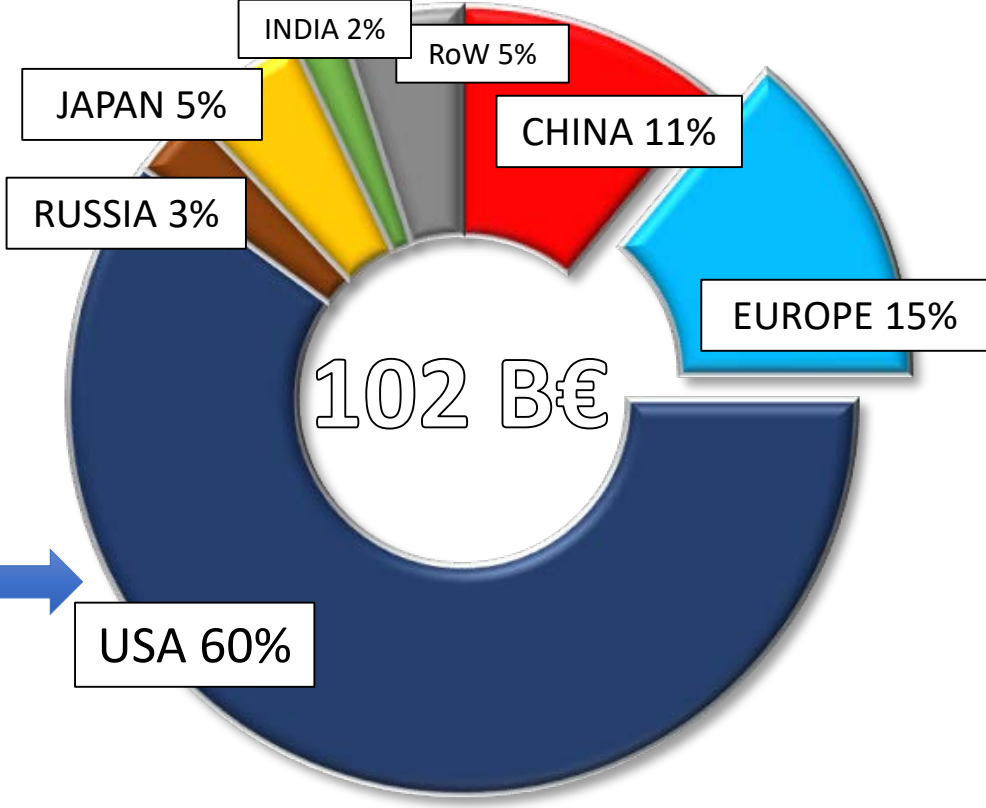
**102 B€**



GOVERNMENT:  
CIVIL + DEFENSE  
**60%**

NOT CONTRACTED  
(Gov. activities:  
internal/R&D costs)  
**40%**

### PUBLIC INVESTMENT IN SPACE (CIVIL + MILITARY)



Source: EUROCONSULT – Space Economy Report  
2022

\*Source: EUROCONSULT – Government Space Programs 2022

# The Value of Global Space Economy

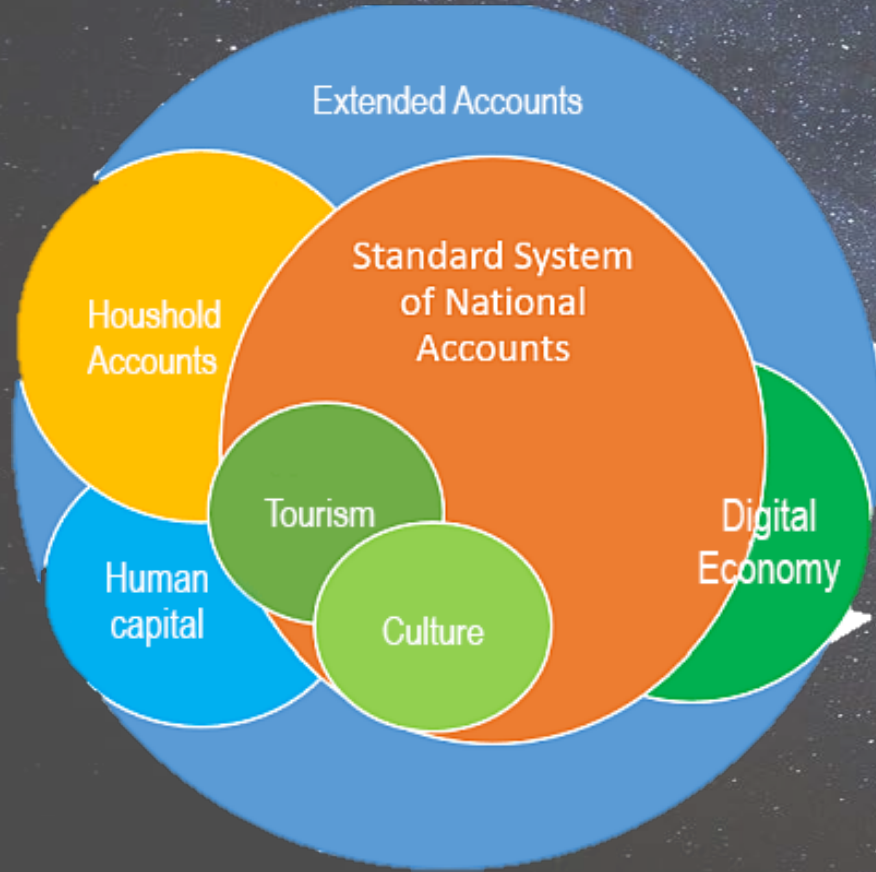


