

Konkursy SPACE w Programie Horyzont 2020 na lata 2019-2020. Nowe możliwości w Programie Horyzont Europa.

Dr Piotr Świerczyński

**Kierownik Biura SOCIO-TECH
Koordynator obszaru Przestrzeń kosmiczna w H2020**

**Krajowy Punkt Kontaktowy Programów Badawczych UE
Instytut Podstawowych Problemów Techniki PAN**

www.kpk.gov.pl

W niniejszej prezentacji wykorzystano materiały udostępnione m.in. przez KE i/lub Ministerstwa oraz Agendy RP



Oferta KPK PB UE i ogólne informacje o H2020

Krajowy Punkt Kontaktowy Programów Badawczych UE w Instytucie Podstawowych Problemów Techniki PAN

Kim jesteśmy?

- nominowani przez Ministra ds. nauki jako **KPK do 5PR w 1999 r.**



- **KPK do PR Horyzont 2020 i Euratom-Fission w Polsce**
- *Eksperti do Komitetów Programowych H2020*

- **Koordynator Sieci KPK:**
 - **KPK i 11 Regionalnych Punktów Kontaktowych**
- *współpracujemy z Branżowymi Punktami Kontaktowymi*
- **Koordynator sieci EURAXESS**
- **UMOWY o współpracy z krajowymi instytucjami:**
KRASP, PAN, RGIB, NCBiR, NCN, FNP, PARP/EEN, KRAB, ARP...



- **Realizacja ponad 100 projektów PR / Koordynator 17 projektów**

Oferta Sieci KPK

- ☐ **Dni informacyjne**, konferencje,
- ☐ **Szkolenia/warsztaty**, w tym w zakresie przygotowania wniosków projektowych,
- ☐ Indywidualne **działania mentoringowe** dla jednostek naukowych, zespołów i naukowców,
- ☐ Doradztwo **finansowo-prawne** w zakresie przygotowania i realizacji projektów,
- ☐ **Indywidualne konsultacje** wniosków projektowych
- ☐ Wsparcie w poszukiwaniu partnerów (partner search),
- ☐ Organizacja międzynarodowych **spotkań brokerskich**,
- ☐ **Promocja** polskich podmiotów w wymiarze międzynarodowym.

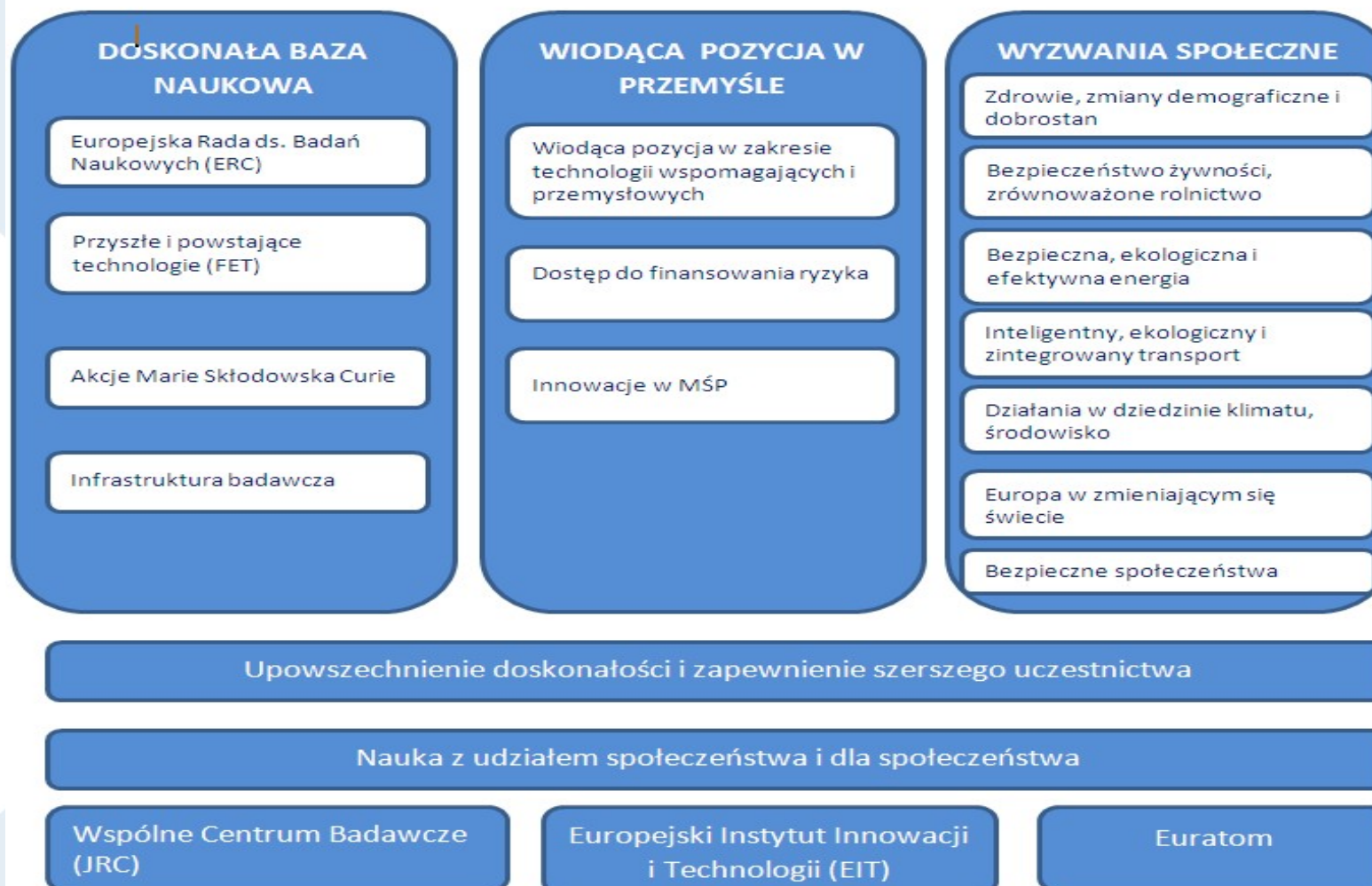
Horyzont 2020 w pigułce

- ☐ **Program Ramowy** na rzecz badań i innowacji implementowany bezpośrednio przez KE;
- ☐ Program odpowiada na założenia **Strategii Europa 2020**;
- ☐ Budżet to **79 mld euro** dla badań i innowacji;
- ☐ Wsparcie dla projektów na każdym etapie gotowości technologicznej (**od pomysłu do rynku**);
- ☐ MŚP jednym z beneficjentów priorytetowych;
- ☐ Programy Pracy definiowane przez duży przemysł.

Dlaczego warto aplikować w Horyzoncie 2020?

- ☐ wsparcie ze strony KE nie jest pomocą publiczną;
- ☐ wysoki poziom dofinansowania realizowanych projektów (70 – 100%);
- ☐ dostęp do najnowszych rozwiązań i wyników badań na świecie w danym sektorze;
- ☐ wzrost rozpoznawalności i prestiż w kraju i za granicą;
- ☐ sieć kontaktów i budowa marki za granicą.

Struktura programu Horyzont 2020



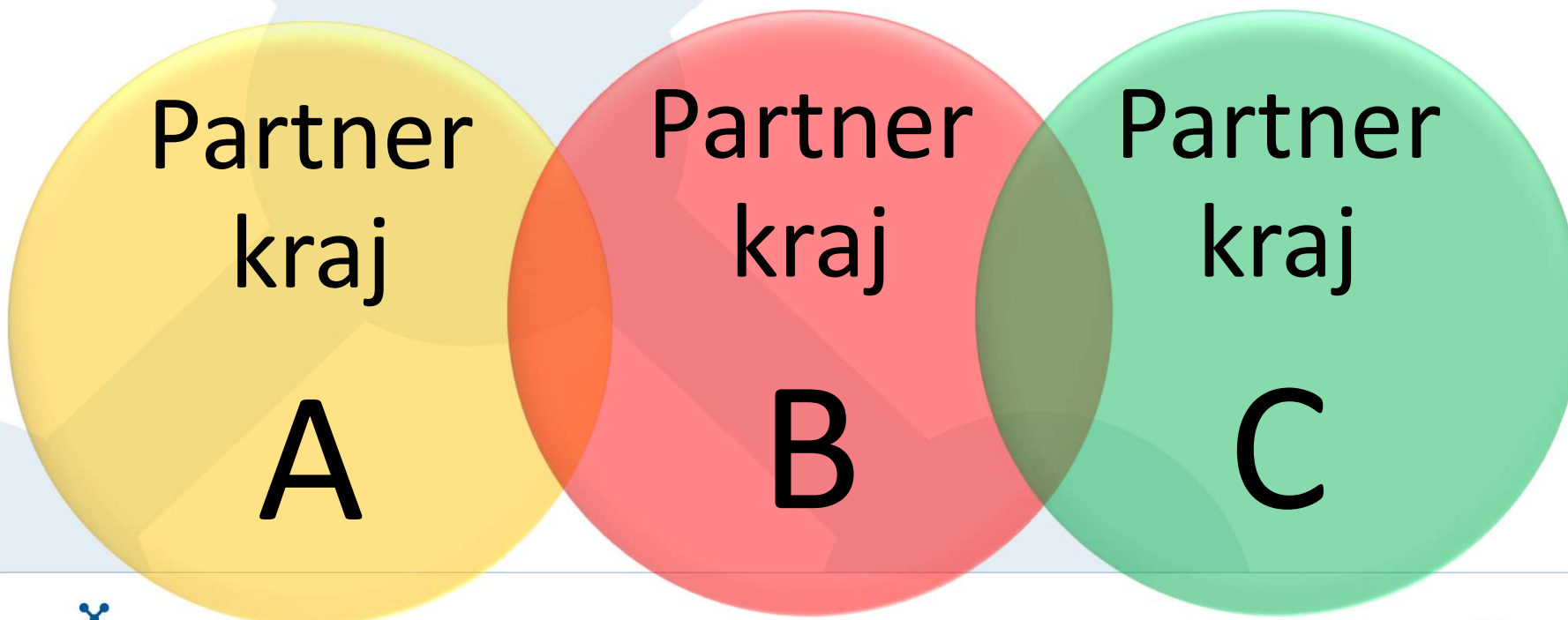
podjęcie *bottom-up* i *top-down*

Zasady uczestnictwa w H2020

Warunki udziału

Projekty realizowane przez konsorcja złożone z co najmniej 3 partnerów z 3 różnych państw członkowskich UE i/lub państw stowarzyszonych

