

Linking space to user needs

Cassini Challenges 2023

3rd informative webinar – 26 March 2024

European Union Agency for the Space Programme (EUSPA)





How to interact during the webinar

- Make sure your headphones are switched on and turn up the volume
- Participants' microphones are **muted**. If you want to address any questions during the webinar, **please use the chat box**
- For any technical issues that may arise during the webinar (sound problems, not viewing content, etc.) you can use the **chat** and we will support you

CASSINI
Challenges

Info
Webinar

Tuesday, 26 March | 16:00 CET

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CASSINI
Challenges

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How to interact during the webinar

- Questions are collected and addressed at the end of the session
- All questions and answers will be also published in form of clarifications on the EUSPA website
- The webinar **will not be recorded**
- The slides will be available on EUSPA's website shortly after the webinar



**CASSINI
Challenges**

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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



Exploitation

- Galileo and EGNOS services provision and 24/7 operations – including management, operation, maintenance, improvement, evolution & protection of infrastructure
- GOVSATCOM hub and IRIS² preparation
- Space Surveillance and Tracking - Front Desk



Security

- Security Accreditation
- Security Monitoring Center operations (GSMC)
- Governmental Service Provision
- Key contributor in the implementation EU Space Strategy for Security and Defence



Utilization

- Market development, communications, user uptake, applications, innovation
- For Galileo, EGNOS, commercial use of Copernicus, GOVSATCOM, SST, and soon IRIS²

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 2021-2027 overview

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

www.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

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) **in the next cut-offs**



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The Challenges

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

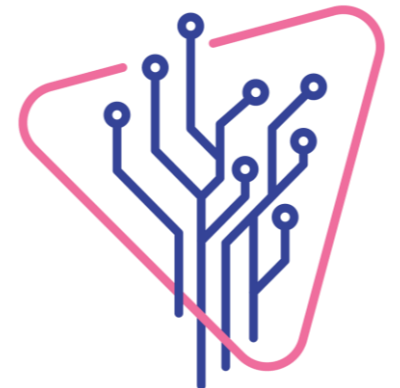
Next Generation
Challenge



Sustainable Future
Challenge



Emerging Technologies
Challenge






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**Next
Generation
Challenge**#EUSpace 

Next Generation Challenge

Innovative solutions that will address major societal challenges in focus areas 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



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.










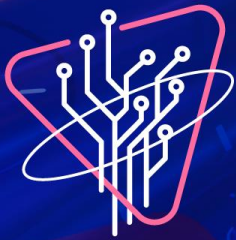
**Sustainable
Future
Challenge**

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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

19 April 2024
23:59 CET



Deadline for the submission of **Products**

3-4 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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The Prizes

15 best ideas



cash prize of 10,000 EUR



10 best prototypes



cash prize of 30,000 EUR



5 best products



cash prize of **100,000** EUR

all winners will get recognition, visibility and promotion through EUSPA's [challenge](#) 

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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



Switzerland + Norway: 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?

