→ **Kick-Start Activity - Connected Rural Communities**

Webinar, ECSAT, 10 March 2020

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WELCOME TO THE WEBINAR! Before we start…

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

- 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

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→ **Webinar Agenda**

- Introduction
  - Space Applications
  - What ESA offers

- Introduction to Kick-Start Activity
  - Introduction to Kick-Start Activity
  - Thematic Calls
  - Study Tasks

- Space for Connected Rural Communities
  - Background
  - Key topics
  - Enablers from space: SatNav, SatEO, SatCom

- Guest speaker: Edward Graham University of the Highlands and Islands

- How to Apply to Kick-Start Activity
  - How to apply
  - Authorization from National Delegations
  - The Proposal Template

- Q&A

→ Space Applications

Users and Markets

Space technologies

Space Weather

Earth Observation

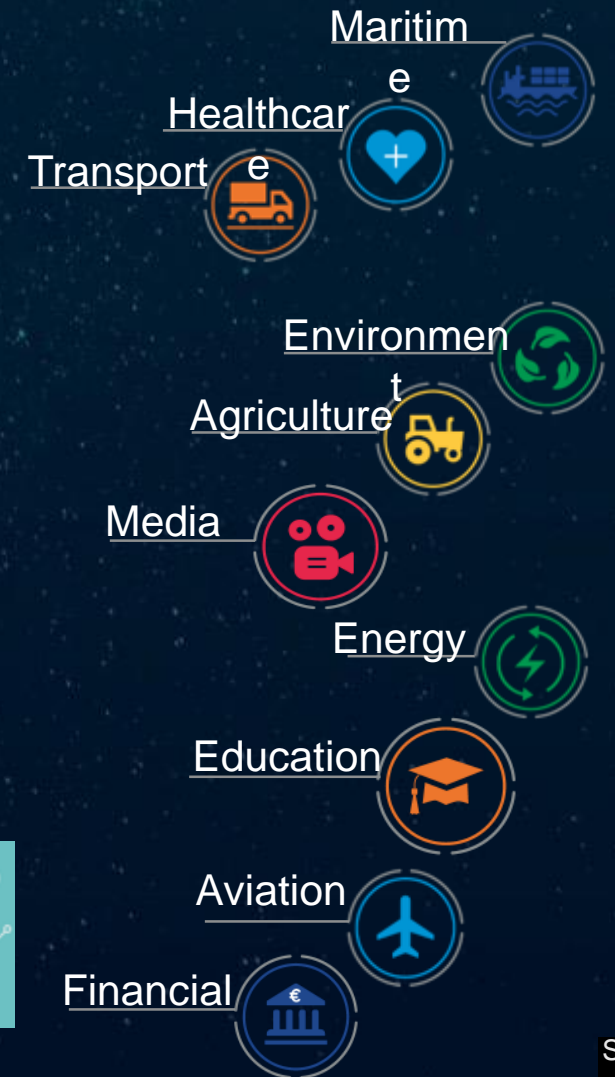Satellite Navigation

Satellite Communication

Human Spaceflight Technologies

- **Big Data analytics**
- **VR/AR**
- **Artificial Intelligence**
- **Megaconstellations**
- **5G**
- **Crowdsourcing**
- **IoT**
- **Cybersecurity**
- **Blockchain**
- **….**

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eesa
space solutions

- Kick- Starts 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-Starts 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.

- Successful Kick-Starts 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

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→ Thematic calls

- The Thematic Calls for Kick-Start Activities are open to any company or organisation in participating Member States.

- 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 % for a maximum amount of 60,000 Euro per activity and at 80% for a maximum of 64,000 Euro for SMEs.

- The Thematic Calls for Kick-Start Activities follow a competitive tendering procedure.

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

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→ **Connected Rural Communities - Background**

To explore new business models and space-based solutions for commercially viable services to contribute to the economic development and improve coverage in **rural** areas by performing different pilots addressing the technical challenges that will help in improving the rural communities ecosystems.

Kick-Start call organized in the sub-thematic calls :

➢ **Life of Communities: Education & Health,**

19 March – 4 May

➢ **Business Opportunities: Mobility & Tourism,**

4 May – 12 June

➢ **Safety & Security,**

15 June 2020 – 24 July 2020

➢ **Management of Resources: Utilities & Natural Resources,**

24 July 2020 – 18 September 2020

- Education is vital for the rural development to build capacity and knowledge, helping rural population to make informed decisions and to innovate their businesses. Educating communities not only for developing schools, educating children and adults, but also for vocational training and support to young entrepreneurs.

- Health services include solutions for remote diagnosis centres, information exchange and digitalisation, training of new personnel, logistics of health-related services (e.g.: laboratories analysis, distribution of medical goods), etc. Remote diagnostics enables the patient to receive healthcare and advice independent of their current location.

