

Arctic Region

Environmental & Economic Resilience

European Space Agency
Business Applications and Space Solutions



European Space Agency

Business Applications & Space Solutions

Arctic Region: Environmental & Economic Resilience Call for Proposals

How to Apply

Q&A

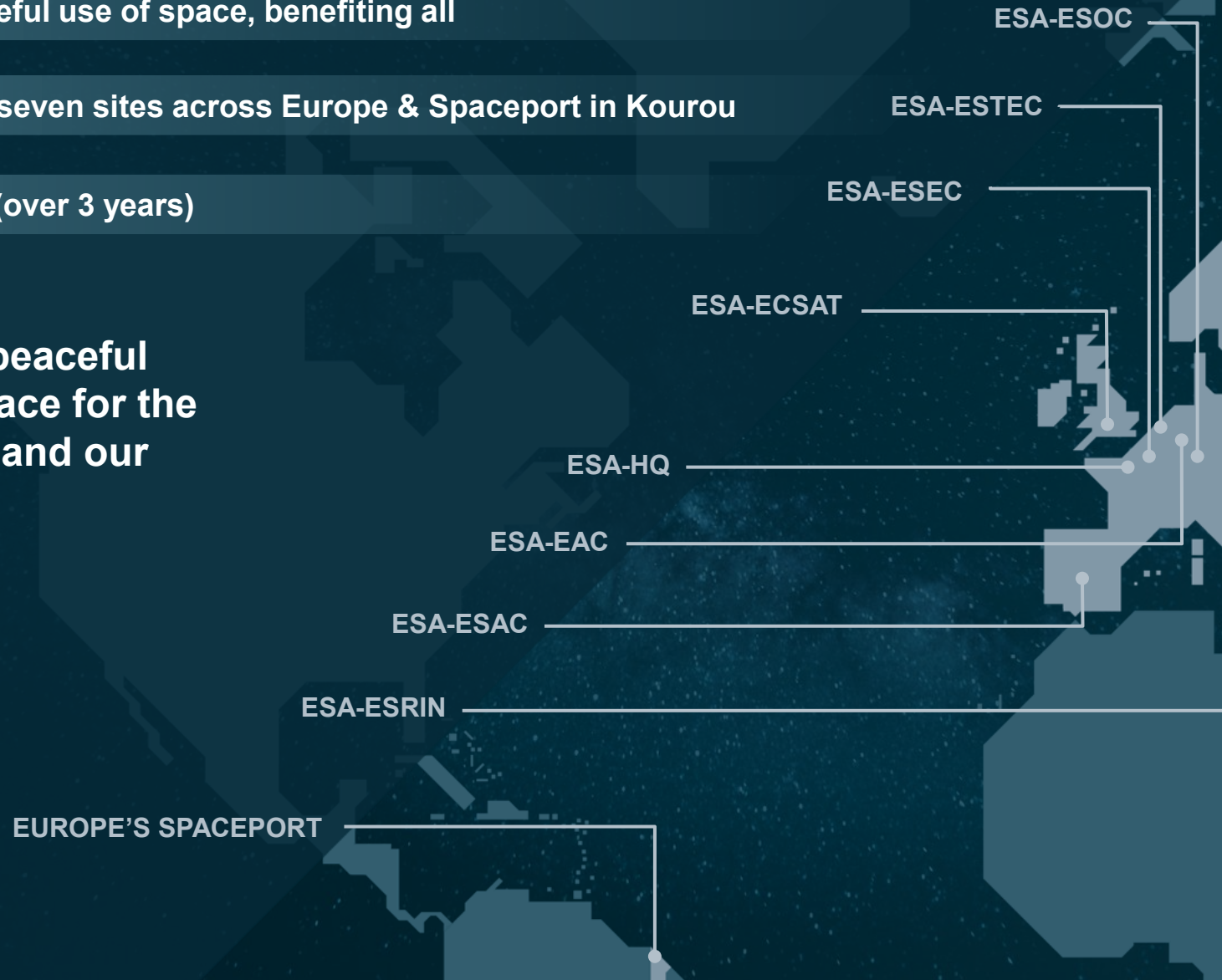
WHO 23 Member States, 2500+ staff members and total workforce of 6000+

