

→ KICK START ACTIVITY Future Internet

Future Internet Webinar

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WELCOME TO THE WEBINAR! Before we start...

- Due to the number of attendees, please keep your microphones muted at all times and switch off the webcam function
- 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

WEBINAR AGENDA

- Introduction
 - Fuel your business
 - What ESA offers
- Space for Future Internet
 - Background
 - Opportunity
 - Topics of relevance
 - Enablers from space
- Kick-start Activity essentials
 - Introduction to Kick-start Activity
 - Thematic Calls
 - Authorization from National Delegations
 - How to apply
 - The Proposal Template
 - Study Tasks
- Q&A



FUEL FOR YOUR BUSINESS

Can you leverage Space technology and data for the benefit of life on Earth?

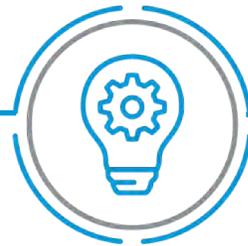


WHAT ESA OFFERS

We'll work together to make your idea commercially viable, with:



Zero-Equity
Funding
(€60k-€2M+)



Tailored Project
Management
Support



Access to
Our Network
& Partners



Use of the
ESA Brand for
Credibility

FUTURE INTERNET BACKGROUND

The theme of Future Internet includes the **Tactile Internet, the Physical Internet, the Internet of People and Internet for All.**



- **The tactile internet** : on-line applications with haptic interaction and visual feedback thanks to ultra-low latency.
- **Physical Internet** : enhanced logistics based on the working principles of the digital Internet (packet routing).
- **Internet of People** : further steps to the Internet of Things where personal mobile devices can respond/act on the behalf of their users.
- **Internet for All** : extending Internet access to citizens who can not access it due to economical or humanitarian reasons.



OPPORTUNITY

6 months duration

up to €60K ESA funding (75% ESA co-funding)

Develop and assess new **business case** for commercially viable services

- **Customer Engagement**
incl. needs and value proposition validation
- **Technical Feasibility Assessment**
incl. Service and System Architecture, Space data/technology integration
- **Commercial Viability Assessment**
incl. Business Model and Plan



Applications

Tactile Internet:

Enable the delivery of real-time control and physical (haptic) experiences remotely, that means to provide a medium for remote physical interaction in real time with exchange of closed-loop information between virtual and/or real objects, i.e. humans, machines, and processes by enabling haptic interaction with visual feedback.

Users and Stakeholders

Manufacturers of transportation equipment, household appliances and electric goods; hospitals, healthcare providers; Universities, (medical) schools, teachers, learners, students ; city councils, automotive sector, traffic management operators

Potential services

Robotic arms on assembly stations ; Tele-diagnosis, tele-surgery and tele-rehabilitation to be used in remote areas; human-robotic operations training scenarios ; training scenarios for operators in city council



Applications

Physical Internet:

represents an innovation in logistics which is based on the working principles of the digital Internet. An internet-like network for goods means no data is encapsulated in data packets, but goods are encapsulated in PI-containers. This evolution promises more efficient logistics : saving energy and cost while ensuring right-on-time delivery, ubiquitous tracking and monitoring of the transport conditions

Users and Stakeholders

Logistics companies, fresh food suppliers, medical goods suppliers

Potential services

Secure and timely transportation of medical goods (drugs, syringes, blood samples) and foods, transportation of high-value goods, tracking of sensitive goods as could be food/health kits in poor regions or regions with high presence of criminality



Applications

Internet of People:

where users' personal devices are not anymore passive generators and consumers of data, but they play an active role, either through local decisions, or through collaborative decisions with other devices with which they interact by incorporate models of their human users' behavior. Stretching this vision further, IoP could embrace even a tighter integration between the Internet and humans, allowing humans themselves to contribute (cognitive) resources to the Internet functions. In IoP humans can also be "used" as network nodes.

Users and Stakeholders

media and advertising companies, event management companies, sport organizations ; retail sector, healthcare, government

Potential services

attendance to live events to people in rural areas, crowd sourcing; development of analytical engines and big data solutions supporting consumers to share information and participate to collective initiatives ; traffic and safety applications



Applications

Internet for All People:

The benefits of the Internet are not accessible to everyone. In particular, one fundamental human right, the right to speech (Freedom of expression is recognized as a human right under article 19 of the Universal Declaration of Human Rights) is denied to many world citizens due to a lack of economic means to purchase or contract the communication means or censorship of the information to be transmitted or retrieved by authorities

Users and Stakeholders

NGOs, remote communities, education initiatives

Potential services

Education, health, journalism, safety



THE POWER OF SPACE



Satellite Navigation

GNSS are the main source of geo-referenced locations data. Satellite navigation is instrumental in order to geo-tagging services and tracking of the robots in case of Tactile Internet, to locate the PI-container along its path for the Physical Internet and for any crowd sourcing applications to locate people and devices.



