



Webinar: 5G/6G Services

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Welcome to the Webinar!

Before we start...

- Please keep your **microphones muted** during the webinar and make sure your webcam is switched off.
- You can use the **conversation function** anytime to submit your questions. They will be addressed during the Q&A at the end of the webinar



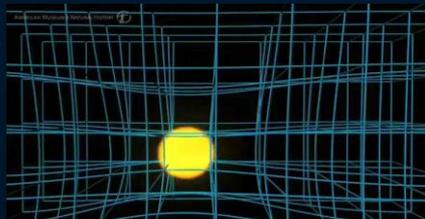
Agenda

1. Introduction
2. ESA Space Solutions
3. Kick-Start Programme
4. 5G/6G Services
5. How to Apply
6. Q&A



ESA's Four Main Pillars

Science and Exploration



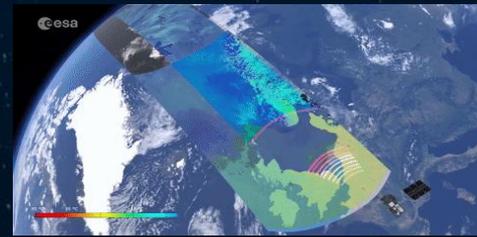
Enabling and Support



Safety and Security



Applications



ESA UNCLASSIFIED

The largest space innovation network in the world

- The **go-to place** for great business involving space to improve everyday life.
- Supporting European start-ups and SMEs to develop businesses **using space technology and data**.
- Offering **funding, business and technical support** to help to generate successful business and create jobs.



ESA SPACE SOLUTIONS OFFERS



Zero-equity funding (from
€50k to €2M+ per activity)



A personalised ESA
consultant



Technical support and
commercial guidance



Tailored project
management support



Access to our international
network of ESA and partners



Access to our network
of investors



Credibility of the
ESA brand



ESA BUSINESS APPLICATIONS

Zero-equity co-funding up to €2M

- **Demonstration Project:** Mature value proposition & business plan and demo your service with customers.
 - Up to 50% co-funding* 
 - **Feasibility studies:** Explore ideas, create a business plan & connect with potential users.
 - Up to 50% co-funding*
 - 100% funding under Competitive Tender
 - **Kick-starts:** Thematic activities.
 - Up to 75% co-funding 
- * Up to 80% for SMEs (pending specific initiative and approval of National Delegation) 


