



EU SPACE

# CASSINI Space Entrepreneurship Initiative 2021-2027

Supporting European New Space

Tomas S. Jonsson  
E-mail: [tomas.jonsson@ec.europa.eu](mailto:tomas.jonsson@ec.europa.eu)  
Tel: +32 229-98896  
European Commission  
DG Defence Industry and Space  
Unit Innovation, Start-ups and Economics

# OroraTech

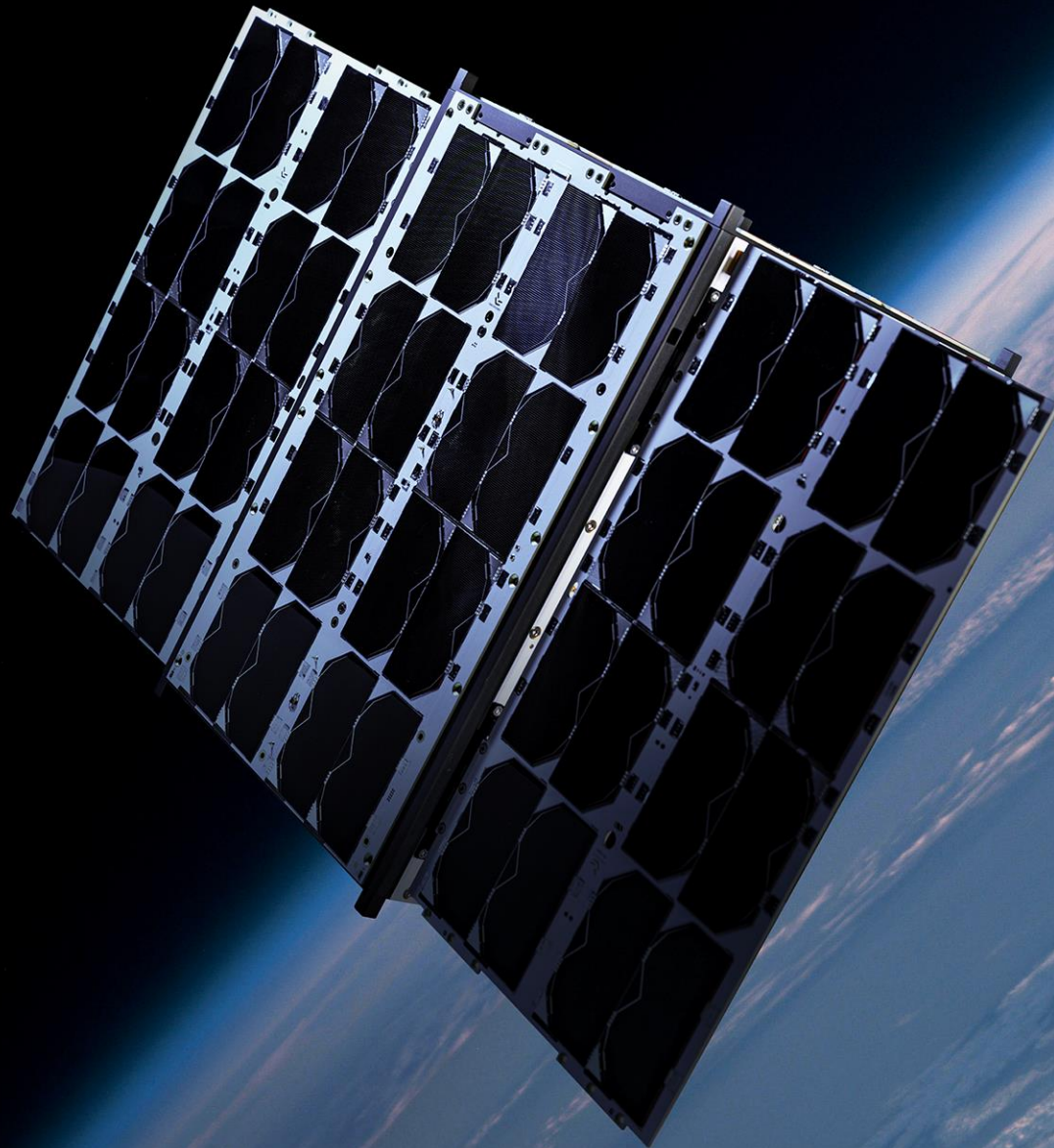
## Taking Earth's temperature



- **Operational thermal sensors in space**
- **Providing Intelligence-as-a-Service for**
  - **Smarter firefighting**
  - **Energy Utilities**
  - **Agriculture**
  - **Urban Heat**
- **€2M ARR with customers worldwide, aiming profitability in 2025**



