



Cassini Challenges 2023

2nd informative webinar – 23 January 2024

European Union Agency for the Space Programme (EUSPA)





CASSINI Challenges

Info Webinar

Tuesday, 23 January | 16:00-17:00 CET

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Agenda

- About EUSPA and entrepreneurship activities
- Cassini overview
- Cassini Challenges objectives
- The Tracks
- The Challenges
- Timeline
- Prizes
- Eligibility criteria
- Award criteria
- How to submit an application
- Q&A

EUSPA's mission

New EU Space Regulation ((EU) 2021/696)

- To acknowledge the growing role of space in supporting EU priorities in terms of growth, competitiveness, sustainability, and security
- Setting the ground for the creation of EUSPA, in **2021** (retroactive effect to 01/01/2021)



Exploitation

- Delivery of services 24/7 of navigation systems, Galileo and EGNOS (management of operations, maintenance and evolutions of space and ground infrastructure)
- GOVSATCOM hub and Space Surveillance and Tracking (SST) Front Desk



Security

- Security Accreditation for all components
- Operational security and Security Monitoring of Galileo and EGNOS



Market development and promotion

- User uptake, applications, innovation of all EU Space components: Galileo, EGNOS, Copernicus, GOVSATCOM
- **Management of encompassing R&I instruments**, incl. Horizon, Entrepreneurship, Capacity Building

EUSPA funding tools stimulating innovation and fostering EU aerospace ecosystem, incl. start-ups & SMEs

CASSINI and Entrepreneurship

Foster EU's innovative spirit to deliver **applications and services**

Stimulate **innovation and entrepreneurship** in the **aerospace ecosystem**



Horizon Europe

Foster adoption of Galileo, EGNOS and Copernicus via **application development**

Support the integration of services into devices and their **commercialisation**



Galileo/EGNOS research (Fundamental Elements)

Foster the development of innovative Galileo and EGNOS-enabled **receivers, antennas and chipsets**

Increase **EU industry competitiveness**



Aviation Grant Programme

Foster **EGNOS operational implementation** for civil aviation

Maximise EGNOS adoption all over EU



Cassini has five main components, four of which are entrusted to EUSPA



IDEAS / INNOVATION

Incentivising new
ideas

**CASSINI
Hackathons
CASSINI Prizes**

TECHNOLOGIES/ APPLICATIONS

Developing
innovative
products and
solutions

**Cassini Challenges
competition**

Scaling up companies,
making them
investable

**CASSINI Business
Accelerator**

EXPANSION AND GROWTH

Connecting with VC
funds and commercial
partners

CASSINI Matchmaking

Increasing number of
Venture Capital funds
with focus on space

**CASSINI Seed and
Growth Funding Facility**




more info on cassini.eu



€ 1 Million
Prize Pool

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Commercialising space technology with CASSINI Challenges

-  New innovation competition to encourage EU space entrepreneurship and business development
-  Development of innovative solutions, products or services based on **Galileo, Copernicus** and their synergies with other technologies
-  Proposals should deliver new **innovative** applications, with commercial and social benefits, impact and a **clear market uptake**

cassinichallenges.eu

€ **1 Million**
Prize Pool

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The Tracks

Applicants must select a Track **depending on the maturity of the solution at the time of the submission:**

IDEA



The application shall present a **theoretical idea** and the pain points that are addressed. Expected TRL: **TRL1-TRL3**

PROTOTYPE



The application shall present a **prototype or beta version** of a solution that has **already been tested in a relevant environment**. Expected TRL: **TRL4-TRL7**

PRODUCT



The application shall present a **product** that is ready for **commercialization or already in the market**. Expected TRL: **TRL8-TRL9**

Applicants with an **awarded Idea** are eligible to **apply again** in the other Tracks (i.e. Prototype or Product) within the relevant deadlines as per Terms of reference



€ 1 Million
Prize Pool

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The Challenges

Except of the Track, applicants must also select a **Challenge** to apply in:

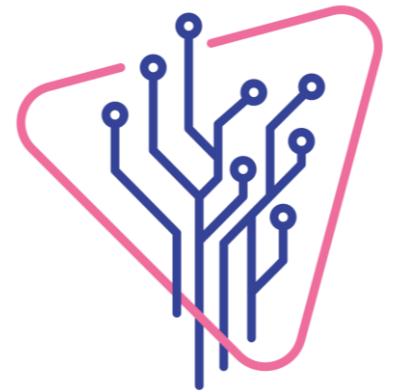
Next Generation
Challenge



Sustainable Future
Challenge



Emerging Technologies
Challenge



Next Generation Challenge

Innovative solutions that will address major societal challenges in focus such as **health and well-being, citizens' safety, security and connectivity**:

- ✈ **Health and well-being:** prevention and health risks related to environmental conditions and spread of diseases, air and water quality monitoring, access to medical expertise in remote or underserved areas, assisted living and social inclusion for the aging population- among others
- ✈ **Citizens' safety:** Disaster response and management, monitoring environmental hazards such as landslides or coastal erosion, early warning systems for various hazards, including tsunamis, storms, and forest fires, infrastructure planning and safety, transportation safety – among others
- ✈ **Security and connectivity:** secure communications ensuring secure and resilient communication channels for governments, border surveillance for monitoring and securing national borders, maritime security solutions monitoring vessel movements and preventing illegal fishing, cybersecurity solutions, connectivity in remote and underserved areas, business, Trade, Insurance and Finance solutions enabling companies to stay connected with partners, clients, and markets worldwide – among others



**Next
Generation
Challenge**

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Sustainable Future Challenge

Innovative solutions that will address areas such as **conservation of ecosystems**, **sustainable agriculture**, and **management of energy and resources**:

- ✈ **Conservation of ecosystems:** deforestation monitoring and illegal logging, biodiversity mapping and protected areas' management, marine conservation, wetland and coastal monitoring, climate change mitigation and adaptation solutions on climate modelling, monitoring carbon emissions, and assessing the effectiveness of adaptation strategies – among others
- ✈ **Sustainable agriculture:** precision farming for the optimization of water, fertilizers, and pesticides, crop monitoring and soil management, disease and pest management for targeted interventions, yield prediction solutions, space-based weather forecasts and climate data solutions for planning planting, harvesting, and irrigation more effectively - among others
- ✈ **Management of energy and resources:** locating and mapping natural resources such as minerals, water sources, and oil reserves, energy efficiency solutions assessing energy consumption patterns, renewable energy planning solutions, waste management solutions, risk management solutions to identify and assess ESG performance – among others.



