

OPENCALLS.SPACE

SPACE OPPORTUNITIES IN THE HORIZON EUROPE PROGRAM



Thursday 7 October, 2021

Foster competitiveness of space systems

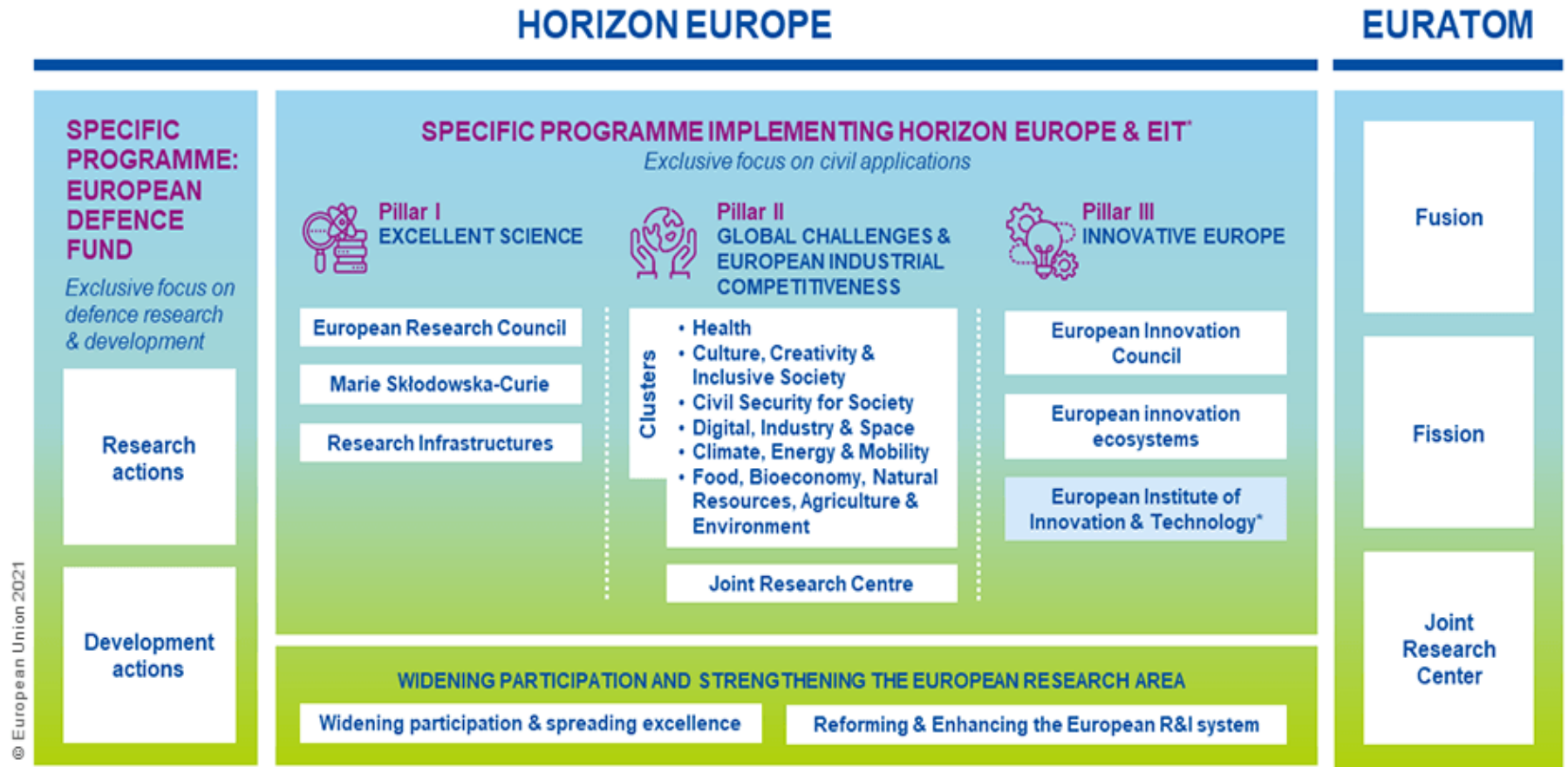
EGNSS

Developments 2021-2027

From Horizon 2020 to **Horizon Europe**

Missions – Clusters - Destinations:

- Health
- Civil Security for Society
- Climate, energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment



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

Developments 2021-2027



EU [funding instrument](#) for the environment and climate action (and 2021-2027 also transition to clean energy)

Bridging the gap between development of new knowledge (Horizon Europe) and implementation (large-scale deployment finance).

