Arctic Region Security & Critical Infrastructure Protection

European Space Agency
Business Applications and Space Solutions

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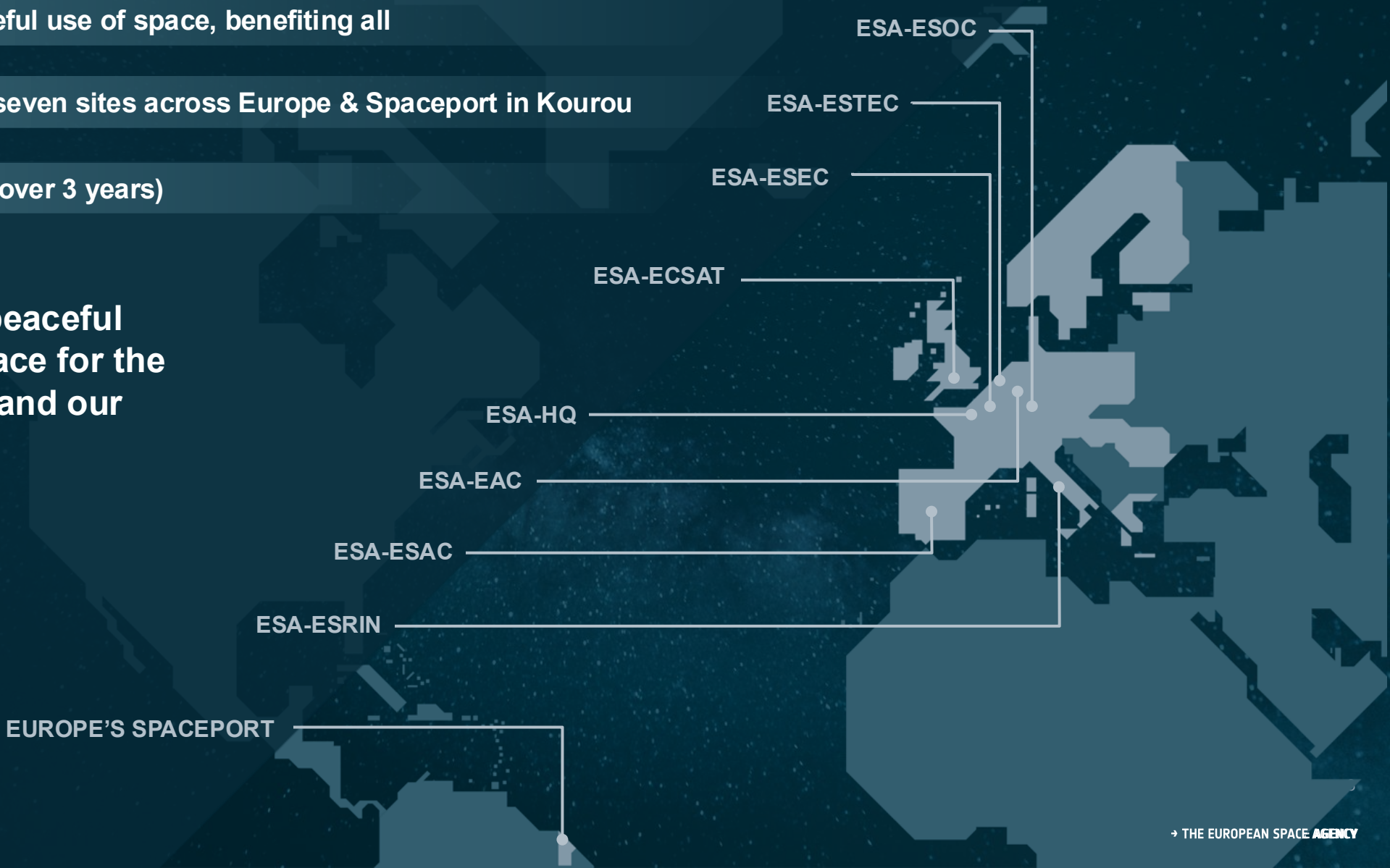
Agenda

- European Space Agency
- Business Applications & Space Solutions
- Arctic Region: Security & Critical Infrastructure Protection 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