CO NAJMNIEJ



Warunki udziału

Na zasadzie odstępstwa od generalnej zasady, projekt może być realizowany przez:

Jeden podmiot prawny w przypadku realizacji następujących typów projektów:

- ✓ działania koordynacyjne i wspierające (CSA)
- ✓ działania w zakresie mobilności (MSCA)
- ✓ badania pionierskie (ERC)
- ✓ instrument MŚP

Rodzaje projektów

➤ Projekty badawczo-innowacyjne (*Research and Innovation Action-RIA*)

Mogą obejmować badania podstawowe i stosowane, rozwijanie technologii, testowanie i walidację na prototypach w laboratorium lub otoczeniu symulowanym (na małą skalę). **100% dofinansowania**

➤ Projekty innowacyjne (*Innovation Action-IA*) polegające „głównie na działaniach mających bezpośrednio na celu opracowywanie planów i systemów lub projektów nowych, zmienionych lub ulepszonych produktów, procesów lub usług. Do tych celów działalność taka może obejmować przygotowywanie prototypów, testowanie, demonstrację, projekty pilotażowe, walidację produktów na dużą skalę i powielanie rynkowe”

100% dofinansowania (non-profit organizations)

70% dofinansowania(for-profit organizations)

➤ Projekty koordynacyjne i wspierające (*Coordination and support action-CSA*)

Standaryzacja, upowszechnianie, koordynacja, tworzenie sieci kontaktów, dialog polityczny itd. **100% dofinansowania**

Uproszczenia

HORYZONT 2020

Jeden projekt – jeden poziom finansowania (bez różnicowania na rodzaje beneficjentów lub działań).

Maksymalne stawki zwrotu	Działania w zakresie badań i rozwoju technologicznego (*)	Działania w zakresie demonstracji	Inne działania
Sieci doskonałości	50% 75% (**)		100%
Projekty współpracy(****)	50% 75% (**)	50%	100%
Akcje koordynacyjne i wspierające			100% (***)

☐ Podstawowy poziom finansowania – do 100% kosztów kwalifikowalnych

☐ W przypadku projektów innowacyjnych – do 70% kosztów kwalifikowalnych

WYJĄTEK: w przypadku podmiotów prawnych o charakterze niezarobkowym do 100%

☐ Maksymalna stawka dofinansowania określona w Programie Pracy

(*) Działania w zakresie badań i rozwoju technologicznego, obejmują również koordynację naukową

(**) W odniesieniu do beneficjentów będących podmiotami publicznymi o charakterze niezarobkowym, szkół średnich i uczelni wyższych, jednostek badawczych i MŚP

(***) W przypadku projektów typu Akcje koordynacyjne i wspierające, zwrot kosztów pośrednich może osiągnąć maksymalnie 7 % bezpośrednich kosztów kwalifikowalnych, z wyłączeniem kosztów podwykonawstwa (subcontracting) oraz kosztów zasobów udostępnionych przez strony trzecie, które nie są wykorzystywane na terenie beneficjenta.

(****) Włączając badania na rzecz konkretnych grup (w szczególności MŚP)

Uproszczenia

60% ?

20% ?



Rzeczywiste?

Uproszczone?

HORYZONT 2020

**Jednolity ryczałt
na koszty
pośrednie –
25%**

Programy kosmiczne UE

Perspektywa finansowa 2014-2020

Programy kosmiczne UE Perspektywa finansowa 2014-2020



~1.479 M€



~4.291 M€



~7.071 M€

COPERNICUS SERVICES

Address six main thematic areas

<http://www.copernicus.eu/main/overview/>

- Land monitoring
- Marine monitoring
- Atmosphere monitoring
- Emergency management
- Security
- Climate change



Data access

- Copernicus users can also have a direct access to satellite data

COPERNICUS SPACE COMPONENT

- Earth Observation Satellites


<http://www.copernicus.eu/main/satellites>

www.kpk.gov.pl

<http://www.copernicus.eu/main/Brochure>



REPORT 2020

COPERNICUS – przetargi i konkursy

<http://www.copernicus.eu/>



The screenshot shows the Copernicus website homepage. The left sidebar contains a menu with the following items: 'What is Copernicus?', 'Copernicus Services', 'Infos & Opportunities', 'Tenders & Grants' (highlighted with a red circle and a red arrow), 'Documentation', 'Research', 'News', 'Newsletter', and 'Events'. The main content area features a large satellite map with a yellow overlay box containing the text: '23/03/2018 Full speed ahead: Closing in on the first year of fully operational Copernicus services for Security applications'. Below the map is a 'Quick Links' section with icons for 'Access to data', 'Access to finance', 'Copernicus Academy', 'Copernicus Relays', and 'Contact & Support'. The 'In Focus' section at the bottom displays two banners for 'Copernicus Training and Information Session'. The first banner is for a session in Sofia, Bulgaria, on 17 April 2018, with the text 'REGISTRATION OPEN' and 'eu2018bg.bg'. The second banner is for a session in Paphos, Cyprus, on 27 March 2018. The date 'Friday, February 23, 2018' is shown at the bottom left, and 'Tuesday, February 20, 2018' is shown at the bottom right.

What is Copernicus ?
Copernicus Services
Infos & Opportunities
Tenders & Grants
Documentation
Research
News
Newsletter
Events

23/03/2018
Full speed ahead: Closing in on the first year of fully operational Copernicus services for Security applications

Quick Links

Access to data
Access to finance
Copernicus Academy
Copernicus Relays
Contact & Support

In Focus

REGISTRATION OPEN
Copernicus Training and Information Session
17 April 2018 Sofia, Bulgaria
eu2018bg.bg

Copernicus Training and Information Session
27 March 2018 Paphos, Cyprus

Friday, February 23, 2018
Tuesday, February 20, 2018

Copernicus Training and Information Session in Bulgaria - Registration Open
Copernicus Training and Information Session in Cyprus

COPERNICUS – przetargi i konkursy

What is Copernicus ?

Copernicus Services

Infos & Opportunities

Tenders & Grants

Documentation

Research

News

Newsletter

Events

[Home](#) > Tenders & Grants

In this section, you will find:

Information about calls:
Usefull links and information on Copernicus activities-related calls.

- Tenders:
Contract opportunities opened or planned to be opened in the context of the Copernicus Service and In-situ activities.

[FAQs](#) [Links](#) [Licence](#) [Contact Us](#) [Site Map](#) [Cookies](#) [About Us](#)

COPERNICUS – przetargi i konkursy

What is Copernicus ?

Copernicus Services

Infos & Opportunities

Tenders & Grants

Documentation

Research

News

Newsletter

Events

[Home](#) > [Tenders & Grants](#) > Information about Calls

Information about Calls



Copernicus digital skills

[EASME](#) has launched a Call for Tenders for supporting Copernicus digital skills initiatives. The envisaged support action will have to foster the development of the technical and scientific skills needed in the domains of space data and geo-information systems.

Tenderers should submit their offers by **06 September 2018 16:00** (Brussels time). More information about the Call is available [here](#).

Copernicus Incubation

The Copernicus Incubation Programme supports the most innovative and commercially-promising business applications based on Copernicus data and services. The programme gives 50,000 EUR to 20 European start-ups every year, to finance their incubation in an organisation of their choice.

The current selection round is open until **17 August 2018**. To obtain funding to finance your incubation, apply [here](#).



Copernicus Hackathon Call for organisers

The Copernicus Hackathons are sprint-like events in which computer programmers

COPERNICUS – przetargi i konkursy

Open Tenders

Description	Estimated Costs (k€)	Opening Date	Closure Date
<u>Atmosphere Monitoring Service (CAMS)</u> <u>Climate Change Monitoring Service (C3S)</u> Procuring Entity: ECMWF <i>COP_043 DIAS - Processing, Data Access and Tools Software</i> <i>CN: 2018/S 144-330800</i> <i>Corrigendum: 2018/S 159-366123</i>	N/A	25/07/2018	EXTENDED 18/09/2018 15:00
<u>Climate Change Monitoring Service (C3S)</u> Procuring Entity: ECMWF <i>C3S_427 Sectoral Information System to Support Biodiversity Sector</i> <i>CN: 2018/S 135-309849</i> <i>Corrigendum: 2018/S 155-357342</i>	1200 to 1500	17/07/2018	EXTENDED 26/09/2018 15:00
<u>Marine Environment Monitoring Service (CMEMS)</u> Procuring Entity: Mercator Océan <i>73-IBI-DEV-CMEMS: Development, Evolution and Validation of Analysis and Forecasting Systems used for the MFC-IBI in CMEMS and in relation to the GLO-MFC</i> <i>CN: 2018/S 112-255122</i>	450	12/06/2018	14/09/2018 12:00
<u>Marine Environment Monitoring Service (CMEMS)</u> Procuring Entity: Mercator Océan <i>100-IBI-OPER-CMEMS: Provision of ocean analysis and</i>	1300	12/06/2018	14/09/2018 12:00

GALILEO – EGNOS

<http://www.gsa.europa.eu/>



European
Global Navigation
Satellite Systems
Agency

HOME SUBSCRIBE LINKS CONTACT



EUROPEAN GNSS

ABOUT

OPPORTUNITIES

GNSS APPLICATIONS

NEWSROOM

MEDIA LIBRARY



Linking space
to user needs



GSA to host H2020 Information Day in Prague

The European GNSS Agency
(GSA) and the H2020 Space

HORIZON 2020 SPACE INTERNATIONAL INFORMATION DAY AND BROKERAGE EVENT

11-12 October 2018, Prague





European
Global Navigation
Satellite Systems
Agency

HOME SUBSCRIBE LINKS CONTACT



EUROPEAN GNSS

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Linking space
to user needs

GNSS OPPORTUNITIES DATABASE

H2020

FUNDAMENTAL ELEMENTS

PROCUREMENT

GRANTS

GNSS R & D PRIZES

OTHER GNSS FUNDING RESOURCES

How can the
European Space
Week 2018
benefit your
business?

a.eu/%23

EUROPEAN
SPACE
WEEK

CONNECTING THE FUTURE
3 - 6 DECEMBER 2018, MARSEILLE



On-going procurement procedures

GSA/OP/06/18 - Integrated Management System and Quality Management Support to GSA

Deadline for submission : 31 October 2018

Clarification files

[!\[\]\(a870788d6ed9b8fd294b7654a8c8526b_img.jpg\) !\[\]\(18065afa4ef6662bca9f3f6088f7de30_img.jpg\) Clarification note no.1](#)

GSA/OP/23/18 - Prestations de service de gardiennage pour le Centre de Surveillance de la Sécurité Galileo

Deadline for submission : 30 October 2018

Prior information notice - Security Accreditation Support Services

Galileo status and next steps



GALILEO:

- Fully autonomous satellite-based positioning, navigation and timing capability
- **Global** high performance services.
- Run by **civil** authorities.
- Dual frequencies as standard.
- Interoperable with other GNSS.

