



# HORIZON EUROPE

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## THE EU RESEARCH & INNOVATION PROGRAMME

2021 – 2027

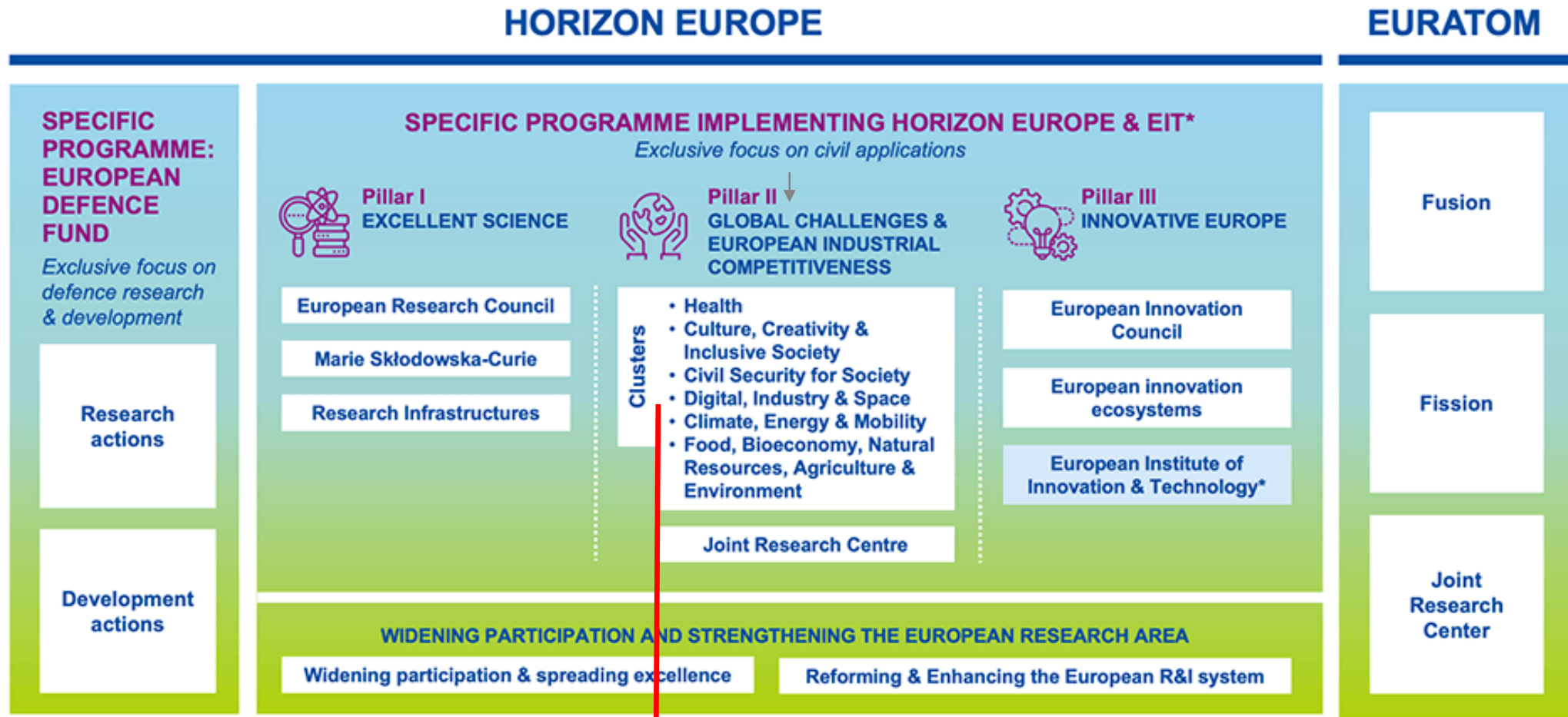
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Croatia National Information Day  
Horizon Europe

Cluster 4 – Digital, Industry and  
Space:

**SPACE**

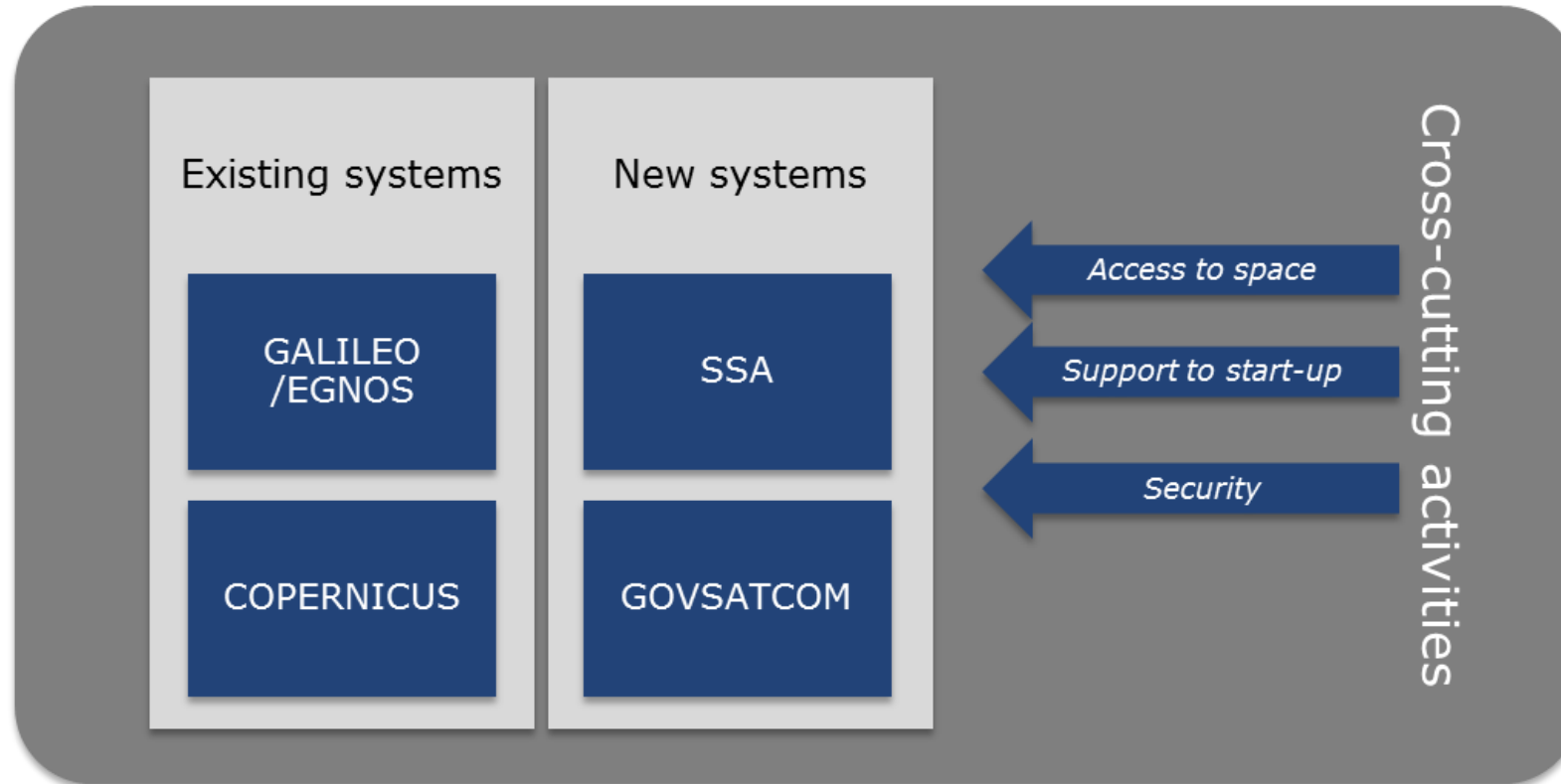
# Space under Horizon Europe



\* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

- 1) Manufacturing Technologies
- 2) Key Digital Technologies
- 3) Advanced Materials
- 4) Emerging Enabling Technologies
- 5) Artificial Intelligence and Robotics
- 6) Next Generation Internet
- 7) Advanced Computing and Big Data
- 8) Circular Industries
- 9) Low-carbon and Clean Industries
- 10) Space

# EU Space Programme 2021-2027



4 Components – 3 Horizontal activities

Total budget of 13,2 bEur (2018 constant prices)

