



H2020 – LEIT Space 2018-2020

This guide will summarize for UNIPi proposers the **LEIT–Space Work Programme (WP) 2018-2020** Calls for proposals and the Space-related Calls part of other H2020 WPs 2018-2020 with deadline 2018-2019. It includes policy context information, downloadable work programmes, links to the topics web pages.

Space work programme sets out the following priorities fully aligned with the **Space Strategy for Europe**:

- Maximising the benefits of space for society and the EU economy;
- Fostering a globally competitive and innovative European space sector;
- Reinforcing Europe's autonomy in accessing and using space in a secure and safe environment;
- Strengthening Europe's role as a global actor and promoting international cooperation.

This will be done in coordination with the activities of the **operational space programmes Copernicus and EGNSS (Galileo and EGNOS)**, with activities in other parts of Horizon 2020 and with the activities of Member States and ESA.

Space Work Programme 2018-2020 will:

- Support the market uptake and evolution of the Copernicus and EGNSS (Galileo/EGNOS);
- Underpin space business, entrepreneurship, space technologies and science;
- Support security aspects and access to space.

The main objective and challenge of Space work programme is to ensure Europe's independent access to space and the development of competitive space technologies. This includes critical technologies for European non-dependence. It is important to reap the benefits of European investments in the space sector, notably through the **Galileo** and **Copernicus** systems, but also through space science and exploration missions. The work programme also supports the protection of space assets in and from space, with priorities covering space weather research, as well as networking and improving the performance of Space Surveillance and Tracking (SST) at European level.

The work programme contributes also to the following focus areas: Digitising and transforming European industry and services' (DT); Building a low-carbon, climate resilient future' (LC)M; Boosting the effectiveness of the Security Union' (SU). Other space-related opportunities are available elsewhere in: (i) the European Innovation Council (EIC) pilot, in particular the SME-instrument, the EIC Horizon price on 'Low cost space launch', the Fast Track to Innovation (FTI) and the FET Open (Future and Emerging Technologies); (ii) the Access to Risk Finance, in particular the InnovFin Space Equity (ISEP) in the context of InnovFin Equity; (iii) Research Infrastructures; (iv) Societal Challenges (SC).

WP 2018-2020 building blocks

Maximising benefits of space for society and EU economy		Globally competitive and innovative space sector	Access to space & Secure and safe space environment
SPACE-EO	SPACE-EGNSS	SPACE-TEC and SPACE-SCI	SPACE-TEC
<ul style="list-style-type: none"> ▪ EO market uptake ▪ Copernicus mission and services evolution ▪ International coop. ▪ Big data 	<ul style="list-style-type: none"> ▪ EGNSS market uptake ▪ EGNSS infrastructure, mission and services evolution 	<ul style="list-style-type: none"> ▪ Technologies for European non-dependence and competitiveness ▪ Strategic research clusters ▪ Generic space technologies ▪ EO and SatCom technologies ▪ In-orbit validation/demonstration ▪ Scientific instrumentation and technologies enabling space science and exploration 	<ul style="list-style-type: none"> ▪ Access to space
SPACE-BIZ			SPACE-SEC
<ul style="list-style-type: none"> ▪ Support to space hubs ▪ Space outreach and education ▪ Horizon Prize for European low-cost space launch ▪ Innovfin Space Equity Pilot (ISEP) ▪ SME Instrument ▪ Fast-track to Innovation 			<ul style="list-style-type: none"> ▪ Space weather ▪ Exploring concepts for space traffic management ▪ Space Surveillance and Tracking (SST) ▪ Near Earth Objects

LEIT-Space WP 2018-2020

Download WP



The **LEIT-Space Work Programme 2018-2020** addresses the main priorities in the EU Space Strategy through the following Calls for proposals:

- **H2020-Space 2018-2020** (EO: 88M€, BIZ: 126M€, TEC: 269M€, SEC: 86,5M€)
- **H2020-SPACE-EGNSS market uptake 2019-2020** (122M€)

Call Space – Earth Observation (EO) (H2020-Space-2018-2020)

*In 2018, the call on **Earth observation (EO)** topics cover market uptake and the evolution of Copernicus services. The goals here are to foster the market development of EO applications, to match the needs of public authorities, and to support the research needs for the evolution of Copernicus services. In 2019, the topic on market uptake is covered again, together with a topic on CO2 emissions monitoring, cross cutting applications between Copernicus services and a topic addressing international cooperation.*