Galileo System Testbed v1
Validation of critical algorithms

2003



GIOVE A/B
2 test satellites
2005/2008



In-Orbit Validation
operational satellites and ground segment
2013



Initial services for OS, SAR,
and demonstrator for CS

2016

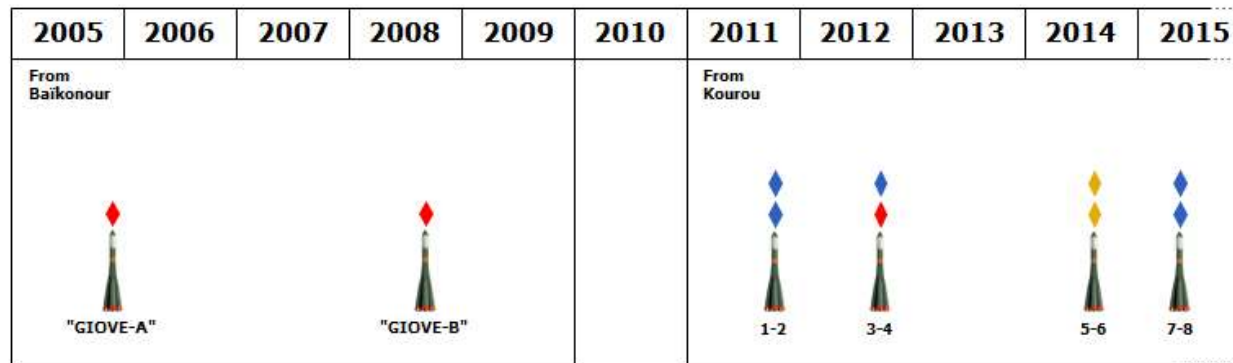


Full Operational Capability
Full services, 30 satellites
2020

14 satellites
+ 4 more coming
this year

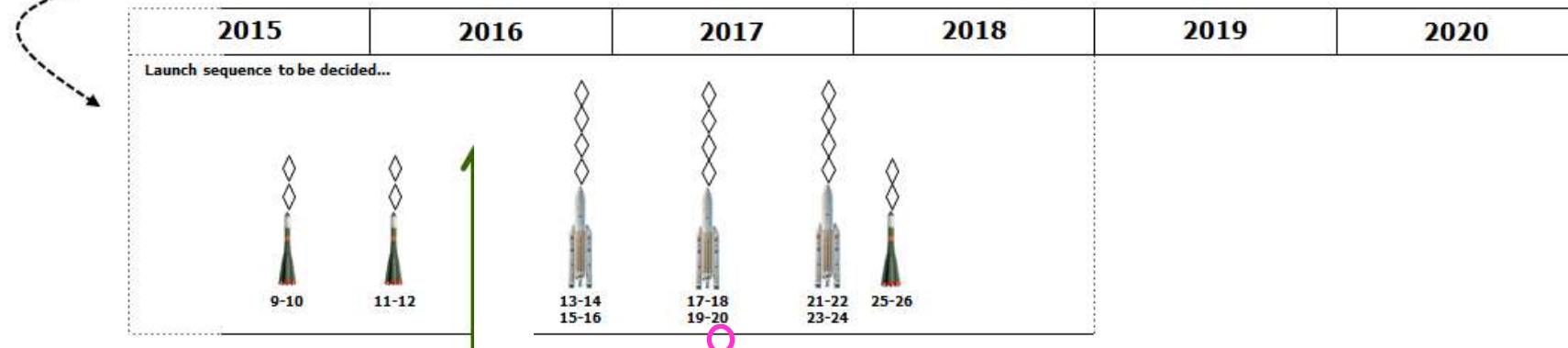


Constellation deployment



Satellite names

- 1 Belgium Thijs
- 2 Bulgaria Natalia
- 3 Czech Rep. David
- 4 Denmark Sif
- 5 Germany Doresa
- 6 Estonia Milena
- 7 Ireland Adam
- 8 Greece Anastasia
- 9 Spain Alba
- 10 France Oriana
- 11 Italy Antonianna
- 12 Cyprus Andriana
- 13 Latvia Liene
- 14 Lithuania Danielė
- 15 Luxembourg Alizée
- 16 Hungary Lisa
- 17 Malta Kimberley
- 18 Netherlands Tijmen
- 19 Austria Nicole
- 20 Poland Zofia
- 21 Portugal Alexandre
- 22 Romania Irina
- 23 Slovenia Tara
- 24 Slovakia Samuel
- 25 Finland Anna
- 26 Sweden Ellen
- 27 UK Patrick



Zofia

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Konkursy SPACE H2020 2018-2020

Cykle realizacji H2020



HORIZON 2020

The EU Framework Programme for Research and Innovation

2014	2015	2016	2017	2018	2019	2020
Strategic Programme						
Work Programme 1 (plus tentative information for 2016)		Strategic Programme				
		Work Programme 2 (plus tentative information for 2018)		Strategic Programme		
				Work Programme 3 (plus tentative information for 2020)		
						Work Programme 4

**There is a place
for SPACE
everywhere**

Excellent Science

- ← Frontier research
European Research
Council (ERC)
- ← Future and Emerging
Technologies (FET)
- ← Marie Curie actions
on skills, training and
career development
- ← Research
Infrastructures

Industrial Leadership

Innov.
SMEs Acces Risk
Finance

Info. Commun.
Technologies
Key Enabling
Technologies



Beneficiary

**Space Theme
in H2020**

~ 1.400 M€

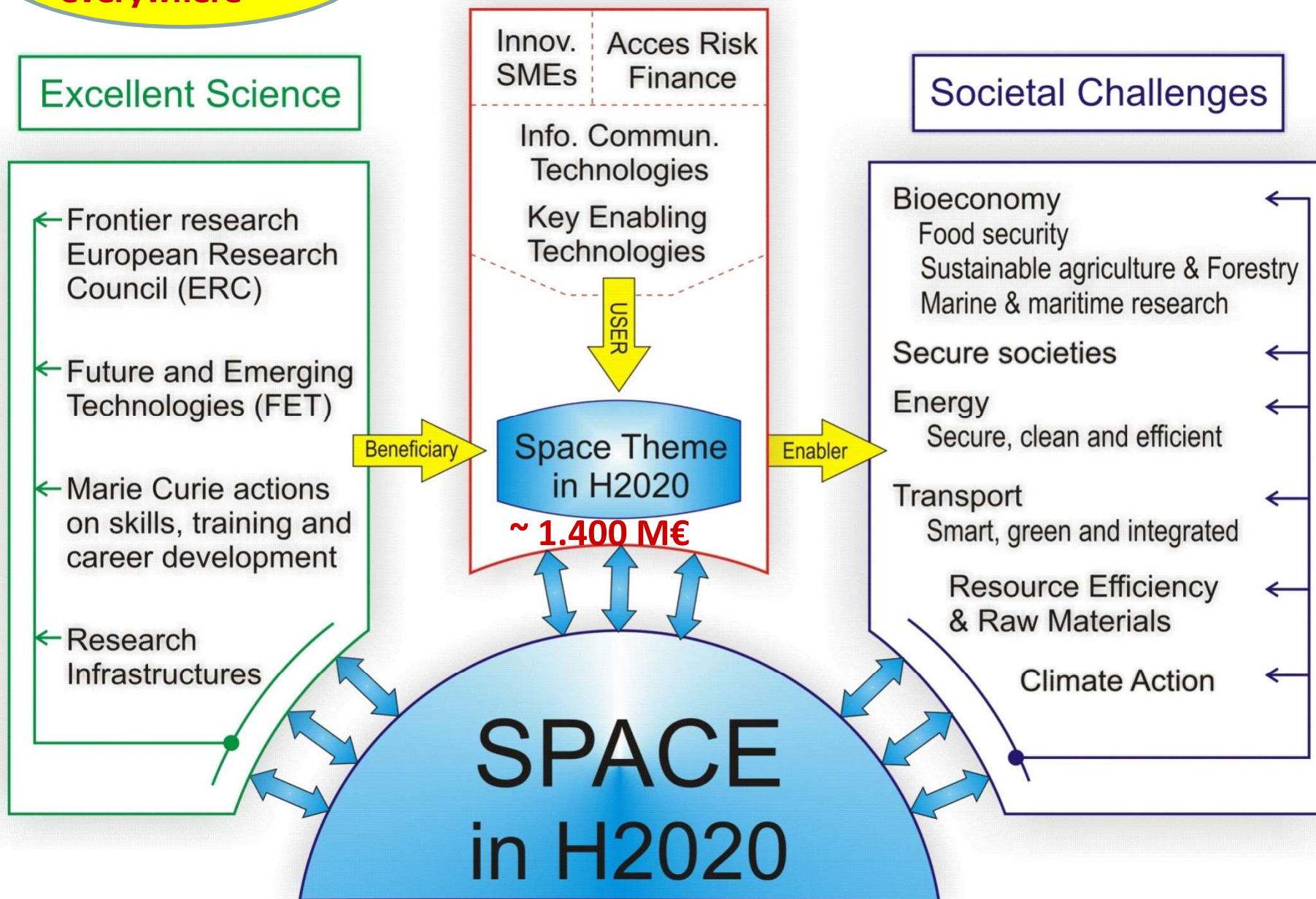
Enabler

Societal Challenges

- Bioeconomy
Food security
Sustainable agriculture & Forestry
Marine & maritime research
- Secure societies
- Energy
Secure, clean and efficient
- Transport
Smart, green and integrated
- Resource Efficiency
& Raw Materials
- Climate Action

