

Business Applications and Space Solutions - BASS

ESA ACCESS Programme

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A wide variety of markets addressed by BASS

Partnerships with **non-space stakeholders** enable large-scale adoption and impact

Green
Societal
Economic



1. Business Applications

Provides funding, business and technical support by placing industrial contracts and cooperative agreements with companies.

Demonstration Projects

- Pilot projects
- Growth projects

>750

Implemented

Feasibility Studies

- Kick-Start studies
- Proof of concept studies
- Enabling studies

>1000

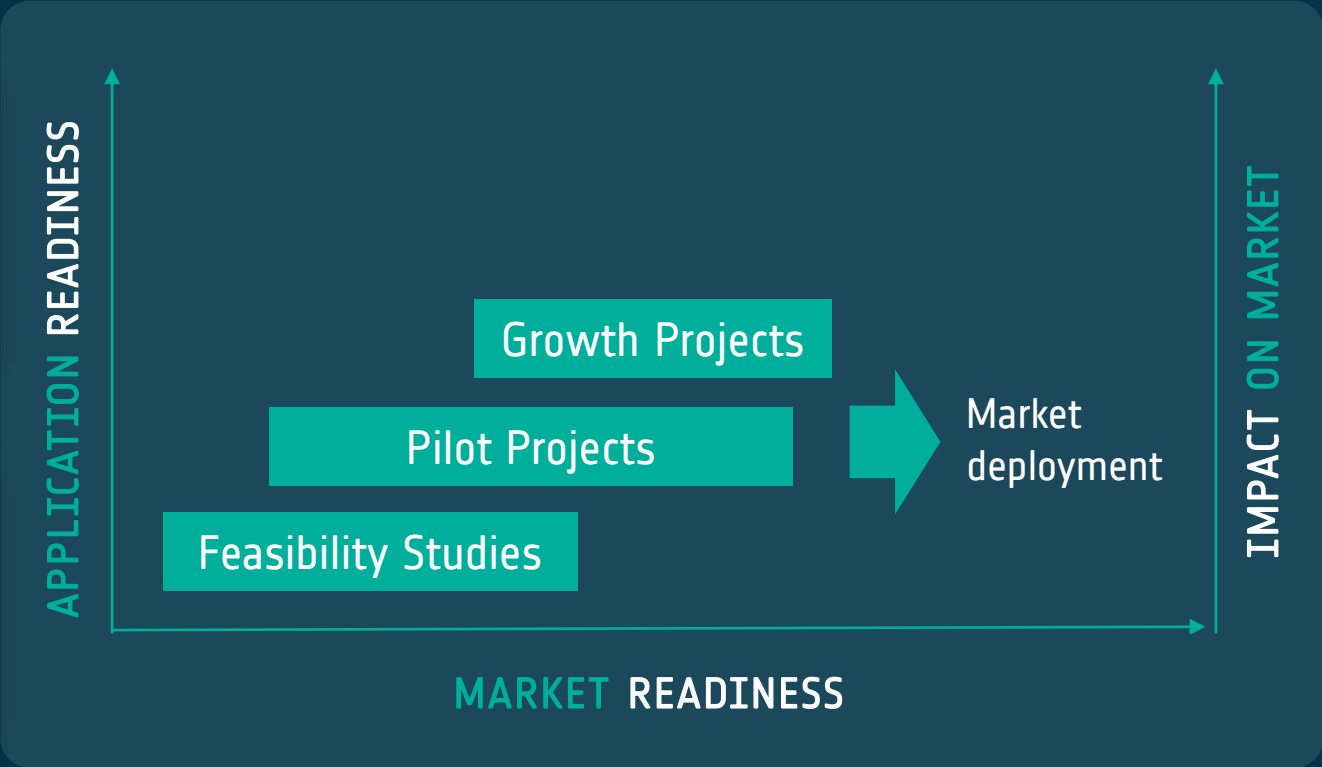
Implemented



2. The Ambassadors

Fosters new business and venturing opportunities in space-related business applications and services through high-quality business consultancy.