5G



Kick-start Activity

Kick-start Activity: Background

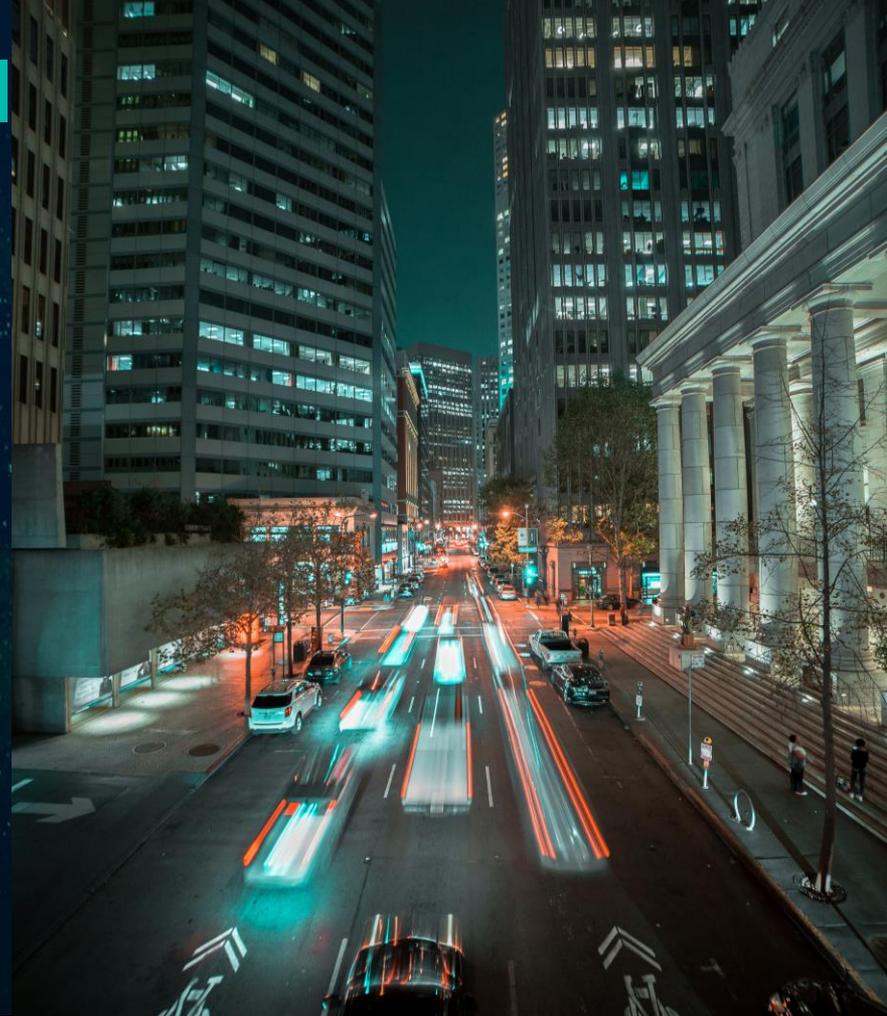
6 months duration -
Overall cost €80K

€60K ESA funding
(75% ESA co-funding)

“Kick-start Activities” are ESA's funding scheme enabling companies to undertake short Feasibility Studies that explore new service and application concepts making use of space capabilities.

Limited initial investment by companies, particularly attractive for SMEs and start-ups, granting them an easy entry into ESA Business Applications.

- Rapid evaluation process, to allow companies to keep the pace in the market.
- If successful, possible follow-up support via Demonstration Projects.



Kick-start Activity

During the Kick-start teams will look at 3 main elements

1. Engagement with **potential end users** and **customers** to understand their needs and translate these into service requirements.
2. Assess the **technical feasibility** of the service, and definition of the service and system architecture.
3. Evaluation of the economic viability of the service and **development of a business plan**.



Overall Aim of the Kick-start Activity



“5G/6G Services” Kick-start Activity



5G/6G Services: Background

The post-COVID-19 societal and economic adaptations have increased the demand for better connectivity and new applications to support automation, e-commerce, education, healthcare, and more.

- Hybrid of satellite and terrestrial 5G/6G networks will play a key role to accommodate **new market requirements**.
- Support the transition to a **new digitised economy**.
- Offer **faster connectivity** speeds, higher data-throughput capacity, and **low-latency** communications.
- Boost the **societal impact** of space-based applications.
- Beyond 5G, 6G and its precursors are expected to provide higher capacity, much lower latency, and **integrate** a set of **previously separate technologies**.



5G/6G Services: Topics

Since the topic of the “5G/6G Services” is so vast, this kick start has been split into three competitions:

Wellbeing and Entertainment Services

eHealth, sport, events, gaming and education. Though broad, the applications therein can expect to be enabled by high data-throughputs, low latency and high reliability provided by future connectivity solutions.

Industry Transformation Services

Utilities, agriculture and manufacturing, to improve efficiency and sustainability of their operations with applications where latency and reliability play a fundamental role.

Smart Transportation Services

Automotive, smart cities and mobility where robust connectivity, high data-rates, high reliability and low latency are vital for applications addressing the needs of the transportation within cities as well as mobility in rural areas.



Wellbeing and Entertainment Services: Open 14/03/2022 and Close: 20/06/2022

E-health



- Remote patient monitoring
- Wearable medical devices
- Robotics and telemedicine solutions

Hospitality



- Event management
- Streaming
- Safer event experiences
- Virtual environments

Education



- Virtual learning environments
- Digital inclusion
- Connecting under-resourced communities
- Augmented and virtual reality

Gaming



- Location-based entertainment (LBE)
- Hyper-reality
- Live streams and broadcasting
- Immersive experience

Industry Transformation Services: Open 20/06/2022 and Close: 20/10/2022

Manufacturing and Logistics



- Fleet management
- Asset tracking
- Routing
- Timestamping
- Last-mile delivery
- IoT device applications

Utilities



- Predictive maintenance
- Visual inspections through UAV
- Asset installation
- Increasing productivity
- Safety of workers