Topic ID	Type of action	Topic title	Opening date	Deadline 2018	Deadline 2019
DT-SPACE-01-EO-2018-2020	IA	Copernicus market uptake	31/10/17 16/10/18	06/03/18	12/03/19
LC-SPACE-02-EO-2018	CSA	Copernicus evolution – Mission exploitation concepts	31/10/17	06/03/18	
LC-SPACE-03-EO-2018	RIA	Copernicus evolution – Preparing for the next generation of Copernicus Marine Service ocean models	31/10/17	06/03/18	
LC-SPACE-04-EO-2019-2020	RIA	Copernicus evolution – Research activities in support of cross-cutting applications between Copernicus services	16/10/18		12/03/19
LC-SPACE-05-EO-2019	RIA	Copernicus evolution – Research activities in support to a European operational monitoring system for fossil CO2 emissions	16/10/18		12/03/19
DT-SPACE-06-EO-2019	RIA	International Cooperation Copernicus – Designing EO downstream applications with international partners	16/10/18		12/03/19
LC-SPACE-14-TEC-2018-2019	RIA	Earth observation technologies	16/10/18		12/03/19

Some of the dedicated Earth observation activities in other parts of Horizon 2020 work programme:

Excellent science – Research Infrastructures

- [INFRAEOSC-01-2018: Access to commercial services through the EOSC hub](#)
- [INFRAIA-01-2018-2019: Integrating Activities for Advanced Communities](#)

Societal challenges

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

Call Space – Space business, entrepreneurship, outreach and education (BIZ)
(H2020-Space-2018-2020)

Topics related to **space business and entrepreneurship (BIZ)** aim at fostering technology transfer and business generator initiatives. The focus in 2018 is on support to 'space hubs' linked to **Copernicus Relays and Copernicus Academy**. Outreach and education activities are also subject of this call, focusing on the dissemination of space research activities in Europe and on promoting space education and research collaboration.

Topic ID	Type of action	Topic title	Opening date	Deadline 2018	Deadline 2019
DT-SPACE-07-BIZ-2019	CSA	Space hubs for Copernicus market uptake	31/10/17	06/03/18	
DT-SPACE-08-BIZ-2019	CSA	Space outreach and education	31/10/17	06/03/18	
DT-SPACE-09-BIZ-2019	CSA	Space hubs (support to start-ups)	16/10/18		12/03/19

Space business and entrepreneurship activities in other work programmes:

- [EIC Horizon prize "Low cost space launch"](#)
- [Fast track to innovation/SME Instrument](#)

Call Space – Space technologies, science and exploration (TEC)
(H2020-Space-2018-2020)

Topics dedicated to **boosting the competitiveness of the European space technology (TEC and SCI)** address the development of critical space technologies for European non-dependence and competitiveness in 2018 to 2020. In 2018, there is support for the 'strategic research cluster' on space robotics as well as for generic space technologies and EO technologies. Satellite telecommunication systems and sub-systems represent an important technology niche that is addressed in 2018. Also covered in 2018 is the development of scientific instrumentation for space science and exploration missions.

Topic ID	Type of action	Topic title	Opening date	Deadline 2018	Deadline 2019
SPACE-10-TEC-2018-2020	RIA	Technologies for European non-dependence and competitiveness	31/10/17	06/03/18 16/10/18	12/03/19
SPACE-11-TEC-2018	RIA	Generic space technologies	31/10/17	06/03/18	
SPACE-12-TEC-2018	RIA	SRC – Space robotics technologies	31/10/17	06/03/18	
SPACE-13-TEC-2019	RIA	In-Space electrical propulsion and station keeping	16/10/18		12/03/19
SPACE-15-TEC-2018	RIA	Satellite communication technologies	31/10/17	06/03/18	
SPACE-16-TEC-2018	RIA	Access to space	31/10/17	06/03/18	
SPACE-17-TEC-2019	RIA	Access to space	16/10/18		12/03/19
SPACE-18-TEC-2019-2020	RIA	In-orbit validation/demonstration – Mission integration and implementation	16/10/18		12/03/19
SPACE-20-SCI-2018	RIA	Scientific instrumentation and technologies for exploration	31/10/17	06/03/18	

**Call Space – Secure and safe space environment (SEC)
(H2020-Space-2018-2020)**

*This topic is related to access to **secure and safe space environment (SEC)** and addresses the focus area ‘Boosting the effectiveness of the Security Union’. Europe must draw on its assets and use space capacities to meet the security and safety needs of the Member States and the EU.*

Topic ID	Type of action	Topic title	Opening date	Deadline 2018	Deadline 2019
SPACE-22-SEC-2019	RIA	Space Weather	16/10/18		12/03/19

**Call EGNSS market uptake 2019-2020 (EGNSS)
(H2020-Space-EGNSS 2019-2020)**

*The **European Global Navigation Satellite System (EGNSS)** encompasses the satellite navigation system established under the **Galileo programme** and the **European Geostationary Overlay System (EGNOS)**. For the EGNSS market uptake the development of downstream applications is key. It will enable not only to maximise the adoption of Galileo and EGNOS but also to stimulate the EU GNSS downstream industry competitiveness, while capturing public benefits. Further developments in the frame of integration of EGNSS with Earth Observation (EO) systems and other technologies are encouraged in order to deliver added value services fully tailored on end user needs. Optimised system architectures have to be defined to fully exploit the potential of synergies/complementary characteristics of the different systems, providing significant benefits in a number of key market segments and operational scenarios.*