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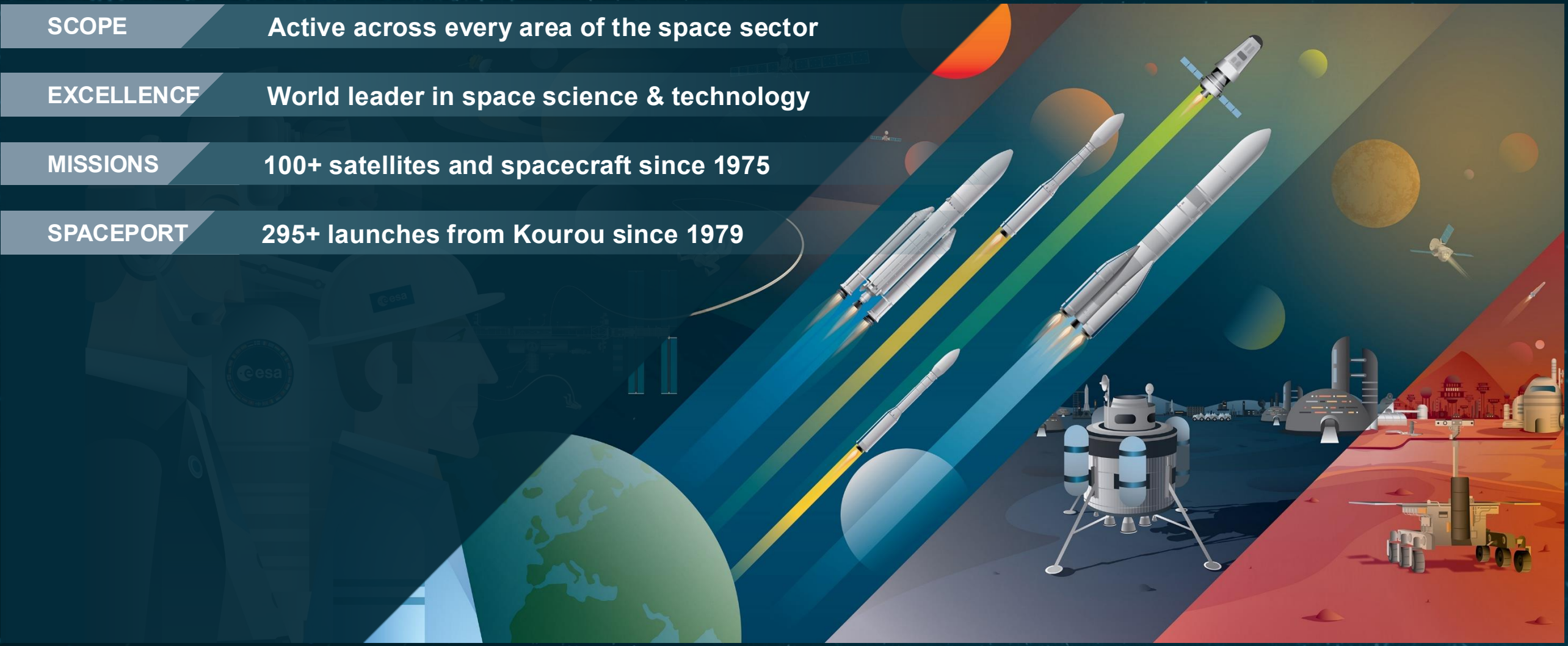
SCOPE	**Active across every area of the space sector**
EXCELLENCE	**World leader in space science & technology**
MISSIONS	**100+ satellites and spacecraft since 1975**
SPACEPORT	**295+ launches from Kourou since 1979**



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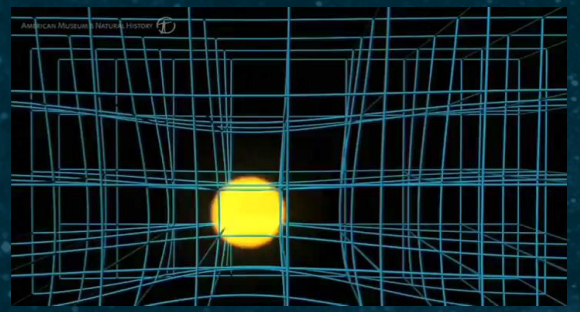
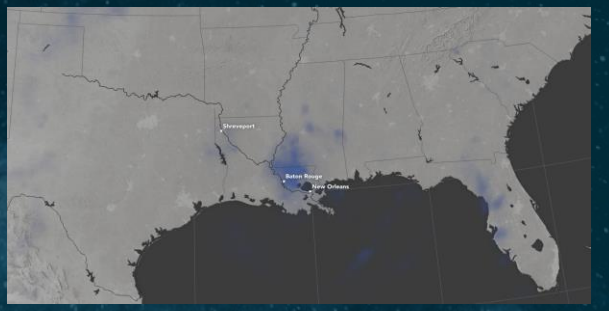
Four pillars. One ESA.