WHY For the peaceful use of space, benefiting all

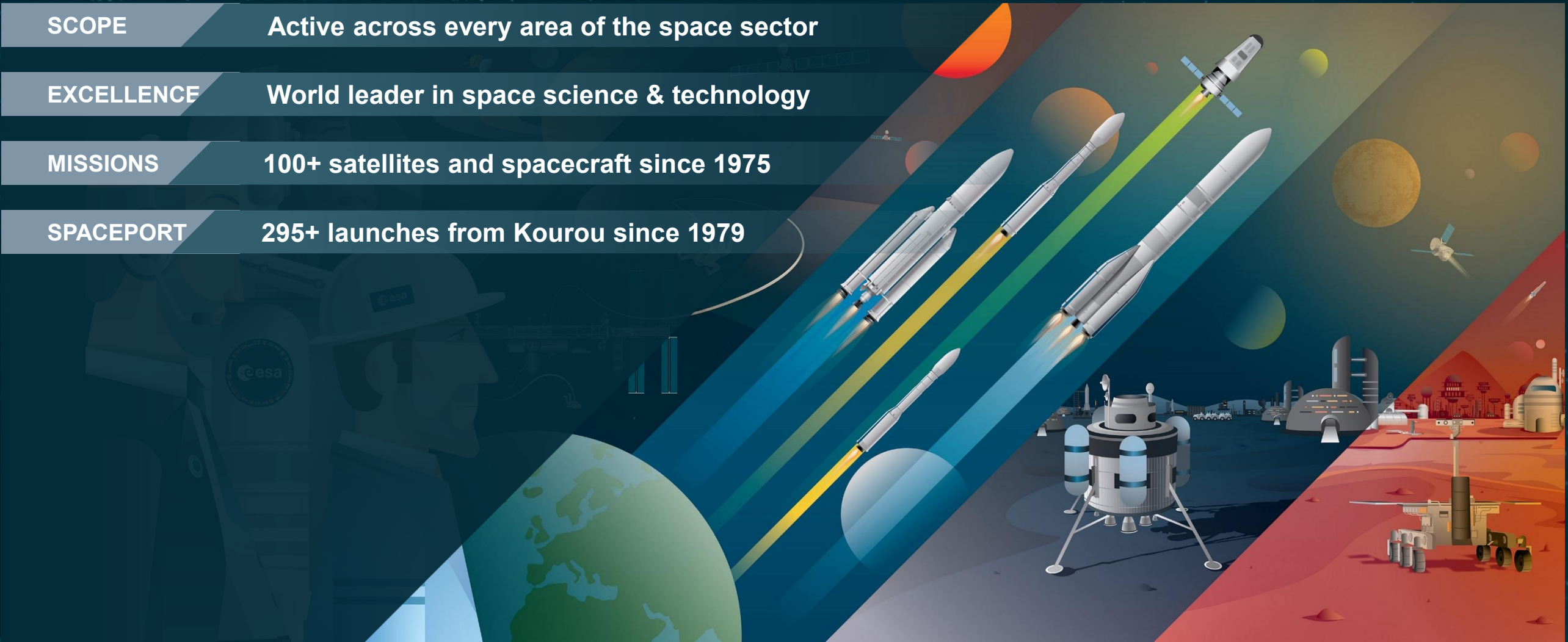
WHERE HQ in Paris, seven sites across Europe & Spaceport in Kourou

BUDGET €22.1 billion (over 3 years)

We are committed to the peaceful exploration and use of space for the benefit of people, society and our planet



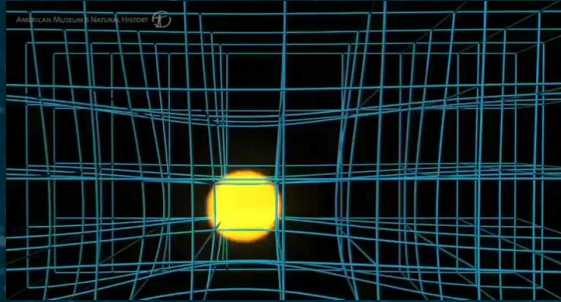
SCOPE	Active across every area of the space sector
EXCELLENCE	World leader in space science & technology
MISSIONS	100+ satellites and spacecraft since 1975
SPACEPORT	295+ launches from Kourou since 1979



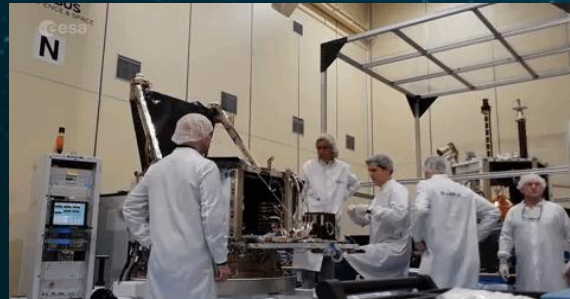
Four pillars. One ESA.