**SPACE
in H2020**

Przestrzeń kosmiczna w Programie HORYZONT 2020



Program Pracy 2018-2020 w obszarze Przestrzeń Kosmiczna w H2020

SPACE Calls	OPENING	DEADLINES
2018	31 October 2017	6 March 2018
2019	16 October 2018	5 March 2019 (EGNSS) 12 March 2019
2020	TBD	TBD

WP 2018-2020 BUILDING BLOCKS

Maximising benefits of space for society and EU economy

SPACE-EO

- EO market uptake
- Copernicus mission and services evolution

SPACE-EGNSS

- EGNSS market uptake
- EGNSS infrastructure, mission and services evolution

SPACE-BIZ

- Support to space hubs
- Space outreach and education
- EIC Horizon Prize on "Low cost Space Launch"
- InnovFin Space Equity Pilot (ISEP)
- SME-instrument
- FTI – Fast Track to Innovation

Globally competitive and innovative space sector

SPACE-TEC

- Technologies for European non-depend. and competitiveness
- Strategic research clusters
- Generic space technologies
- EO and SatCom technologies
- In-orbit validation/demonstration

SPACE-SCI

- Scientific instrumentation and technologies for exploration
- Scientific data exploitation

Access to space & Secure and safe space environment

SPACE-TEC

- Access to space

SPACE-SEC

- Space weather
- Exploring concepts for space traffic management
- Space Surveillance and Tracking (SST)
- Near Earth Objects (NEOs)

+ under "other actions": ESA engineering support, REA/GSA project monitoring, studies & communication and support to the Space NCPs network

INDICATIVE BUDGET BREAKDOWN (2018-2020)

2018 | 2019 | 2020

Security

SEC (€85.6M)

16.8 | 30.9 | 37.9

2018 | 2019 | 2020

Technology and science

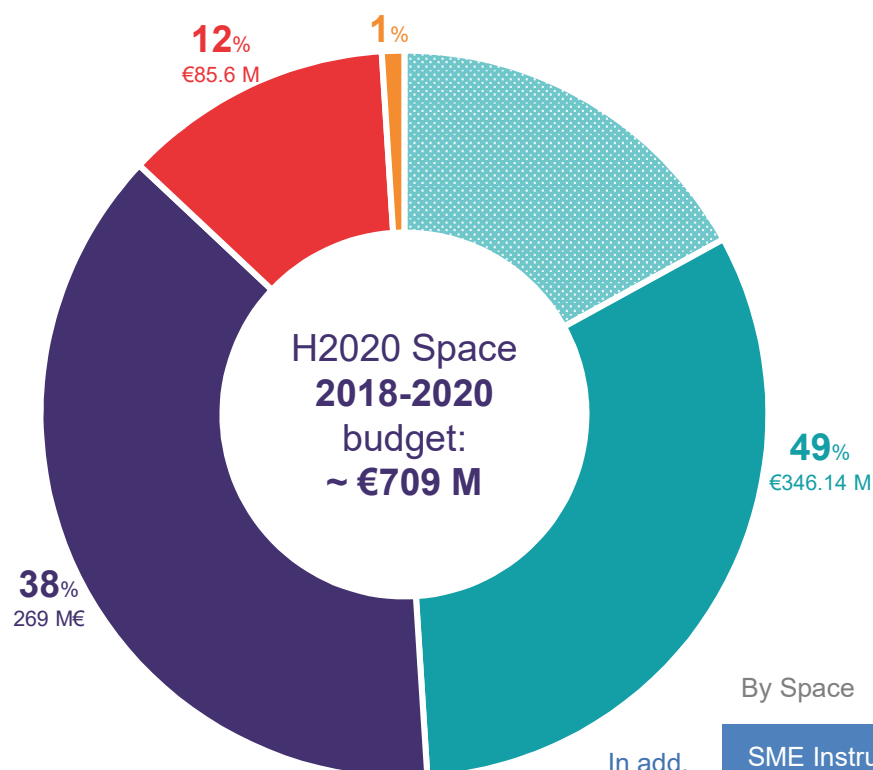
TEC (€250 M)

16.8 | 30.9 | 37.9

81.0 | 75.0 | 94.0

SCI (€19 M)

10.0 | 0.0 | 9.0



Miscellaneous (1%)

*Miscellaneous: Proposal evaluation, project monitoring, support to the NCP network; studies and communication activities

2018 | 2019 | 2020

Flagships, Entrepreneurship

104.7 | 124.7 | 120.5

EGNS (€122 M)

36.0 | 54.0 | 32.0

EO (€88 M)

22.0 | 31.0 | 35.0

BIZ (€136.14 M)

46.7 | 39.7 | 49.8

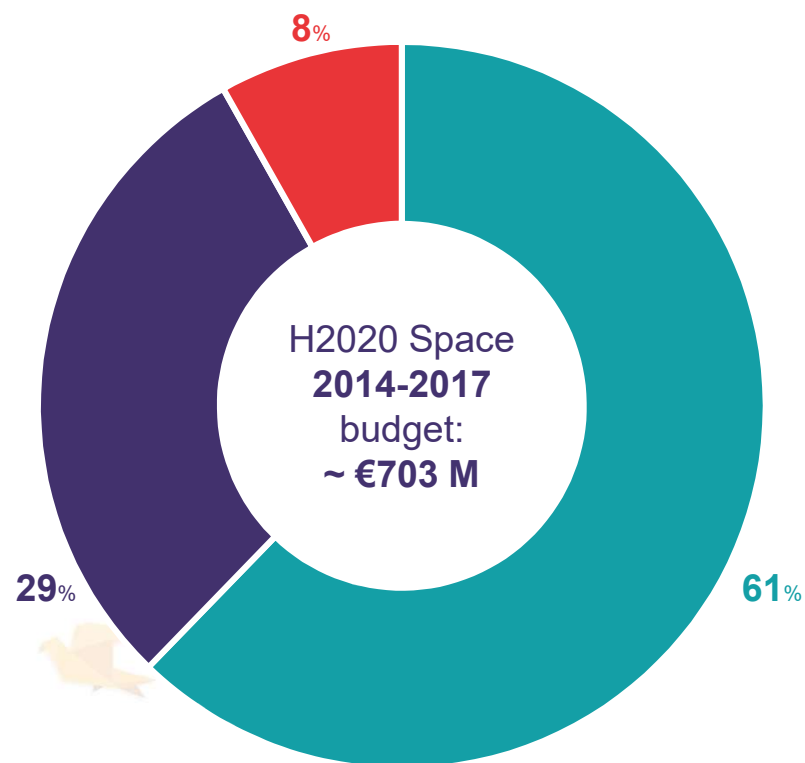
By Space

33.3 | 27.3 | 32.4

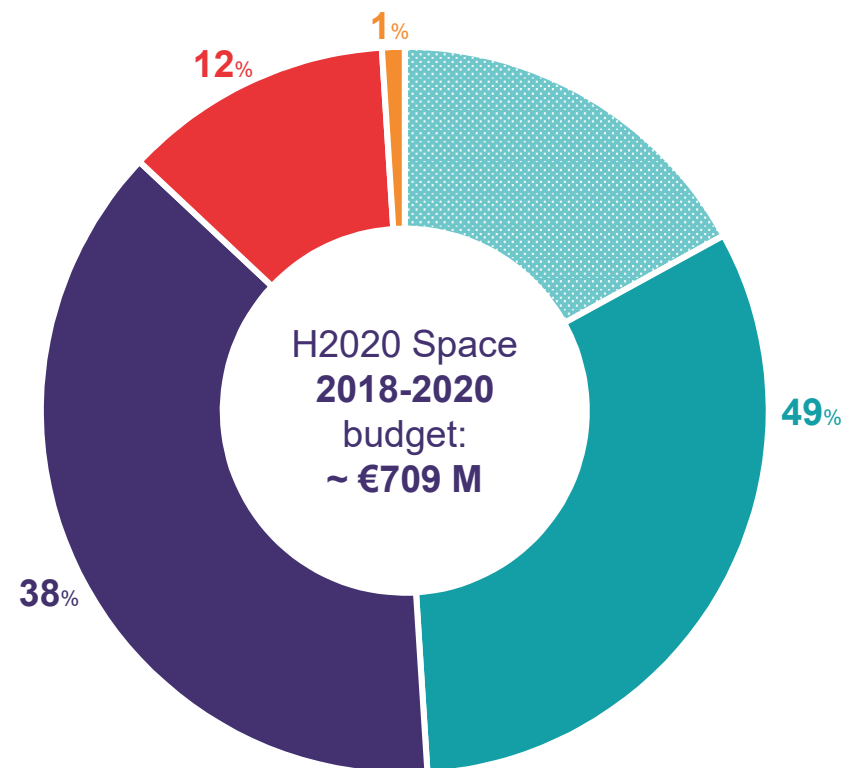
In add.
By EIC
& ARF

SME Instrument	19.3	19.3	19.4
EIC prize			5.0
ISEP	14.0	8.0	8.0

INDICATIVE BUDGET BREAKDOWN (2018-2020)



- Flagships and Entrepreneurship (EGNSS, EO, SME Inst & FTI)
- Technology and science (COMPET)
- Security (PROTEC & SST)
- Miscellaneous



- Flagships and Entrepreneurship (EGNSS, EO, BIZ)
+ SME instrument, EIC Prize and ISEP
- Technology and science (TEC, SCI)
- Security (SEC)
- Miscellaneous & FTI

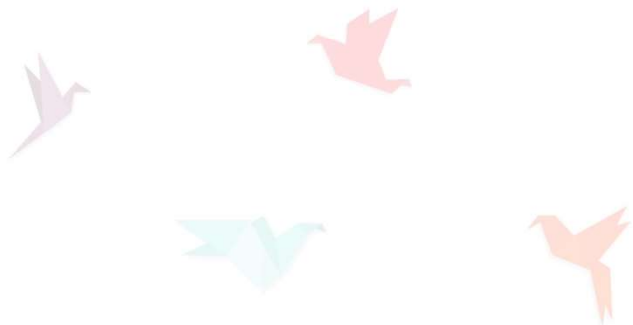


European
Commission



EARTH OBSERVATION

Indicative budget 2018-2020: € 88 million)
Deadline: 12 March 2019 (Call 2019)