PROGRAMME OF THE  
EUROPEAN UNION





PROGRAMME OF THE  
EUROPEAN UNION



# Space Segment



**High temperature accuracy (1,5 K) and sensitivity (0,07 K)**

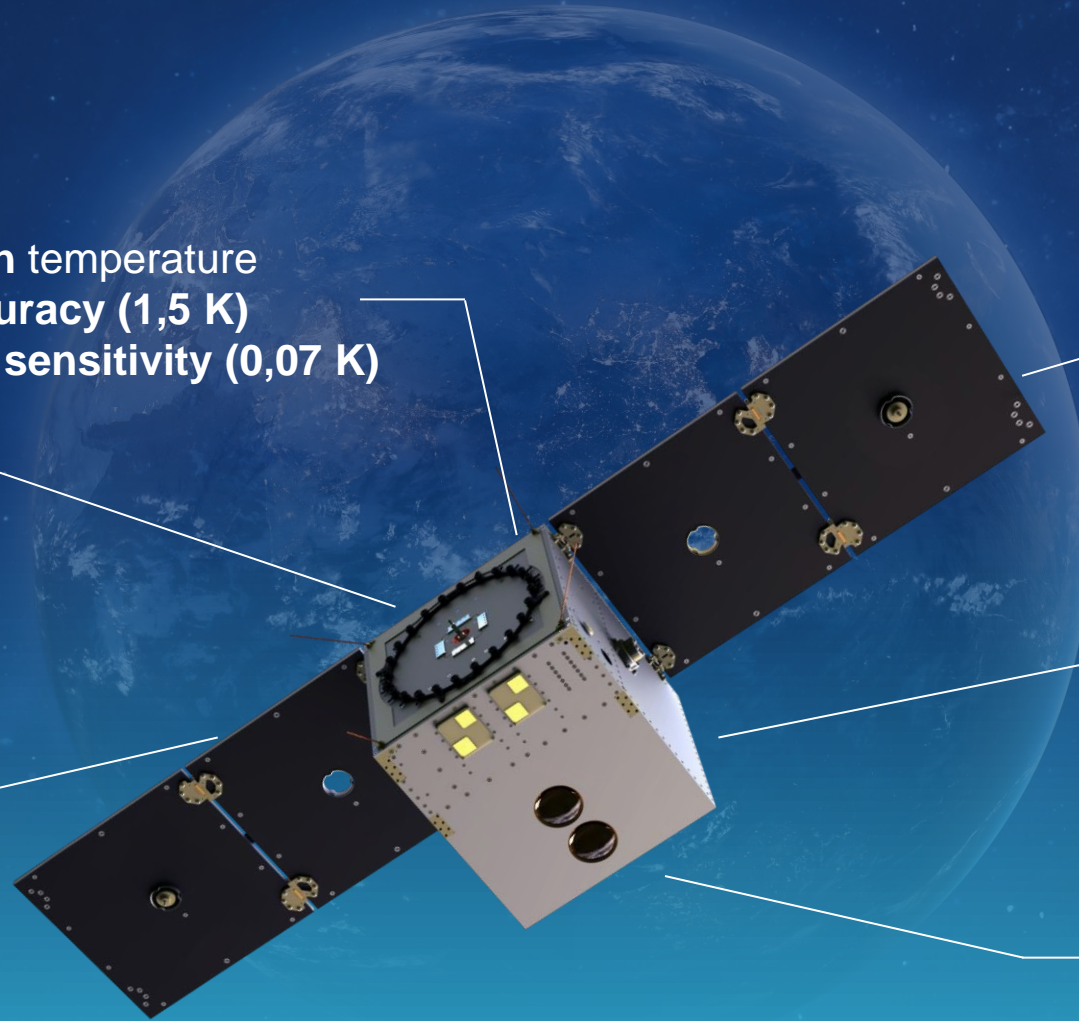
**Data delivery within 12 hours from recording**

**Up to 1.000.000 km<sup>2</sup> daily imaging capacity**

**30m x 30m ground sampling distance TIR  
10m GSD VNIR**

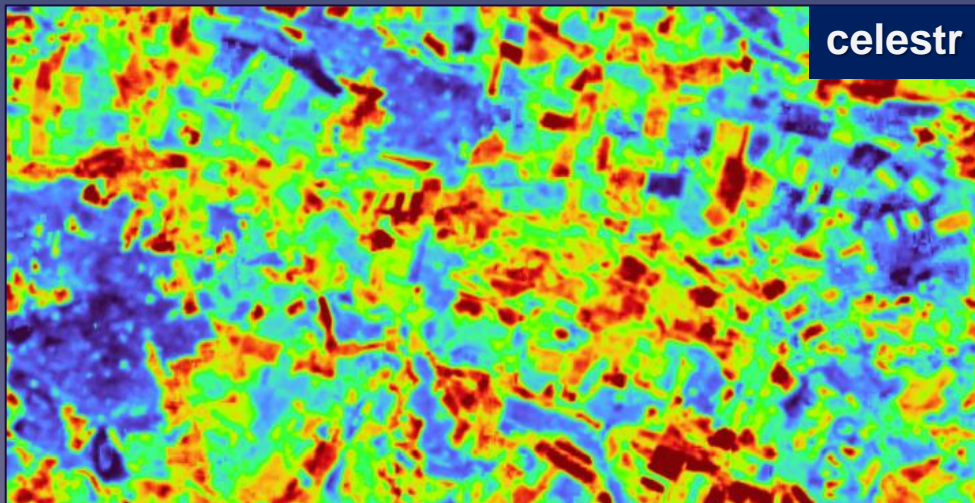
**Global coverage and daily revisit time**