Science and Exploration

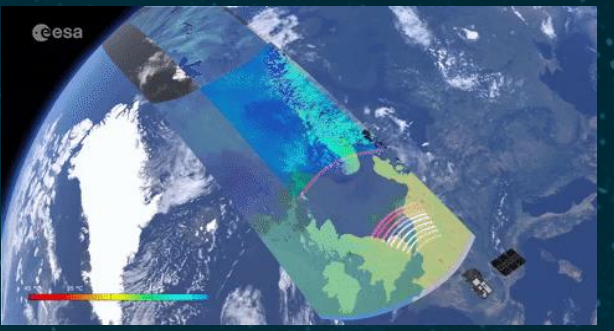


Enabling and Support

Safety and Security



Applications



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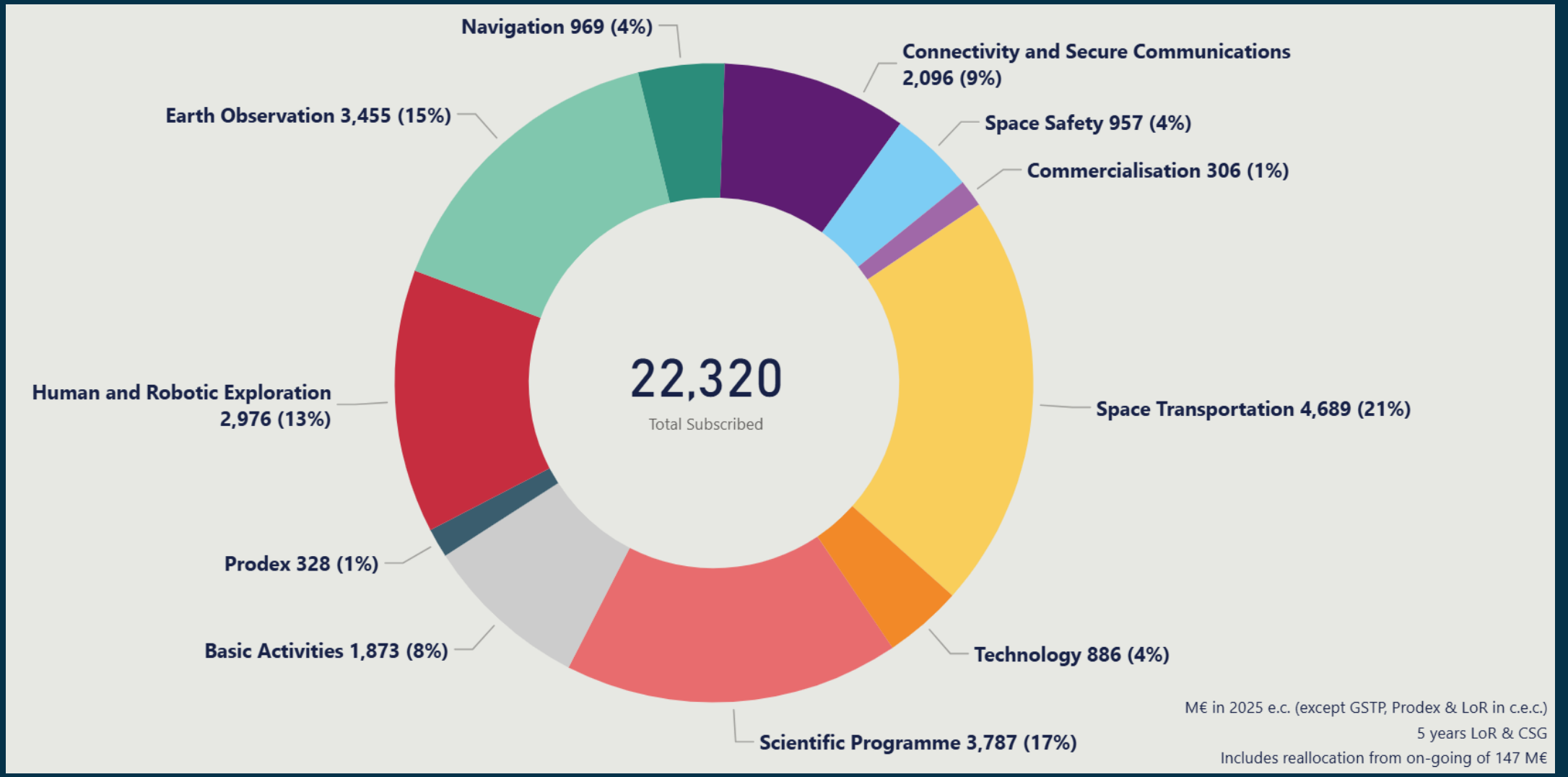
Total Subscriptions at CM25

22.3 B€

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

CONTRIBUTIONS SPLIT



M€ in 2025 e.c. (except GSTP, Prodex & LoR in c.e.c.)
5 years LoR & CSG
Includes reallocation from on-going of 147 M€

Applications

BUSINESS APPLICATIONS AND SPACE SOLUTIONS

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

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Using any space asset(s) and integrating them with terrestrial assets for the benefit of life on Earth

Space Technology…	X	… non-Space Technology…	=	Added-Value…
Earth Observation		Big Data Analytics		Maritime
Satellite Positioning		VR/AR/XR		Agriculture
Satellite Communication		Artificial Intelligence		Environment
Spaceflight Technologies		Distributed Ledger Technology		Healthcare
Space Weather		Robotics		Financial
		Internet of Things		Transport
		Digital Twins		Education
		Drones		Media
		Cloud Technologies		Energy
		5G (https://artes.esa.int/esa-5g6g-hub)		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