Konkursy Earth Observation w H2020

EARTH OBSERVATION

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
DT-SPACE-01-EO-2018-2020: Copernicus market uptake	IA	9.0	9.0	9.0
LC-SPACE-02-EO-2018: Copernicus evolution – Mission exploitation concepts	CSA	8.0		
LC-SPACE-03-EO-2018: Copernicus evolution – preparing for the next generation of Copernicus Marine Service ocean models	RIA	5.0		
LC-SPACE-04-EO-2019-2020: Copernicus evolution – Research activities in support of cross-cutting applications between Copernicus services	RIA		8.0	8.0

EARTH OBSERVATION

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
LC-SPACE-05-EO-2019: Copernicus evolution – Research activities in support to a European operational monitoring system for fossil CO2 emissions	RIA		9.0	
LC-SPACE-06-EO-2019: International Cooperation Copernicus – Designing EO downstream applications with international partners	RIA		5.0	
LC-SPACE-24-EO-2020: Copernicus evolution – Mission exploitation concepts	RIA			8.0
LC-SPACE-25-EO-2020: Copernicus big data algorithm factory	RIA			10.0

Konkursy Earth Observation w H2020

EARTH OBSERVATION

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SPACE-04-EO-2019-2020: Copernicus evolution – Research activities in support of cross-cutting applications between Copernicus services	RIA		8.0	8.0

Konkursy Earth Observation w H2020

EARTH OBSERVATION

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SPACE-06-EO-2019: International Cooperation Copernicus – Designing EO downstream applications with international partners	RIA		5.0	
SPACE-24-EO-2020: Copernicus evolution – Mission exploitation concepts	RIA			8.0
SPACE-25-EO-2020: Copernicus big data algorithm factory	RIA			10.0

Inne konkursy Earth Observation w H2020

EARTH OBSERVATION TOPICS IN OTHER PARTS OF H2020 WP

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
INFRAEOSC-01-2018: Access to commercial services through the EOSC hub	RIA		9.0	9.0
INFRAIA-01-2018-2019: Integrating Activities for Advanced Communities	RIA		5.0	

Societal challenge 5 – Climate action, environment, resource efficiency and raw materials

SC5-15-2018: Strengthening the benefits for Europe of the Global Earth Observation System of Systems (GEOSS) – establishing 'EuroGEOSS'	RIA			8.0
SC5-16-2019: Development of commercial activities and services through the use of GEOSS and Copernicus data	RIA			10.0

Inne konkursy Earth Observation w H2020

Call	Topic	Type	Deadline
DT-SPACE-06-BIZ-2018	International Cooperation Copernicus	Research & Innovation	12.03.19
Health, Demographic Change and Wellbeing			
SC1-BHC-13-2019	Mining big data for early detection of infectious disease threats driven by climate change and other factors [mentions use of Copernicus]	Research & Innovation	16.04.19
Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy			
LC-SFS-34-2019	Food Systems Africa [mentions use of Copernicus and Earth observation data]	Research & Innovation	23.01.19 (1st stage)
BG-07-2019-2020	The Future of Seas and Oceans Flagship Initiative [mentions use of GEO/GEOSS and Copernicus Marine Service as well as observation technologies]	Innovation	23.01.19
Secure, Clean and Efficient Energy			
LC-SC3-RES-28-2018-2019-2020	Market uptake support (Development of tools or services using global earth observation data, [such as those available through Copernicus], to support development and deployment of renewable energy sources)	Coordination & Support	13.02.18 + 11.12.18
Smart, Green & Integrated Transport			
MG-2-8-2019	Innovative applications of drones for safety in transport [mentions Copernicus]	Research & Innovation	16.01.19 (1st stage)

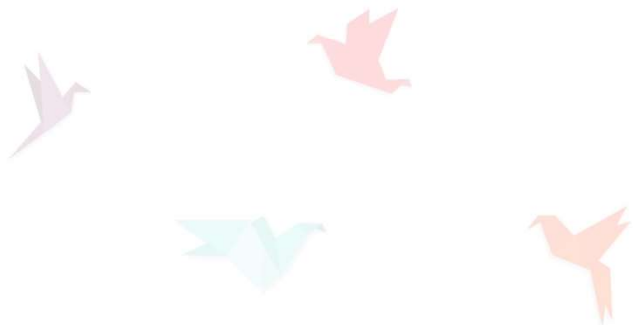
Inne konkursy Earth Observation w H2020

Call	Topic	Type	Deadline
Climate Action, Environment, Resource Efficiency & Raw Materials			
LC-CLA-02-2019	Negative emissions and land-use based mitigation assessment [mentions use of Copernicus]	Research & Innovation	19.02.19 (1st stage)
LC-CLA-05-2019	Human dynamics of climate change [mentions use of Copernicus and GEOSS]	Research & Innovation	19.02.19 (1st stage)
LC-CLA-06-2019	Inter-relations between climate change, biodiversity and ecosystem services [actions build upon Copernicus Service]	Research & Innovation	19.02.19 (1st stage)
SC5-10-2019-2020	Raw materials innovation actions: exploration and Earth observation in support of sustainable mining [mentions use of Copernicus , Earth observation]	Innovation	19.02.19 (1st stage)
SC5-14-2019	Visionary and integrated solutions to improve well-being and health in cities [mentions use of Copernicus and GEOSS]	Research & Innovation	19.02.19 (1st stage)



SPACE BUSINESS AND ENTREPRENEURSHIP

Indicative budget 2018-2020: 136 M€;
Deadline: 12 March 2019 (Call 2019)



SPACE BUSINESS, ENTREPRENEURSHIP, OUTREACH AND EDUCATION

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
DT-SPACE-07-BIZ-2018: Space hubs for Copernicus market uptake	CSA	2.0		
DT-SPACE-08-BIZ-2018: Space outreach and education	CSA	2.0		
DT-SPACE-09-BIZ-2019: Space hubs – support to start-ups	CSA		2.0	
DT-SPACE-26-BIZ-2020: Space hubs – support to start-ups	CSA			2.0

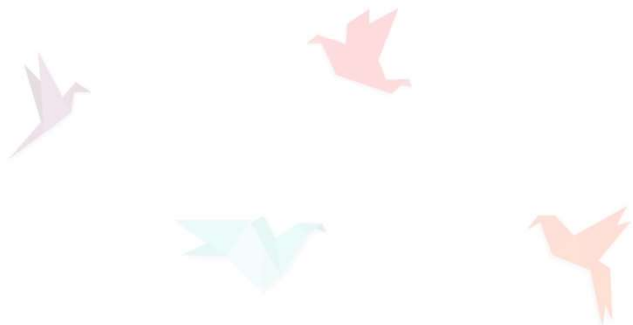
SPACE BUSINESS, ENTREPRENEURSHIP, THROUGH THE EIC/ARF

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
EIC Horizon prize "Low cost space launch"	RIA			10.0
InnovFin Space Equity Pilot (ISEP)	RIA	20.0	15.0	15.0
SME Instrument	RIA	57.93		
Fast-track to innovation	RIA	3.37	3.37	3.37



SPACE BUSINESS AND ENTREPRENEURSHIP

Indicative budget 2018-2020: 136 M€;
Deadline: 12 March 2019 (Call 2019)

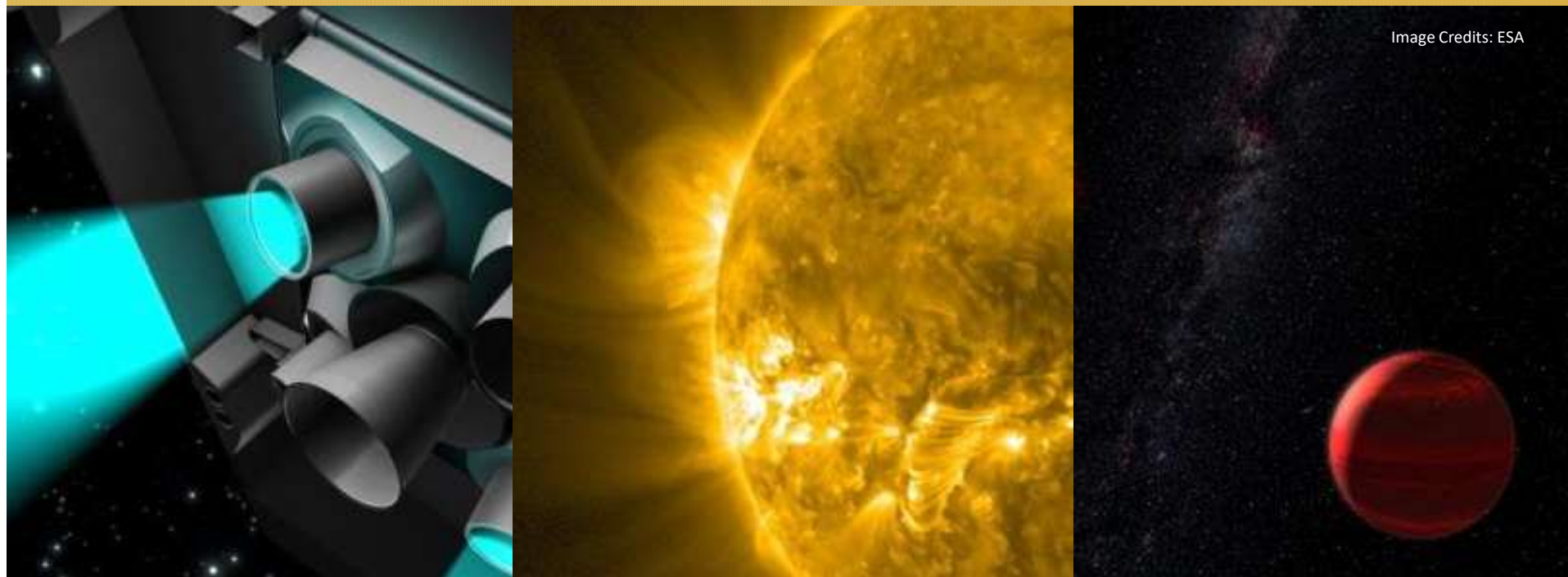


SPACE BUSINESS, ENTREPRENEURSHIP, OUTREACH AND EDUCATION

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DT-SPACE-07-BIZ-2018: Space hubs for Copernicus market uptake	CSA	2.0		
DT-SPACE-08-BIZ-2018: Space outreach and education	CSA	2.0		
DT-SPACE-09-BIZ-2019: Space hubs – support to start-ups	CSA		2.0	
DT-SPACE-26-BIZ-2020: Space hubs – support to start-ups	CSA			2.0