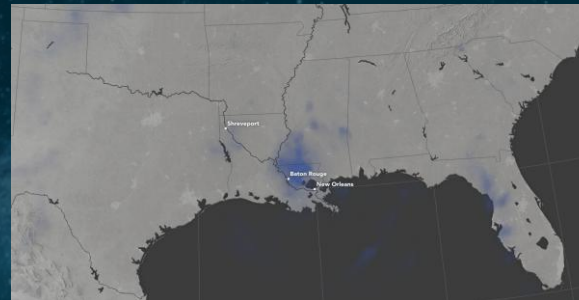
Science and Exploration



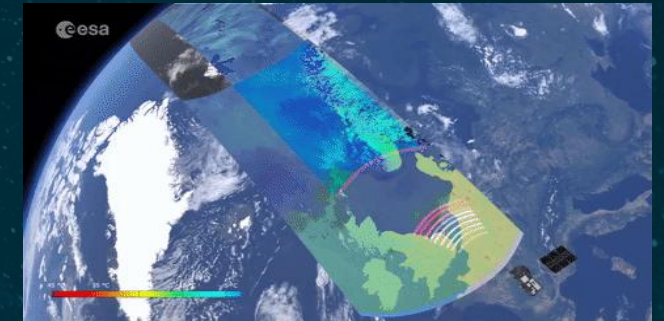
Enabling and Support



Safety and Security



Applications

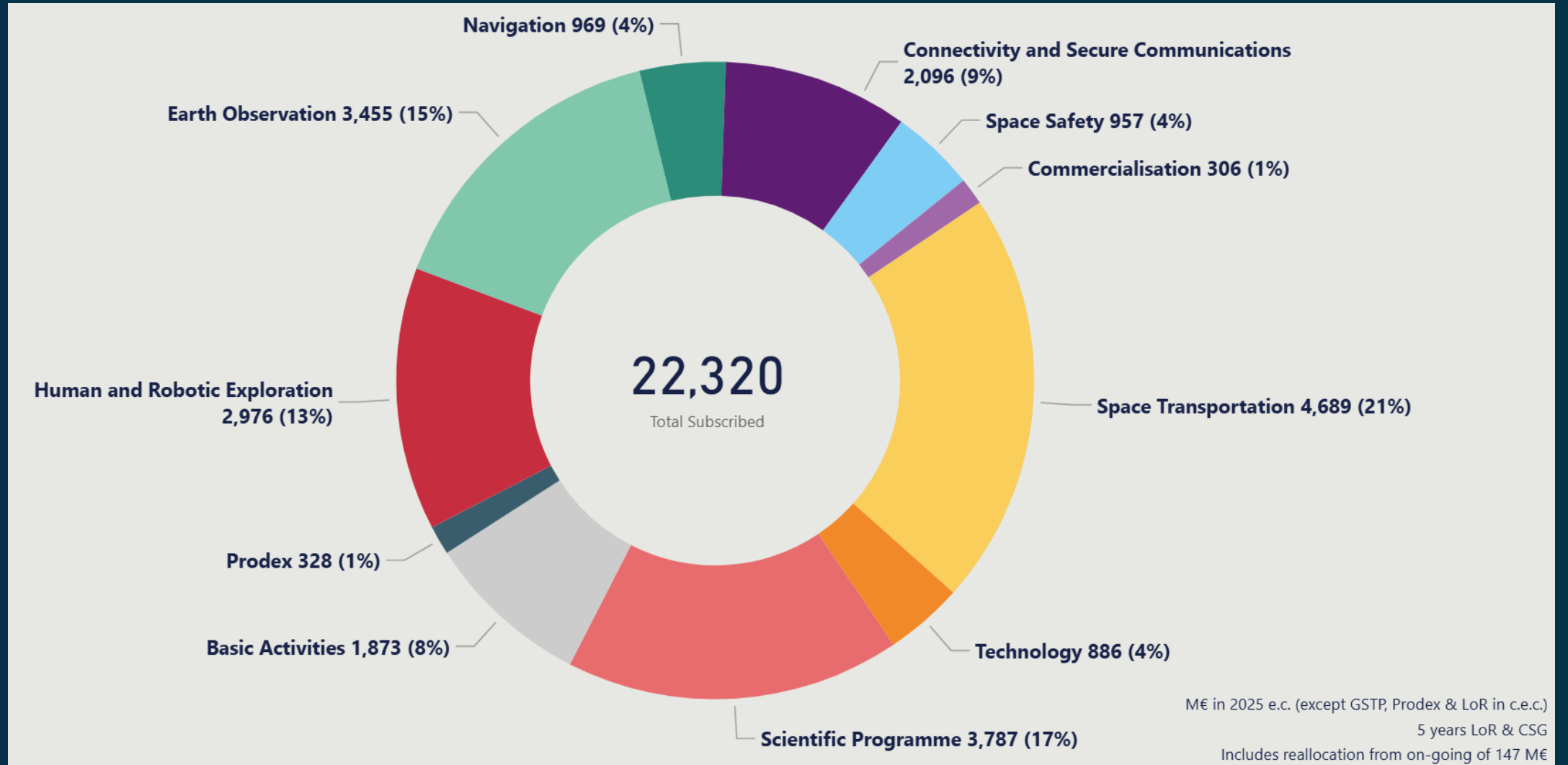


Total Subscriptions at CM25

22.3 B€

+32% compared to 2022
+17% if corrected from inflation

CONTRIBUTIONS SPLIT



Who benefits?



Applications

BUSINESS APPLICATIONS AND SPACE SOLUTIONS

**Supporting European
companies to develop
businesses using space
technology and data.**

Space Technology...

X

... non-Space Technology...

=

Added-Value...



Big Data Analytics

VR/AR/XR

Artificial Intelligence

Distributed Ledger

Technology

Robotics

Internet of Things

Digital Twins

Drones

Cloud Technologies

5G (<https://artes.esa.int/esa-5g6g-hub>)



Maritime



Environment



Financial



Education



Energy



Agriculture



Healthcare



Transport



Media



Aviation

What can you do with Space Technology?

