→ KICK START CALL

Responsible Agritech

AO 10535

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Kick-Start Responsible Agritech

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

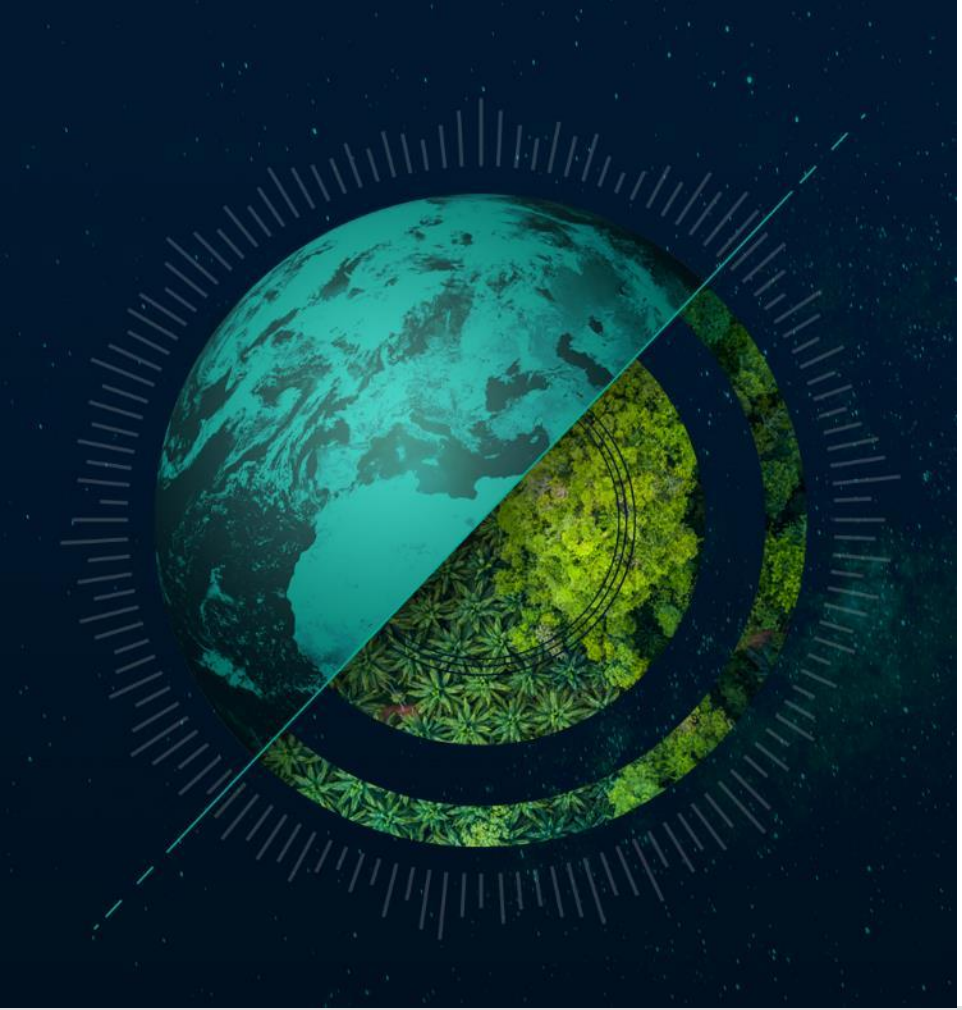
- Introduction
  - Fuel your business
  - What ESA offers
- Space for Responsible Agritech
  - Background
  - Opportunity
  - ICT-AGRI-FOOD partnership
  - Topics of relevance
  - Enablers from space
- Kick-start Activity essentials
  - Introduction to Kick-start Activity
  - Thematic Calls
  - Authorization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

