

# ESA Business Applications

## Kick-start Activity

### Theme: Commercial Climate Services

3 November 2017, Webinar  
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## AGENDA

- 11:00-11:20 (CET)
  - Welcome by ESA
  - Introduction to the Kick-start Activity
  - What ESA offers
  - Kick-start Work plan
  - The Thematic Calls for Kick-start Activities
  - Support from National Delegations
  - The Call for Proposals (EMITS)
  - “What you need to do”
  - The Proposal Template
  
- 11:20-11:30 (CET)
  - Commercial Climate Services Background
  - Topics of relevance for Commercial Climate Services
  - Enablers from space
  
- 11:30-12:00 (CET)
  - Open Questions & Answers session

# WELCOME BY ESA



- Welcome to participants
- Guidelines how/when to interact during the webinar:
  - Due to the number of attendees, **please keep your microphones muted at all times**
  - You can use the **chat function** anytime to submit your questions to **Norbert Huebner (the presenter)**. They will be addressed during the Q&A at the end of the webinar



# INTRODUCTION TO KICK-START ACTIVITY



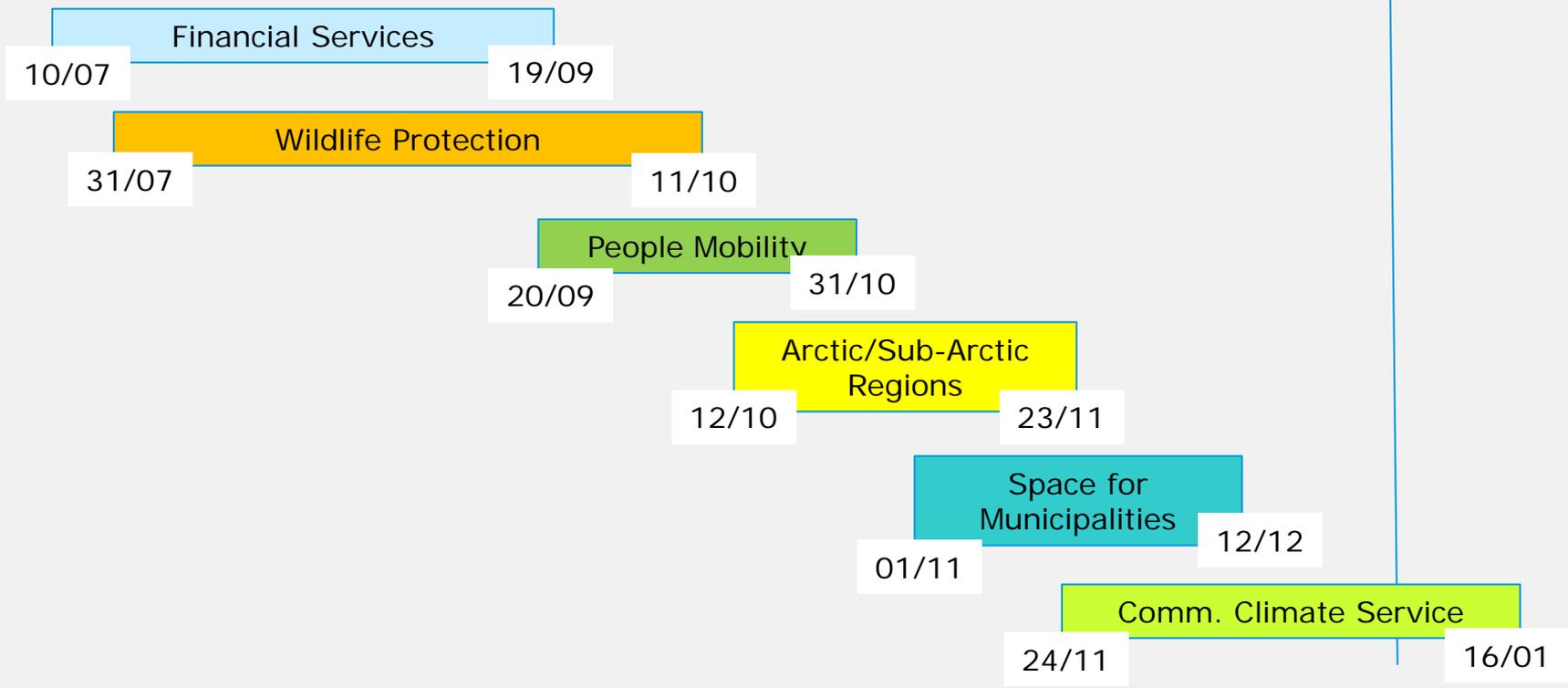
- The “Kick-start Activity” is ESA’s **new funding scheme** which enables companies to undertake **short Feasibility Studies** (up to 6 months) that explore new service and application concepts making use of space capabilities (e.g. Satcom, SatNav, SatEO).
- Kick-start Activities offer an instrument to assess the viability of an idea with **limited initial investment by companies** (both financial and manpower). As such, it is 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<sup>(\*)</sup>**