SPACE BUSINESS, ENTREPRENEURSHIP, THROUGH THE EIC/ARF

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COMPETITIVENESS OF THE EUROPEAN SPACE SECTOR TECHNOLOGY AND SCIENCE

Indicative budget 2018-2020: 269 M€
Deadline: 12 March 2019 (Call 2019)

SPACE TECHNOLOGIES, SCIENCE AND EXPLORATION

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
SPACE-10-TEC-2018-2019-2020: Technologies for European non-dependence and competitiveness	RIA	12.0	12.0	12.0
SPACE-11-TEC-2018: Generic space technologies	RIA	11.0		
SPACE-12-TEC-2018: SRC – Space Robotics Technologies	RIA	18.0		
SPACE-13-TEC-2019: SRC – In-Space electrical propulsion and station keeping	RIA		10.0	
LC-SPACE-14-TEC-2018-2019: Earth observation technologies	RIA	8.0	8.0	
SPACE-15-TEC-2018: Satellite communication technologies	RIA	9.0		
SPACE-16-TEC-2018: Access to space	RIA	10.0		
SPACE-17-TEC-2019: Access to space	RIA		9.0	

SPACE TECHNOLOGIES, SCIENCE AND EXPLORATION

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
SPACE-18-TEC-2019-2020: In-orbit validation/demonstration – Mission integration and implementation	RIA		20.0	18.0
SPACE-27-TEC-2020: SRC – Space Robotics Technologies	RIA			9.0
SPACE-28-TEC-2020: SRC – In-Space electrical propulsion and station keeping	RIA			24.0
SPACE-29-TEC-2020: Satellite communication technologies	RIA			9.0
SPACE-20-SCI-2018: Scientific instrumentation and technologies for exploration	RIA	10.0		
SPACE-30-SCI-2020: Scientific data exploitation	RIA			9.0

Space technologies science and exploration

SPACE - 10 - TEC - 2018 - 2020

Technologies for European non-dependence and competitiveness

Group A (2018):

- ☐ JTF-2018/20-3 – High Capacity FPGAs
- ☐ JTF-2018/20-8 – ASICs: 28nm DSM
- ☐ JTF-2018/20-16 – Active discrete power comp.
- ☐ JTF-2018/20-18 – RF components
- ☐ JTF-2018/20-19 – Passive components
- ☐ JTF-2018/20-22 – High temperature packaging

Group B (2019):

- ☐ JTF-2018/20-2 – ASICs for mixed signal processing
- ☐ JTF-2018/20-11 – Design and qualification of μ controller for space applications
- ☐ JTF-2018/20-12 – Design and prototype of nvRAM for SPACE with serial i/f
- ☐ JTF-2018/20-21 – High density (1000 pins and beyond) assy capabilities and PCBs
- ☐ JTF-2018/20-28 – Photonics component
- ☐ JTF-2018/20-31 – Advanced laser crystals for high power space applications

Group C (2020):

- ☐ JTF-2018/20-5 – Very high performance microprocessors
- ☐ JTF-2018/20-9 – Design and prototype of ultra-reprogrammable SoCs
- ☐ JTF-2018/20-14 – Fiber optic or photonic integrated technology gyro-based imu
- ☐ JTF-2018/20-17 – Power amplification: travelling wave tube materials
- ☐ JTF-2018/20-23 – SW tool: automatic generation of code
- ☐ JTF-2018/20-33 – Advanced materials and material technology for combustion chambers

Technologies for 2019 and 2020 may change based on updates on technologies' development status and needs

*Recommended
project size
Indicative budget*

Type of action

€ 1 to 3 M
€36 M

*Research and
Innovation Actions
Participation of industry,
including SMEs, is encouraged*

SPACE-14-TEC-2018-2019

Earth observation technologies

Mature application-oriented technologies in the domains of Earth Observation (EO)

Demonstrate significant improvements in such areas as miniaturisation, power reduction, efficiency, versatility, and/or increased functionality

Each proposal shall address only one of the following subtopics:

- a) Very high resolution optical EO for LEO and/or high resolution optical EO for GEO/HEO instrument technologies
- b) Competitive remote sensing instruments and space systems
- c) Disruptive technologies for remote sensing
- d) On-board data processing
- e) Advanced SAR/Radar technologies

Recommended

project size

Indicative budget

Type of action

€ 2 to 3 M

€16 M

Research and

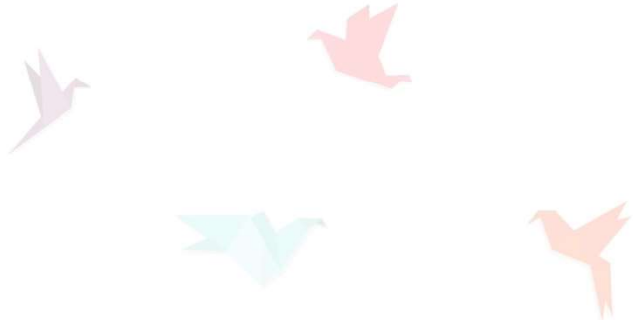
Innovation Actions

*Participation of industry,
including SMEs, is encouraged*



SATELITE NAVIGATION — GALILEO AND EGNOS

No call in 2018;
Budget 2018-2020: 123 M€
Deadline: 5 March 2019 (Call 2019)



CALL — EGNSS MARKET UPTAKE 2019-2020

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
SPACE-EGNSS-1-2019-2020: EGNSS applications fostering green, safe and smart mobility	IA		10.0	10.0
SPACE-EGNSS-2-2019-2020: EGNSS applications fostering digitisation	IA		4.0	5.0
SPACE-EGNSS-3-2019-2020: EGNSS applications fostering societal resilience and protecting the environment	IA		4.0	5.0
SPACE-EGNSS-4-2019: Awareness raising and capacity building	CSA		2.0	

OTHER ACTIONS FOR 2018-2020 (SUB-SET)

Topics	Type of Action	Indicative budget (€ million)		
		2018	2019	2020
Activity 7 – Galileo Evolution, Mission and Service related R&D activities	Public Procurement		2.6	1.8
Activity 8 – EGNOS Mission and Service related R&D activities	Public Procurement		0.4	0.2
Activity 9 – GNSS evolution, infrastructure-related R&D activities	DA - ESA	36.0	31.0	10.0
Activity 13 – Horizon 2020 project monitoring and audits EGNSS	Expert Contracts		0.5	0.5

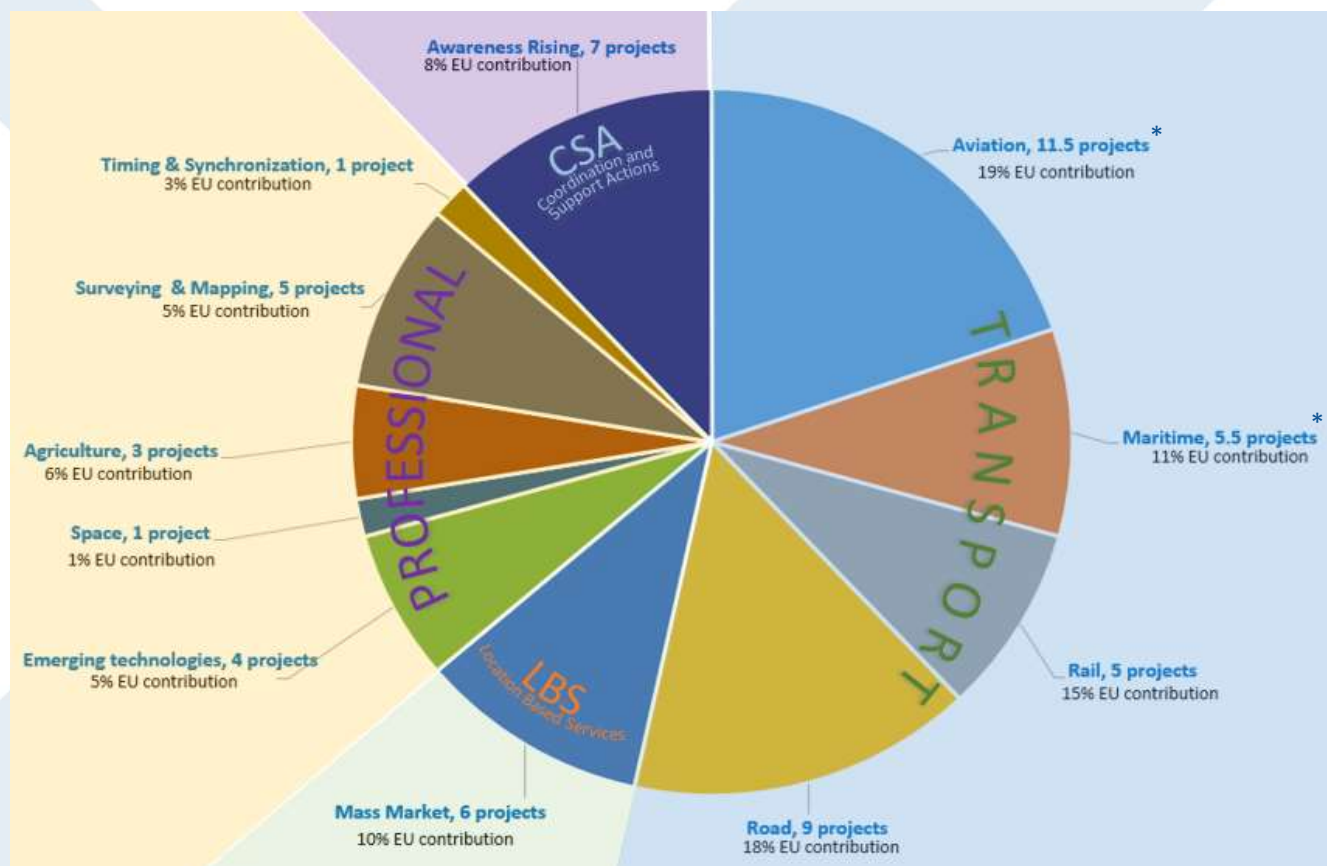
CALL — EGNSS market uptake 2019-2020
and other actions for 2018-2020