→ ESA SPACE SOLUTIONS

esa space solutions

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

Space Technology

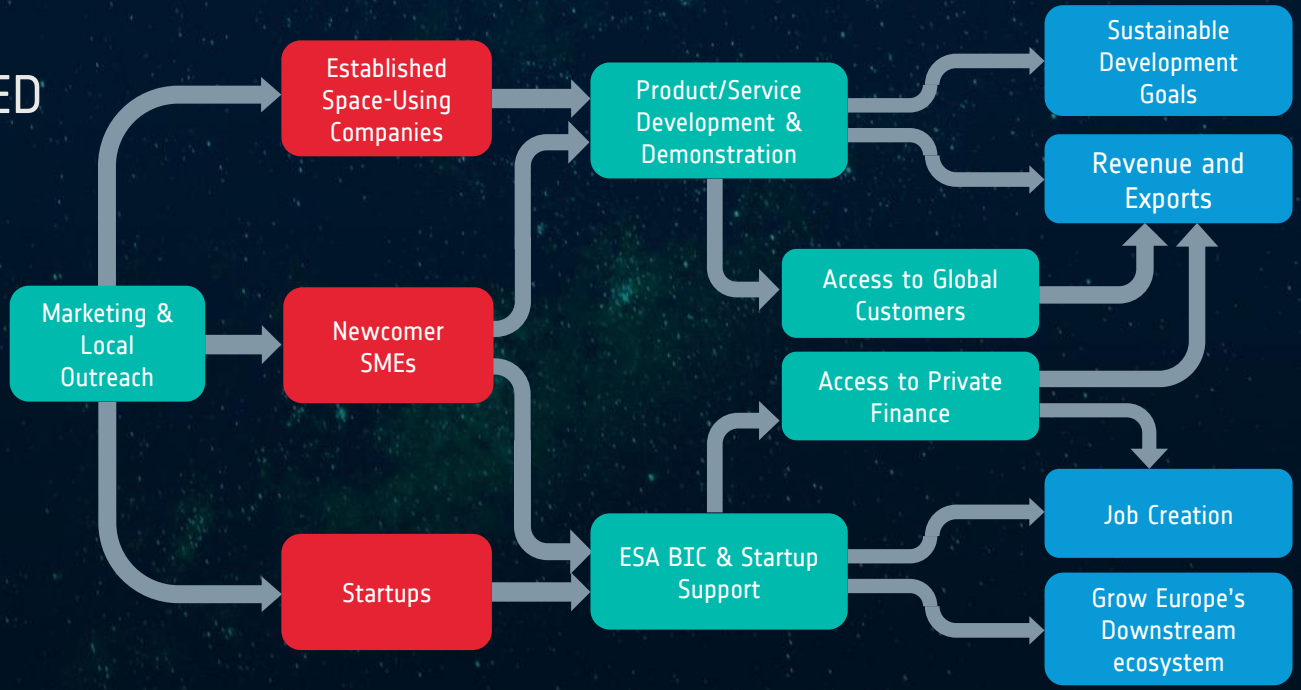
- Earth Observation
- Satellite Navigation
- Satellite Communication
- Spaceflight Technologies
- Space Weather

Users & Markets

- Maritime
- Agriculture
- Environment
- Healthcare
- Financial
- Transport
- Education
- Media
- Energy
- Aviation