Agriculture



- 5G Narrow Band IoT sensors
- Optimise production
- Reduce input use

Smart Transportation Services: Open 20/10/2022 and Close: 09/01/2023

Automotive



- Vehicle platooning
- Autonomous driving
- Shared mobility

Smart Cities and Mobility



- Status of parking spots
- Air quality and associated dynamics in relation to traffic
- Positions of vehicles and pedestrian traffic
- Emergency notifications
- Infrastructure health
- Infotainment services



Satcom provide a means to communicate with users located in remote locations where there is no, or limited, terrestrial network. Satellites can also serve to enhance network robustness and resilience. Seamless 5G networks, relying on terrestrial and satellite components, will have a key role in the establishment of novel 5G/6G services in the above domains.



Satellite Earth Observation: SatEO data (both SAR and optical) can be used to monitor and plan infrastructure (e.g. hospitals, buildings, road network,). It can provide key data for monitoring and forecasting air quality and CO2 emissions. SatEO data can also be leveraged in real-world gaming and education environments.



Satellite Navigation, Positioning and Timing (PNT) are instrumental in the development of applications requiring geo-referencing, positioning, and timing information. Such technologies can also be augmented by terrestrial PNT technologies to cater to services with more stringent requirements.

How to Apply (1/2)

Register

Register by completing online questionnaire on ESA-STAR Registration (minimum 'light registration') [[Doing Business with ESA](#)]

Download

Download the official tender documentation (Invitation to Tender) via ESA Star Publication from 14th March 2022

Create

Create 'Bidder Restricted Area' in ESA-STAR Tendering

Write

Write your proposal and obtain Letter of Authorization from National Delegation, if needed.

Submit

Submit your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering [[Doing Business with ESA](#)] by the relevant closing date (don't wait until the last minute!)



How to Apply (2/2)

The Letter of Invitation to Call for Proposals is issued on ESA-Star Publication [[Doing Business with ESA](#)] and includes:

Cover Letter

Appendix 1

Activity Description / Statement of Work

Appendix 2

Draft Contract

Appendix 3

Tendering Conditions for Express Procurement Procedure - EXPRO/TC

Appendix 4

Proposal Template

Authorisation from National Delegations

- The **authorisation from National Delegation** for the specific Thematic Call against which you submit your Proposal is an admissibility criterion. Proposals not authorized at the closing date of the Thematic Call will not be admitted for evaluation.
- For each individual Thematic Call, dedicated clarifications will be posted in ESA-Star Publication to provide information on the list of Member States that have already provided their pre-authorization to the Thematic Call.
- In case your company/organisation resides in a country which has not provided a pre-authorization to the Thematic Call you are interested in; you need to contact your National Delegation. The contact information of the National Delegations can be found at <https://business.esa.int/national-delegations>.

Proposal template

Your Proposal shall include the following information:

1. Executive Summary (max 1 page)
2. Business Potential (max 5 pages)
3. Technical Concept (max 5 pages)
4. Team and Resources (max 3 pages)
5. Management (max 4 pages)
6. Financials (max 2 pages)



5G/6G Services: Application Deadlines

If you are interested in applying please decide which topic your idea falls under and submit a proposal between the opening and closing date

	<u>Opening Date</u>	<u>Closing Date</u>
1. Wellbeing and Entertainment Services	14 March 2022	20 June 2022
2. Industry Transformation Services	20 June 2022	10 October 2022
3. Smart Transportation Services	10 October 2022	09 January 2023

5G/6G Services

Home > Funding > 5G/6G Services

Image credit: 24Novembers

OPPORTUNITY	Intended Tender
ACTIVITY	Kick-start Activity
OPENING DATE	14 March 2022
CLOSING DATE	09 January 2023

SUB TOPIC OPENING AND CLOSING DATES

Wellbeing and entertainment services: open 14 March 2022 and closed 20 June 2022
Industry transformation services: open 20 June 2022 and closed 10 October 2022
Smart Transportation services: open 10 October 2022 and closed 09 January 2023

<https://business.esa.int/funding/intended-tender/5g6g-services>

Thank you!

For more information:

[ESA Space Solutions](https://spacesolutions.esa.int/)
(<https://spacesolutions.esa.int/>)

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