Horizon Europe, ~95 billion euros for 2021 – 2027

Pillar 1
Excellent Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and European Industrial Competitiveness

Clusters
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre

Pillar 3
Innovative Europe

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Widening Participation and Strengthening the European Research Area

- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system

HORISONTTI EUROOPPA
EU:N TUTKIMUS- JA INNOVAATIO-OHJELMA

Horizon Europe: Competitiveness Pillar

Pillar 2
Global Challenges and European Industrial Competitiveness

- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre

8,2 mrd. €
2,3 mrd. €
1,6 mrd. €
15,3 mrd. €
15,1 mrd. €
9 mrd. €
2 mrd. €

--- Space 1.5 billion euro
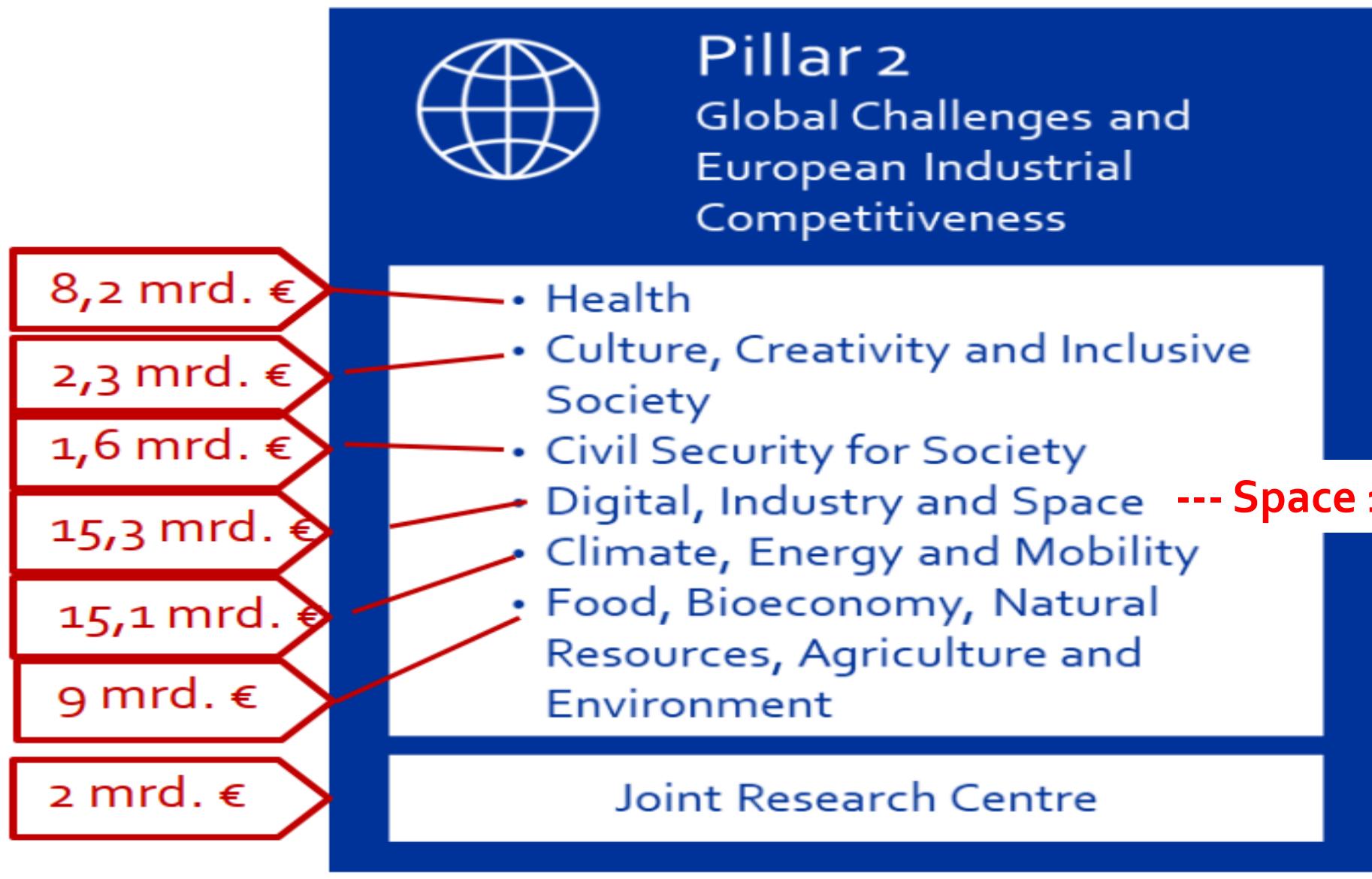
Cluster 4 Space – all this with 150-200 M€/yr in 2025