esa space solutions

A FULLY INTEGRATED TOOLKIT FOR DOWNSTREAM BUSINESSES



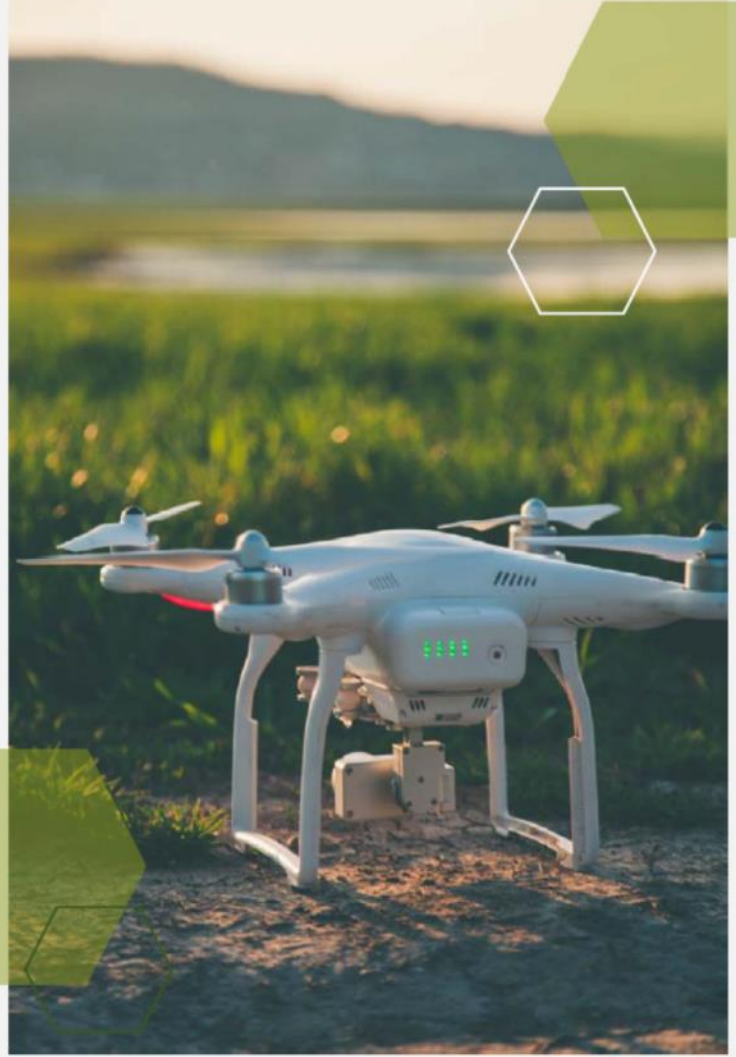
RESPONSIBLE AGRITECH Background

The theme of Responsible Agritech addresses the topics of Sustainability, Fairness and Competitiveness

- **Sustainability:** new technologies to monitor and advice on new farming practices that will reduce carbon emissions, preserve biodiversity, preserve soils and water reserves. In particular, Satellite Earth Observation can measure the impact of sustainable practices. Satellite Navigation and precision farming can optimize the use of our precious resources.
- **Fairness:** in line with the new EU Common Agricultural Policy (CAP) objectives, support and empower farmers and revitalize rural areas such as streamlining allocation of CAP greening subsidies, deployment of broadband Internet, as e-training, e-workshops and remote monitoring.
- **Competitiveness:** innovation to address regional challenges such as GNSS enabled automations for berries harvesting or weed removal, AI combined with Satellite Earth Observation to anticipate the emergence of crop diseases and advise on suitable remedies, greater machine interoperability and data standardization.

OPPORTUNITY

- 6 months duration
- up to €64K ESA funding (80% 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



ICT-AGRI-FOOD

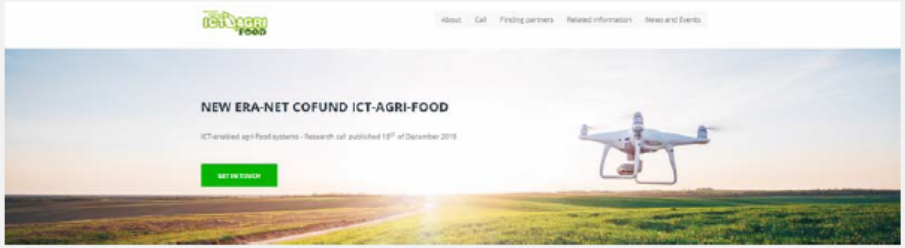
ERA-NET Cofund on ICT-enabled agri-food systems

(H2020-SFA-31-2019 A)

01/10/19 – 30/09/24

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grand agreement no 862665 ICT-AGRI-FOOD.

Objectives



www.ictagrifood.eu

ICT-AGRI-FOOD is a network of national and regional funding organisations promoting European research on ICT-enabled agri food systems, and offering innovative opportunities for the entire food chain. ICT-AGRI-FOOD is funded under the European Union's Horizon 2020 research and innovation programme.