Budget € 5.4 billion

[Digital Europe](#) (DIGITAL)

Accelerate the recovery and drive the digital transformation of Europe.

Fill the gap between the research of digital technologies and their deployment, and to bring the results of research to the market – for the benefit of Europe’s citizens and businesses – in particular SMEs.

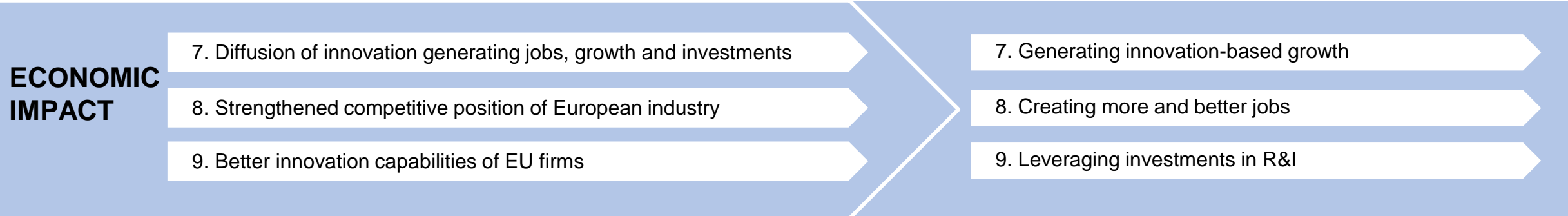
Budget € 7.6 billion



European Maritime and Fisheries Fund

[Fund](#) to invest in the maritime economy and support fishing communities

Impact Pathways – evolution Horizon 2020 to Horizon Europe



Scientific impact indicators

Toward scientific impact	Short-term	Medium-term	Longer-term
Creating high-quality new knowledge	Publications – Number of FP peer reviewed scientific publications	Citations – Field-Weighted Citation Index of FP peer reviewed publications	World-class science – Number and share of peer reviewed publications from FP projects that are core contribution to scientific fields
Strengthening human capital in R&I	Skills – Number of researchers having benefited from upskilling activities in FP projects	Careers – Number and share of upskilled FP researchers with more influence in their R&I field	Working conditions – Number and share of upskilled FP researchers with improved working conditions
Fostering diffusion of knowledge and Open Science	Shared knowledge – Share of FP research outputs (open data / publication / software etc) shared through open knowledge infrastructures	Knowledge diffusion – Share of open access FP research outputs actively used / cited	New collaborations – Share of FP beneficiaries having developed new transdisciplinary / trans-sectoral collaborations with users of their open FP R&I outputs

Societal impact indicators

Toward societal impact	Short-term	Medium-term	Longer-term
Addressing EU policy priorities through R&I	Outputs – Number and share of outputs aimed at addressing specific EU policy priorities	Solutions – Number and share of innovations and scientific results addressing specific EU policy priorities	Benefits – Aggregated estimated effects from use of FP funded results, on tackling specific EU policy priorities, including contribution to the policy and law-making cycle
Delivering benefits and impact through R&I missions	R&I mission outputs – Outputs in specific R&I missions	R&I mission results – Results in specific R&I missions	R&I mission targets met – Targets achieved in specific R&I missions
Strengthening the uptake of innovation in society	Co-creation – Number and share of FP projects where EU citizens and end-users contribute to the co-creation of R&I content	Engagement – Number and share of FP beneficiary entities with citizen and end-users engagement mechanisms after FP project	Societal R&I uptake – Uptake and outreach of FP co-created scientific results and innovative solutions