**Cryo-cooled detector for highest image quality**





A satellite-agnostic data stream for high-revisit land surface temperature (LST)



## What we are delivering today



Data from own and public space crafts delivered in spatially harmonized LST raster data, resampled to 30 m pixel size (accuracy better than 3 K in 2022 – ca 1,5 K in 2024)



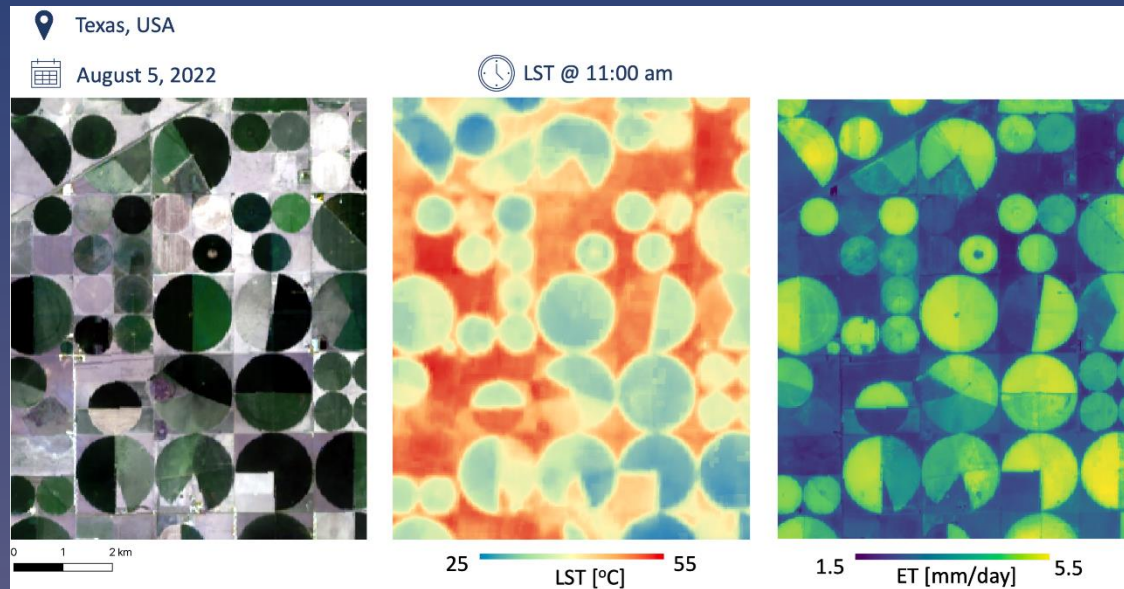
Data captured from different sensors reaches a comparable processing state (partial removal of artifacts, pixel alignment, time correction, etc.)



Sub-weekly image frequency (dependent on cloud coverage over scene)



Dataset per scene comprises: one LST raster, one cloud mask and meta data



### What we are delivering today



A field-specific catalogue of proven algorithms based on proprietary data – for each field on the planet.



Model builds on celestr to offer high resolution and high temporal coverage



Utilized PT-JPL and TSEB models incorporate vegetation biophysical parameters, meteorology, and radiation data



Our product delivers instantaneous and day estimations of ET in 50 m resolution raster layers



## FLIGHT HERITAGE & TRACK RECORD:

**323**

satellites  
launched

**21**

missions (incl. all SpaceX  
Transporter missions)