The overall objective of "ICT-enabled agri-food systems" is **strengthening the cooperation in research, development and innovation** between EU Member and associated States to **foster, verifiably and perceptibly, the use of smart digital technology to make European food systems more sustainable, resilient and secure**.

With financial support of the European Commission, the consortium is promoting a **joint call for transnational research projects** on an annual basis, as a way to contribute to introducing and exploring digital technology that enhances the sustainability of the agri-food sector to the benefit of our and future generations.

Other joint activities in this thematic area will be also implemented, such as the collaboration with other thematic related initiatives, thus contributing to the establishment of a fair and societally accepted bioeconomy in the EU and beyond.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grand agreement no 862665 ICT-AGRI-FOOD.

Partners

The 34 ICT-AGRI-FOOD consortium partners from 22 countries, some already present from the beginning of ICT-AGRI and some new partners, are a broad and diverse community is one of the main pillars of the project and of its success.

It is lead by the German Federal Office for Agriculture and Food (BLE).

Other funding organizations wishing to join at a later stage (after the cofunded call) will be welcome to do so after approval by the Call Steering Committee and the European Commission.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grand agreement no 862665 ICT-AGRI-FOOD.

More information: www.ictagrifood.eu

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TOPICS OF RELEVANCE

Applications : Sustainability	Users and Stakeholders	Potential services
• Climate change. Fighting climate change : EU agriculture represents 12% of all EU greenhouse gas (GHG) emissions.	Farmers	reduction nitrogen application efficient use of fuel powered machinery.
• Biodiversity and landscapes : preservation of diversity of nature and farmland and economy of regional food products	Farmers, authorities	Monitor compliance with preservation standards
• Soils. Every year, at world level, it is considered that the equivalent of a land area about the size of Greece of fertile soil is lost.	Farmers	storage of carbon in soils, soil preservation and restoration techniques monitored by satellite
• Water. Protecting the aqua sphere through demand-driven and moderate use of chemicals and optimized irrigation	Farmers	optimize water use
• Healthy and nutritious food. European consumers are increasingly concerned by individual health and occurrence of major health crisis.	Food processors	monitor food quality
• Disease prevention : monitoring farming enforcing safe and organic practices	Farmers	monitor and advice for specific crops and fields

TOPICS OF RELEVANCE

Applications : Fairness	Users and Stakeholders	Potential services
• Difficult living conditions. The farming sector lives on minimal margins and is the recipient of the negative impacts of market fluctuations. The new EU Common Agricultural Policy (CAP) objectives are to re-balance this situation and space technologies can generate higher value for farmers.	Farmers, authorities, consumers	Support service for farmers to increase revenues : circular economy, high value products, …
• Path towards fairness. Implement the paradigm of the new CAP : smooth access to financial support, targeted to farmers who need it the most and related to sustainable practices.	Farmers, authorities	Services to increase transparency and accountability ; reduce the administrative burden on farmers.
• Revitalizing rural areas: Innovation generating value in rural areas is a great mean to attract workforce, including young workers, and in particular digital technologies with proper training and adequate quality of services.	Farmers, communities	Broadband internet access in rural areas, e-learning and e-training services

TOPICS OF RELEVANCE

Applications : Competitiveness	Users and Stakeholders	Potential services
• Automation. AI, big data and new generation electrical engines (such as those equipped in drones) for smart robots to scout fields and perform complex tasks, replace chemical use.	Farmers, farming companies and associations, machine manufacturers	Robots for harvesting berries and disease monitoring, weed or leaf removal, ploughing, …
• Forecasting. Food market fluctuations have a direct impact on the revenues of farmers. Forecasting climatic events, temperatures, precipitations, crop growth, yields and diseases outbreaks are key assets for farm managers to anticipate risks and implement mitigation actions.	Farmers, farming companies and associations	Accurate forecasting systems (yield, volume, quality,…) taking into account climate change disruptions.
• Systems Interoperability. A majority of farmers suffer from a lack of interoperability of their owned (or rented/shared) equipment and system (e.g. fertilization maps for Variable Application Machines or Farm Management Systems).	Farmers, machine manufacturers	Interoperable hardware and software services relying on recognized and/or standardized schemes.
• Data standards. The lack of agreed data standards (such as farmer data ownership or business confidentiality) should be tackled as it fuels productivity losses.	Whole value chain	Services enforcing ethical data management.