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

# KICK-START WORK PLAN, 2<sup>nd</sup> Sem. 2017



June    July    August    September    October    November    December    January



# WHAT ESA OFFERS



Financial support



Technical and business expertise



ESA branding and promotion



Network and Partnership Building

# THE THEMATIC CALL 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.

# SUPPORT FROM NATIONAL DELEGATIONS



- The availability of funding for the specific Thematic Call against which you submit your Proposal is an admissibility criteria. Proposals not supported at the closing 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 are encouraged to contact the National Delegation. The contacts of the National Delegations can be found at <https://business.esa.int/national-delegations>.

**So far, Germany, Luxembourg, and Norway have made funding available for the Thematic Call on Commercial Climate Services**



# THE CALL FOR PROPOSALS

The Letter of Invitation for the Call for Proposals (ESA AO/1-9072/17/NL/CLP) is issued on EMITS (<http://emits.sso.esa.int/emits/owa/emits.main>) 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

Appendix 1 will be updated on AO 9072, once a new Thematic Call will be opened.

# “WHAT YOU NEED TO DO”

- The proposal submissions shall make use of the new **ESA-STAR** system which will allow the **submission of proposals electronically**.
- Companies shall register beforehand by completing the **online questionnaire** on the “ESA-STAR registration” - <https://esastar-emr.sso.esa.int/>
  - For general information about how to do it, see the “esa-star” Registration User Manual [http://esamultimedia.esa.int/docs/business\\_with\\_esa/CG-EM-ORR-S-16\\_End\\_User\\_Manual\\_v1.2.pdf](http://esamultimedia.esa.int/docs/business_with_esa/CG-EM-ORR-S-16_End_User_Manual_v1.2.pdf)
- The content of your proposal will be limited to filling in as necessary the **Cover letter (1 page) and Proposal Template (maximum 20 pages)**.
- **Full compliance to the Draft Contract** is a Key Acceptance Factor.

# THE PROPOSAL TEMPLATE

Your Proposal shall include the following information:

- 1) EXECUTIVE SUMMARY (maximum one page)
- 2) BUSINESS POTENTIAL (maximum five pages)
- 3) TECHNICAL CONCEPT (maximum five pages)
- 4) TEAM AND RESOURCES (maximum three pages)
- 5) MANAGEMENT PART (maximum four pages)
- 6) FINANCIAL PART (maximum two pages)

# KICK-START ACTIVITY ON COMMERCIAL CLIMATE SERVICES

- Any proposal addressing the challenge of Commercial Climate Services and utilising at least one space asset is relevant for this thematic call



**Health**



**Energy Supply**

**Transportation  
and Critical  
Infrastructure**

**Food and Water  
Resources**



**Compliance  
Monitoring**

**Other**



# COMMERCIAL CLIMATE SERVICES BACKGROUND

The **5th Intergovernmental Panel on Climate Change (IPCC)** report, finalised in 2014, states with certainty that climate change is **man-made** and that without fast action on the part of governments around the world, the effects of climate change may become **irreversible**.