**50+**

global  
customers

## ICONIC DEPLOYMENT TECHNOLOGIES & LAUNCH HARDWARE:

### EXOpod

Cubesat deployers  
223 sats / 17 missions

### CarboNIX

Microsat separation systems  
65 sats / 13 missions

### EXObox

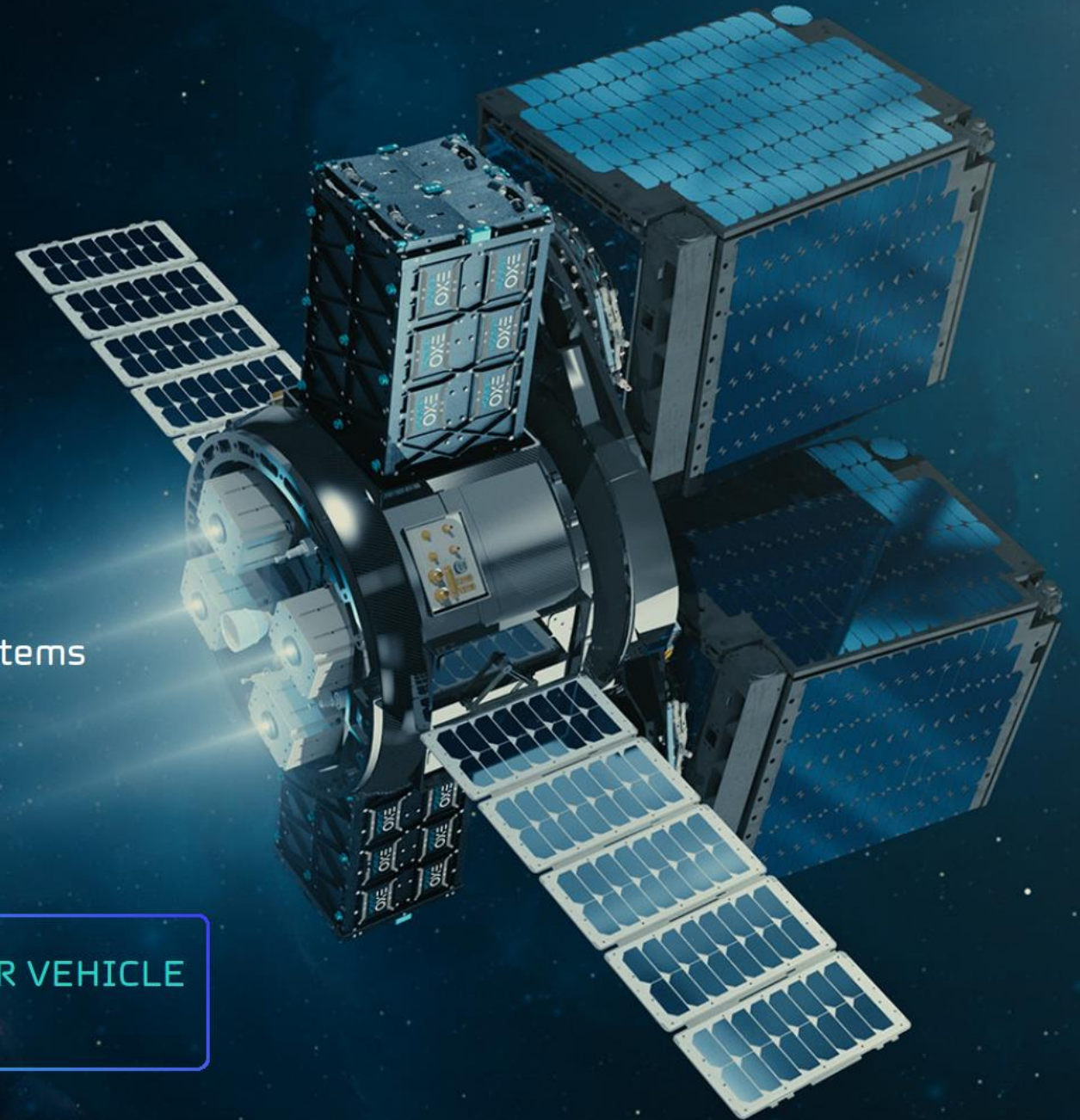
Sequencers

### EXOport

Multi-satellite adapters

WHAT'S  
NEXT?

THE RELIANT ORBITAL TRANSFER VEHICLE  
ON TRACK FOR LAUNCH IN 2024





# What is CASSINI?

*An entrepreneurship initiative to:*

**Spur companies to commercialise new products and services**

**Encourage companies to try new business models**

**Stimulate new financing schemes:**

- **Venture Capital funds**
- **Debt funding through banks and EIB**

**Modernise the approach to procurement, make business-friendly**

**Coordinate entrepreneurship support Commission, ESA, EUSPA, EIF, EIB, EIC**

# CASSINI status in 2023

## THE ROAD TO NEW SPACE

- Clear vision for European space businesses and markets
- New industry setup
- New entrants
- New private investment
- New markets
- New solutions

### PROMOTION

CASSINI Hackathons  
& Mentoring

Started 2021

### INNOVATION COMPETITIONS

CASSINI Prizes  
CASSINI Challenges

Started 2022

### INVESTMENT

CASSINI Seed and Growth Funding  
Facility (InvestEU)  
€1 billion capacity or more  
6 VC funds signed + 1 co-investment

Started 2022

### MATCHMAKING

CASSINI Matchmaking  
6 physical events in 5 countries  
100+ companies participating

Started 2022

### BUSINESS GROWTH

CASSINI Business Accelerator  
First batch: 20 startups begin on 1 May

Started Q1 2023

### IOD/IOV

In-Orbit Demonstration and  
Validation

Started 2022

### Initial Public Offering

Helios Space Stock Market Index

Started 2023

### Capacity building

Networks and knowledge  
VC funds and other investors

Started 2022

### Dynamic Purchasing System

Anchor customer contracts  
Long-term perspective

Started 2022



# CASSINI Business Accelerator

CASSINI Business Accelerator will offer entrepreneurs qualified business development support to:

- Develop go-to-market plans and sales methods
- Accelerate activities leading to revenue growth
- Raise expansion capital
- Expand business networks
- Seed financing voucher to successful participating companies