→ 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 robots and agricultural machines, and user devices. Different location techniques are available depending on the accuracy needed by the target solution.

Earth Observation

Earth Observation data can be used in combination with measurements of in-situ sensors to observe a range of physical parameters : biomass, indicators such as NDVI, moisture. With advance processing and correlation with multiple sources, EO data can identify more intricate information such as risk of moisture deficit, appearance of disease, soil potential, … . A wide range of EO satellite provide data than can used to these ends: optical, multispectral, radar, public access (such as Copernicus Sentinels) are commercial providers.

Satellite Communication

Satellite Communications provide a reliable and cost-effective access to broadband connectivity all over the world and especially in rural areas. Internet in rural areas is key is a necessary conditions to access online monitoring and advisory agritech services and e-learning and e-training services.

INTRO TO KICK-STARTS

- “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

THEMATIC CALLS FOR KICK-START ACTIVITIES

- 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 up to 80 % by the Agency for a maximum amount of 64,000 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.

- For the Thematic Call on 'Responsible Agritech', Germany, Luxembourg, Norway and Ireland have already pre-authorized the funding. No letter of support is required for you to attach to your proposal.
- Austria, Greece, Switzerland and United Kingdom are not supporting this Kick-Start call. Therefore no application from companies/organisation residing in these countries is eligible.
- For all other countries you need to contact your National Delegation. The contact information of the National Delegations can be found at https://business.esa.int/national-delegations.

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 under call AO 10535 from 12th October 2020

3. **Create** 'Bidder Restricted Area' in ESA-STAR

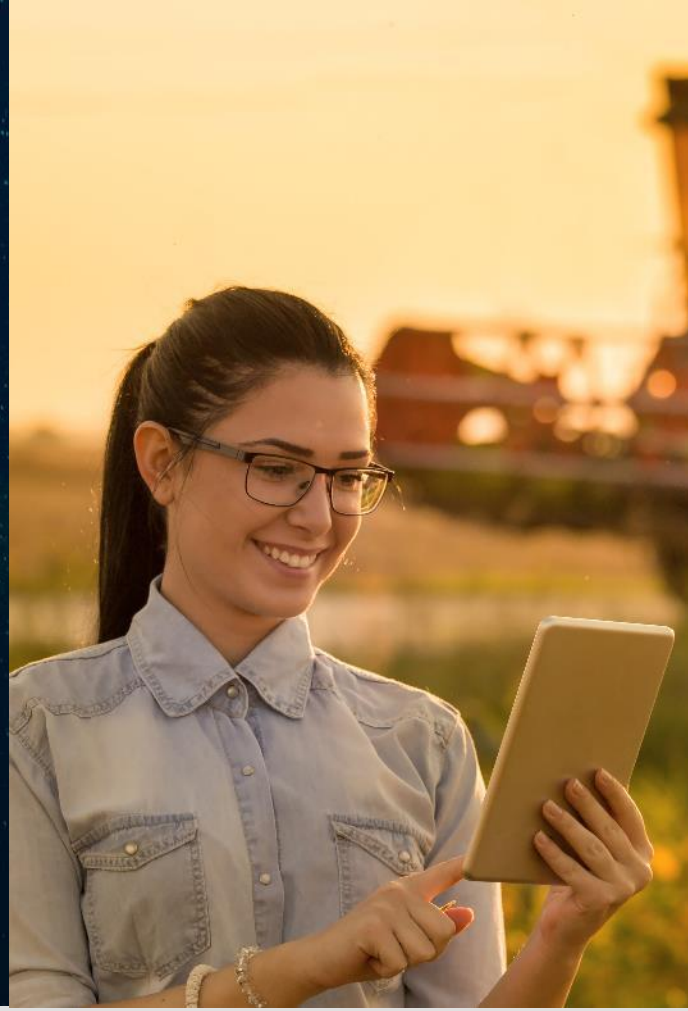
4. **Write your proposal** and obtain **Letter of Authorization** from National Delegation, if needed (see below)

5. **Submit** your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering by 27th November 2020 13:00 CET (Don't wait until the last minute!)