What ESA BASS offers

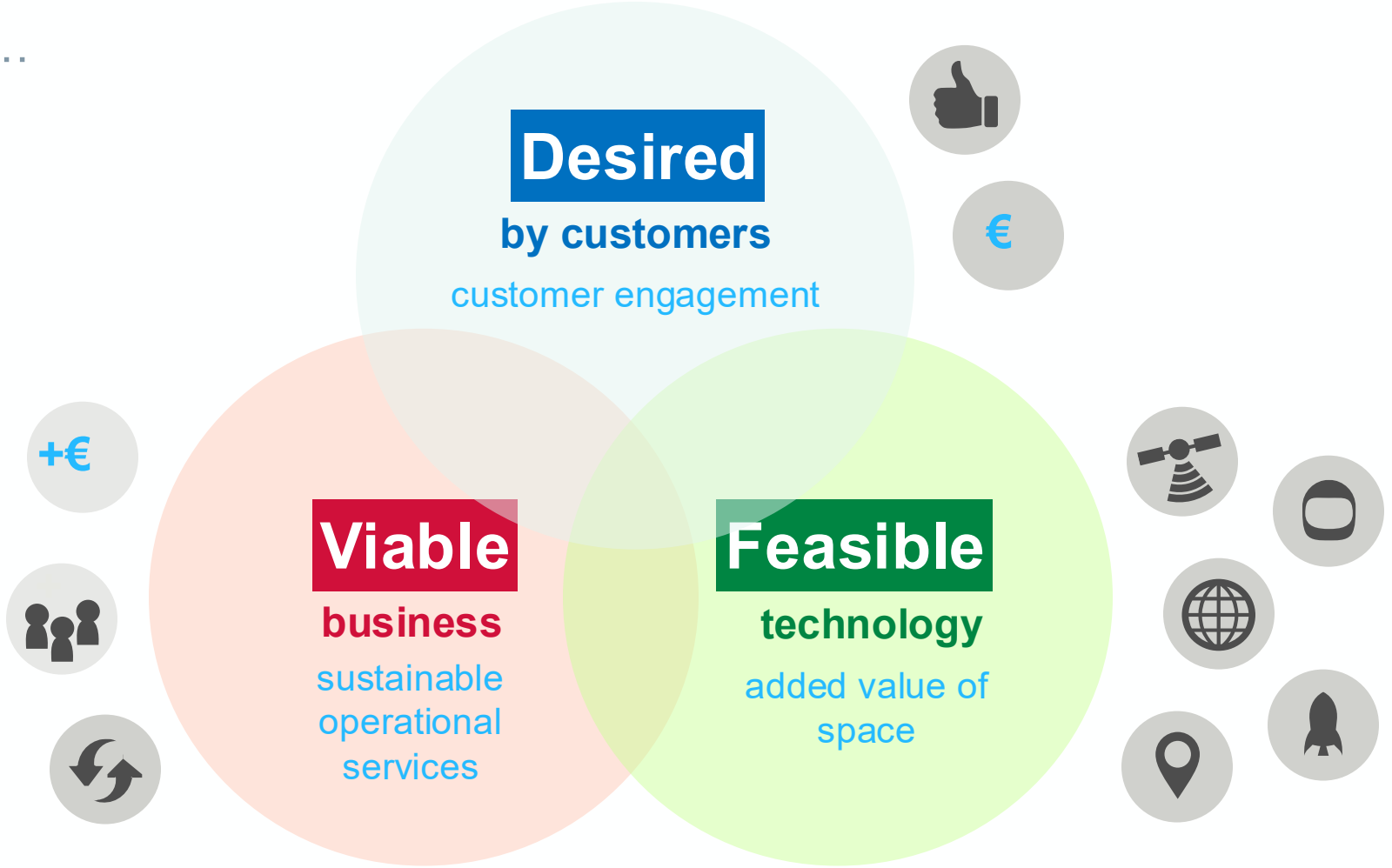
Zero equity funding

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.

What are we looking for?

Services that are…



What's in it for us?

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

SOCIO-ECONOMIC IMPACT

Deliver social value and economic sustainability

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
-
Security & Critical Infrastructure Protection
-
Call for Proposals

Space-enabled services for Arctic security and infrastructure resilience.

CALL OBJECTIVE - Sub Theme 3

Strengthen security and critical infrastructure resilience

Non-aggressive protective and resilience-enhancing services.

01 EARTH OBSERVATION

Monitor assets and activity

- Monitor infrastructure, geohazards and maritime activity using satellite data.

02 SATELLITE COMMUNICATIONS

Maintain remote connectivity

- Connect remote monitoring systems and share alerts beyond terrestrial coverage.

03 GNSS

Support positioning and awareness

- Use positioning data and interference indicators to support protective services.

OUTCOME **Actionable awareness and infrastructure resilience**

Growing activity, increasing vulnerability

Growing Arctic activity increases exposure to security threats and climate-driven damage.

01	MARITIME ACTIVITY	New routes and resource access increase activity, alongside unlawful activity and strategic competition.
02	CLIMATE-DRIVEN DAMAGE	Permafrost thaw, coastal erosion, flooding and wildfires threaten infrastructure and communities.
03	SECURITY ANOMALIES	Dark vessels, GNSS interference and uncooperative drones can affect assets and operations.
04	REMOTE ASSETS	Remote transport, energy, telecommunications and monitoring assets need persistent awareness.

IMPLICATION **Protect assets and improve resilience through operational services.**

From vulnerability to actionable awareness

Threats and vulnerabilities create a need for timely, evidence-based protective services.

01 CAUSE
Threats and vulnerabilities

- Permafrost thaw and coastal erosion
- Unlawful or anomalous maritime activity
- GNSS interference and uncooperative drones

→

02 EFFECT
Asset and operational impact

- Structural deterioration and failure risk
- Disruption to infrastructure and operations
- Gaps in detection and situational awareness

→

03 RESPONSE
Service response

- Infrastructure and geohazard monitoring
- Maritime awareness and anomaly alerting
- Timely alerts and forensic evidence

OUTCOME ## Non-aggressive protection and resilience

Part 3 addresses two complementary focus areas:

1. **Maritime Security**
2. **Critical Infrastructure Protection**

Structure of the Arctic Call

I – Environmental Protection & Climate Resilience (Closed)

→ APQ window: 4 June–4 September 2026

Focus:
Environmental monitoring and protection
Fisheries, aquaculture and climate resilience

II – Safety, Navigation & Operations

→ APQ window: 5 September – 5 November 2026

Focus:
Ice and weather monitoring, route planning
Search and rescue, situational awareness

III – Security & Critical Infrastructure Protection

→ APQ window: 6 November 2026 – 6 January 2027

Focus:

Maritime surveillance and anomalous activity
Critical infrastructure protection and resilience

Proposal Areas

Maritime Security

Space-enabled services improve maritime awareness and protective alerting around Arctic assets.