Earth Observation

Earth Observation data can be used in combination with measurements of in-situ sensors (i.e. in direct contact with an object or medium, e.g. a water temperature sensor in water) or remotely (i.e. in indirect contact with an object or medium, observing or interacting with an object or medium indirectly either actively or passively, e.g. a surveillance camera detecting cars' number plates from a distance) to provide important information about events.



Satellite Communication

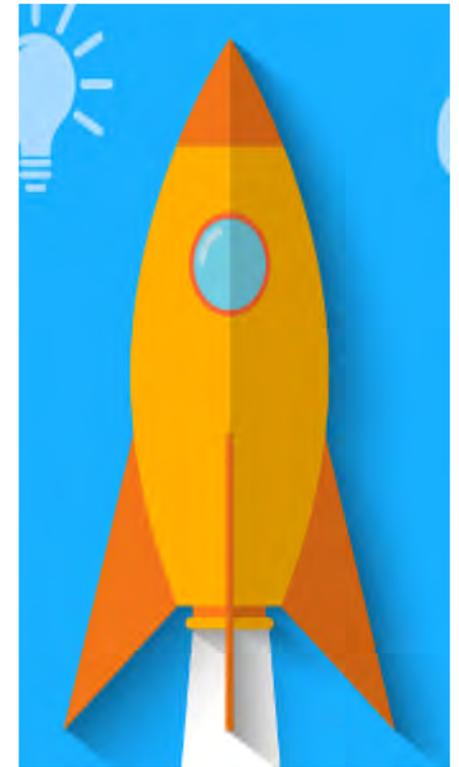
Satellite Communications provide a means to communicate with the coordinating centre to and from remote locations where there is no terrestrial network. For example, Satcom is needed to reach operators in remote places (including schools in Africa, workers on ships etc..).

5G networks including terrestrial and satellite components will have a key role for delivering the high amount of data required with low latency.

INTRO TO KICK-

- “Kick-start Activities” are ESA’s **funding scheme** enabling companies to undertake short Feasibility Studies (up to 6 months) that explore new service and application concepts making use of space capabilities.
- “Kick-start Activities” offer an instrument to assess the technical feasibility and commercial viability of an idea with **limited initial investment** by companies. As such, this scheme is considered particularly attractive for **SMEs and start-ups**, granting them an easy entry into ESA Business Applications.
- ESA is committed to a **rapid evaluation** process, for allowing companies to keep the pace in the market.
- Successful Kick-start Activities can be further developed into commercially-viable businesses with follow-up support from ESA Business Applications in the form of **Demonstration Projects**(*)

(*) <https://business.esa.int/funding/direct-negotiation-call-for-proposals/demonstration-projects>



THEMATIC CALLS FOR KICK-START ACTIVITIES

- The Thematic Calls for Kick-start Activities are **open to any company or organisation in participating Member States** (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, Switzerland and the United Kingdom).
- Kick-start Activities aim at exploring the **viability of new service/application concepts** and **consolidating the user landscape** including derivation of user requirements.
- Kick-start activities resulting from Thematic Calls are funded at **75 %** by the Agency for a maximum amount of **60,000 Euro** per activity.
- The Thematic Calls for Kick-Start Activities follow a **competitive tendering procedure**. The evaluation criteria and associated weighting factors are published in the cover letter of the Call for Proposals.

AUTHORIZATION FROM NATIONAL DELEGATIONS

The **availability of funding** for the specific Thematic Call against which you submit your Proposal is an admissibility criteria. 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 EMITS to provide information on the list of Member States that have already provided their financial support to the Thematic Call.

In case your company/organisation resides in a country which has not provided their financial support 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>.

For the Thematic Call on 'Future Internet' **United Kingdom and **Germany** have already pre-authorized the funding.**

→ HOW TO APPLY 1/2

1. **Register** by completing online questionnaire on [ESA-STAR Registration](#) (minimum 'light registration') (<https://esastar-emr.sso.esa.int>)
2. **Download** the official tender **documentation** (Invitation to Tender) via [EMITS 'AO 8872'](#) from 28th October 2019
3. **Create** 'Bidder Restricted Area' in ESA-STAR
4. **Write your proposal** and obtain **Letter of Authorization** from [National Delegation](#), if needed (see below)
5. **Submit** your proposal via 'Bidder Restricted Area' in [ESA-STAR Tendering](#) by 6th December 2019 13:00 CET (Don't wait until the last minute!)

