

→ KICK START ACTIVITY

Space-enabled Blockchain services

Blockchain Webinar
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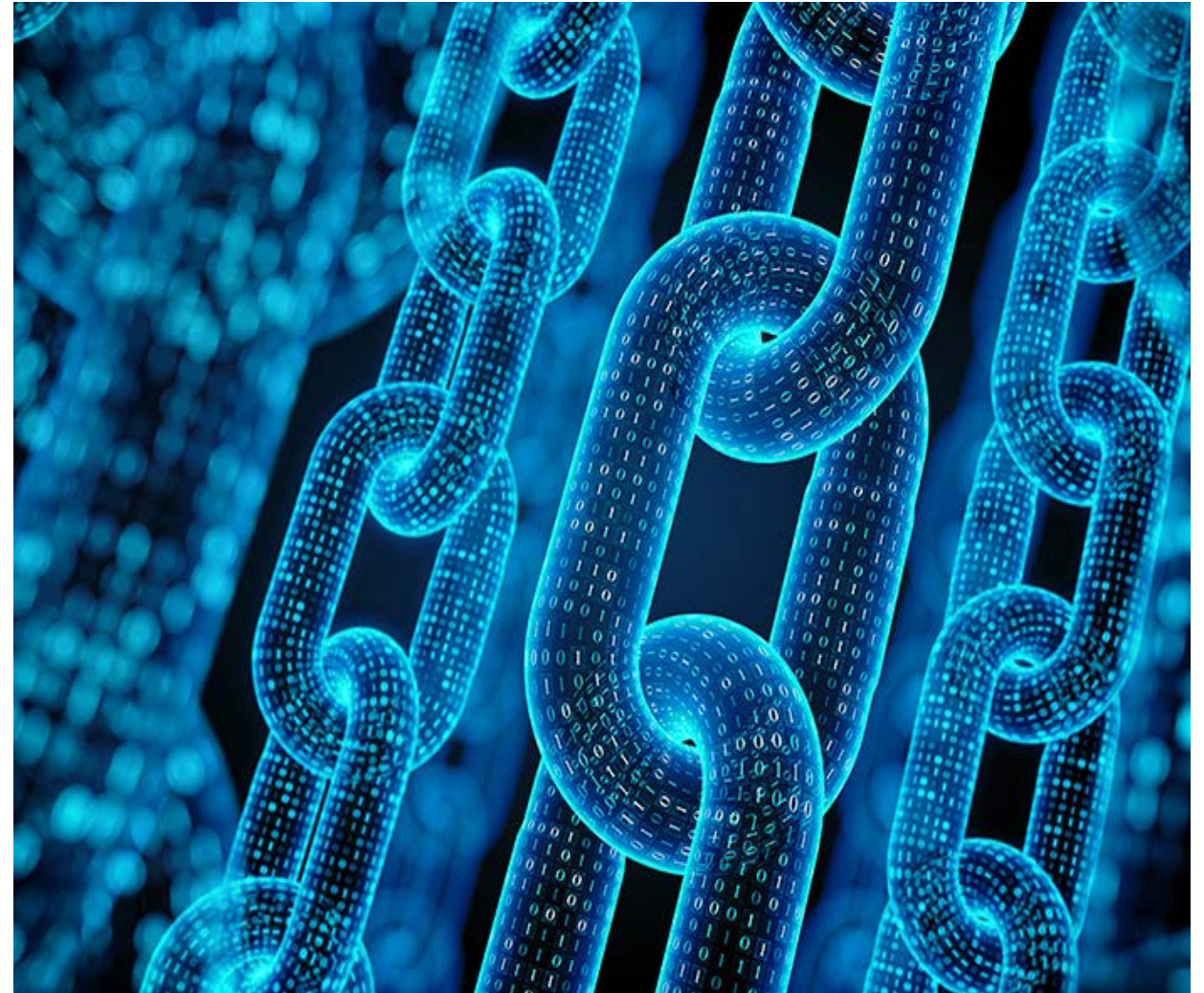
European Space Agency

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 Blockchain
 - 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:



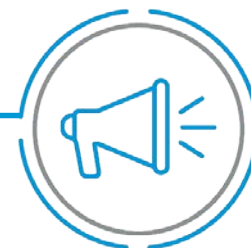
Zero-Equity
Funding
(€60k-€2M+)



Tailored Project
Management
Support



Access to
Our Network
& Partners



Use of the
ESA Brand for
Credibility

- Conceptualised in 2008, the **blockchain technology** represents today the promises to become a new foundation for **all forms of transactions** in the society. It points the digital economy towards a new generation of the Internet, where people can **exchange valuable digital assets** such as currencies, property titles, identity information, etc., in a **trustable and decentralised manner**, without the involvement of centralised transaction management structures such as banks, stock exchanges, governmental agencies.
- Blockchain has already experienced success in the form of several applications, and is increasingly seen as one of the main pillars of the digital transformation of the economy, not only for the **financial sector** but for also many other business sectors such as **manufacturing, distributions, logistics, retail, health, etc.**
- A blockchain is an **electronic ledger** that instead of being managed by a single centralised institution, is stored in multiple copies on multiple independent computers within **a decentralised distributed network**. In this ledger transactions are sequentially grouped together into blocks that are then chronologically chained together (hence “blockchain”) by **cryptographic locks and timestamps**. Any computers on the network can make a change to the ledger to submit a new transaction, but the block of data will be added to the chain only after verification of its validity by the other nodes.

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



TOPICS OF RELEVANCE



Domains (not exhaustive)	Potential applications	Users / Stakeholders
Fintech	<ul style="list-style-type: none">financial transactions and settlementsplatform for trading goods and servicesmoney transfer and cross-border payments	banks, trade financiers, stock exchange markets stakeholders, money transfer companies
Insurance	<ul style="list-style-type: none">automate claims processing through smart contractssecuring medical recordsclaims settlement and compliance checks	(health) insurance companies, reinsurance companies, property & casualty insurers
Utilities	<ul style="list-style-type: none">contract and transaction recordingsmart grids IoT (solar cells, autonomous smart meters) management	Utilities companies, Transmission System Operators and Distribution System Operators
Supply chain management	<ul style="list-style-type: none">record transactionstracking assets and goodsaudit and inspection activitiescross-border payments	Logistics companies, retailers, railways, airports, food/goods producers, distributors, suppliers, and regulators
Institutional & Humanitarian activities	<ul style="list-style-type: none">Securing electronic health recordsvoting systemtax paymentsSecuring and monitoring supply chain	Institutions & governmental organisations, NGOs

→ THE POWER OF SPACE



Satellite
Navigation

GNSS are the main source of geo-referenced data. Satellite navigation may be instrumental for **geo-referencing and/or time-stamping transactions metadata**, for e.g. photographs used for insurance claims processing, timestamping of land titles transfer of ownership, assets tracking and tracing, etc.



Earth
Observation

Earth Observation imagery could **provide key information** in support of transactions and helping to reinforce trust between stakeholders (i.e. by providing evidence), and could **validate conditions of execution of smart contracts**. Examples of applications : assessing damage extent of flooding and fire events, monitoring oil tanks' volume or counting cars on retailers' big parking lots, providing meteorological parameters for electricity production forecast, etc.



Satellite
Communication

Satellite Communications could **extend blockchain service coverage** to reach users located in geographical areas with limited or no terrestrial communication infrastructures, and add **robustness** to the service by offering an alternative way to distribute the blockchain.

Satcom megaconstellation and 5G networks including terrestrial and satellite components will reinforce further these benefits by allowing users to access blockchain and pass transactions seamlessly and independently from their geographical position, in a cost-efficient and timely manner .