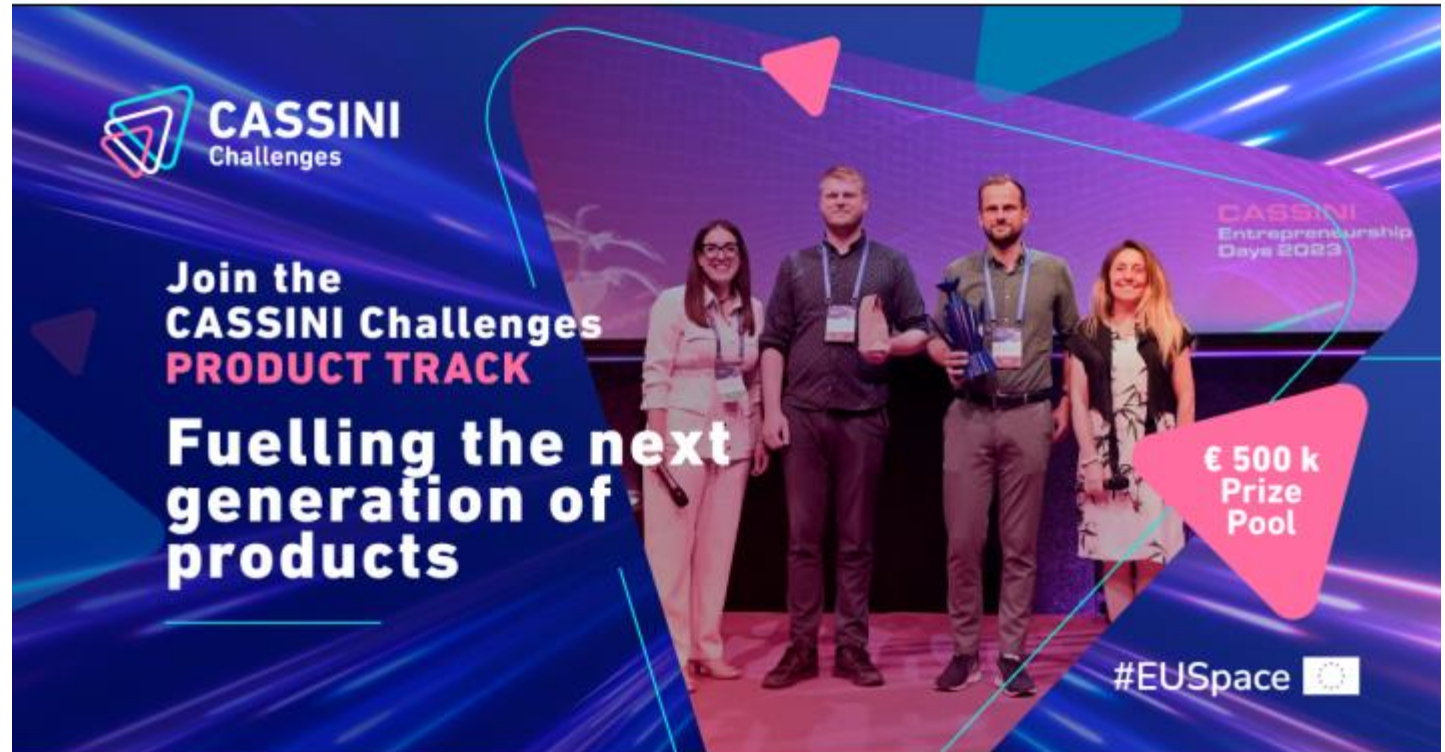
Operational organization

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

Testimony from previous winners

"Winning the CASSINI Challenges product track has been transformative for us, significantly evolving our cloudless service and business model into a scalable subscription service. This accolade not only refined our technology but also expanded our market reach, opening doors to new applications. The competition offered us exposure, matchmaking opportunities, and funding, a powerful mix that's propelling our growth forward. 10/10, would do it again."

Morten Fjord Pedersen
CEO & co-founder of ClearSky



ClearSky Vision

How to submit an application

1. Read the [Terms of Reference](#) so you don't miss anything!
2. Register in the [application form](#) until the deadline! **Application. You can edit your application any time**
3. Upload all the requested documents.

The [Legal Entity Form](#) (LEF) collects the required identification information

Every natural person participating to a team shall submit a "Natural Person"

The [Financial Identification Form](#) requires details in order to provide payment details to payout any prize during the contest

Do not forget to submit all the documents requested at the end of the form

Technical
Application Form

Form for

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Product

Application Form for Product (**max.10 pages**)

2 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 prototype
- Declaration of Honour on exclusion
- Legal Entity Form & IDs
- Financial Identification Form

Thank you for attending!



CASSINI
Challenges

**Competition
Now Open**

Apply!

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

**€ 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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