PROPOSALS MAY ADDRESS

Illustrative service opportunities

01 Maritime domain awareness

02 Dark-vessel detection and monitoring

03 Threat and proximity-anomaly alerting

04 GNSS interference indicators around maritime assets

05 Cyber-resilience telemetry via satellite for energy, subsea telecoms and maritime assets

ILLUSTRATIVE SERVICE CHAIN

From observation to protective awareness

- **DETECT** — Vessels and anomalous activity
- **CHARACTERISE** — Activity, location and proximity to assets
- **ASSESS** — Indicators and context for protective awareness
- **ALERT** — Timely information for relevant authorities
- **SUPPORT** — Situational awareness and forensic evidence

Proposal Areas

Critical Infrastructure Protection

Non-aggressive protective and resilience-enhancing services with identified users and operational outputs.

PROPOSALS MAY ADDRESS

Illustrative service opportunities

01 Structural integrity monitoring of critical infrastructure

02 Prediction and detection of deterioration and failure risk

03 Permafrost thaw, coastal erosion and thermokarst mapping

04 Improved spatial and temporal geohazard information

05 Persistent detection of anomalies near critical assets

06 Timely alerting and forensic evidence for GNSS interference, anomalous activity and uncooperative drones

ILLUSTRATIVE SERVICE CHAIN

From monitoring to resilience

- **DETECT** Deterioration, geohazards and anomalies
- **LOCATE** Affected assets and surrounding hazards
- **ALERT** Relevant operators and authorities
- **SUPPORT** Engineering, risk assessment and resilience

The role of space technologies

Space capabilities support protective awareness and infrastructure resilience.

FROM CONSTRAINT TO SERVICE VALUE

Space-enabled service value - Illustrative examples

	Operational challenge	Space capability	Service value
01	Infrastructure and geohazard exposure	**Earth observation**	Monitor deterioration, ground change and maritime activity
02	Remote monitoring and alert delivery	**Satellite communications**	Connect sensors and share alerts from remote assets
03	Positioning and interference awareness	**GNSS**	Support positioning and interference-related awareness
04	Fragmented protective awareness	**Integrated space and terrestrial data**	Combine evidence for asset monitoring and protective alerts

Who the call is for

Strong proposals connect a capable delivery team with a genuine operational user and customer

ELIGIBLE APPLICANTS

Who can apply

01 Companies — from start-ups and SMEs to large companies

02 Consortia with industrial and non-industrial partners

03 Cross-sector teams combining space and non-space actors

04 Applicants with a clear, identified customers or users

TARGET END USERS

Who must benefit

- Maritime operators
- Coastguards and maritime authorities
- Energy and infrastructure operators
- Telecommunications asset operators
- Relevant civil or defence authorities