**40 startup companies to be selected in 2023**

**First batch of 20 startups begin working on 1 May 2023**

*Info and applications:* <https://www.cassini.eu/accelerator>



# CASSINI Matchmaking

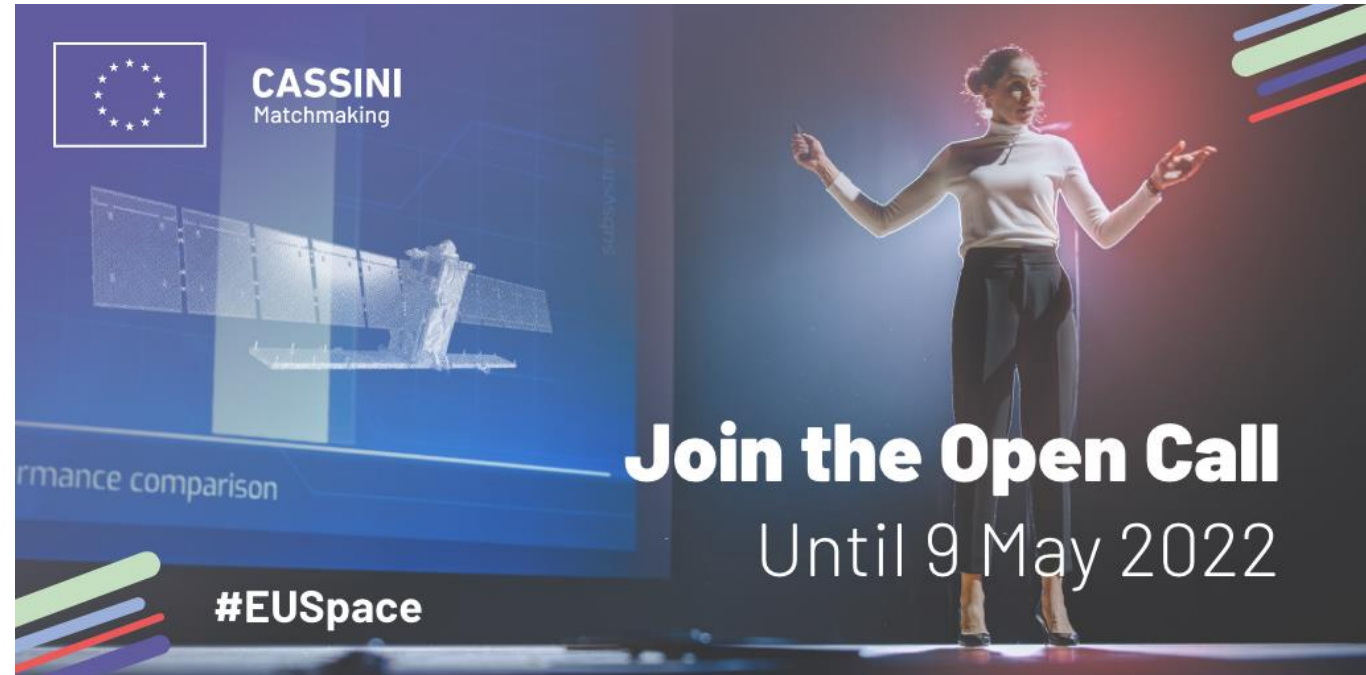
## CASSINI Matchmaking 2023

Enrol at any time to join on-site events:

1. Four Years From Now (MWC), Barcelona, 28 Feb 2023
  2. Tech Show, Stockholm, 4 May 2023
  3. Latitude 59, Tallinn, 25 May 2023
  4. EUSPA Entrepreneurship Day, Prague, 28 June 2023
  5. Matchmaking event in Germany (to be confirmed)
  6. Web Summit, Nov 2023
- Q1-Q2: in addition 4 online matchmaking events

## 2022

1. International Astronautical Congress Paris, 19 Sep
2. EU Space Week Prague, 5 Oct
3. Web Summit Lisbon, 3-4 Nov
4. New Space Forum Rome, 1 Dec