# SPACE MARKET VALUE: Upstream vs. Downstream



- ❑ Europe have a significant **growth potential** in the downstream market, possibility to align market shares (**from 24% DS to 29% US**)
- ❑ The gap to fill (5% share, from 24% to 29%) is worth **12.5 B€**, that is **more of the present European upstream market!**

# NEAR FUTURE: A «**SATELLITE ACCOUNT**» FOR SPACE ECONOMY..?



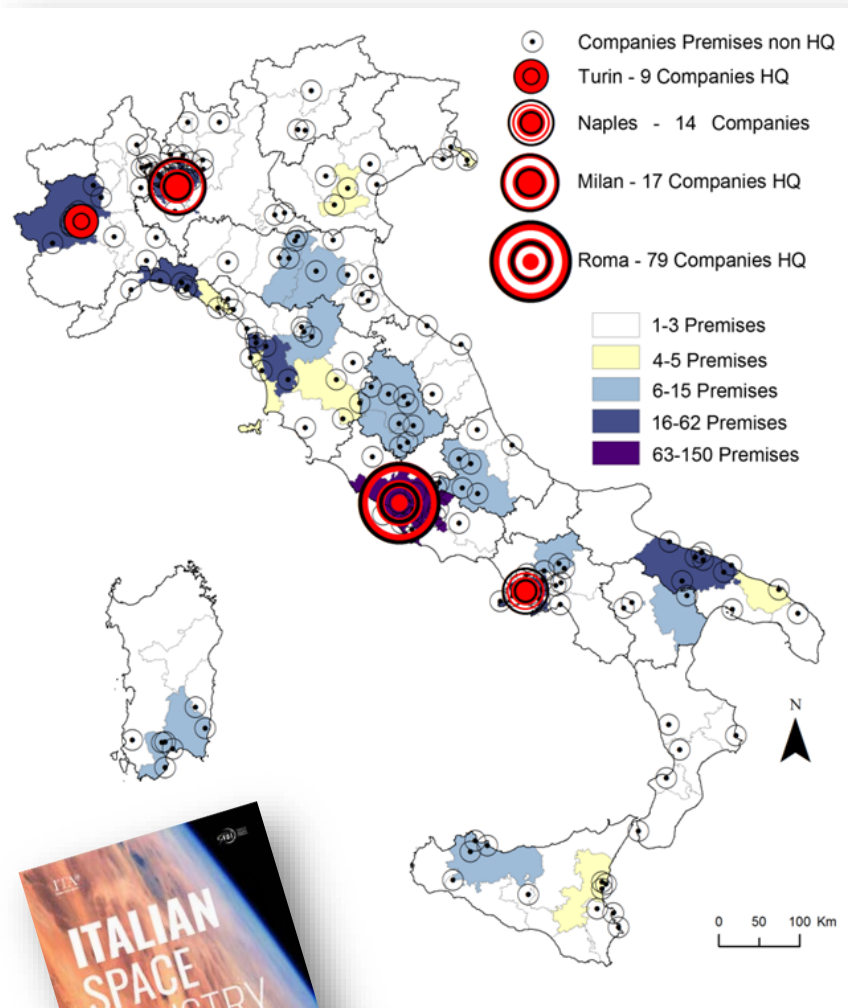
### What does the Travel and Tourism Satellite Account (TTSA) provide?