- Competitiveness
  - EO satellite technologies
  - In orbit servicing of satellites
  - Launchers
- Copernicus services evolution (public sector)
  - Copernicus for Atmosphere, Climate Change, Emergency, In-situ, Marine, Land, Security
- EGNSS and Copernicus Downstream (companies) incl. Galileo PRS
- GOVSATCOM , Quantum in communications, Space Weather and NEOs
  - Quantum Space Gravimetry satellite Phase-A and B
  - Space Weather every second year – not 2025
- Other Actions
  - ITT's for SST Consortium only (Oct 2024-Mar 2025)
  - ITT's via ESA for improved EGNSS https://esastar-publication-ext.sso.esa.int/search?s=HE-ESA-
  - Secure Connectivity/GOVSATCOM Space infrastructure technology R&D activities, incl. IRISS
  - In Orbit Demonstration/Validation (IOD/IOV) service (2-3 calls per year) – "free launches" – next DL 2.9.2024
  - CASSINI competitions, but also a way to Cassini Business Accelerator, EIB funding
- Cross-Cutting
  - Scientific exploitation of space data every second year – not 2025
  - Space technologies for European non-dependence and competitiveness

Partnership "Space AISBL" ~ "Avaruus ry (Belgia)"

SRG delegates of SPACE aisbl			
Eurospace	**Pierre Lionnet**	Eurospace	pierre.lionnet@eurospace.org
SME4Space	**Hans Bracquené**	SME4Space	chairman@sme4space.org
EASTRO	**Andy Court**	TNO	andy.court@tno.nl
ESRE	**Laurent Leylekian**	Onera	laurent.leylekian@onera.fr
EASN	**Athanasios Dafnis**	RWTH Aachen	dafnis@easn.net

Founding members

Target: Digitalisation for Commercial Space solutions

Long background – 2017/18 large companies and Eurospace hoped for 2 billion euro partnership. Now, it is 100 M€ in 3 years.
For launchers Commissioner Breton signaled in January "flagship size" funding after 2027. Satellite technologies will follow – or not.

Draft topics for 2025

Topic n°		Topic title	TRL target	2025	2026	2027	TOTAL (m€)
		Budget (m€) repartition per call years and topics					
Topic 1	EO / Satcom	Collaborative Earth Observation and Satcom missions for Space solutions	Low to Mid (RIA)	6	12	4	22
Topic 1	EO / Satcom	Collaborative Earth Observation and Satcom missions for Space solutions	Mid to High (IA)	11	26	26	63
Topic 2	NSTS	Digital solutions for autonomy for space transportation systems, design and simulation tools	Low to Mid (RIA)	3	-	-	3
Topic 2	NSTS	Digital solutions for autonomy for space transportation systems, design and simulation tools	Mid to High (IA)	12	-	-	12
		TOTAL (m€)		32	38	30	100

Topic n°		Topic title	TRL target	2025 budg./proj. (m€) Min	Max	2025 # Proj. Min	Max	2026 budg./proj. (m€) Min	Max	2026 # Proj. Min	Max	2027 budg./proj. (m€) Min	Max	2027 # Proj. Min	Max
		Overview of the min/max budg. per project and min/max number of project													
Topic 1	EO / Satcom	Collaborative Earth Observation and Satcom missions for Space solutions	Low to Mid (RIA)	1	5	1	6	1	2	6	12	1	2	2	4
Topic 1	EO / Satcom	Collaborative Earth Observation and Satcom missions for Space solutions	Mid to High (IA)	2	6	2	6	5	10	3	5	5	10	3	5
Topic 2	NSTS	Digital solutions for autonomy for space transportation systems, design and simulation tools	Low to Mid (RIA)	1	3	1	3	2	5	-	-	2	5	-	-
Topic 2	NSTS	Digital solutions for autonomy for space transportation systems, design and simulation tools	Mid to High (IA)	4	6	2	3	1	5	-	-	2	5	-	-

Cluster 3 "Civil Security" domains

1. Destination – Better protect the EU and its citizens against **crime and terrorism**

2. Destination – Effective management of EU external **borders**

3. Destination – Resilient **infrastructure**

4. Destination – Increased **Cybersecurity**

5. Destination – A **Disaster**-Resilient Society for Europe

6. Destination – Strengthened Security Research and **Innovation**

HORIS NTTI EUROOPPA
EU:N TUTKIMUS- JA INNOVAATIO-OHJELMA

Call 2024

- **TOTAL 27 topics with 42 projects and 198 M€ budget**

- HORIZON-CL3-2024-FCT-01:   47 M€   8 topics   9 projects
- HORIZON-CL3-2024-BM-01   29 M€   6 topics   7 projects
- HORIZON-CL3-2024-INFRA-01   16 M€   3 topics   3 projects
- HORIZON-CL3-2024-CS-01   60 M€   1 topics   10 projects
- HORIZON-CL3-2024-DRS-01   30 M€   7 topics   8 projects
- HORIZON-CL3-2024-SSRI-01   16 M€   2 topics   5 projects