<https://www.cassini.eu/matchmaking/>



# CASSINI Investment Facility

**€1+ billion boost to space investments**  
EIF open call since April 2022



## *Investment agreements signed to date:*

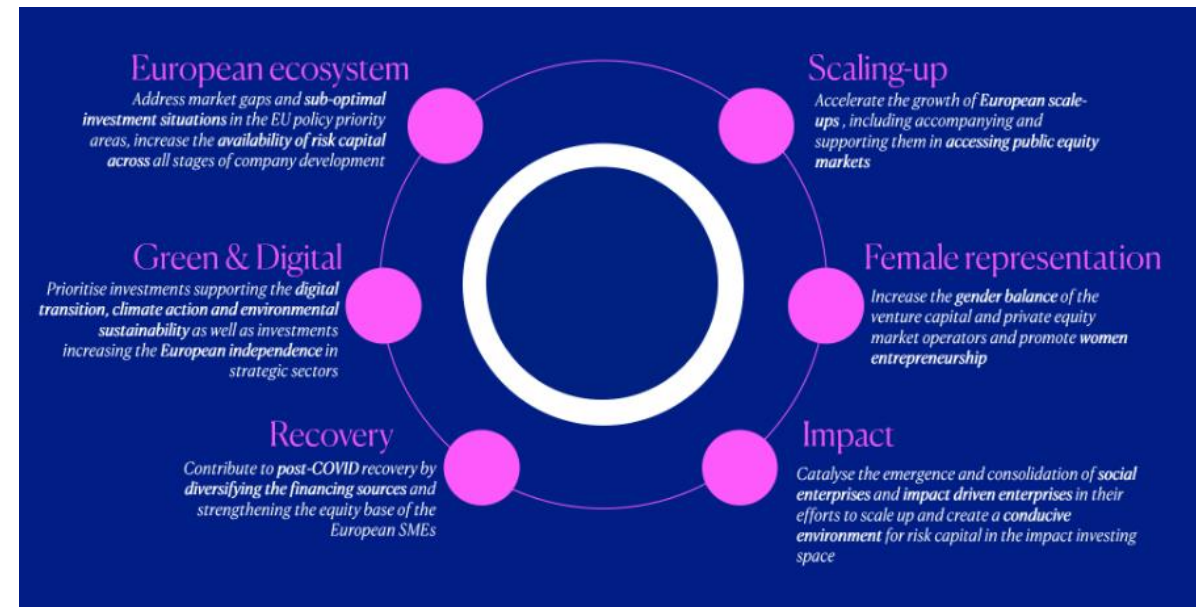
- Co-investment Isar Aerospace (in total €155M investment round)
- Alpine Space Ventures [May 2023]
- OTB Ventures
- Vsquared Ventures
- Primo Space
- Orbital Ventures/Promus Ventures
- UnternehmerTUM VC/UVC Partners

**Fund managers** can contact EIF:

[https://www.eif.org/InvestEU/equity\\_products\\_calls/index.htm](https://www.eif.org/InvestEU/equity_products_calls/index.htm)

**Startups** can check the list of VC funds:

[https://ec.europa.eu/defence-industry-space/cassini-access-finance\\_en](https://ec.europa.eu/defence-industry-space/cassini-access-finance_en)