- Quantifies the impact of travel and tourism activity on the economy
- Compares travel spending by households, business and government
- Tracks the value of tourism exports (inbound tourism) and imports (outbound tourism)
- Measures the contribution of tourism to GDP

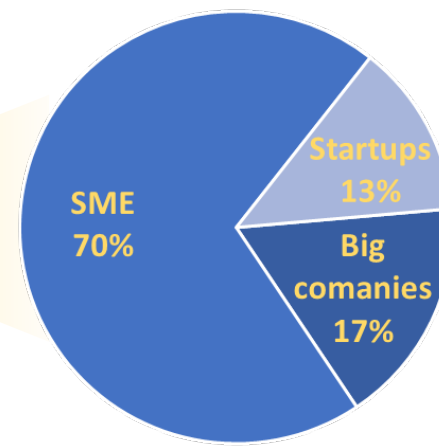
bea.gov

**SATELLITE ACCOUNT**  
**AN ATTEMPT TO MEASURE**  
**THE SIZE OF ECONOMIC**  
**ACTIVITIES OR SECTORS**  
**WHICH ARE NOT INCLUDED**  
**IN THE ESTABLISHED**  
**NATIONAL ACCOUNTS**  
*\*Unesco Institute for Statistics*

**ASI** and **ISTAT** (Italian National Statistical Institute) are about to start a collaboration in order to create a **ITALIAN SPACE ECONOMY SATELLITE ACCOUNT**



~ **300** companies



~ **8.000** employees

**3** business associations:

- AIAD (Italian Industries Federation for Aerospace, Defence and Security)
- AIPAS (Association of Italian Companies for Space Activities)
- ASAS (Association for Space-Based Applications and Services)

**15** Regional Technology Districts

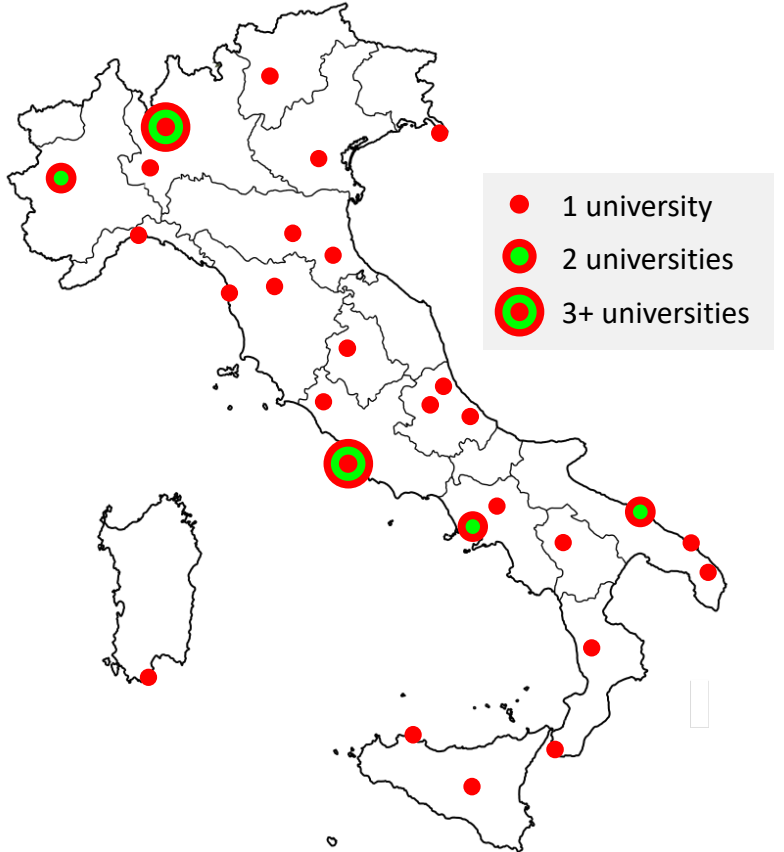
**1** National Aerospace Technology Cluster (CTNA)

**2** ESA BIC (Business Incubation Centers) + **3** more on their ways to be become operational, for supporting the growth of space startups

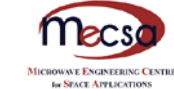
# Italian Space Value Chain

A wide network of Italian **universities**, leveraging on a deep and solid scientific heritage, offers highly-qualified STEM education courses, as well as cooperation with ASI and the industry for scientific research, technology transfer projects and socio-economic studies.