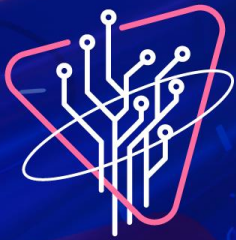
**Sustainable
Future
Challenge**

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Emerging Technologies Challenge

Innovative solutions combining EU space data with deep technologies such as **Artificial Intelligence (AI)**, **Quantum technologies** (quantum computing, sensing, simulation, encryption etc.), **Blockchain**, **Metaverse** and **Extended Reality** (Augmented Reality (AR) / Mixed Reality (MR) / Virtual Reality (VR):

- ✈ **Artificial Intelligence (AI) and Machine Learning** solutions that range from image and speech recognition to autonomous vehicles and predictive analytics;
- ✈ **Blockchain** solutions for secure transactions, supply chain management, and digital identity verification;
- ✈ **Quantum Computing** for solving complex problems and providing additional security levels, e.g. cryptography;
- ✈ **Metaverse** solutions for real world: Development of digital twins creating a spatial view of different ambient during the design process applied to gaming and industrial solutions;
- ✈ **Advanced Materials** and the creation of new materials with specific properties or smart materials that respond to environmental changes;
- ✈ **Photonics** and the use of light-based technologies for communication, sensing, imaging, and medical diagnostics;
- ✈ **Virtual Reality (VR)** and **Augmented Reality (AR)** to create immersive digital experiences (VR) or overlay digital information onto the real world (AR).



**Emerging
Technologies
Challenge**

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The Timeline

4 December 2023
23:59 CET



Deadline for the submission of **Ideas**

announcement of the best Ideas

9 February 2024
23:59 CET



Deadline for the submission of **Prototypes**

announcement of the best Prototypes

19 April 2024
23:59 CET



Deadline for the submission of **Products**

June 2024
 Prague



Contest Finals: Entrepreneurship Days

announcement of the best Products
all winners from all tracks invited to showcase their solutions
meet other teams, meet investors and press

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Prize Pool

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The Prizes

15 best ideas



cash prize of 10,000 EUR

Teams with an awarded idea are eligible to apply again in the other tracks

10 best prototypes



cash prize of 30,000 EUR

Teams with an awarded prototype are eligible to apply again in the other tracks

5 best products



cash prize of 100,000 EUR

all winners will get recognition, visibility and promotion through EUSPA's channels

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Prize Pool

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Eligibility criteria

Teams composition



You can apply as an individual(s) or as a company
Team coordinator as contact point

Participation open to

- ✓ Start-ups
- ✓ Scale-ups
- ✓ Entrepreneurs
- ✓ University students
- ✓ Researchers

Nationality/ Location of the entity



EU Member States + Norway



Switzerland: Galileo only
Iceland: Copernicus only

Age



All applicants must be at least of
18 years of age by the date of
registration



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Award criteria

Innovation

- How innovative and novel is the approach **compared to existing technical solutions** and commercial services?
- Is this kind of solution not yet available on the market or addressing a **new application area**?
- Is the application technologically advanced (e.g. using multi-frequency, innovative algorithms)?

Market potential

- Is there a **potential market demand**/customer base for this solution?
- What is the **revenue** potential?
- What is the market (entry) plan?

Feasibility

- How feasible is the solution within the limits of current technology?
- What is the **development plan** of the solution?

EU space relevance

- Is the application making use of Galileo and/or Copernicus?
- Are Galileo and/or Copernicus differentiators relevant for the application?
- Are **synergies** between Galileo-Copernicus data explored?

Operational organization

- What are the operational resources (**human, technical and other**) that will be invested in the solution development?

How to submit an application

1. Read the [Terms of Reference](#) of the competition to be sure you don't miss anything!
2. Register in the [application platform](#) and start your application. **You can edit your application any time until the deadline!**
3. Upload all the required documents:

Idea

- Application Form for Idea (**max.10 pages**)
- **2-minute** video explaining idea & team
- Declaration of Honour on exclusion
- Legal Entity Form & IDs
- Financial Identification Form

Prototype

- Application Form for Prototype (**max.10 pages**)
- **3-minute** video explaining prototype & team
- Preliminary Business Plan (**max.10 pages**)
- Declaration of ownership of the prototype
- Declaration of Honour on exclusion
- Legal Entity Form & IDs
- Financial Identification Form

Product

- Application Form for Product (**max.10 pages**)
- **3-minute** video demonstrating product & team
- Technical report/user manual for the product (**max.5 pages**)
- proof of downloads of the app OR link to the solution website
- Business Plan (**max.10 pages**)
- Declaration of ownership of the product
- Declaration of Honour on exclusion
- Legal Entity Form & IDs
- Financial Identification Form



CASSINI
Challenges

**Competition
Now Open**

Apply!

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

Thank you for attending!

**€ 1M
Prize
Pool**

Applicants may send their questions via email to
prizes@euspa.europa.eu.

The answers and clarifications will be published on a
regular basis on the competition website

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