# Horizon Europe Space

## Upstream Space

Strategic Research and Innovation Agenda  
SRIA

**Foster competitiveness of space systems**

**Reinforce our capacity to access and use space**

## EU Space Programme Components and emerging initiatives

EGNSS

**Evolution of space and ground infrastructures**

EGNSS and Copernicus

**Evolution of services**

**Development of applications**

**Innovative Capabilities**

SSA  
GOVSATCOM  
Quantum

**Cassini**

Ecosystem for Entrepreneurship  
-, incl. **IOD / IOV**

EU Space Programme

## Targeted and strategic actions

**Critical Technologies for Non-Dependence**

**Space Science**

**Education and Skills**

**International Cooperation**

# DESTINATION – OPEN STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA

Call HORIZON-CL4-**2021**-SPACE-01

STRATEGIC AUTONOMY IN DEVELOPING,  
DEPLOYING AND USING GLOBAL SPACE-BASED  
INFRASTRUCTURES, SERVICES, APPLICATIONS  
AND DATA

136,2 MEur

28/10/2021 – 16/02/2022

Call HORIZON-EUSPA-**2021**-SPACE-02

STRATEGIC AUTONOMY IN DEVELOPING,  
DEPLOYING AND USING GLOBAL SPACE-BASED  
INFRASTRUCTURES, SERVICES, APPLICATIONS  
AND DATA - **APPLICATIONS**

32,6 MEur

28/10/2021 – 16/02/2022

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STRATEGIC AUTONOMY IN DEVELOPING,  
DEPLOYING AND USING GLOBAL SPACE-BASED  
INFRASTRUCTURES, SERVICES, APPLICATIONS  
AND DATA

85,7 MEur

28/10/2021 – 16/02/2022

Call HORIZON-EUSPA-**2022**-SPACE-02

STRATEGIC AUTONOMY IN DEVELOPING,  
DEPLOYING AND USING GLOBAL SPACE-BASED  
INFRASTRUCTURES, SERVICES, APPLICATIONS  
AND DATA - **APPLICATIONS**

48,1 MEur

May 2022 – September 2022

Other Actions

# Call - STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA 2021

HORIZON-CL4-2021-SPACE-01

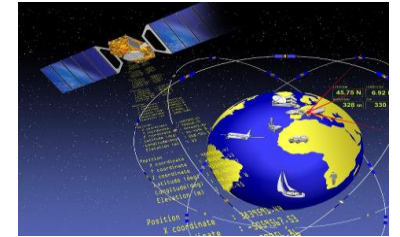
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## HORIZON-CL4-2021-SPACE-01-

### Foster competitiveness of space systems

11: End-to-end satellite communication systems and associated services

12: Future space ecosystems: on-orbit operations, new system concepts



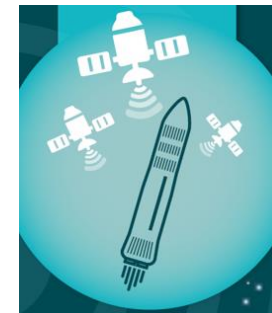
### Reinforce EU capacity to access and use space

21: Reusability for European strategic space launchers - technologies and operation maturation including flight test demonstration

22: Low cost high thrust propulsion for European strategic space launchers - technologies maturation including ground tests

23: New space transportation solutions and services

-11	RIA	12.00 <sup>205</sup>	4.00 to 6.00	2
-12	RIA	6.00	1.00 to 2.00	3
-21	RIA	39.00 <sup>206</sup>	30.00 to 39.00	1
-22	RIA	19.80 <sup>207</sup>	15.00 to 19.00	1
-23	RIA	3.00 <sup>208</sup>	1.00 to 1.50	2





# Call - STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA 2021

## HORIZON-CL4-2021-SPACE-01-

### Evolution of space and ground infrastructure for Galileo/EGNOS: under Other Actions



### Evolution of Copernicus services

- 41: Copernicus Climate Change Service evolution
- 42: Copernicus Atmosphere Monitoring Service evolution
- 43: Copernicus Security and Emergency Services evolution
- 44: Copernicus evolution for cross-services thematic domains

-41	RIA	11.00 <sup>209</sup>	10.00 to 11.00	1
-42	RIA	7.50 <sup>210</sup>	6.00 to 7.50	1
-43	RIA	5.00 <sup>211</sup>	4.00 to 5.00	1
-44	RIA	5.60 <sup>212</sup>	Around 3.00	2