### ITALIAN SPACE-RELATED UNIVERSITIES



### ITALIAN UNIVERSITIES WITH A COOPERATION AGREEMENT SIGNED WITH



Italian Universities involved in scientific space-related education and research



# UNIVERSITIES

- 31 framework agreements  
(29 Universities and 2 Consortia of Universities)



- 128 implementing agreements

# RESEARCH CENTRES/INSTITUTES

- 8 framework agreements



- 133 implementing agreements

Agreements ASI and Italian Universities and Research Centres/Institutes

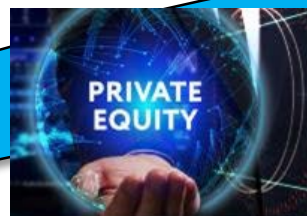


Thanks to the continuity of public investments, Italy has acquired skills and created space systems and services in all application sectors

INCREMENTO DEI FONDI  
PUBBLICI PER I  
PROGRAMMI SPAZIALI



INCREMENTO **RISORSE PRIVATE**



IMPRENDITORI ED ATTORI  
FINANZIARI FOCALIZZATI SU  
**MATURITÀ COMMERCIALE E  
SOSTENIBILITÀ ECONOMICA**

DISPONIBILITÀ DATI  
SPAZIALI,  
INTELLIGENZA  
ARTIFICIALE,  
CAPACITÀ DI  
CALCOLO,  
MINIATURIZZAZIONE,  
ECC.

**NUOVI FATTORI  
GLOBALI  
ABILITANTI**  
PER L'EVOLUZIONE DEL  
SETTORE SPAZIALE



Grazie alla disponibilità di ingenti capitali privati si è passati da una «**corsa allo Spazio**»,  
di carattere prevalentemente scientifico-strategico, ad una vera e propria

**SPACE ECONOMY...**

## NEW SPACE DRIVERS



### COST REDUCTION

- ❑ Dramatic reduction in launch costs
- ❑ Increasing trend to re-use rockets
- ❑ Small cubesat/nanosatellite trend

### NEW INVESTORS

- ❑ Top VCs investing in Space Tech
- ❑ New Space «Barons»
- ❑ Late stage Global Investors