Economic impact indicators

Toward economic impact	Short-term	Medium-term	Longer-term
Generating innovation-based growth	Innovative outputs – Number of innovative products, processes or methods from FP (by type of innovation) & Intellectual Property Rights applications	Innovations – Number of innovations from FP projects (by type of innovation) including from awarded IPRs	Economic growth – Creation, growth & market shares of companies having developed FP innovations
Creating more and better jobs	Supported employment – Number of FTE jobs created, and jobs maintained in beneficiary entities for the FP project (by type of job)	Sustained employment – Increase of FTE jobs in beneficiary entities following FP project (by type of job)	Total employment – Number of direct and indirect jobs created or maintained due to diffusion of FP results (by type of job)
Leveraging investments in R&I	Co-investment – Amount of public & private investment mobilised with the initial FP investment	Scaling up – Amount of public & private investment mobilised to exploit or scale up FP results	Contribution to '3% target' – EU progress towards 3% GDP target due to FP

Canvas part 1

SPECIFIC NEEDS

What are the specific needs that triggered this project?

Example 1

Most airports use process flow-oriented models based on static mathematical values limiting the optimal management of passenger flow and hampering the accurate use of the available resources to the actual demand of passengers.

Example 2

Electronic components need to get smaller and lighter to match the expectations of the end-users. At the same time there is a problem of sourcing of raw materials that has an environmental impact.

EXPECTED RESULTS

What do you expect to generate by the end of the project?

Example 1

Successful large-scale demonstrator:

Trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management.

Algorithmic model:

Novel algorithmic model for proactive airport passenger flow management.

Example 2

Publication of a **scientific discovery on transparent electronics.**

New product: More sustainable electronic circuits.

Three PhD students trained.

D & E & C MEASURES

What dissemination, exploitation and communication measures will you apply to the results?

Example 1

Exploitation: Patenting the algorithmic model.

Dissemination towards the scientific community and airports: Scientific publication with the results of the large-scale demonstration.

Communication towards citizens: An event in a shopping mall to show how the outcomes of the action are relevant to our everyday lives.

Example 2

Exploitation of the new product: Patenting the new product; Licencing to major electronic companies.

Dissemination towards the scientific community and industry: Participating at conferences; Developing a platform of material compositions for industry; Participation at EC project portfolios to disseminate the results as part of a group and maximise the visibility vis-à-vis companies.

Canvas part 2

TARGET GROUPS

Who will use or further up-take the results of the project? Who will benefit from the results of the project?

Example 1

9 European airports:

Schiphol, Brussels airport, etc.

The European Union aviation safety agency.

Air passengers (indirect).

Example 2

End-users: consumers of electronic devices.

Major electronic companies: Samsung, Apple, etc.

Scientific community (field of transparent electronics).

OUTCOMES

What change do you expect to see after successful dissemination and exploitation of project results to the target group(s)?

Example 1

Up-take by airports: 9 European airports adopt the advanced forecasting system demonstrated during the project.

Example 2

High use of the scientific discovery published (measured with the relative rate of citation index of project publications).

A major electronic company (Samsung or Apple) **exploits/uses the new product** in their manufacturing.

IMPACTS

What are the expected wider scientific, economic and societal effects of the project contributing to the expected impacts outlined in the respective destination in the work programme?

Example 1

Scientific: New breakthrough scientific discovery on passenger forecast modelling.

Economic: Increased airport efficiency

Size: 15% increase of maximum passenger capacity in European airports, leading to a 28% reduction in infrastructure expansion costs.

Example 2

Scientific: New breakthrough scientific discovery on transparent electronics.

Economic/Technological: A new market for touch enabled electronic devices.

Societal: Lower climate impact of electronics manufacturing (including through material sourcing and waste management).