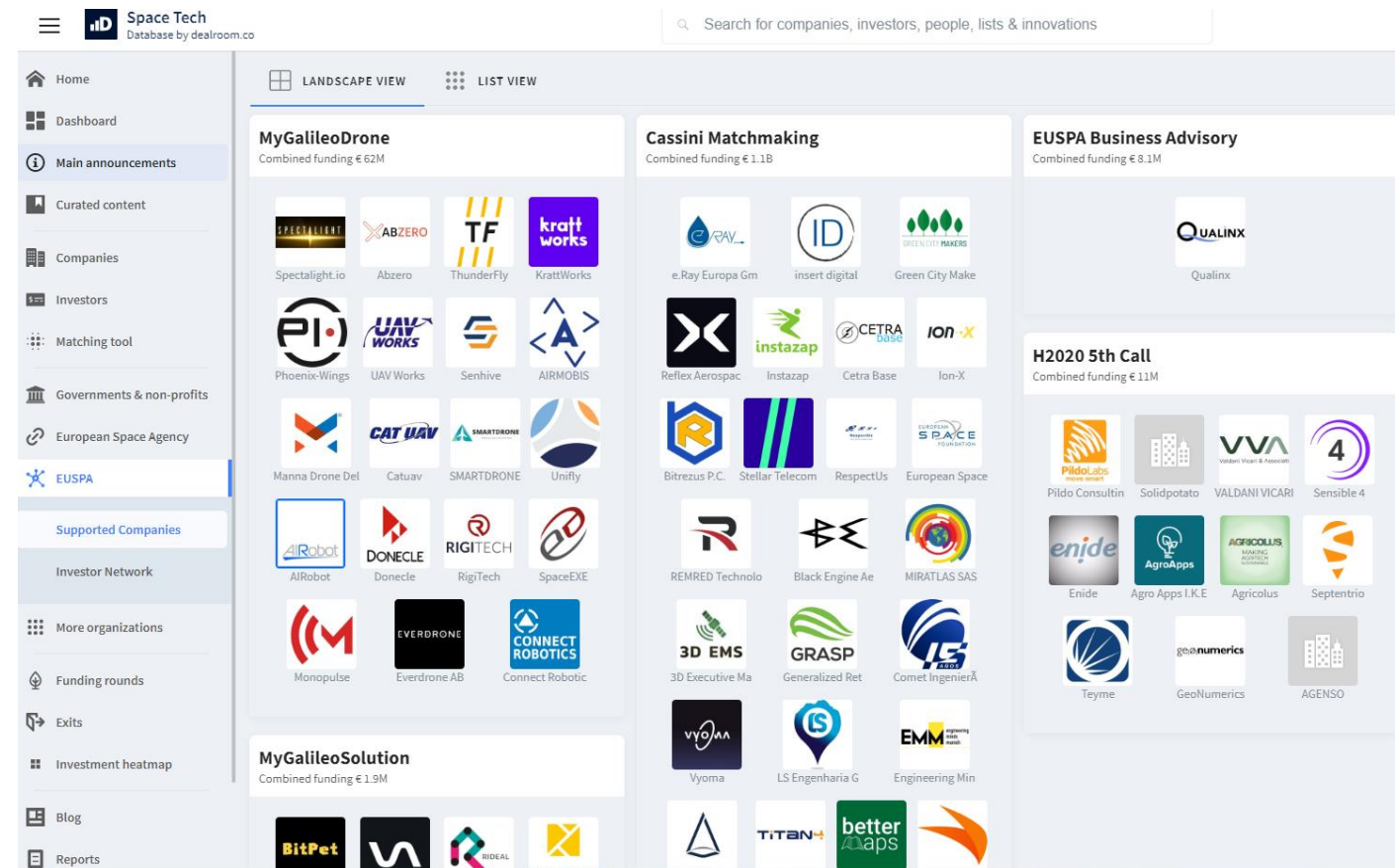




# Funding raised by CASSINI startups

Dealroom.co registers venture capital funding rounds and other financing to European tech companies

The aggregated funding of the companies participating in CASSINI Matchmaking is **€1.1+ billion**





# Debt funding for space companies

**Access to debt funding is crucial for growth stage companies looking to expand production and sales**



**EIB Venture-debt operations offer non-dilutive funding with ticket sizes €10-40 million – with InvestEU guarantees**

<https://www.eib.org/en/products/equity/venture-debt.htm>

**EIB offers loans €10-75 million suitable for fast-growing mid-caps – with InvestEU guarantees**

Refer to “InvestEU loans for larger projects within R&D&I and Sustainable Infrastructure”

<https://www.eib.org/en/products/loans/private-sector/index.htm>



SME Competitiveness

Sustainability

Innovation & Digitalisation

Cultural & Creative

Micro & Social

Skills & Education

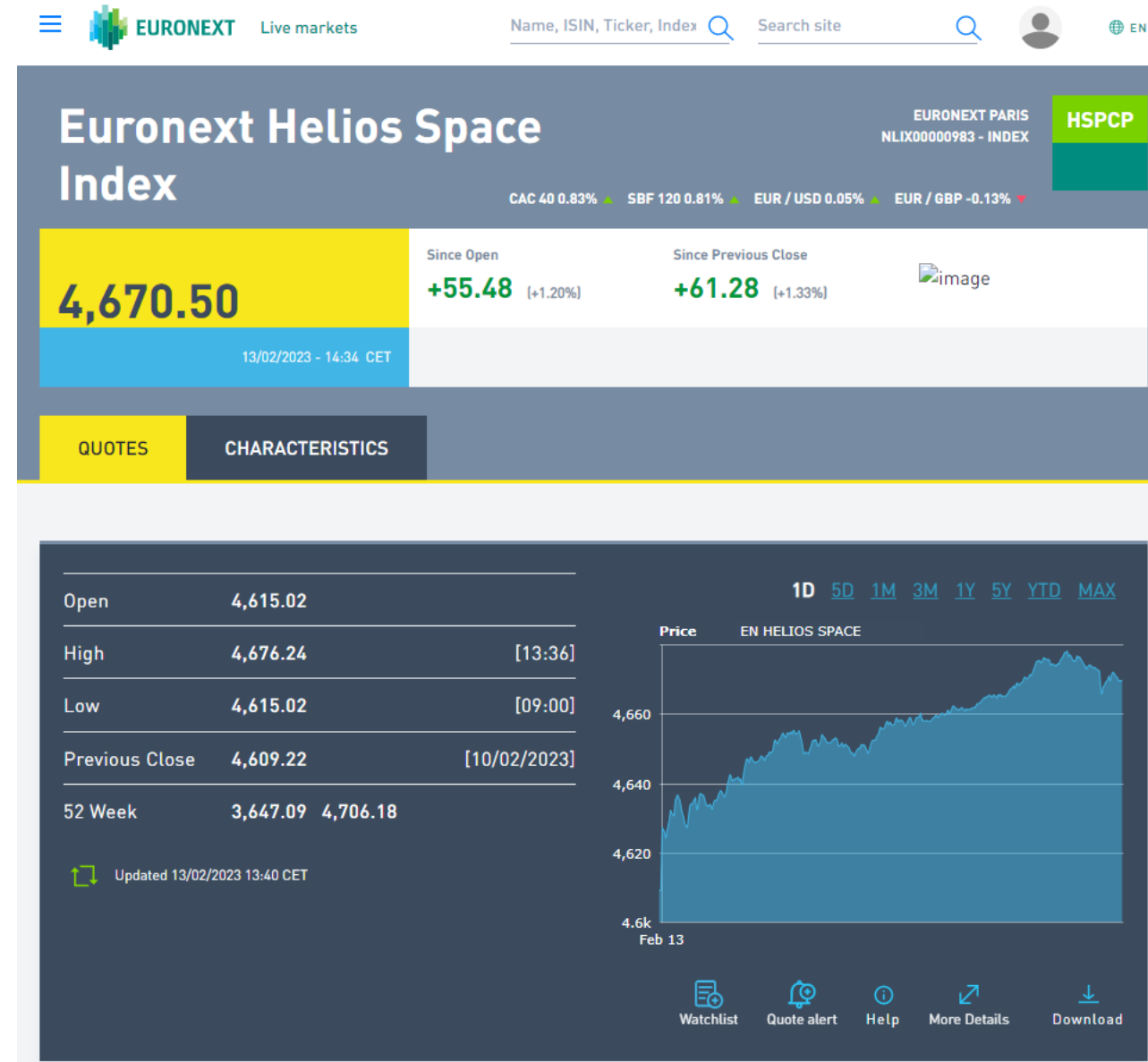
**Private banks can offer business loans €1.0 - 7.5 million – with InvestEU guarantees**