Satellite Positioning



Global Positioning
Navigation
Velocity
Precision Timing
Activity Tracking
Route Optimisation
Surveying
Machine Control

Satellite Communication



Reliable and Secure
Communication
Remote Connectivity
Backup to Terrestrial
Infrastructure
Broadcast to
Widespread Users

Earth Observation



Land, Sea, Air Monitoring
Infrastructure Monitoring
Resource Mapping
Environment Sensing
Change Detection
Weather and Pollution
Forecasting

Human Spaceflight Technologies (Spin-Outs)



Augmented Reality
Health Sensors
Procedures
Big Data Processing
Artificial Intelligence

Zero equity funding

BASS supports ideation, development and demonstration of commercial sustainable services and products exploiting space technologies

- Activities are proposed by companies responding to **thematic call** for proposals or **permanently open call** for proposals.
- Support to increase applications and market readiness: **market roll-out** and **adjacent market growth**.
- **Creation of "BASS Alumni Network"** : opportunities for match-making with market sector leads, investors, task force partners and support to International event participation.



Co-funding from ESA, IPRs remain with companies



Technical and business guidance from ESA

WHAT ESA OFFERS



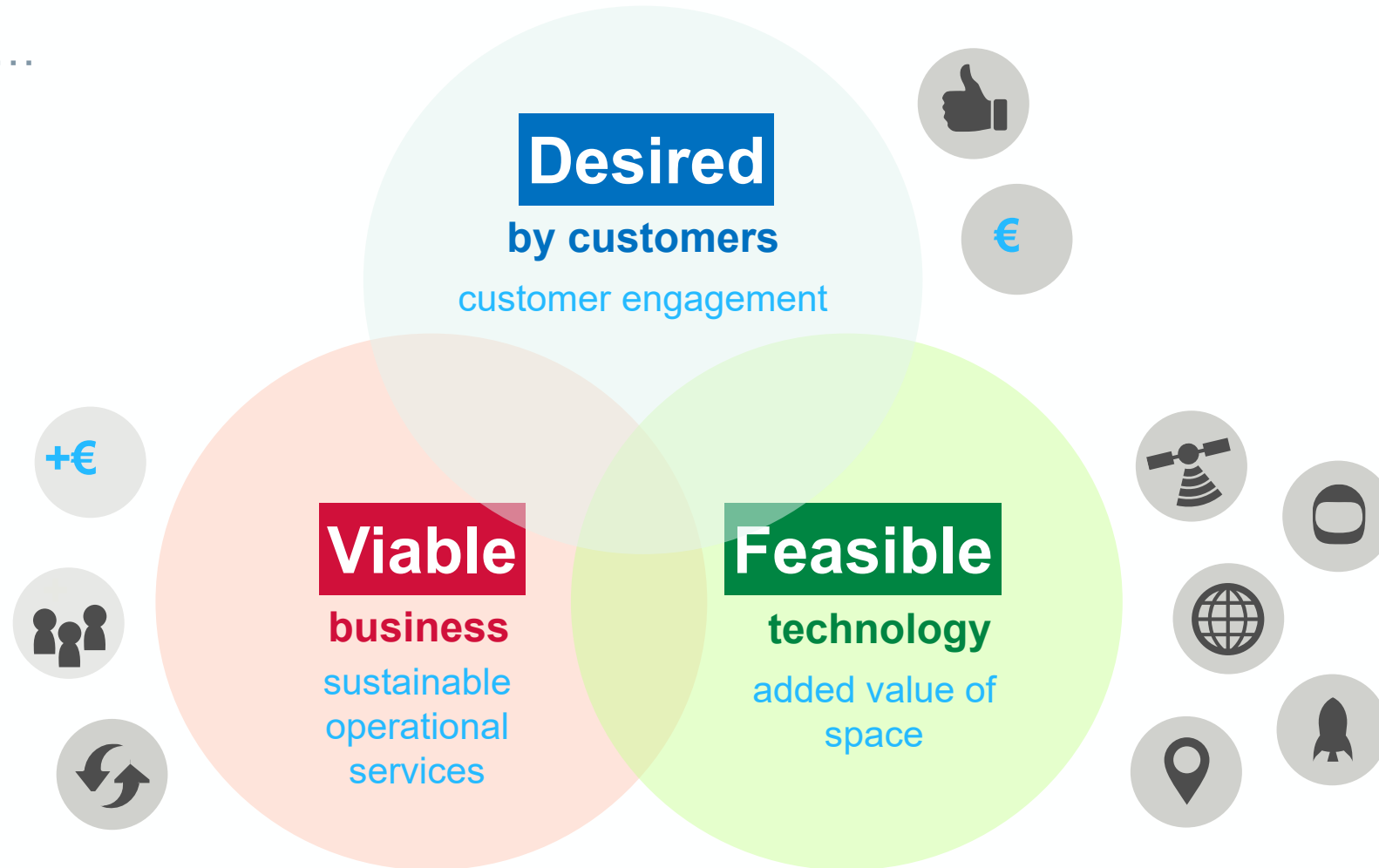
Association with the ESA Brand



Incremental and interactive project process with dedicated team

What are we looking for?