#### Copernicus Services



### Evolution of EGNSS Services under Other Actions

#### Innovative space capabilities: SSA, GOVSATCOM, Quantum

- 62: Quantum technologies for space gravimetry

-62	RIA	17.00	15.00 to 17.00	1
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### Space entrepreneurship ecosystem (including "New Space" and start-ups) and skills: under Other Actions

#### Targeted and strategic actions supporting the EU space sector

- 81: Space technologies for European non-dependence and competitiveness

-81	RIA	10.32 <sup>213</sup>	2.00 to 3.00	4
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# Call - STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA 2022

*HORIZON-CL4-2022-SPACE-01*

85,7 MEur  
28/10/2021 – 16/02/2022

HORIZON-CL4-2022-SPACE-01-

## Foster competitiveness of space systems

- 11: Future space ecosystems: on-orbit operations, preparation of orbital demonstration mission
- 12: Technologies and generic building blocks for Electrical Propulsion
- 13: End-to-end Earth observation systems and associated services



·11	RIA	26.00	20.00 to 26.00	1
·12	IA	5.10	1.00 to 2.00	3
·13	IA	8.10	2.00 to 3.00	3
·21	RIA	2.00	1.00 to 2.00	1

## Reinforce EU capacity to access and use space

- 21: Multi sites flexible industrial platform and standardised technology for improving interoperability of European access to space ground





# Call - STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA 2022

## HORIZON-CL4-2022-SPACE-01-

Evolution of space and ground infrastructure for Galileo/EGNOS: under other actions

Evolution of services of the EU space programme components: Copernicus

41: Copernicus Marine Environment Monitoring Service evolution

42: Copernicus Anthropogenic CO<sub>2</sub> Emissions

Monitoring & Verification Support (MVS) capacity

43: Copernicus Land Monitoring Service evolution

Innovative space capabilities: SSA, GOVSATCOM, Quantum

62: Space Weather

Space entrepreneurship ecosystems (including "New Space" and start-ups) and skills

72: Education and skills for the EU space sector

Targeted and strategic actions supporting the EU space sector

81: Space technologies for European non-dependence and competitiveness

82: Space science and exploration technologies

-41	RIA	10.00 <sup>231</sup>	8.00 to 10.00	1
-42	RIA	6.00 <sup>232</sup>	5.00 to 6.00	1
-43	RIA	5.00 <sup>233</sup>	4.00 to 5.00	1
-62	RIA	2.00	0.50 to 1.00	2
-72	CSA	3.00	2.00 to 3.00	1
-81	RIA	10.50 <sup>234</sup>	2.00 to 3.00	4
-82	RIA	8.00	1.00 to 1.50	6



# DESTINATION – OPEN STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA

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STRATEGIC AUTONOMY IN DEVELOPING,  
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48,1 MEur

May 2022 – September 2022

Other Actions



# Calls by EUSPA: HORIZON-EUSPA-2021-SPACE-02

32,6 MEur

## HORIZON-EUSPA-2021-SPACE-02-

51: EGNSS and Copernicus applications fostering the European Green deal

52: EGNSS applications for Safety and Crisis management

53: EGNSS applications for the Digital Age



Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) <sup>304</sup>	Number of projects expected to be funded
		2021		
Opening: 2021 (indicative) Deadline(s): 2021-2022 (indicative)				
HORIZON-EUSPA-2021-SPACE-02-51	IA	14.00 <sup>305</sup>	2.00 to 3.00	5
HORIZON-EUSPA-2021-SPACE-02-52	IA	9.30 <sup>306</sup>	2.00 to 3.00	3
HORIZON-EUSPA-2021-SPACE-02-53	IA	9.30 <sup>307</sup>	2.00 to 3.00	3
Overall indicative budget		32.60		

# Calls by EUSPA: HORIZON-EUSPA-2022-SPACE-02

48,1 MEur  
05/05/2022 – 06/09/2022

## HORIZON-EUSPA-2022-SPACE-02-

- 51: EGNSS applications for Smart mobility
- 52: Public sector as Galileo and/or Copernicus user
- 54: Copernicus downstream applications and the European Data Economy
- 55: Large-scale Copernicus data uptake with AI and HPC
- 56: Designing space-based downstream applications with international partners
- 61: GOVSATCOM Service developments and demonstrations