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**(*)

(*) <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 'Blockchain', **Germany, Ireland, Norway and United Kingdom have already pre-authorized the funding.**

→ HOW TO APPLY 1/2

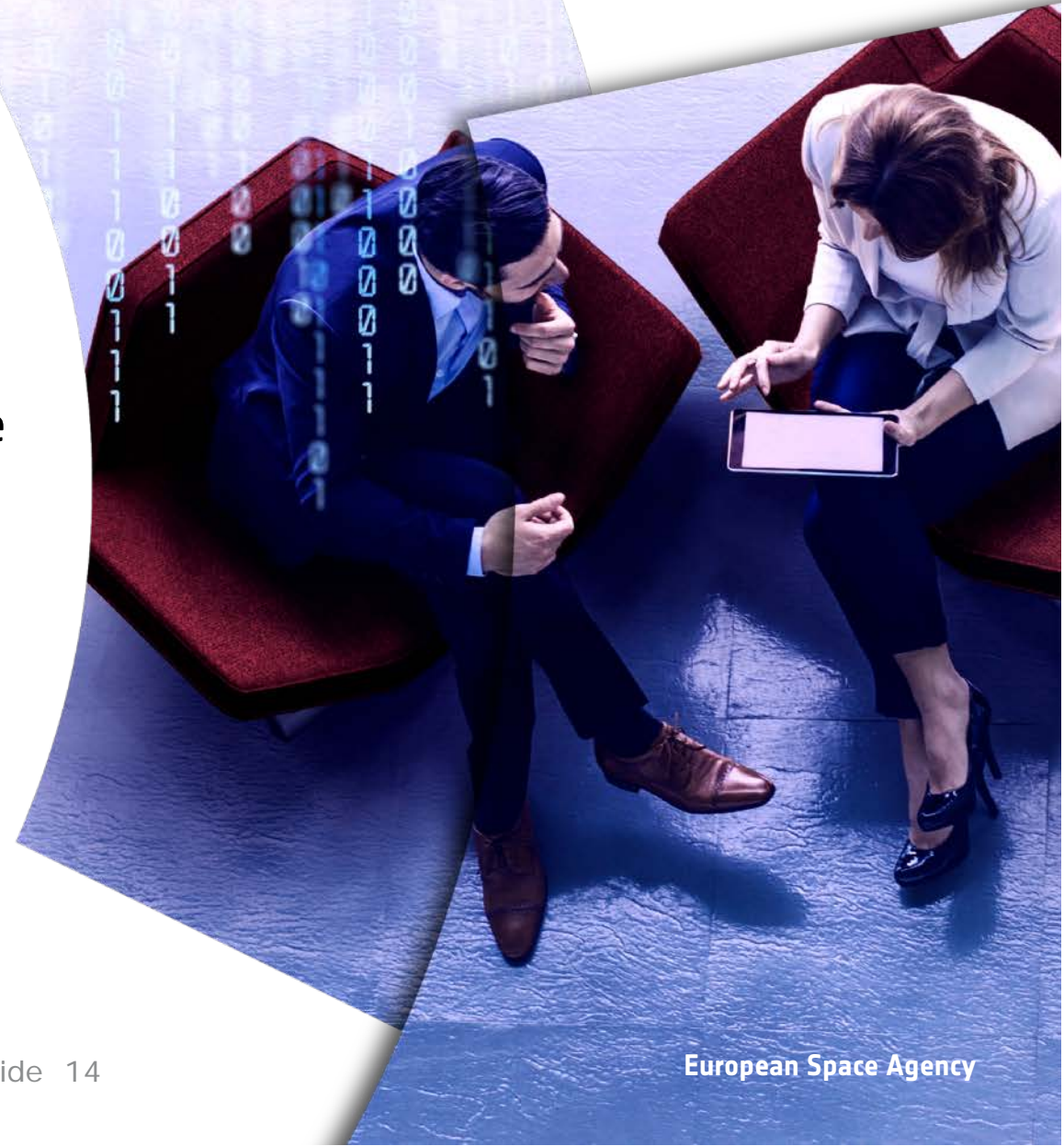
1. **Register** by completing online questionnaire on [ESA-STAR Registration](https://esastar-emr.sso.esa.int) (minimum 'light registration') (<https://esastar-emr.sso.esa.int>)
2. **Download** the official tender **documentation** (Invitation to Tender) via EMITS '[AO8872](#)' from [26th February 2019](#)
3. **Create** 'Bidder Restricted Area' in ESA-STAR
4. **Write your proposal** and obtain **Letter of Authorization** from [National Delegation](#), if needed.
5. **Submit** your proposal via 'Bidder Restricted Area' in [ESA-STAR Tendering](#) by [08th April 2019 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/emits/owa/emits.main>) under 'AO8872' 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