Services that are...



What's in it for us?



SOCIO-ECONOMIC IMPACT

Deliver **social value** and **economic sustainability**



USE OF SPACE TECHNOLOGY AND DATA

Expand the **utilisation of space** in **new markets** and **user communities**



INDUSTRY COMPETITIVENESS

Strengthen **European Industry competitiveness** on the **global space** and **non-space markets**



Cooperations with Non-Space Stakeholders*

* These are entities who do not receive funding from ESA through the cooperation but have mutual objectives in running initiatives with ESA



Arctic Region

- ENVIRONMENTAL AND ECONOMIC RESILIENCE

Call for Proposals





Objective

Develop space-enabled solutions that address current and emerging challenges in the Arctic. By extension, and virtue of their similarities, solutions may be applied to the Antarctic Region as well.

The following (non-exclusive) focus areas are

- Maritime Security
- Critical Infrastructure Protection
- Ice Charting, Collision Avoidance and Navigation
- Search and Rescue
- Aquaculture and Fishery Resilience
- Environmental Protection



The role of space technology

- **Satellite Earth observation** may support everything from “dark” vessel detection through sea ice mapping and land subsidence monitoring.
- **Satellite communications**
 - Can be used to backhaul sensing devices used for aquaculture and fishery monitoring.
 - Secure and resilient connectivity during outages or emergencies
- **GNSS** is critical to navigation of aerial platforms and geo/timestamping of data collection, with potential applications in search and rescue.



- The Arctic is warming roughly 2-4 times faster than the global average, with recent observations often showing $\sim \times 3-4$
- Arctic conditions (remoteness, ice, poor infrastructure) mean disproportionately high risk or operational constraints



The Arctic: A Region Under Pressure

Rapid environmental & economic transformation

- Sea ice **-40%** since 1979 (~ -12%/decade)
- Opening routes = more ships and longer seasons:
Arctic ship traffic **+40%** from 2013–2025 (Arctic Council)
- Arctic economy tripled since 2003 (~\$666B, ECONOR 2025)

Rising risks

- Pollution (oil spills, plastics, emissions)
- Ecosystem disruption
- Safety and operational challenges

Impacts on

- Ecosystems
- Communities
- Economic activities (e.g. fisheries)

 Strong need for operational, scalable solutions



I – Environmental Protection & Climate Resilience

→ APQ opening 4th of June 2026 – Closing 4th of September 2026

Topics of relevance:

- Aquaculture and Fishery Resilience
- Environmental Protection



II - Safety, Navigation, and Operations

→ APQ opening 5th of September 2026 – Closing 5th of November 2026

Topics of relevance:

- Ice Charting, Collision Avoidance and Navigation
- Search and Rescue



III - Security & Critical Infrastructure Protection

→ APQ opening 6th of November 2026 – Closing 6th of January 2027

Topics of relevance:

Key capabilities:

- Maritime Security
- Critical Infrastructure Protection



Aquaculture & fishery

Resilience

- Improved climate projections in coastal areas
- Early warning systems:
 - Marine heatwaves
 - Extreme weather events(e.g. storms, blizzards)
- Monitoring of:
 - Algal blooms
 - Jellyfish invasions
 - Disease outbreaks
- Understanding environmental impact on production