- Open 27 June 2024
- Closes 20 Nobember 2024

- **Calls 2021-22 had 48 topics with 83 projects and 368 M€ funding**
- **Call 2023   had 37 topics with 39 projects and 160 M€ funding**

Call - Fighting Crime and Terrorism 2024 (47 M€)

- HORIZON-CL3-2024-FCT-01-01 Mitigating new threats and adapting investigation strategies in the era of Internet of Things, RIA, 5 M€, 1 project

- HORIZON-CL3-2024-FCT-01-02 Open Topic (police), RIA, 9 M€ for 2 projects

- HORIZON-CL3-2024-FCT-01-03 Lawful evidence collection in online child sexual abuse investigations, including undercover (police), RIA, 3.7 M€ , 1 project

- HORIZON-CL3-2024-FCT-01-04 Radicalisation and gender, RIA, 3 M€, 1 project

- HORIZON-CL3-2024-FCT-01-05 Combating hate speech online and offline, IA, 3 M€, 1 project

- HORIZON-CL3-2024-FCT-01-06 Open Topic (police), RIA, 3 M€, 2 projects

- HORIZON-CL3-2024-FCT-01-07 CBRN-E detection capacities in small architecture, IA. 6 M€, 1 project

- HORIZON-CL3-2024-FCT-01-08 Tracing of cryptocurrencies transactions related to criminal purposes, IA, 6 M€, 1 project

Call - Border Management 2024 (29 M€)

- HORIZON-CL3-2024-BM-01-01 Open Topic (border, coast, customs), RIA, 6 M€ for 2 projects

- HORIZON-CL3-2024-BM-01-02 Interoperability for border and maritime surveillance
- and situational awareness, IA, 6 M€, 1 project

- HORIZON-CL3-2024-BM-01-03 Advanced user-friendly, compatible, secure identity
- and travel document management, IA, 6 M€, 1 project

- HORIZON-CL3-2024-BM-01-04 Integrated risk-based border control that mitigates
- public security risk, reduces false positives and strengthens privacy, IA, 5 M€, 1 project

- HORIZON-CL3-2024-BM-01-05 Detection and tracking of illegal and trafficked goods, RIA, 6 M€ for 2 projects

Call - Resilient Infrastructure 2024 (16 M€)

- HORIZON-CL3-2024-INFRA-01-01 Open Topic, IA, 5 M€, 1 project

- HORIZON-CL3-2024-INFRA-01-02 Resilient and secure urban planning and new tools for EU territorial entities , IA, 6 M€, 1 project

- HORIZON-CL3-2024-INFRA-01-03 Advanced real-time data analysis used for infrastructure resilience , RIA, 5 M€, 1 project

HORIS NTTI EUROOPPA
EU:N TUTKIMUS- JA INNOVAATIO-OHJELMA

Call - Disaster-Resilient Society 2024 (30 M€)

- HORIZON-CL3-2024-DRS-01-01 Prevention, detection, response and mitigation of chemical, biological and radiological threats to agricultural production, feed and food processing, distribution and consumption, RIA, 8 M€ for 2 projects

- HORIZON-CL3-2024-DRS-01-02 Open Topic, RIA, 6 M€ for 2 projects

- HORIZON-CL3-2024-DRS-01-03 Harmonised / Standard protocols for the implementation of alert and impact forecasting systems as well as transnational emergency management in the areas of high-impact weather / climatic and geological disasters, IA, 6 M€ for 2 projects

- HORIZON-CL3-2024-DRS-01-04 Hi-tech capacities for crisis response and recovery after a natural-technological (NaTech) disaster, RIA. 4 M€, 1 project

- HORIZON-CL3-2024-DRS-01-05 Cost-effective sustainable technologies and crisis management strategies for RN large-scale protection of population and infrastructures after a nuclear blast or nuclear facility incident, RIA, 6 M€, 1 project

Call - Increased Cybersecurity 2024 (60 M€)

- HORIZON-CL3-2024-CS-01-01 Approaches and tools for security in software and hardware development and assessment , IA, budget 37 M€, 4-6 Me per project, 6 projects

- HORIZON-CL3-2024-CS-01-02 Post-quantum cryptography transition, RIA, budget 23.4 M€, 4-6 Me per project, 4 projects