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) <sup>310</sup>	Number of projects expected to be funded
		2022		
Opening: May 2022 (indicative)				
Deadline(s): Sep 2022 (indicative)				
HORIZON-EUSPA-2022-SPACE-02-51	IA	9.50 <sup>311</sup>	2.00 to 3.00	3
HORIZON-EUSPA-2022-SPACE-02-52	PCP	5.20	2.60 to 5.20	2
HORIZON-EUSPA-2022-SPACE-02-54	IA	9.60 <sup>312</sup>	2.00 to 3.00	3
HORIZON-EUSPA-2022-SPACE-02-55	RIA	9.60 <sup>313</sup>	2.00 to 3.00	3
HORIZON-EUSPA-2022-SPACE-02-56	RIA	5.10	0.50 to 1.00	5
HORIZON-EUSPA-2022-SPACE-02-61	RIA	9.10 <sup>314</sup>	1.00 to 1.50	6

# OTHER ACTIONS NOT SUBJECT TO CALLS FOR PROPOSALS



2022

## Grants to identified beneficiaries

1. HORIZON-CL4-SSA-SST-MS - New & improved EUSST Missions and Services
2. HORIZON-CL4-SSA-SST-STM-AE - SST & STM system architecture and evolutions
3. HORIZON-CL4-SSA-SST-SB - Space-based SST (mission, system and sensors network)
4. HORIZON-CL4-SSA-SST-SP - SST Sensors and Processing
5. HORIZON-CL4-SSA-SST-SD - SST Networking, Security & Data sharing

## Public procurement

3. EGNSS Evolution: Mission and Service related R&D activities
4. Support European “New Space” entrepreneurship through CASSINI Space Entrepreneurship Initiative 2021-2027

## Other budget implementation instruments

1. Indirectly managed actions
1. Indirectly managed actions delegated to ESA
2. Indirectly managed actions delegated to EUSPA

- EGNSS upstream
- Space Weather and NEO
- GOVSATCOM tech. Dev.
- Cassini IOD/IOV

- GOVSATCOM service
- EGNSS and Copernicus downstream

# Eligibility conditions: same as Space Programme

In accordance with paragraph 11 of Annex IV of the Regulation (EU) 2021/695 establishing Horizon Europe, this action is implemented with regard to eligibility of legal entities in accordance with the Union Space Programme. In particular, for the reasons of EU strategic autonomy in space and the security and integrity of EU space assets, in order to guarantee the protection of the strategic interests of the Union and its Member States, **legal entities established in any Member State will be eligible to participate where these entities comply with the conditions established in Article 24 of the Regulation (EU) 2021/696.** [https://eur-lex.europa.eu/legal-content/EN/AUTO/?uri=uriserv:OJ.L\\_.2021.170.01.0069.01.ENG&toc=OJ:L:2021:170:TOC](https://eur-lex.europa.eu/legal-content/EN/AUTO/?uri=uriserv:OJ.L_.2021.170.01.0069.01.ENG&toc=OJ:L:2021:170:TOC)

2022-SST: 5 grants to identified beneficiary = SST Partnership

2022-SPACE-02-61: GOVSATCOM



# Eligibility conditions: Article 22(5)

EU 27 + NO + IC + UK(conditional)

2021-SPACE-01-11: End-to-end satellite communication

2021-SPACE-01-21: Reusability for EU strategic space launchers

2021-SPACE-01-22: Low cost high thrust propulsion

2021-SPACE-01-23: New space transportation solutions

2022-SPACE-01-21: Multi sites flexible industrial platform

2021-SPACE-01-43: Copernicus Security and Emergency Services

2021-SPACE-01-62: Quantum technologies for space gravimetry

2021-SPACE-01-81: Space technologies for European non-dependence

2022-SPACE-01-81: Space technologies for European non-dependence

# Funding and Tenders portal

- 4 Calls currently published with more than 500 MEur of EU-funding overall for 2021-2022
- See EU Funding and Tenders Portal  
<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities>
- Keywords:
  - Programme: Horizon Europe
  - Programme Part: Digital Industry and Space
  - Destination: Open strategic autonomy in developing, deploying and using global space based infrastructures, services, application and data
- Keywords for the Calls published by EUSPA
  - Programme: Horizon Europe
  - EUSPA
- First closing date: 16 February 2022



# HORIZON EUROPE

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## THE EU RESEARCH & INNOVATION PROGRAMME

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2021 – 2027

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