H2020 Galileo Calls in numbers

32% of GSA H2020 funds
to SMEs

	1 st Call	2 nd Call	3 rd Call	TOTAL
Budget available	40.4 mln EUR	24.9 mln EUR	33 mln EUR	100.9 mln EUR
Budget requested	174.3 mln EUR	192.2 mln EUR	160.8 mln EUR	527.3 mln EUR
No of projects granted	27	13	18	58
No of proposals submitted	105	89	78	272
	26% success rate	15% success rate	21% success rate	21% success rate
No of applicants	775	634	546	1 955
No of beneficiaries	221	100	113	434

Funded projects distributed by market segment



NOTE:

*1 project related to both maritime and aviation

EGNSS 2014-2017

Calls for proposals

Total EU contribution (M€)**:	100,9
Number of projects*	58

H2020 first results in a nutshell



15 products developed

- **Aviation:** GNSS performance monitoring system (*GMCA*), Solution for navigation aid and surveillance of airport surface movements (*MAGNIFIC*), **integrated airport operations monitor application (*e-Airport*)**, Helicopter Visual RNAV with EGNSS for rotorcraft operations (*5 LIVES*)
- **Road:** **Monitoring of freight transport flows and targeting efficient last-mile delivery (*GALENA*)**, Galileo-Enhanced electric scooter sharing service for sustainable urban mobility (*GMOTIT*)
- **Maritime:** Personal Location Beacon (*SAT406M*)
- **LBS:** Galileo enabled Location as a Service (*ELAASTIC*); 3 applications for efficient communication during humanitarian disasters (*GEO VISION*); Application for Smart Cities- to detect infrastructure anomalies (*GHOST*)
- **Timing:** Time & Frequency Distribution over Optical link; Certified Trusted Time Distribution using NTP (*DEMETRA*)
- **Surveying & Mapping:** **Positioning platform used for carbon mapping and land management (*COREGAL*)**



6 patents granted

- **Maritime:** 3 in *SAT406M*: Single Burst Single Satellite Beacon Localisation; Tracking a Radio Beacon from a Moving Receiving Device; Communication of Plain Information during Channel Access
- **Surveying & Mapping:** 2 in *MapKITE*: Spanish and US patents for Method for the acquisition and processing of geographical information of a path
- **Surveying & Mapping:** **1 patent process has been initiated to protect some elements of the receiver IP developed within *COREGAL***



62 prototypes ready



Horizon 2018-2020 Mission statement

Development of Galileo and EGNOS enabled applications in different market segments

Areas of Innovation:

Green, safe smart mobility
Digitisation
Societal resilience
Environmental protection

Galileo and EGNOS Adoption

- Multi-frequencies
- High accuracy
- Authentication services
- Better accuracy for single-frequency users

European GNSS awareness raising and capacity building

Areas of activities:

Raising awareness
Creation of networks of industrial relationships
International cooperation

www.kpk.gov.pl

Call: EGNSS market uptake 2019-2020



H2020-SPACE-EGNSS-2019

Type of Action	Topic	Indicative budget (EUR mln)	Funding rate	Indirect costs
IA	EGNSS applications fostering green, safe and smart mobility	10.00	70% (except for non-profit legal entities, where a rate of 100% applies)	25% of the total eligible costs excluding: • Subcontracting • Costs of resources made available by 3rd parties • Financial support to 3rd parties
IA	EGNSS applications fostering digitisation	4.00		
IA	EGNSS applications fostering societal resilience and protecting the environment	4.00		
CSA	EGNSS awareness raising and capacity building	2.00	100%	
TOTAL budget:		20.00	Opening: 16 October 2018 Deadline: 05 March 2019	

IA: activities aimed at producing plans and arrangements or designs for new, altered or improved products, processes or services

CSA: consisting of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, policy dialogues and studies

LC-SPACE-EGNSS-1-2019:

EGNSS applications fostering green, safe and smart mobility

Scope: Proposals should contribute to **efficient, climate and environmentally friendly transport** that will be **safe and seamless for all citizens**

Aviation

Advanced navigation



CNS



Air Traffic Management



Unmanned vehicles



Road

Autonomous vehicles



eCall



Connected Cars



Digital tacograph



Maritime

Vessel navigation & Traffic Management



Port operations



Fisheries



Autonomous vessels



Rail

Train signalling/control



Passenger-crew services



Autonomous trains



Multimodal logistics



Project Indicative funding: 1 to 3 million €

www.kpk.gov.pl

* PRS (Public Regulated Service) applications are not in scope of this action

DT-SPACE-EGNSS-2-2019:

EGNSS applications fostering digitisation

Scope: Actions should deliver new innovative applications integrating digital technologies like **Internet of Things (IoT), cloud computing, big data and robotics**

Secure
financial
transactions



Tracking
solutions



Augmented
reality



Commercial
LBS



- Foster the adoption of **EGNOS and Galileo in mass markets**
- Applications that will make best use of EGNSS innovative features such as better multipath resistance, authentication...
- Foster competitiveness of the European GNSS industry in the area of **mobile applications, with special focus on SMEs**
- Maximise public benefits by supporting the development of applications that will address major societal challenges such as **health, citizen safety, mobility, regional growth** etc.

Project Indicative funding: 1 to 3 million €

www.kpk.gov.pl

* PRS (Public Regulated Service) applications are not in scope of this action

SU-SPACE-EGNSS-3-2019:

EGNSS applications fostering societal resilience and protecting the environment

Scope: Proposals may address applications to support **societal resilience, wellbeing of EU citizens, emergency and disaster management**

Emergency and disaster management



- Professional application should leverage Galileo and EGNOS differentiators in order to reduce the price and **increase the effectiveness of the solution**

Search and Rescue



- Proposals addressing Galileo **SAR** service should leverage the **Forward and Return Link Services** to improve the users' safety

Surveying and mapping



- Emergency and disaster management applications should target **integration of different sensors and position sources** to identify, locate and react in critical situations

Efficient Agriculture



- Applications in agriculture should **improve the productivity** and **decrease the negative environmental impact**

Project Indicative funding: 1 to 3 million €

www.kpk.gov.pl

* PRS (Public Regulated Service) applications are not in scope of this action

SPACE-EGNSS-4-2019:

Awareness raising and capacity building

Scope: Proposals should aim the **development of EGNSS competences** existing and emerging in EU Member States and Associated Countries

EGNSS dissemination



- Support building of **industrial relationships** by gathering private and public institutions around services offered by EGNSS and related applications

Creation of networks



- Support the **competitiveness of EU industry** by identifying strategic partners and by developing market opportunities

International cooperation



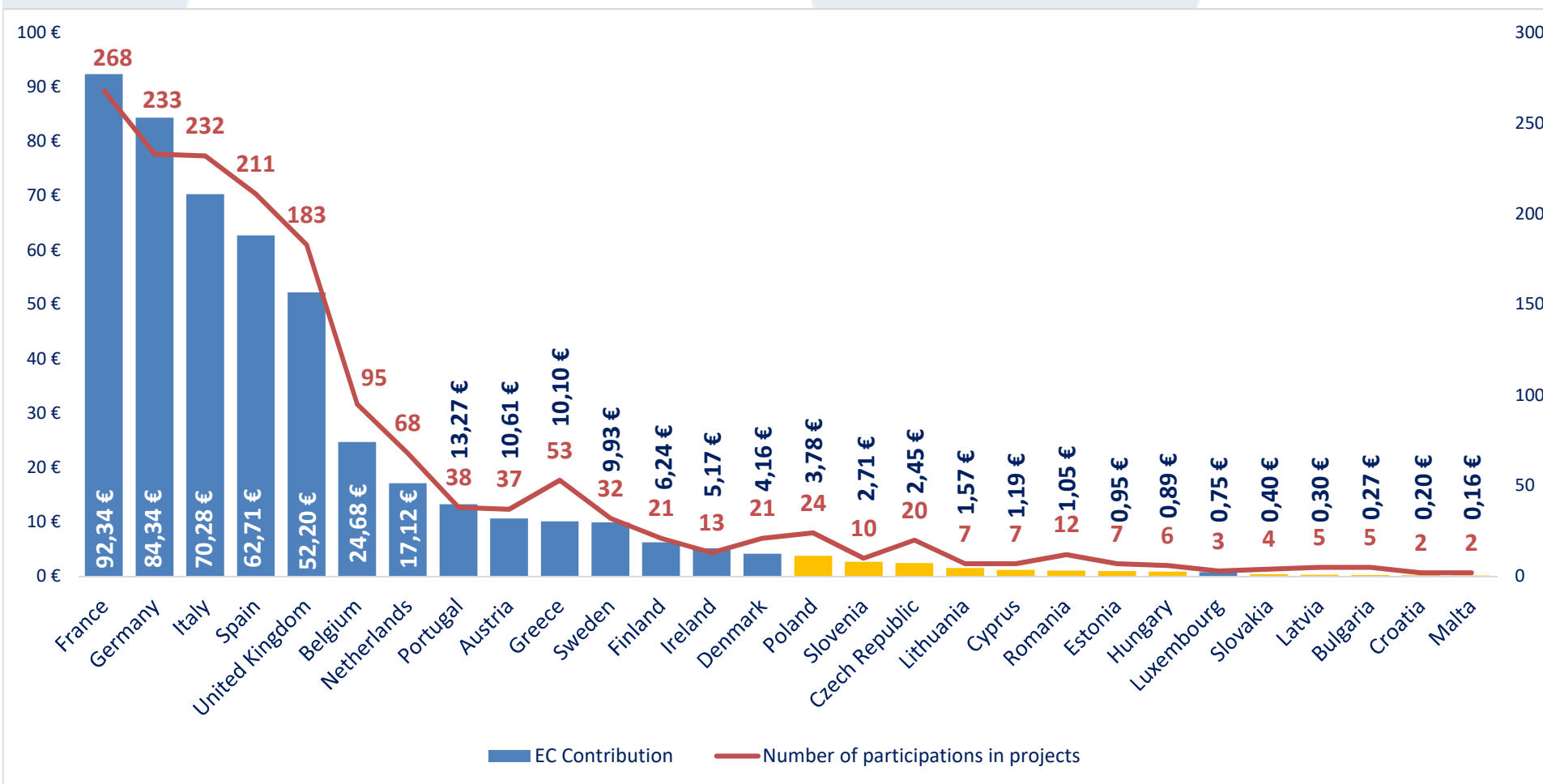
- Support to **incentive schemes** should foster the emergence of new downstream applications based on either Galileo and/or EGNOS and therefore to support the EU GNSS industry