In particular, anthropogenic emissions of GreenHouse Gases (GHGs) such as carbon dioxide, methane, nitrous oxide and fluorinated gases are leading to rising temperatures with consequent profound effects on the **environment** and **global economy**.

The challenges and opportunities that this creates for the development of **commercial** climate services are the subject of this Kick-start competition.

Relevant opportunities include for instance assessing the **impact of regulations at local and regional level** and the monitoring of these regulations. In other cases, climate change may open up new business areas in order to **mitigate** or even **exploit** rising temperatures and environmental change in particular sectors.



# TOPICS OF RELEVANCE FOR COMMERCIAL CLIMATE SERVICES



- ❑ **Health:** Climate change affects various social and environmental determinants of health. Extreme high air temperatures contribute directly to **deaths from cardiovascular and respiratory disease** (particularly among elderly people), as well as indirectly through higher **levels of ozone and other pollutants** in the atmosphere.
- ❑ **Energy Supply:** Information on the likely impact of climate change is important e.g. for selecting **sites for future wind farms and power lines**. Hydropower companies need rainfall data and climate information to understand **seasonal rainfall patterns**, their impact on energy production and when back-up energy may be required. **Diminishing ice cover** in the Arctic has resulted in the opportunity for O&G to be extracted, requiring accurate **long-term forecasts of ice conditions**.
- ❑ **Transportation and Critical Infrastructure:** Changes in the frequency and intensity of **extreme weather events**, heatwaves, storm surges and precipitation could increase the risk of delays, disruption, damage, and failure across our land-based, air, and maritime transportation systems. Exposure to flooding and extreme snow events shortens the **life expectancy of roads**, though some areas may experience **cost savings and improved mobility** from reduced snowfall and less frequent Winter storms. Less sea-ice in shipping lanes may **extend the shipping season** and **reduce shipping times**.
- ❑ **Management of Food and Water Resources:** **Agriculture** is highly dependent on the climate, with an **increase in crop yields** expected in some conditions, but also **increased risk of droughts and floods**. Heat stress can increase **vulnerability of livestock** to disease, and drought conditions may reduce the amount of quality forage. Dramatic shifts are expected in the distribution and abundance of **commercial fish stocks**. In many areas, climate change is likely to **increase water demand while shrinking supplies**.
- ❑ **Compliance Monitoring:** From 2023, GHG emissions compliance monitoring will need to be done nationally **every 5 years**, presenting opportunities for the establishment of new satellite-based monitoring services. **Reliable measurement of GHG emissions** (and forest inventories) would enable improved efficiency and effectiveness of mitigation policies, and direct **comparability** between different cities, regions and countries.

# ENABLERS FROM SPACE



- **Earth Observation** can be used for **monitoring and change detection**, e.g. for GHG concentrations, land and surface temperature, sea level height, soil moisture, solar irradiance, and incidence of extreme weather events (e.g. heatwaves and storm events). It can also be used for **historical analysis** and providing inputs to **forecasting models**.



- **Satellite Navigation** provides precise **positioning and guidance** and can support track and trace applications and **geo-tagging of in-situ sensors**. **GNSS reflectometry** can also be used to provide information on sea state, ice and snow cover and for wide-swath altimetry.



- **Satellite Communication** enables reliable communications in maritime and remote locations where there is **no terrestrial coverage**, for instance in the transmission of sensor data to a coordinating centre, or for radio and TV **broadcasts to warn the public** about dangerous climate-related events such as storms and heatwaves. Satellite Communications are especially important in **disaster relief operations** where the terrestrial telecommunication infrastructure may be damaged or destroyed.

# OPEN QUESTIONS & ANSWERS SESSION



Participants Chat Notes

Participants

Speaker:

Chat

Send to: (Presenter)

Select a participant in the Send to menu first, type chat message, and send...

Send

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European Space Agency

## ESA Business Applications

**→ SPACE IS OPEN FOR BUSINESS**

<https://business.esa.int/funding/intended-tender/commercial-climate-services>