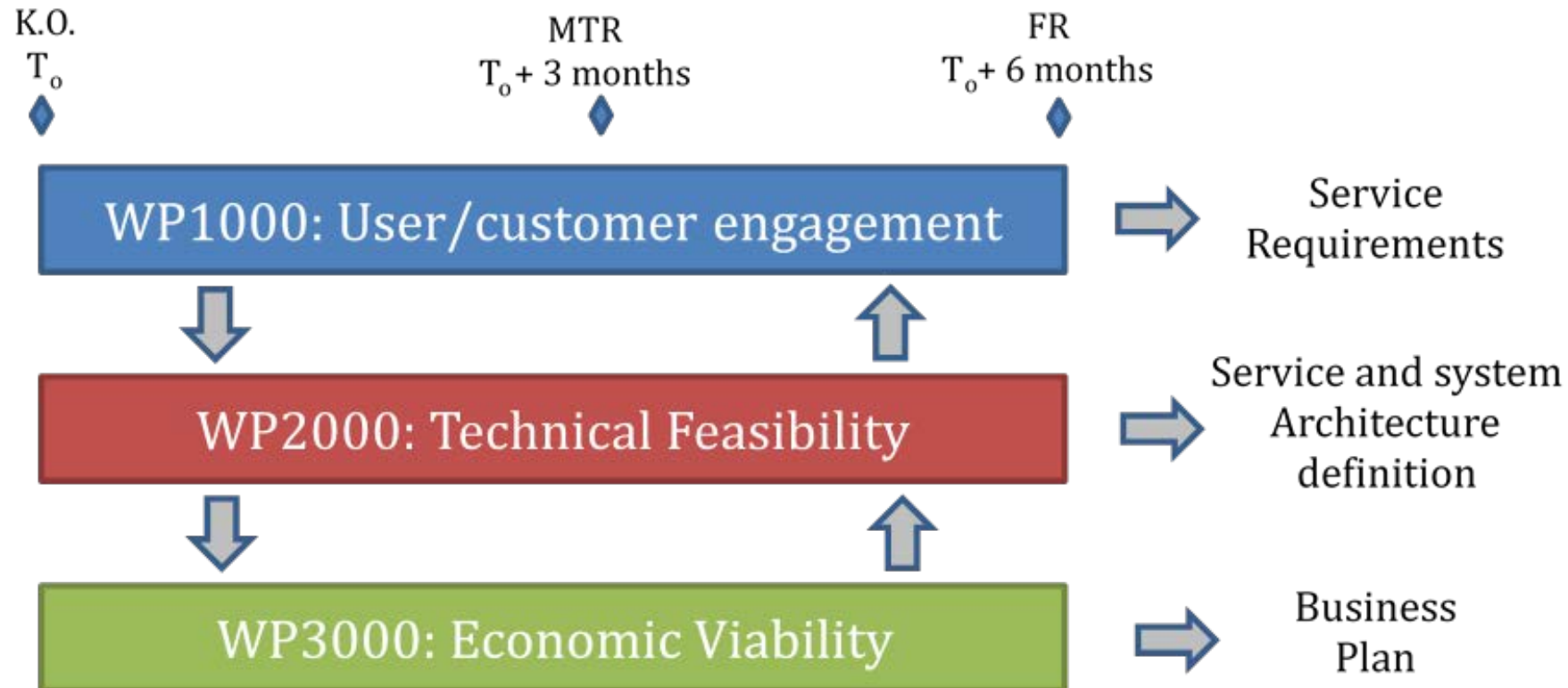
→ THE PROPOSAL TEMPLATE

Your Proposal shall include the following information:

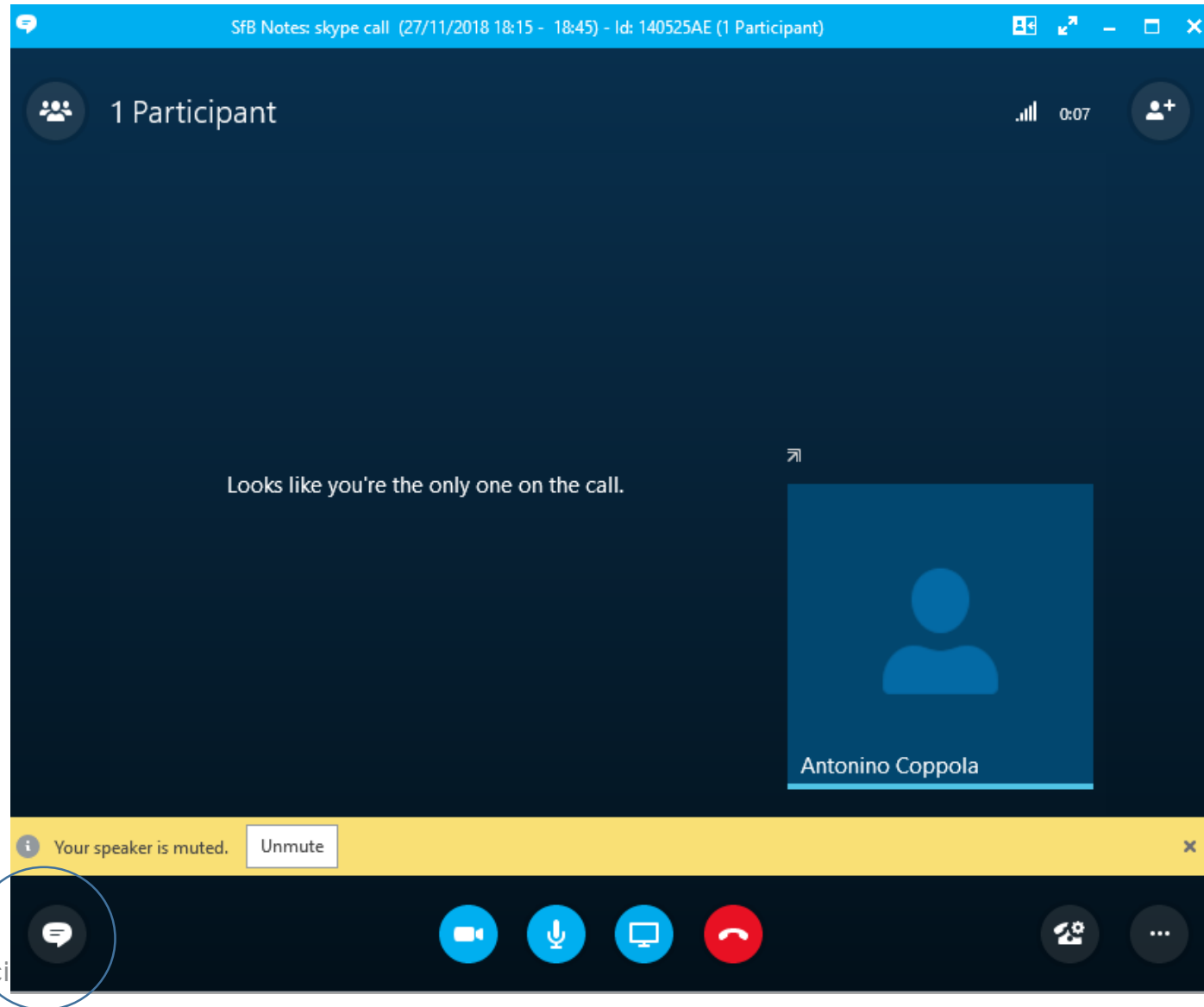
- 1) Executive Summary (max 1 page)
- 2) Business Potential (max 5 pages)
- 3) Technical Concept (max 5 pages)
- 4) Team and Resources (max 3 pages)
- 5) Management (max 4 pages)
- 6) Financials (max 2 pages)

Kick-Start Activity

→ Study Tasks



OPEN QUESTIONS & ANSWERS SESSION







→ THANK YOU FOR PARTICIPATING