Germany and Norway have pre-authorized the funding. Companies residing in other participating members states have to request a letter of authorization.

→ HOW TO APPLY 2/2

The Letter of Invitation to Call for Proposals is issued on EMITS (<http://emits.sso.esa.int/emits/owa/emits.main>) under 'AO 8872' and includes:

- **Cover letter**
- **Appendix 1:**
List of Thematic Calls for Ideas (including the calendar of the Thematic Call for Ideas and specific information on the themes)
- **Appendix 2:**
Draft Contract
- **Appendix 3:**
Tendering Conditions for Express Procurement Procedure - EXPRO/TC
- **Appendix 4:**
Proposal Template



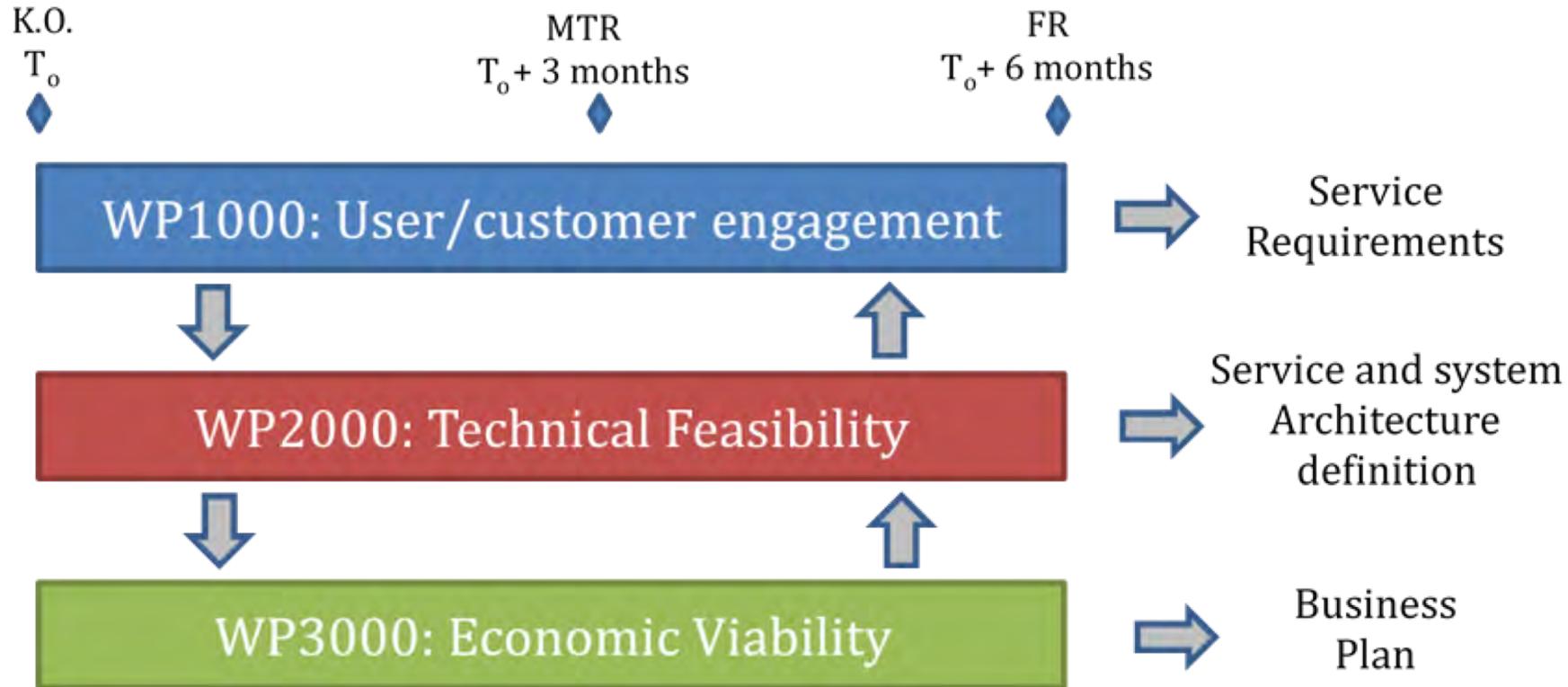
→ THE PROPOSAL TEMPLATE

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)

Kick-Start Activity

→ Study Tasks



→ Q&A



A central graphic featuring a blue banner with the text "→ THANK YOU FOR PARTICIPATING" in white. The banner is set against a circular collage of images including a satellite view of Earth, a port with shipping containers, agricultural fields, and various icons representing business, health, and sports. The entire graphic is set against a background of a starry space.

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