### NEW APPLICATIONS

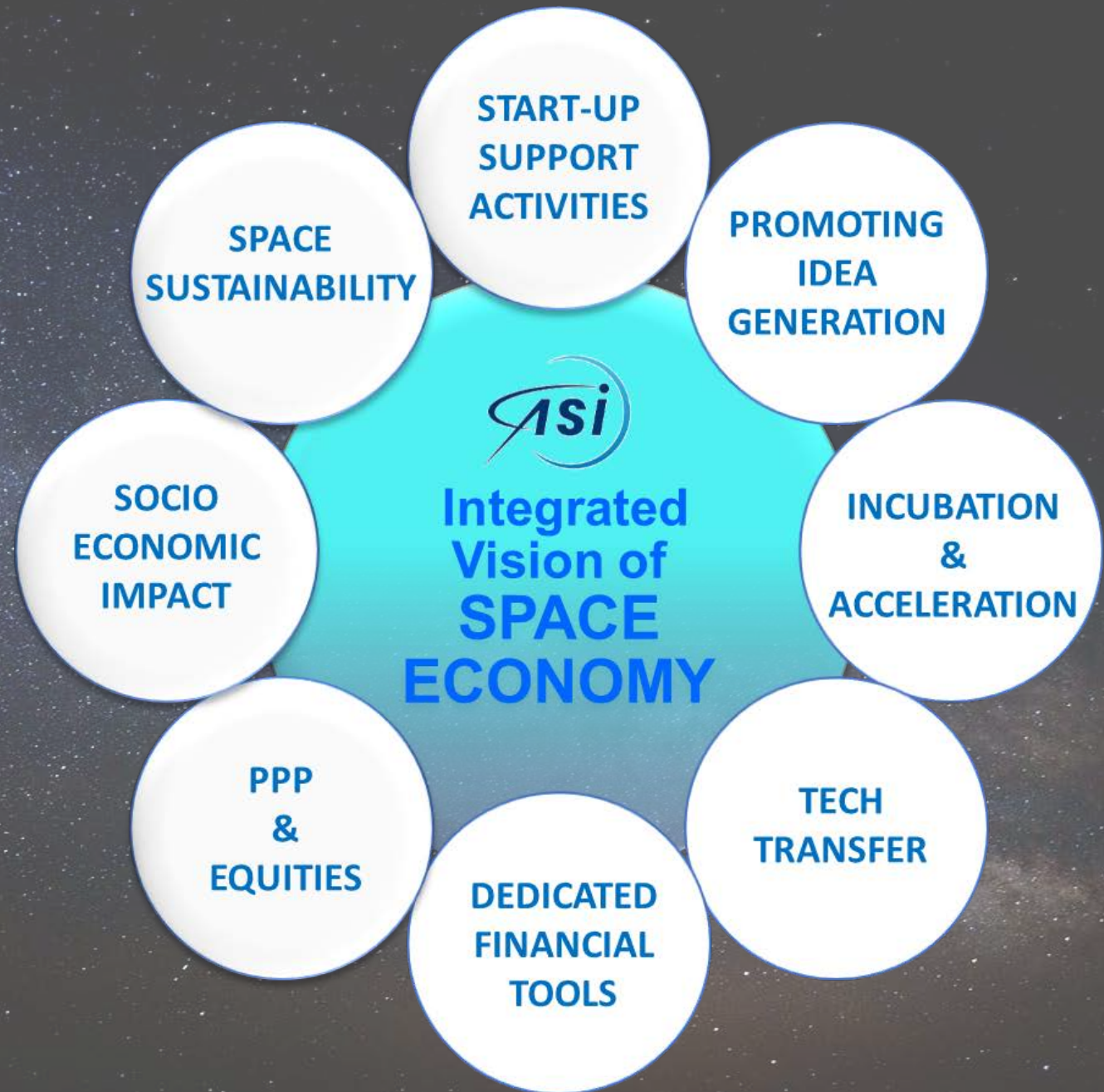
- ❑ Easier access to Space for Commercial Players
- ❑ Key role in the digital economy
- ❑ Integrated Applications
- ❑ In-Orbit Servicing

### NEW GEOPOLITICS

- ❑ Ukrain/Russia conflict
- ❑ China as main global actor
- ❑ New moon and mars space race
- ❑ National Security
- ❑ Sustainability

**PUBLIC ENTITIES ARE UPGRADING THEIR ROLE...**

....LEADING  
TO AN  
INTEGRATED  
VISION OF  
SPACE  
ECONOMY...



# ASI FOSTERING ENTREPRENEURSHIP IN SPACE ECONOMY



WORKING TO INTEGRATE INITIATIVES THROUGH THE WHOLE CHAIN OF SME, SPACE START-UPS, UNIVERSITIES

## IDEA GENERATION AND LOCAL SUPPORT

Challenges Competitions  
Sponsorship  
Free legal aid  
→ An ASI official challenge for the future?



## INCUBATION

ESA BIC Italy Network  
Interaction and contamination with deep tech incubators  
→ 2023 New Openings  
→ BIC Lazio renewal  
→ 1 other BIC in the next future?



## ACCELERATION

Promoting, Supporting, and Participating in Space Acceleration Programs  
→ 2023: Space Founders ITT finally published  
→ 2024 increasing ASI presence in TakeOff



## VENTURE CAPITAL AND FINANCIAL ACTORS

Supporting and Promoting the spread of new financial tools dedicated to Space  
→ EIF/CNES Collaboration in 2024?  
→ ASI participation in VC fund?