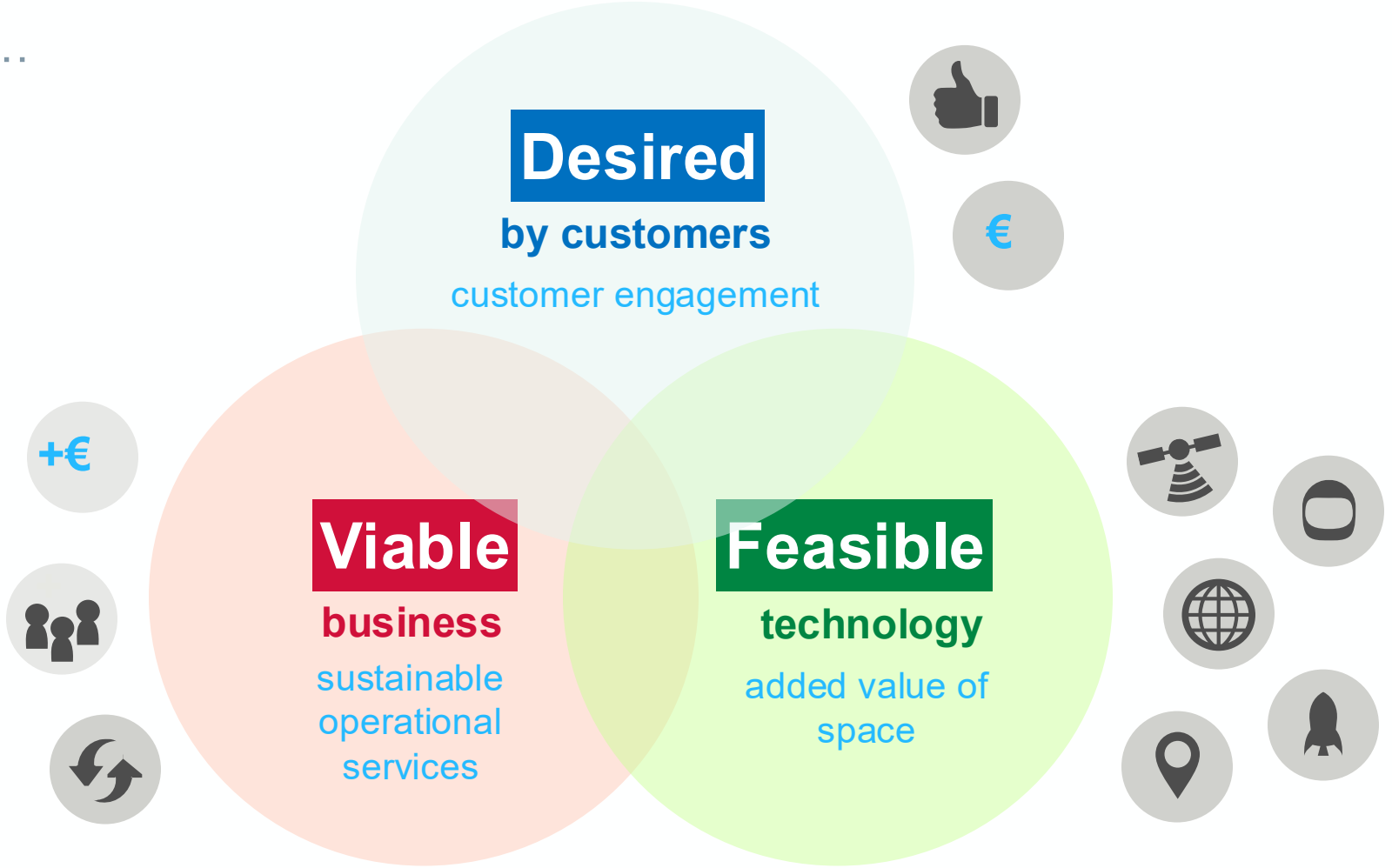
SUCCESS ESSENTIALS

What matters most

- **ENGAGE** Direct user engagement
- **VALIDATE** Commercially credible service concept
- **PROVE** Clear operational benefit

What are we looking for?