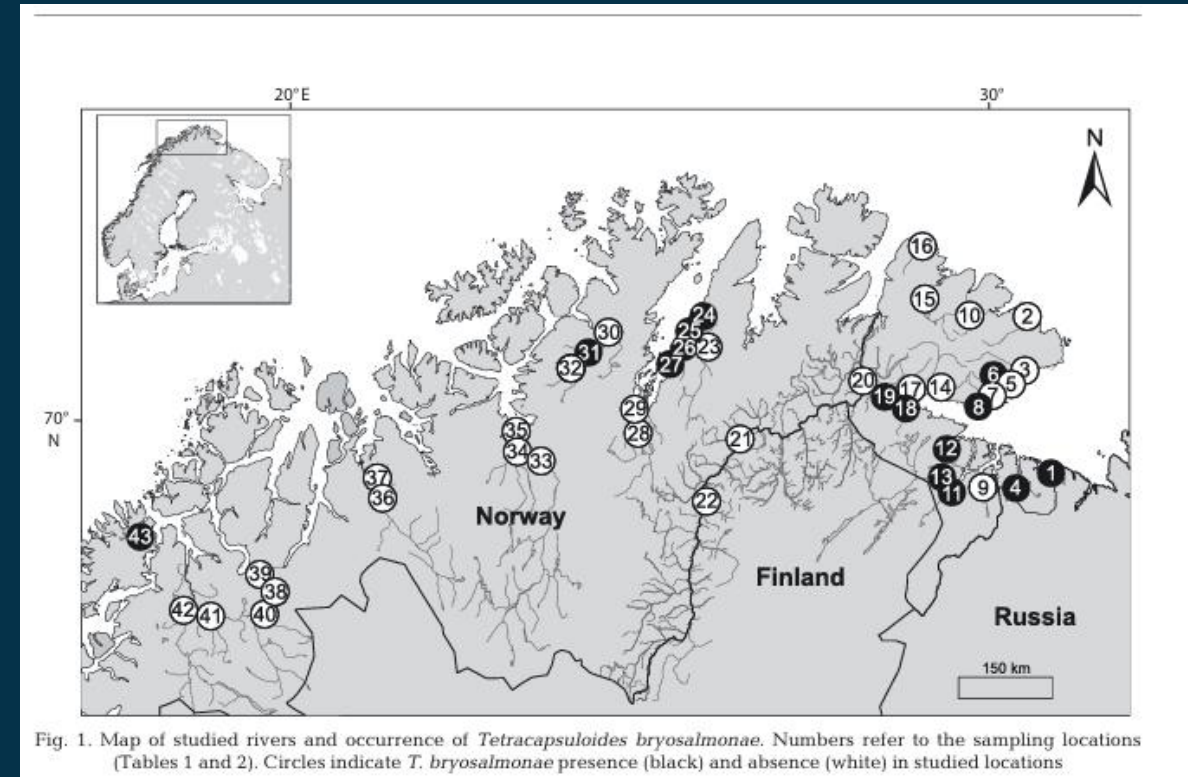


Figure of the spread of a species of parasite jellyfish affecting salmon (infected-black, white-not infected)
Lauringson et al.2022

Operational Gaps Today

- Limited predictive capabilities
- Fragmented data sources
- Lack of continuous monitoring
- Poor integration between data and decision-making

→ Results

- Operational risk
- Economic losses
- Reduced resilience

Demand for

- Environmental risk, detection, warning, monitoring & dashboards
- Predictive environmental intelligence
- Operational decision-support tools