## IMPACTS ON MARKET AND SOCIETY

Promoting studies dedicated to market analysis, market estimates, socio-economic impacts..  
→ ISTAT collaboration for the Space Economy Satellite Account  
→ New studies for 2023/2024



TECHNOLOGY DEV. FINANCING

COMMERCIALIZATION

IMPACTS

# IDEA GENERATION

## THE CASSINI HACKATHON – ITALY

ASI sponsor the CASSINI HACKATHON in ITALY providing experts and professionals for the evaluation committees and also support the local organization managed by different Italian actors of the ecosystem: ROMA (Lazio Innova), BARI (Planetek), FEA (Torino)

**Are you a**  
**< Driven designer >**

Feeling driven to solve? **You're in luck.**  
**The 5th CASSINI Hackathon: Space for Defence & Security is here!**

**5th CASSINI HACKATHON**  
SPACE FOR DEFENCE & SECURITY

www.dtasarl.it

Join the Hackathon in Bari!

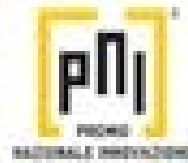
Can you create solutions using space technology to help strengthen Europe's security? The 5th CASSINI Hackathon is open for entries.

Be inspired by experts, learn to access data from Copernicus, EODDS and Galileo, and connect with a team to build your solution. There are three challenges on the theme of defence.

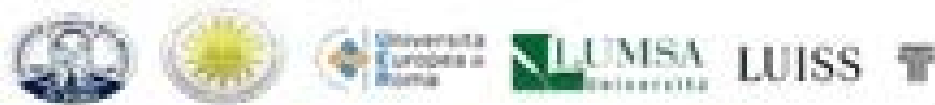
- #1 Enabling cross-terrain mobility
- #2 Making the seas more secure
- #3 Protecting our critical infrastructure

**CASSINI**  
Hackathons & Mentoring

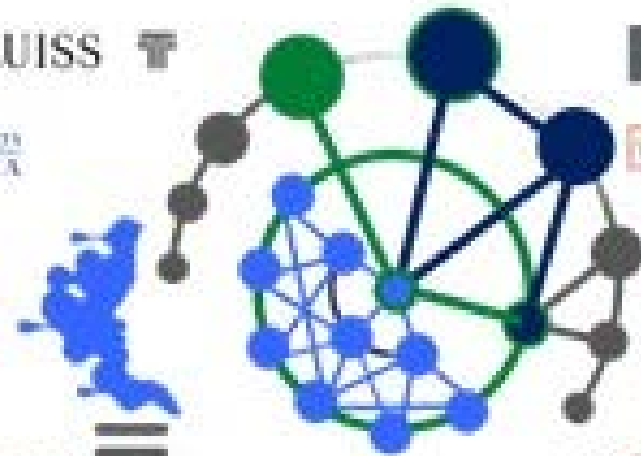
ASI has already guaranteed its sponsorship to FEA for the organization of the **6<sup>o</sup> CASSINI HACKATHON**, focused on «“Space for International Development & Humanitarian AID”»



REGIONE LAZIO



Università (101)  
Enti di Ricerca (6)



NETWORK  
STARTCUP  
LAZIO

Imprese, istituzioni, organizzazioni finanziarie e associazioni (38)