Call - Support to Security Research and Innovation 2024 (16,5 M€)

- HORIZON-CL3-2024-SSRI-01-01 Demand-led innovation through public procurement, PCP, 10.5 M€ for 2 projects

- HORIZON-CL3-2024-SSRI-01-02 Accelerating uptake through open proposals for advanced SME innovation, IA, 6 M€ for 4 projects

Participant Portal info, BF training

- Latest Call text – the **proposal must answer to its requirements**
  - Other documents that help, give guidance

- Portal lists interested parties but not all are relevant actors!
  - https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/topic-announcements/44114300
- https://cordis.europa.eu/ lists old projects… the participants stay in their fields of interest

- **3 countries minimum** (EU and e.g. Norway and UK) - typically 6-12 countries with one or two actors per country.

- **Business Finland gives training**
  - https://www.businessfinland.fi/ajankohtaista/tapahtumat/horisontti-eurooppa/2022/save-the-date-horisontti-eurooppa-kustannusasioiden-masterclass

Brockerage 22.-23.5 Pariis
[SMI2G - Security Mission Information & Innovation Group Event 2024 - Paris (cmine.eu)](cmine.eu) – registration has ended. Web page likely to give info on project ideas after event is over.

Info and Brockerage 12.-13.6. Bryssel – hybrid by European Commission

Thanks

Evaluation criteria (RIAs and IAs)

Research and innovation action (RIA)

Activities to establish new knowledge or to explore the feasibility of a new or improved technology, product, process, service or solution.

This may include basic and applied research, technology development and integration, testing, demonstration and validation of a small-scale prototype in a laboratory or simulated environment.

Innovation action (IA)

Activities to produce plans and arrangements or designs for new, altered or improved products, processes or services.

These activities may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

EXCELLENCE

✓ Clarity and pertinence of the **project's objectives**, and the extent to which the proposed work is ambitious, and goes beyond the state-of-the-art.

✓ Soundness of the proposed **methodology**, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the **gender dimension** in research and innovation content, and the quality of **open science practices** including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

IMPACT

✓ Credibility of the **pathways** to achieve the expected **outcomes and impacts** specified in the work programme, and the likely scale and significance of the contributions due to the project.

✓ Suitability and quality of the **measures to maximize expected outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities.

QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

✓ Quality and effectiveness of the **work plan**, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.

✓ Capacity and role of each **participant**, and extent to which the **consortium** as a whole brings together the necessary expertise.

Technology Readiness Level Defines Which Action Suits Your R&D Phase

TRL 1 – basic principles observed
TRL 2 – technology concept formulated
TRL 3 – experimental proof of concept

TRL 4 – technology validated in lab
TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies) ~"MVP"
TRL 7 – system prototype demonstration in operational environment ~"Pilot"
TRL 8 – system complete and qualified ~"Large-scale pilot"

TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)
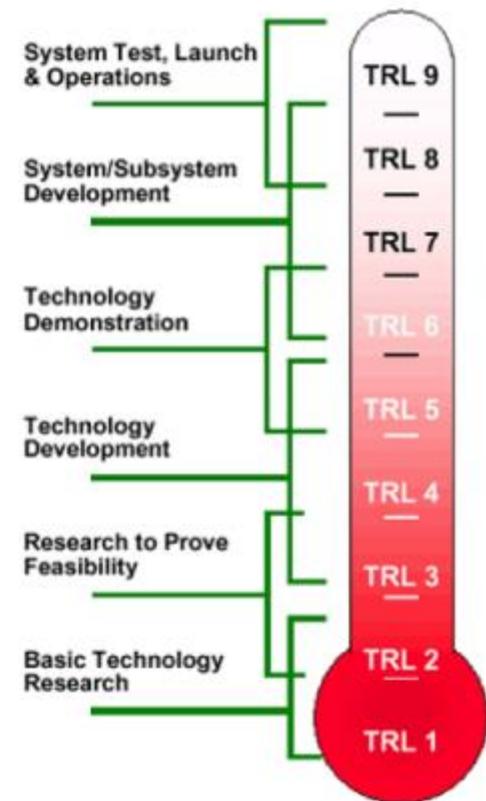
Teknologian valmiustaso – NASA loi mittarin avaruuslentojen alkuaikoina. EU:ssa tutkimushanke (RIA) on tasolla 3-6, markkinaläheisempi IA-hanke TRL on korkampi, joskus 8 asti. Markkinaläheisiä rahoitetaan 70% tasolla (julkinen sektoria saa aina 100%), RIA 100%. 100% on osuus suorista kuluista, päälle 25% indirect costs (overhead).
CL3-hauissa pyritään välillä TRL-tasolle 8 … RIA-projektissa.