Target customers

- Aquaculture operators
- Fisheries
- Public authorities
- Insurers

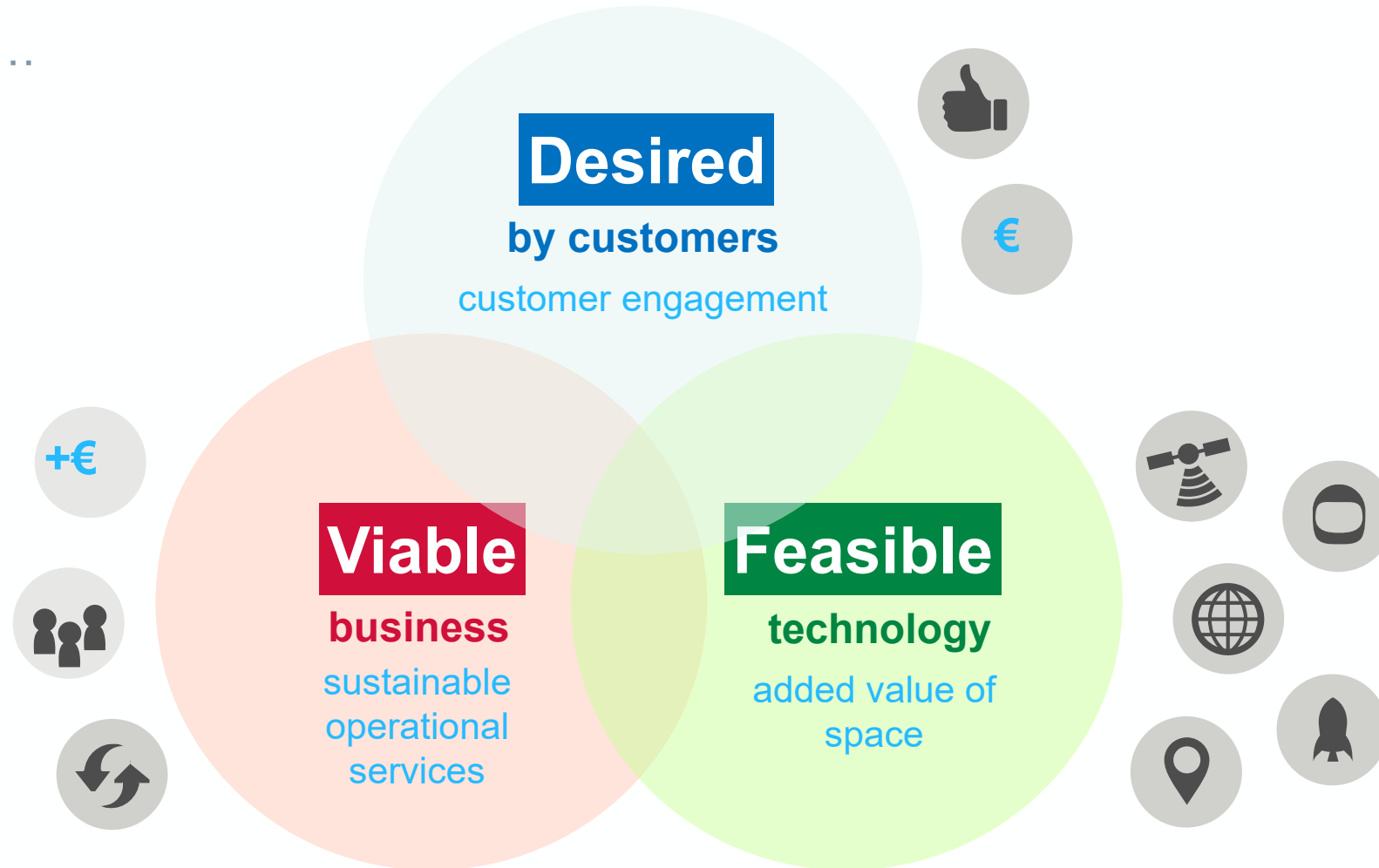
The role of space technologies

Enabling operations at Arctic scale

Challenge	Space-enabled solution	Operational value
Remote & harsh environments	Satellite Communication	Reliable connectivity where terrestrial networks fail
Large, fragmented areas	Earth Observation	Continuous, large-scale monitoring & detection
Tracking assets & events	GNSS	Accurate positioning and time-stamping of data
Limited visibility & access	Multi-source integration (EO + GNSS + SatCom)	Real-time situational awareness

What are we looking for?

Services that are...



How to Apply...

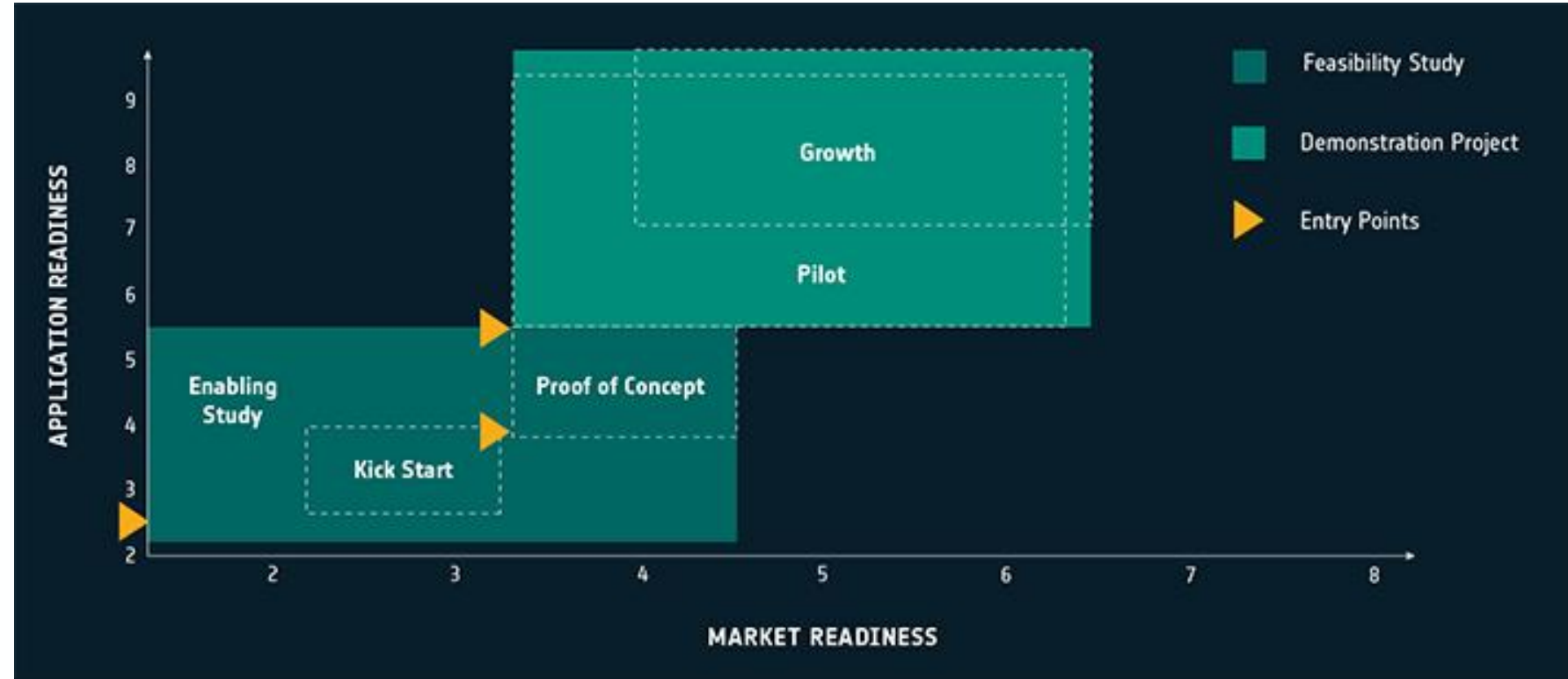
Proof-of-Concept & Pilot Project

Proof-of-Concept Studies:

- 9-12 months
- Investigate the technical feasibility and commercial viability

Pilot Project:

- 12-24 months
- Develop and demonstrate the operational service



Open Call for Proposals: Proof-of-concept Studies and Pilot Projects

Who can apply?