Media Partner



# INCUBATION

## ESA BIC ITALY NETWORK

2005

PARTNERSHIP WITH REGIONE LAZIO AND LAZIO INNOVA:  
**ESA BIC LAZIO**

2021

PARTNERSHIP WITH I3P, OFFICIAL INCUBATOR OF THE POLITO:  
**ESA BIC TORINO**

2023

3 NEW ESA BICs IN ITALY  
**ESA BIC MILAN**  
**ESA BIC PADUA**  
**ESA BIC BRINDISI**

2024

ESA BIC LAZIO EXTENSION

AND THE NEXT YEARS? THINKING ABOUT NEW BICs IN ITALY



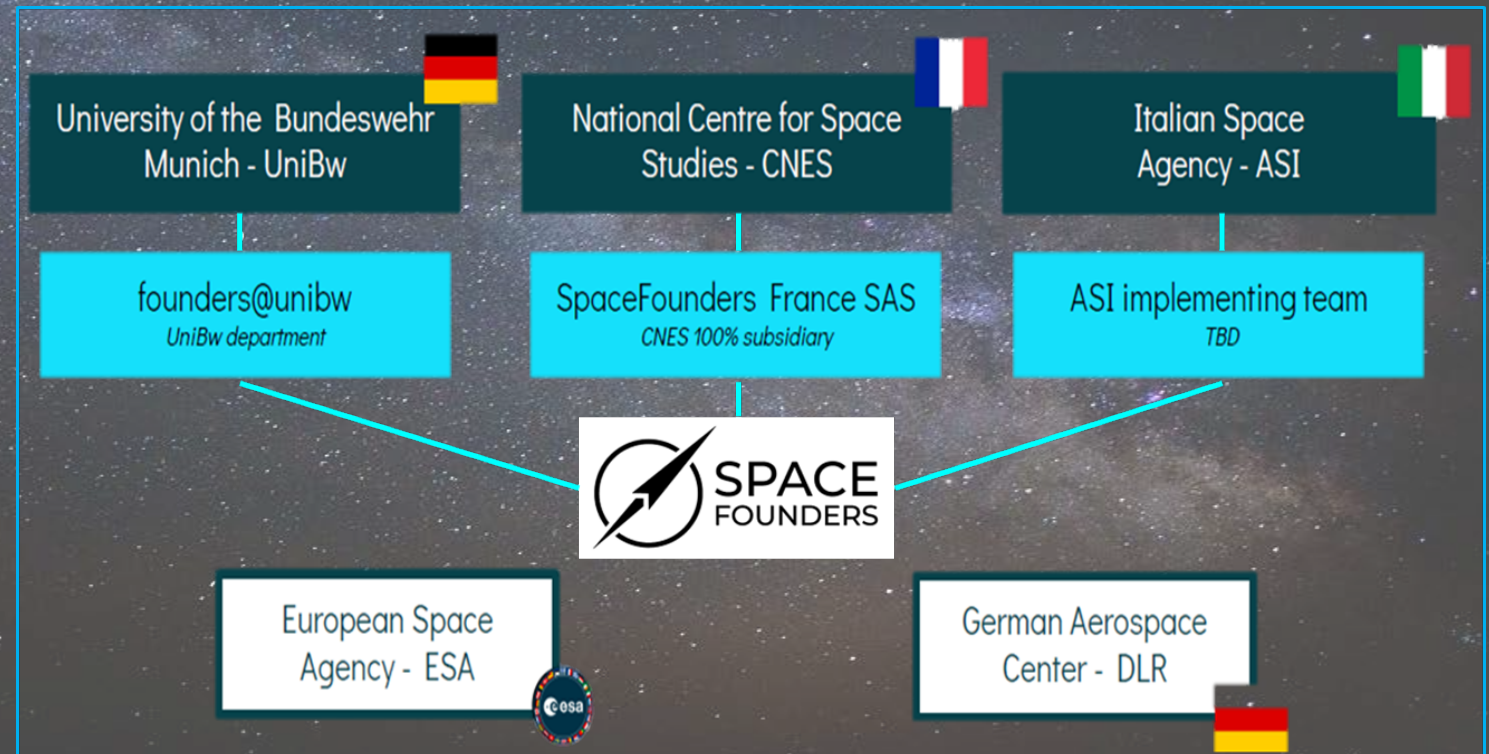
# ACCELERATION - SPACEFOUNDERS PROGRAM

THE SPACE-TECH ELITE ACCELERATOR FOR MOST PROMISING EUROPEAN SPACE START-UPS

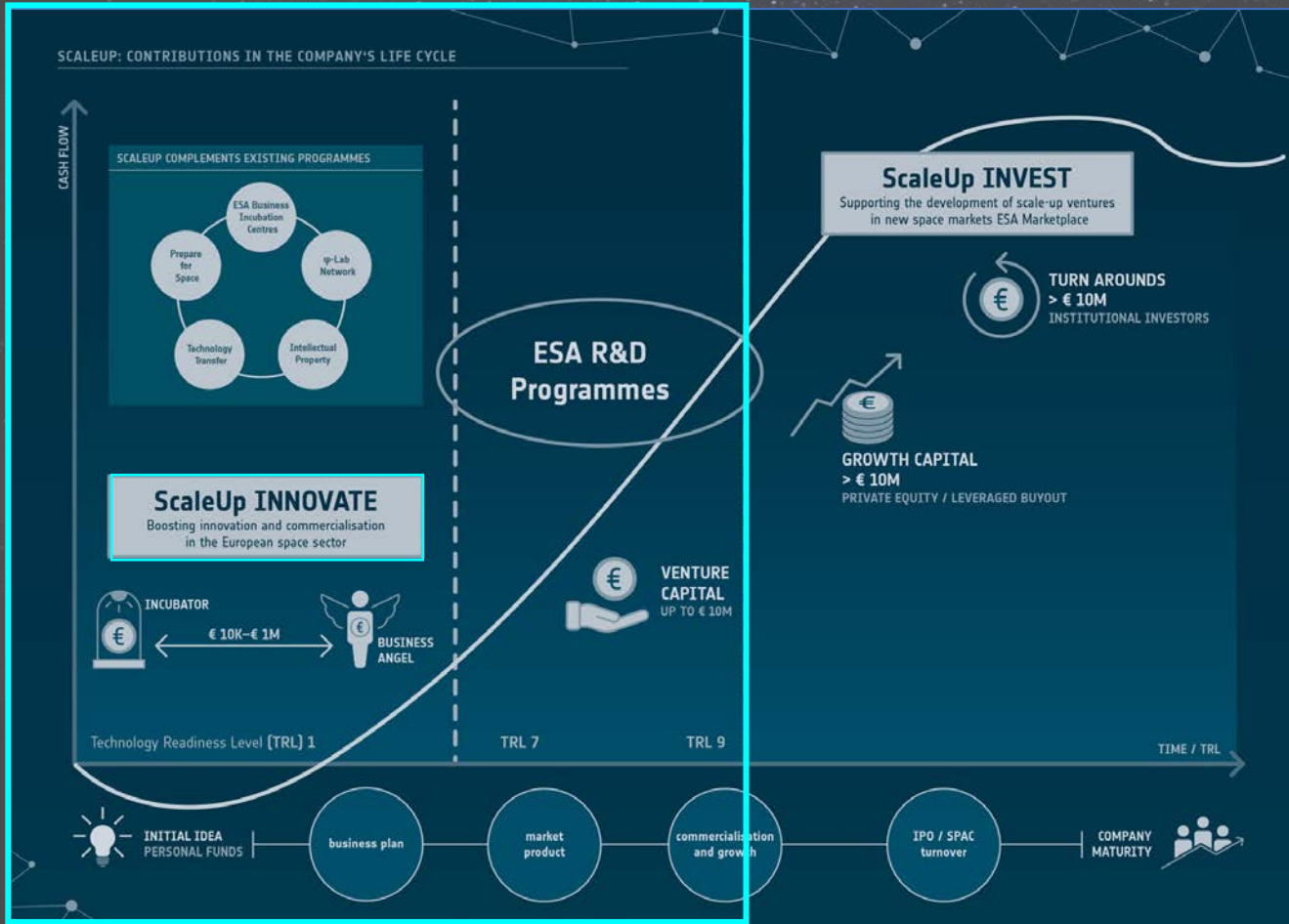
➔ **MAY 2023**  
Official signature of the MoU  
between CNES/UNIBW/ASI



➔ **JUNE 2023**  
First SPACEFOUNDERS Demo  
Day in Italy: Rome



➔ **AUGUST 2023**  
ASI publish a ITT to select the  
ITALIAN IMPLEMENTING  
ENTITY: SITO WEB ASI!



**ITALY, DURING THE ESA CM22, SUBSCRIBED THE SCALE-UP PROGRAM (COMMERCIALIZATION AND INNOVATION) WITH A TOTAL AMOUNT FO 5M€**

**5M€**

**INNOVATE ELEMENT**

**BIC 2.0  
TT2.0**

**SCALE-UP PROGRAM AND ASI**  
Technology Transfer and Commercialization

## Bringing together SPACE and NON-SPACE industries

Technology Brokers have two main objectives: First, to solve industrial challenges using innovative space technology. Second, to help cutting-edge companies bring their terrestrial innovations into the space domain.

Technology Brokers use a combination of market pull and technology push to find the best solution to your problem. They are part of the regional and national innovation ecosystems of their country, but act as a network to ensure a pan-European reach.

**ASI SPONSORED THE ESA CALL FOR THE ITALIAN TT BROKER**

**APPLY ON [ESASTAR.INT](https://esastar.int)**

**DEADLINE: 23 NOVEMBER 2023**

**TECHNOLOGY BROKER FOR TECH TRANSFER**