- Potential applications: 3D educational experiences in remote sites, training for teachers and students, telesurgery,..
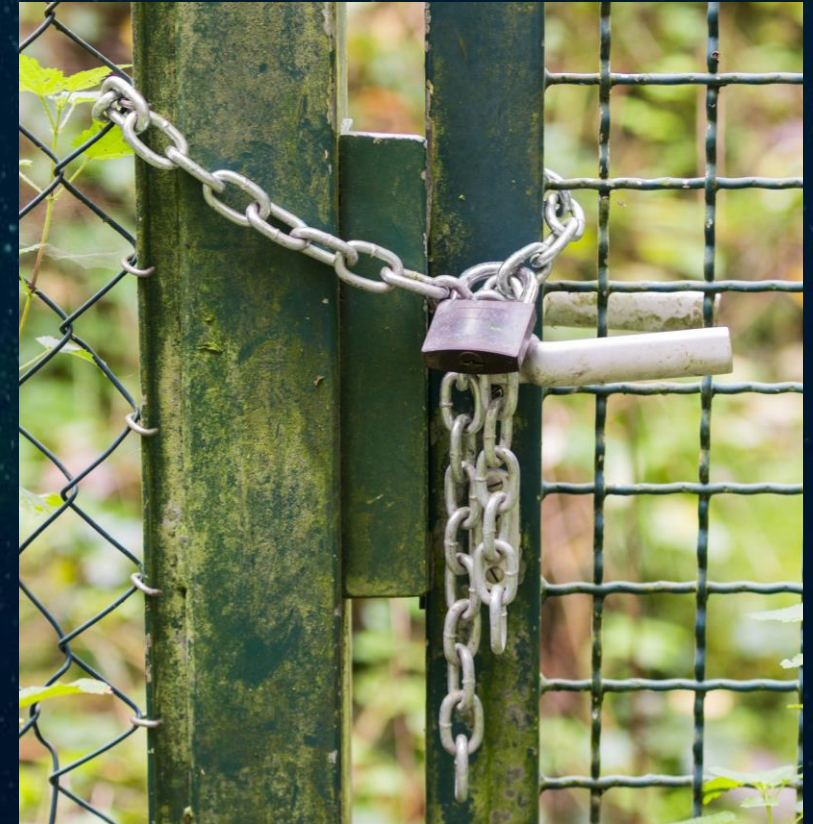
Slide 8

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- Transport plays a key role in responding to the problem of rural social exclusion, and in keeping these people engaged in mainstream society.

- Tourism is a source of economic development, employment opportunities and income for the rural communities, in addition to offer several opportunities for the tourists to take active participation in the rural life.

- Tourism is strictly connected also with the transport infrastructure.

- Potential applications: on-demand and shared mobility services, innovative community-based transport services, improved goods delivery, road planning and maintenance

→ Key topics - Safety and Security

- Safety and security of the rural communities refers to those issues that affect the communities in what concern the human, property and food protection and security.

- Farmers, farm workers and residents within rural communities are considered soft targets by criminals, due to the remoteness of farms, large distances between farms and villages and inaccessibility to the police.

- Rural police stations are often isolated and responsible for controlling vast areas.

- Potential applications: connecting the rural farmers to first responders, police, and security services; provide better situational awareness and mapping of risk areas

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- Rural areas face several challenges for the management of resources, including utilities as energy and water use and natural resources as land and forestry.

- In the rural areas, utilities are challenged with higher costs and often find it harder to implement new clean technologies to modernize their infrastructure because of the great, for example water treatment, electric power and telecommunication services. Energy covers direct light, heating, cooling, which are needed for a huge number of different tasks (e.g. refrigeration and communications.

- Another aspect concerns the "land resources utilization", including not only agricultural uses but also encompasses natural areas, sustainable management of forests, watercourses and other natural resources.

- Potential applications include remote training & support on off-grid energy systems operations to rural communities, rural utilities services planning and maintenance, monitoring and management of water resources including provision of clean water.

→ The Power of Space

Satellite Navigation

GNSS are the main source of geo- referenced locations data. Satellite navigation is instrumental in order to track and trace users and geo-locate different objects and for any crowd sourcing applications to locate people and devices.

Earth Observation

EO imagery are used to provide maps showing the remote locations and to evaluate the conditions on the ground; recreate the remote environment; provide meteorological information and for monitoring and forecasting emissions; to support the land use analysis and planning of infrastructures and management of forestall/agricultural areas.

Satellite Communication

SatCom provide a means to communicate with the coordinating centre to and from remote locations where there is no terrestrial network or to cope with large demand of bandwidth.

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

→ 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 19th March 2020

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 4th May 2020 13:00 CET (Don't wait until the last minute!)

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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

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→ **Authorization from National Delegations**

The authorization from National Delegation 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 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)

→ QUESTIONS?

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