EIF’s list of banks providing loans with an EU guarantee is published on their web site (**new list available soon!**):

[https://www.eif.org/what\\_we\\_do/guarantees/single\\_eu\\_debt\\_instrument/innovfin-guarantee-facility/](https://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/)

# HELIOS Space Stock Index

- The HELIOS Space Stock Index will track the performance of European space companies
- A communication tool to bridge the gap between private investment capital and publicly traded companies on stock exchanges
- Euronext runs the index on its trading platform
- ESA, Promus Ventures and the Commission provide expertise and advice







# CASSINI Hackathons

## 5th CASSINI Hackathon Mar 2023

"Space for defence and security"

10 locations in Europe  
500+ participants

## 4th CASSINI Hackathon Nov 2022

"Space for the financial world"

10 locations in Europe  
400+ participants



<https://www.cassini.eu/hackathons/>



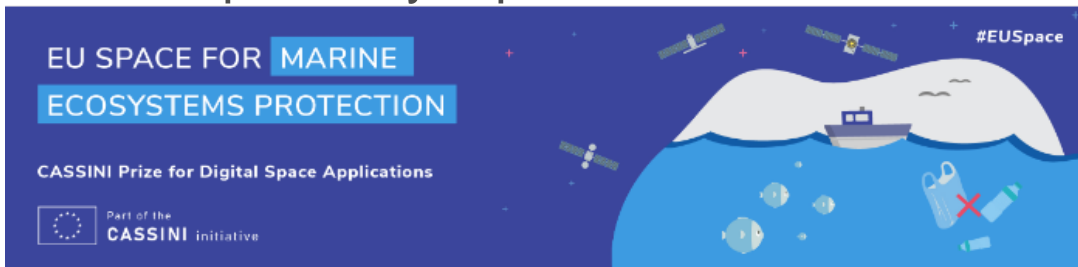
# CASSINI Prizes

## CASSINI Maritime Prize

Competition for best digital application dealing with plastic marine pollution is published by EUSPA

Top 3 may win EUR 950 000 each

TED - <https://bit.ly/3qTIT6T>



## CASSINI Challenge

EUR 1 million prize pool

<https://www.euspa.europa.eu/myeuspacecompetition>



# EUSPA Space Academy

Free online training to space entrepreneurs



<https://www.euspa.europa.eu/spaceacademy/>

This **free** online training is open to all individuals, start-ups, entrepreneurs and SMEs who want to learn the ins and outs of building a space application business

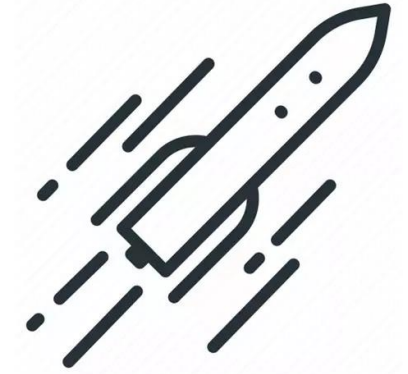
Your training starts with a series of modules that can be followed **using your own device and completed when and where you want**

Topics range from the technical details of the EU Space Programme and its various components to practical business skills such as:

- Customer support and sales
- Building a successful team
- Resource allocation
- Business plans and models
- Access to funding
- Intellectual Property, copyrights and data policy
- And much, much more



# CASSINI links



CASSINI overview <https://www.cassini.eu/cassini-initiative>

CASSINI Business Accelerator <https://www.cassini.eu/accelerator>

CASSINI Matchmaking <https://www.cassini.eu/matchmaking/>

CASSINI Hackathons <https://www.cassini.eu/hackathons/>

VC funds with CASSINI backing

[https://defence-industry-space.ec.europa.eu/cassini-space-entrepreneurship-initiative-access-finance\\_en](https://defence-industry-space.ec.europa.eu/cassini-space-entrepreneurship-initiative-access-finance_en)

EIF contact point for VC funds [https://www.eif.org/InvestEU/equity\\_products\\_calls/index.htm](https://www.eif.org/InvestEU/equity_products_calls/index.htm)

HELIOS Space Stock Index <https://live.euronext.com/en/product/indices/NLIX00000983-XPAR>

EIC Accelerator funding [https://eic.ec.europa.eu/eic-funding-opportunities/eic-accelerator\\_en](https://eic.ec.europa.eu/eic-funding-opportunities/eic-accelerator_en)

EUSPA support and funding <https://www.euspa.europa.eu/>

ESA Commercialisation Gateway <https://commercialisation.esa.int>