To be **eligible for funding**, your team must be based in one of the **following countries**:

Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom and Canada.

If you are considering applying, you must **inform your National Delegation** to obtain a **Letter of Authorisation** allowing the funding of the proposed activity. Contact details of each National Delegate can be found here:

<https://business.esa.int/national-delegations-0>

Exception: Denmark & Norway national delegations has pre-authorized the budget for this call (400keuros overall)

- More information here: [How to apply to the Proof-of-concept Study and Pilot Project Open Call | ESA Space Solutions.](#)



How to apply – Activity Pitch Questionnaire (APQ)



1. (WHO) Company Background Information
2. (WHAT) do you want to offer your customers and what is the added-value?
3. (WHY) Who are the target beneficiaries addressed by your offer, and what is the expected impact?
4. (HOW) How do you intend to implement?

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ACTIVITY PITCH QUESTIONNAIRE (APQ)

ESA-TIAA-PO-2017-1054 - V. 3.19

The Activity Pitch Questionnaire (APQ) allows you to present your business idea in a reduced, standardised pitch. It helps ESA to quickly take informed decisions on next steps, pointing you to the most appropriate activity stream in case the APQ is considered acceptable (e.g., additional preparatory work, training, teaming up with some other partners, go ahead targeting a Feasibility Study or a Demonstration Project).

Gated and incremental approach: The submission process is based on the following three stages: the Activity Pitch Questionnaire (this form), the Outline Proposal, and the Full Proposal. In case the APQ is accepted by ESA, the answers to the questions of this APQ will be directly integrated in the Outline Proposal and extended as needed. In a similar way, the elements of the Outline Proposal, if accepted by ESA, can be directly integrated in the Full Proposal.

Activity Pitch Questionnaire (APQ) → Outline Proposal → Full Proposal

Prepare your pitch:

- Make sure you use the **LATEST VERSION** of the [APQ template](#).
- Explanations of terminology used here can be found in the document [Terminology used in ESA Business Applications](#).
- Some explanations on how to prepare the APQ are available in the presentation [ESA Business Applications - Guidelines for APQ Preparation](#).
- Choose the appropriate Open or Thematic Call. For further details, visit [ESA Opportunities for Open Calls](#).

Call: Activity:

"Please be aware, it's important to ensure you have selected the right options."

Submit your pitch:

- Contact your National Delegation¹ as specific rules may apply depending on your country.
- Please note that for a given idea, **ONLY ONE** APQ submission is possible (no subsequent submission of revised APQ Form(s) is allowed!).
- The APQ has a validity of **ONE YEAR**: in case of no draft of Outline Proposal is submitted within one year from the date of the APQ submission, the APQ will be considered by ESA as withdrawn.
- Your APQ shall be submitted using the **online web form submitter** accessible at [APQ Submit](#)¹. Please note that only PDF formats are accepted.

Activity Pitch Process:

Upon submission of your Activity Pitch Questionnaire:

- ESA may provide this Activity Pitch Questionnaire to and discuss it with the National Delegations of the countries of your consortium.
- ESA will assess your pitch.
- ESA will provide written feedback typically within 10 working days from the date of the APQ submission.

¹ Contact details of the National Delegations can be found under: <https://business.esa.int/national-delegations>

For Greek entities, please note that Greece does not support non-competitive bids, therefore Greek proposals are not admissible under in this call.

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Important Note:

- For optimal viewing and accurate completion of the template, please download and install the latest version of [Acrobat Reader](#), which is available for free.
- Click on "i" for more information.

Section AP.1 Background information

i AP.1.1 Idea name:

Brand name: Full name:

i Thematic market area

Primary 1: Subcategories 1:

Primary 2: Subcategories 2:

Keywords 1: Keywords 2: Keywords 3:

i AP.1.2 Basic company information

Name: Website:

Address: Country: Phone:

Contact point name: Email:

i AP.1.3 Company background

Year of creation: Revenues (Most recent figure in EUR) / Year:

Number of employees: Industry / sector:

Coming from ESA BIC(*): (*) If Yes, conclusion date of BIC contract: mm/yyyy

More details:

i AP.1.4 Have you had any previous activities within Business Applications?

If Yes, indicate name of any previous activities and possible commercial outcomes

Max 270 characters (no spaces)

i AP.1.5 Are you applying with sub-contractors?

If Yes, who are the other entities?

Name:	Website:	Industry:	Country:
Name:	Website:	Industry:	Country:
Name:	Website:	Industry:	Country:

Roles in Activity:

Max 360 characters (no spaces)

Thank you!

For more information:

[ESA Space Solutions](https://business.esa.int/)

<https://business.esa.int/>

Reach out to:

Guillaume.prigent@esa.int



Questions?