Project Indicative funding: 0.5 to 1 million €

www.kpk.gov.pl

* PRS (Public Regulated Service) applications are not in scope of this action

Liczba zespołów badawczych w projektach dofinansowanych przez KE oraz poziom dofinansowania KE w konkursach SPACE w H2020



Horyzont Europa 2021 – 2027

Nowy program ramowy Horyzont Europa na lata 2021-2027

- **Najbardziej ambitny** w historii program z dziedziny badań i innowacji
- Komisja Europejska proponuje przydzielenie **100 mld euro** na badania naukowe i innowacje w następnym długoterminowym budżecie UE
- Nowy program będzie się opierał na osiągnięciach i sukcesach Horyzontu 2020 i zagwarantuje utrzymanie przez UE w tej dziedzinie czołowej **pozycji na świecie**.
- W ramach tego programu zwiększy się środki finansowe dla **Europejskiej Rady ds. Badań Naukowych**, a także wytyczy ambitne nowe **misje** dla unijnej nauki.
- Proponuje również ustanowienie nowej **Europejskiej Rady ds. Innowacji**, aby zmodernizować finansowanie przełomowych innowacji w Europie.
- **Rozwija synergię działań z programami krajowymi i regionalnymi.**
- Kluczowe jest osiągnięcie w 2019 r. **porozumienia** w sprawie przyszłego budżetu długoterminowego.

Nowy program ramowy Horyzont Europa – kontekst i impakt

- W ostatnich dziesięcioleciach siłą napędową około 2/3 wzrostu gospodarczego w Europie były **innowacje**.
- Oczekuje się, że program przyniesie nową i szerszą wiedzę oraz **nowe i liczniejsze technologie**, będzie propagował doskonałość naukową oraz będzie miał pozytywny wpływ na wzrost, handel i inwestycje, a także znaczące oddziaływanie na społeczeństwo i środowisko.
- Każde zainwestowane w ramach nowego programu euro może przynieść **zwrot** w wysokości do 11 euro PKB w okresie 25 lat.
- Można się spodziewać, że unijne inwestycje w badania naukowe i innowacje doprowadzą bezpośrednio do stworzenia do **100 tys. miejsc** pracy w sektorze badań naukowych i innowacji w „fazie inwestycyjnej” (2021–2027).

From Horizon 2020 to Horizon Europe

- From 13 parts to 5 clusters
- From 69 activity lines to 39 intervention areas

II pillar

LEIT	Information and Communication Technologies (ICT)
	Nanotechnologies
	Advanced materials
	Biotechnology
	Advanced manufacturing and processing
	Space
Societal Challenges	Health, demographic change and well-being
	Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bio-economy
	Secure, clean and efficient energy
	Smart, green and integrated transport
	Climate action, environment, resource efficiency and raw materials
	Europe in a changing world – Inclusive, innovative and reflective societies
	Secure societies – Protecting Freedom and security of Europe and its citizens

III pillar

Health
Inclusive and Secure society
Digital and Industry
Climate, Energy and Mobility
Food and Natural Resources

II pillar

Horizon Europe – 100 mld Euro (2021-2027)

25,8 mld Euro

52,7 mld Euro

13,5 mld Euro



2,1 mld Euro

https://ec.europa.eu/info/designing-next-research-and-innovation-framework-programme/what-shapes-next-framework-programme_en

Global Challenges & Industrial Competitiveness



boosting key technologies and solutions underpinning
EU policies & Sustainable Development Goals

Clusters implemented through usual calls, missions & partnerships	Budget (€ billion)
Health	€ 7.7
Inclusive and Secure Societies	€ 2.8
Digital and Industry*	€ 15
Climate, Energy and Mobility	€ 15
Food and Natural Resources	€ 10
Joint Research Centre supports European policies with independent scientific evidence & technical support throughout the policy cycle	€ 2.2

Clusters in 'Global Challenges and Industrial Competitiveness'

Clusters	Areas of intervention	
Health	* Health throughout the life course * Non-communicable and rare diseases * Tools, technologies and digital solutions for health and care	* Environmental and social health determinants * Infectious diseases * Health care systems
Inclusive and Secure Societies	* Democracy * Social and economic transformations * Protection and Security	* Cultural heritage * Disaster-resilient societies * Cybersecurity
Digital and Industry	* Manufacturing technologies * Advanced materials * Next generation internet * Circular industries * Space	* Key digital technologies * Artificial intelligence and robotics * Advanced computing and Big Data * Low carbon and clean industry
Climate, Energy and Mobility	* Climate science and solutions * Energy systems and grids * Communities and cities * Industrial competitiveness in transport * Smart mobility	* Energy supply * Buildings and industrial facilities in energy transition * Clean transport and mobility * Energy storage
Food and Natural Resources	* Environmental observation * Agriculture, forestry and rural areas * Food systems * Circular systems	* Biodiversity and natural capital * Sea and oceans * Bio-based innovation systems

SPACE in cluster Digital and Industry

Area of intervention	Indicative content
Space	• European Global Navigation Satellite Systems (Galileo and EGNOS): innovative applications, global uptake and next generation systems development; • Copernicus Earth observation system: innovative applications, global uptake and next generation systems development; • Space Situational Awareness: robust EU capacity to monitor and forecast state of the space environment e.g. space weather, space debris and near Earth objects; • Secure Satellite Communications for EU governmental actors; • End-to-end satellite Communications for citizens and businesses; • Non-dependence and sustainability of the supply chain: increased technology readiness levels in satellites and launchers; associated space and ground segments, and production and testing facilities; • In-orbit validation and demonstration services, including rideshare services for light satellites; • Space demonstrators: hybrid, smart or reconfigurable satellites, in-orbit manufacturing and assembly, launcher reusability, in-orbit servicing and micro-launchers, etc; • Breakthrough innovations, and technology transfer, in areas such as recycling, green space, artificial intelligence, robotics, digitisation, cost-efficiency, miniaturisation; • Space science: exploitation of scientific data delivered by scientific and exploration missions; the development of innovative instruments in an international environment.

Polecane wydarzenia

Konkursy SPACE 2019 – wydarzenia międzynarodowe

- Horizon 2020 Space International Info Day & Brokerage Event, **11-12 October 2018, Prague, Czech Republic.**



<https://h2020-prague-space-info-day.b2match.io/>

Rejestracja zamknięta

- Horizon 2020 International Space Info Day & Brokerage Event, **14-15 November 2018, Berlin, Germany.**



<https://h2020-berlin-space-info-day.b2match.io/>

Rejestracja otwarta

Konkursy SPACE 2019 – wydarzenia krajowe

- **9 października 2018 r.**, Dzień Informacyjny Obserwacji Ziemi (przedstawienie konkursów EO w różnych częściach H2020) w Warszawie



Dzień informacyjny Obserwacji Ziemi

9 października 2018, Warszawa

Więcej informacji oraz rejestracja:

<https://www.kpk.gov.pl/?event=dzien-informacyjny-observacji-ziemi>

- **16 października 2018 r.** Urząd Marszałkowski Województwa Mazowieckiego i KPK PB UE organizują spotkanie informacyjne nt. konkursów SPACE w H2020 w Warszawie.

Więcej informacji oraz rejestracja:

<https://innowacyjni.mazovia.pl/warsztaty-pt-mozliwosci-fiannslowania-technologiei-kosmicznych-z-programu-horyzont-2020.html>

Konkursy SPACE 2019 – wydarzenia krajowe

20 listopada 2018 r. Warszawa, IPPT PAN

**Dzień Informacyjny SPACE w H2020
z udziałem ekspertów KE, GSA i REA**

Rejestracja wkrótce na stronie KPK PB UE

Instytucje UE odpowiedzialne za obszar Przestrzeń Kosmiczna w H2020

☐ Research Executive Agency (REA):

EO, PROTEC and COMPET calls

- Call handling, receipt of proposals, evaluation process, negotiation, grant agreements signature, receipt of reporting, reviews, payments, audits
- New Mandate for Horizon 2020 and continued implementation of FP7 Space projects

☐ European GNSS Agency (GSA): GALILEO calls

☐ Executive Agency for SMEs (EASME)*: SME calls

- Building on existing Executive Agency for Competitiveness and Innovation (EACI)

☐ European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW):

EU Space policy and Horizon 2020 Space Research

☐ National Contact Points in EU Member States

Dodatkowe informacje

EU Space research websites:

<http://ec.europa.eu/growth/sectors/space>

http://ec.europa.eu/embrace_space

<http://www.copernicus.eu/>

<http://www.gsa.europa.eu/>

ESA website:

<http://www.esa.int/esaLP/LPgmes.html>

Participant Portal:

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

Model Grant Agreement:

http://ec.europa.eu/research/participants/data/ref/h2020/mga/gga/h2020-mga-gga-multi_en.pdf

Annotated Model Grant Agreement:

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

Research Enquiry Service

<http://ec.europa.eu/research/index.cfm?pg=enquiries>

COSMOS - HORIZON SPACE NCPs – service:

<http://ncp-space.net/>

Krajowy Punkt Kontaktowy Programów Badawczych UE:

ZAPRASZAMY DO KONTAKTU

KRAJOWY PUNKT KONTAKTOWY
PROGRAMÓW BADAWCZYCH UE

Instytut Podstawowych Problemów Techniki PAN

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kom. +48 508 101 005

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