Services that are…



How to Apply…

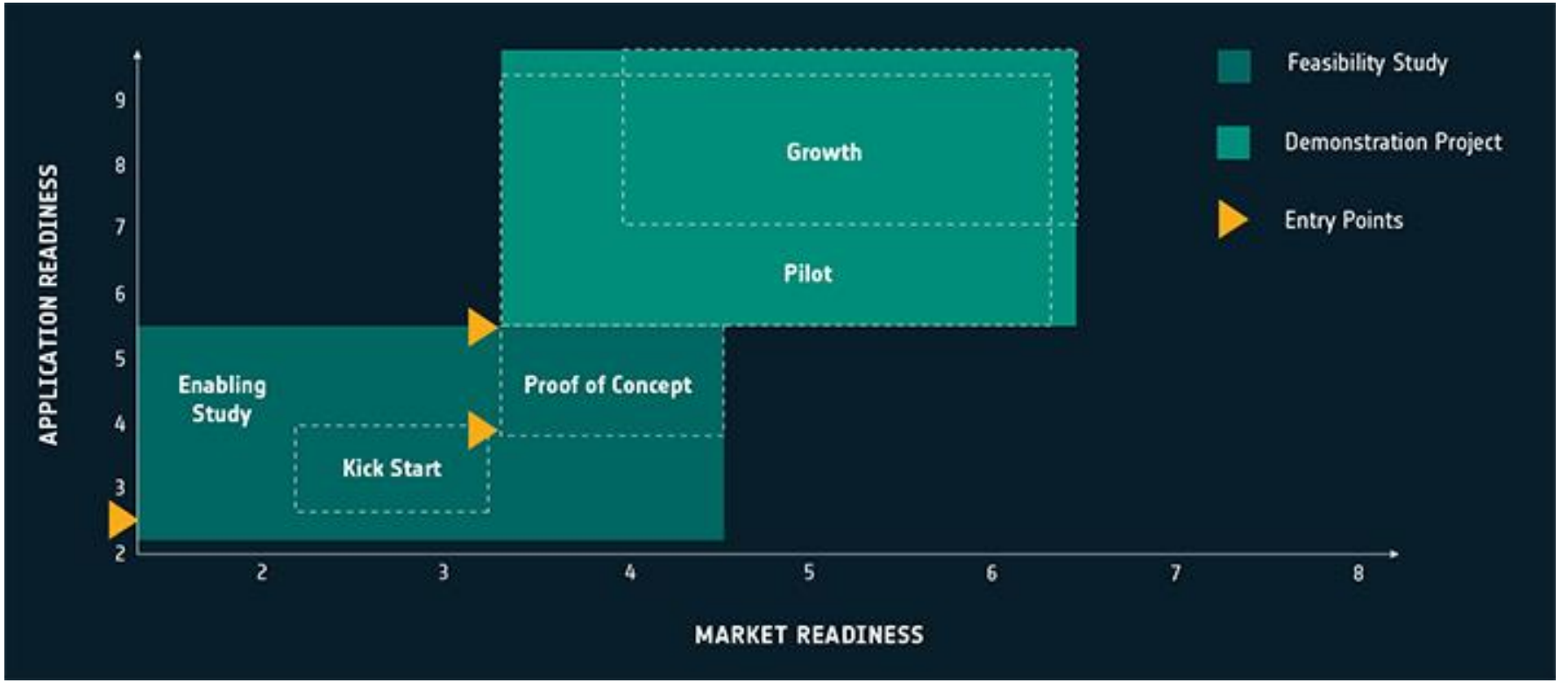
Study & Demonstration Pathways

Proof of Concept

- 9–12 months
- Technical feasibility and commercial viability

Pilot Project

- 12–24 months
- Develop and demonstrate an operational service



Activity Types & Funding Levels

	Proof-of-Concept Studies	Pilot Studies
Activity cost	Up to €600,000 (limited to eligible cost)	Case-by-case assessment (limited to eligible cost)
ESA co-funding		
Baseline	Up to 75% of company's cost	Up to 50% of company's cost
Micro, small and medium businesses[1]	Up to 80%[2] business' cost	Up to 80%[2] business' cost
Universities, research institutes and public sector entities with no commercial interest in product/service	Up to a 100%[2] of the entity's costs, with ESA co-funding not exceeding 30% of the total activity cost	Up to a 100%[2] of entity's costs, with ESA co-funding not exceeding 30% of the total activity cost
Universities, research institutes and public sector entities with a commercial interest in product/service	Up to 75%[2] of they entity's costs	Up to 75%[2] of they entity's costs
Industry co-funding	Remaining part of the cost to carry out the activity. Co-funding can be provided through public or private sector, direct or in-direct co-funding	

1 Enterprises fulfilling the criteria defined in the European Commission Recommendation of 6 May 2003 (2003/361/EC) or as updated.

2 Depending on the funding level authorised by the related National Delegation(s).

3 In case of no commercial interest, universities, research institutes and public sector entities shall be involved as subcontractors.

50–80% ESA co-funding; SME status and Member State approval apply

Who can apply?

The call is open to companies, consortia and cross-sectoral teams combining space and non-space actors.

Start-ups, SMEs and large companies may apply; proposals must demonstrate a genuine end-user need.

For ESA funding, the bidding team must be based in an eligible participating country.

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

Applicants should engage their National Delegation before submission and obtain any required Letter of Authorisation.

Denmark have pre-authorised budget for this call (€400k overall).

How to Apply

Start with an 8-page APQ, align with your delegation, then progress through ESA's proposal stages.

BEFORE SUBMISSION

Four actions to get application-ready

01 PREPARE THE APQ

Maximum 8 pages covering WHO, WHAT, WHY and HOW.

02 SECURE NATIONAL SUPPORT

Engage your National Delegation early and confirm Member State support.

03 SUBMIT ON TIME

Submit the APQ: 6 November 2026 to 6 January 2027.

04 PLAN THE FUNDING

ESA co-funding is 50–80%, subject to SME status and Member State approval.

AFTER ESA INDICATION

Two routes, one approval path

Select the route that fits the activity:

FEASIBILITY STUDY | **DEMONSTRATION PROJECT**

BOTH ROUTES FOLLOW THE SAME STAGES

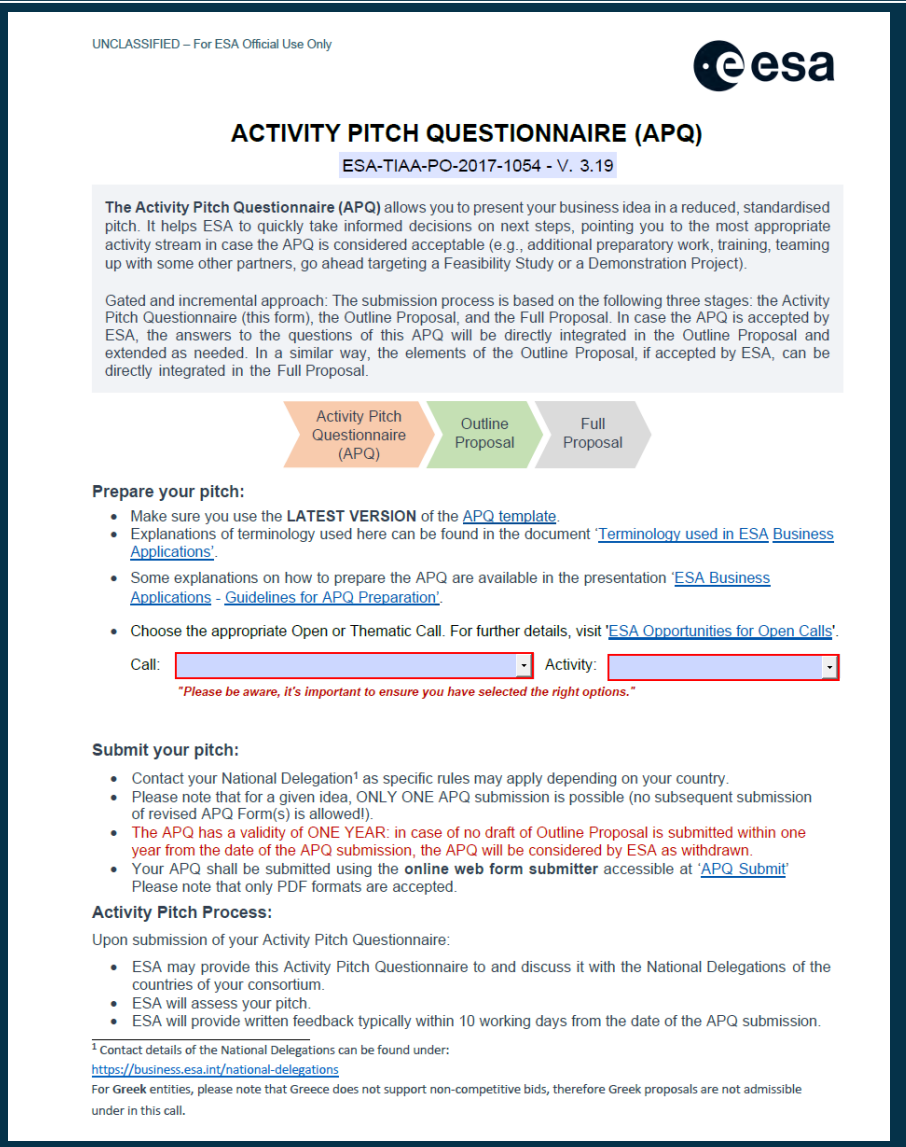
- **01 Outline Proposal (OP)**
  Shape the service concept and delivery approach.
- **02 Full Proposal (FP)**
  Set out the complete project, funding and implementation plan.
- **03 Project approval & kick-off**
  Begin delivery once approval and authorisation are in place.