Topic ID	Type of action	Topic title	Opening date	Deadline 2018	Deadline 2019
LC-SPACE-EGNSS-1-2019-2020	IA	EGNSS applications fostering green, safe and smart mobility		16/10/18	05/03/19
DT-SPACE-EGNSS-2-2019-2020	IA	EGNSS applications fostering digitisation		16/10/18	05/03/19
SU-SPACE-EGNSS-3-2019-2020	IA	EGNSS applications fostering societal resilience and protecting the environment		16/10/18	05/03/19
SPACE-EGNSS-4-2019	CSA	Awareness raising and capacity building		16/10/18	05/03/19

Applications in Satellite Navigation – Galileo activities in related calls and topics from other WPs:

LEIT-ICT

- [ICT-28-2018: Future Hyper-connected Sociality](#)
- [DT-ICT-08-2019: Agricultural digital integration platforms](#)

Societal challenge 1 – Health

- [SC1-BHC-13-2019: Mining big data for early detection of infectious disease threats driven by climate change and other factors](#)
- [SC1-DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing](#)
- [SC1-DTH-05-2019: Large scale implementation of digital innovation for health and care in an ageing society](#)

Societal challenge 2 – Energy

- [LC-SC3-ES-6-2020: Research on advanced tools and technological development](#)

Societal challenge 4 - Transport:

- [MG-2-9-2019: Integrated multimodal, low-emission freight transport systems and logistics \(Inco Flagship\)](#)
- [LC-MG-1-2-2018: Sustainable multi-modal inter-urban transport, regional mobility and spatial planning](#)
- [MG-2-6-2019: Moving freight by Water: Sustainable Infrastructure and Innovative Vessels](#)
- [MG-2-8-2019: Innovative applications of drones for safety in transport](#)
- [MG-3-2-2018: The Autonomous Ship](#)
- [DT-ART-01-2018: Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data](#)
- [DT-ART-02-2018: Support for networking activities and impact assessment for road automation](#)
- [DT-ART-04-2019: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all](#)

Other Actions (2018-2020)

- ESA engineering support
- [ARF – WP InnovFin Space Equity Pilot \(ISEP\)](#)
- [Programmatic Support Actions for the Strategic Research Clusters](#)
- In-orbit demonstration/validation – launch services
- Space surveillance and tracking (SST)
- Improving the Performances of the SST at European Level
- Galileo Evolution, Mission and Service related R&D activities
- EGNOS, Mission and Service related R&D activities
- GNSS evolution, infrastructure-related R&D activities
- Cooperation among NCPs
- Studies & Communication
- Horizon 2020 project monitoring
- Horizon 2020 tender evaluation, project monitoring and audits (EGNSS)

Space and EGNSS 2020

H2020-LEIT-Space-2018-2020-continued

Earth observation

- DT-SPACE-01-EO-2018-2020: Copernicus market uptake
- LC-SPACE-04-EO-2019-2020: Copernicus evolution – Research activities in support of cross-cutting applications between Copernicus services
- LC-SPACE-24-EO-2020: Copernicus evolution - Mission exploitation concepts
- DT-SPACE-25-EO-2020: Copernicus big data algorithm factory

Space business, entrepreneurship, outreach and education

- DT-SPACE-26-BIZ-2020: Space hubs (support to start-ups)

Space technologies, science and exploration

- SPACE-10-TEC-2018-2020: Technologies for European non-dependence and competitiveness
- SPACE-18-TEC-2019-2020: In-orbit validation/demonstration – Mission design, integration and implementation
- SPACE-27-TEC-2020: SRC - Space robotics technologies
- SPACE-28-TEC-2020: SRC - In space electrical propulsion and station keeping
- SPACE-29-TEC-2020: Satellite communication technologies
- SPACE-30-SCI-2020: Scientific data exploitation

Secure and safe space environment

- SU-SPACE-21-SEC-2020: Exploring concepts for space traffic management
- SU-SPACE-23-SEC-2020: Near Earth objects

Call - EGNSS market uptake 2020

- LC-SPACE-EGNSS-1-2019-2020: EGNSS applications fostering green, safe and smart mobility
- DT-SPACE-EGNSS-2-2019-2020: EGNSS applications fostering digitisation
- SU-SPACE-EGNSS-3-2019-2020: EGNSS applications fostering societal resilience and protecting the environment

Some policy context and other useful links:

[Horizon2020 web site](#)

[Participants portal](#)

[Rules for participation and dissemination in Horizon 2020](#)

[Horizon 2020 – Space](#)

[Space research and guidance documents](#)

[European GNSS Agency \(GSA\)](#)

[European Space Agency \(ESA\)](#)

[Copernicus](#)

[Copernicus data access](#)

[SSA Space Weather Service Network](#)