EGNSS in Horizon Europe: EUSPA



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Indirectly managed actions delegated to EUSPA (EU Space Programme Agency)

1. EIC Horizon and CASSINI Prize for digital space applications (SME)
2. EIC Horizon and CASSINI Prize for space technology products and services
3. Support European “New Space” entrepreneurship through CASSINI Space Entrepreneurship Initiative 2021-2027 - Hackathons & Mentoring
4. Innovation activities for improved EGNSS operation and service provision
5. Development of applications for Galileo, EGNOS and Copernicus
6. Tender evaluation, project monitoring and audits (EGNSS downstream)

EGNSS



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HORIZON-EUSPA-2021-SPACE-02-51: EGNSS and Copernicus applications fostering the European Green deal

Cluster 4: Digital, Industry, Space (DIS, [WP7](#))

Work programme year

Destination: Open strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data

Type of action: IA
Budget (EUR million): 14
Expected EU contribution/project (EUR million): 2-3
Opening: October 2021
Closing: ?
TRL 7-9 at end of project

Topic description:

Expected outcome: Development of innovative EGNSS and Copernicus based solutions that contribute to the implementation of the European Green deal. These solutions can play a major role in the transformation of the EU's economy into a climate-neutral economy by 2050, as well as support environmental protection, maintaining biodiversity, etc.

NEW

Destination description (policy context and targets: Key Strategic Objectives / KSO)

Expected impacts: credible pathways towards scientific, societal and economic impact of the project (longer-term)

EGNSS - EUSPA



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2021

The first call is expected to have a €32.6 million budget and encompass three topics:

- EGNSS and Copernicus applications fostering the European Green deal,
- EGNSS applications for Safety and Crisis management, and
- EGNSS applications for the Digital Age.

2022

The second call is expected to have a €48.1 million budget and encompass six topics:

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

EGNSS - EUSPA

2021	2022
<p>HORIZON-EUSPA-2021-SPACE-02-51 EGNSS and Copernicus applications fostering the European Green deal</p> <p>IA; budget (EUR million): total - 14.00, per project - 2.00-3.00; projects N°: 5</p>	<p>HORIZON-EUSPA-2022-SPACE-02-51 EGNSS applications for Smart mobility</p> <p>IA; budget (EUR million): total - 9.50, per project - 2.00-3.00; projects N°: 3</p>
<p>HORIZON-EUSPA-2021-SPACE-02-52 EGNSS applications for Safety and Crisis Management</p> <p>IA; budget (EUR million): total - 9.30, per project - 2.00-3.00; projects N°: 3</p>	<p>HORIZON-EUSPA-2022-SPACE-02-52 Public sector as Galileo and/or Copernicus user</p> <p>PCP; budget (EUR million): total - 5.20, per project - 2.60-5.20; projects N°: 2</p>
<p>HORIZON-EUSPA-2021-SPACE-02-53 EGNSS applications for the Digital Age</p> <p>IA; budget (EUR million): total - 9.30, per project - 2.00-3.00; projects N°: 3</p>	<p>HORIZON-EUSPA-2022-SPACE-02-56 Designing space-based downstream applications with international partners</p> <p>RIA; budget (EUR million): total - 5.10, per project - 0.50-1.00; projects N°: 5</p>

EGNSS other

HORIZON-CL3-2021-BM-01-01

Enhanced security and management of borders, maritime environment, activities and transport, by increased surveillance capability, including high altitude, long endurance aerial support
IA; budget (EUR million): total - 7.00, per project - around 7.00; projects N°: 1 (Open: 23 June - Closing: 23 November)

HORIZON-CL6-2022-GOVERNANCE-01-11

Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions
RIA; budget (EUR million): total - 15.00, per project - 5.00-7.50; projects N°: 3 (Open: 28 Oct 21 - Closing: 15 Feb 22)

HORIZON-CL6-2022-GOVERNANCE-01-09

Environmental observations solutions contributing to meeting “One Health” challenges
RIA; budget (EUR million): total - 10.00, per project - around 5.00; projects N°: 2 (Open: 28 Oct 21 - Closing: 15 Feb 22)

Further information

NL Enterprise Agency (RVO) national contact points / [advisors](#)
(NL organisations)

EU [Portal](#)



Sessions can be [viewed](#) even after live broadcast.