Use ESA Business Applications guidance and standard proposal/deliverable templates. National Delegation written authorisation is required for ESA funding.

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?

→ Arctic call selection when submitting in OSIP Platform



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ACTIVITY PITCH QUESTIONNAIRE (APQ)

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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 Delegation[1] 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' Please note that only PDF formats are accepted.

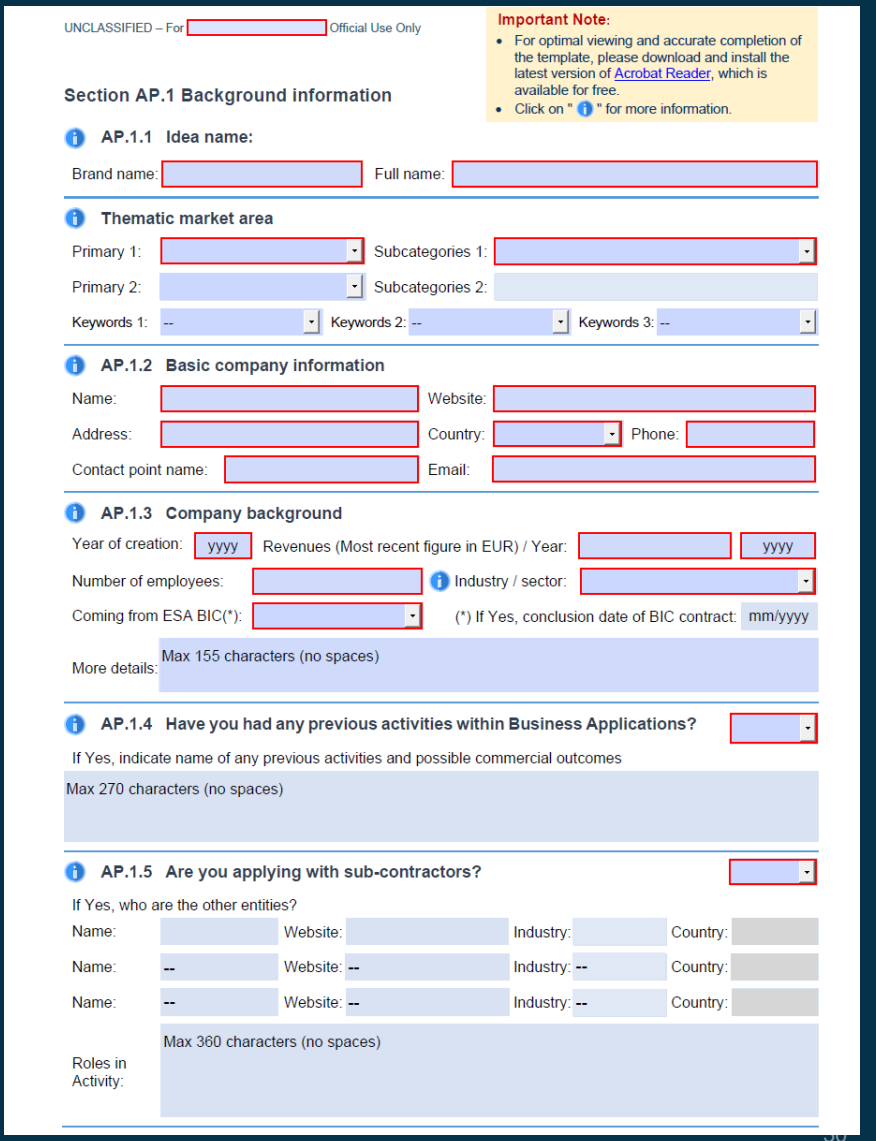
Activity Pitch Process:

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 " " for more information.

Section AP.1 Background information

AP.1.1 Idea name:

Brand name: Full name:

Thematic market area

Primary 1: Subcategories 1:

Primary 2: Subcategories 2:

Keywords 1: -- Keywords 2: -- Keywords 3: --

AP.1.2 Basic company information

Name: Website:

Address: Country: Phone:

Contact point name: Email:

AP.1.3 Company background

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

Number of employees: Industry / sector:

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

More details: Max 155 characters (no spaces)

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)

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!

Guillaume.prigent@esa.int

Questions?

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