HOW TO APPLY 2/2

The Letter of Invitation to Call for Proposals is issued on EMITS (http://emits.sso.esa.int/) under call 'AO 10535' and includes:

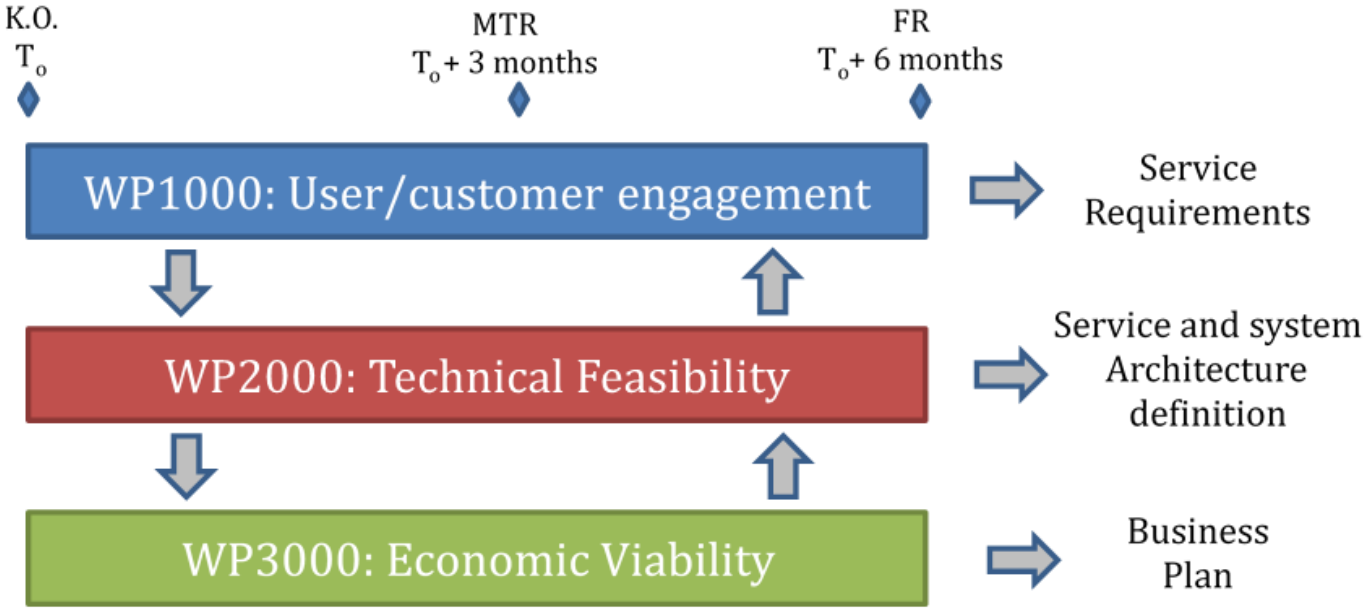
- **Cover letter**
- Appendix 1:
  List of Thematic Calls for Ideas (including the calendar of the Thematic Call for Ideas and specific information on the themes)
- Appendix 2:
  Draft Contract
- Appendix 3:
  Tendering Conditions for Express Procurement Procedure - EXPRO/TC
- Appendix 4:
  Proposal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



→ THE PROPOSAL TEMPLATE

- Your Proposal shall include the following information:
- Executive Summary (max 1 page)
- Business Potential (max 5 pages)
- Technical Concept (max 5 pages)
- Team and Resources (max 3 pages)
- Management (max 4 pages)
- Financials (max 2 pages)

→ Study Tasks



Q&A