BASS supports companies in the ideation, development , demonstration and growth of commercial sustainable services and products exploiting space technologies



Task Force Members and Port Working Group



ENERGY Launched Sept 22



SMART & GREEN CITIES Launched Sept 23



MARITIME Launched Jan 24



BIOECONOMY Launched Oct 24



LOGISTICS & INFRASTRUCTURE Launched Mar 26



PORTS WORKING GROUP

Antwerp | Belfast | Esbjerg | ESPO (European Sea Port Organisation) | Halifax | Trieste | Tyne | Valencia (Fundacion Valencia Port)



Real Socio-Economic Outcomes early in the Projects



157 M€

Revenues generated during projects

1.9 B€

Projected revenues 3 years after project completion

Sales During BASS Project



■ YES ■ No

180 M€

Industry co-funding

196 M€

Member States investment



308

projects with demonstrated Achievements



1561

jobs created

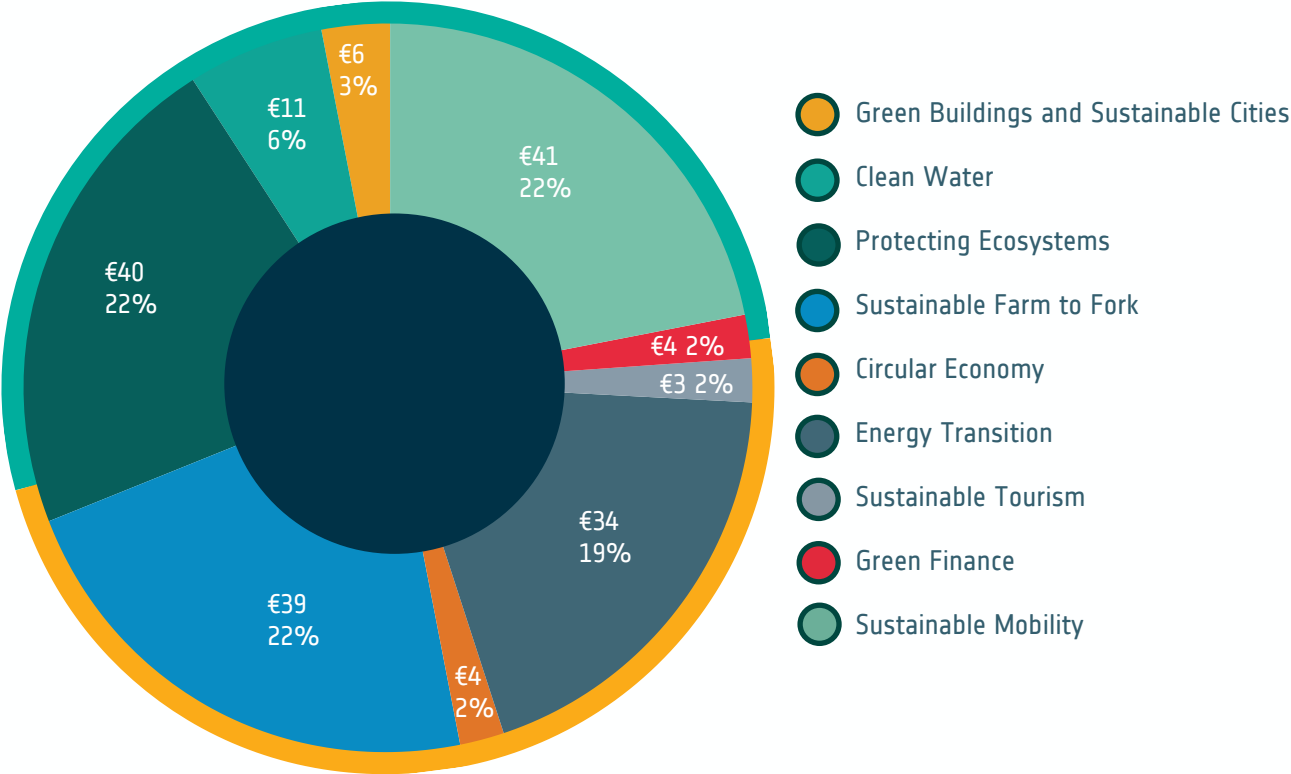


1649

partnerships established



Environmental Benefits



183 M€ Investment in 300 BASS
Green Activities since 2010

Societal Benefits



355 M €
total investment in over 300 demonstration
projects

BASS Calls for Proposals

business.esa.int



ESA-STAR REF: 6-60021



ESA-STAR REF: 4-40034



ESA-STAR REF: 4-40035

AND IN ADDITION: Thematic Calls for Proposals

Digitalization of the water sector

- **There will always be a need for water.** It is a fundamental resource with no substitute, underpinning human health, food systems, industry and ecosystems
- In today economic uncertainty and growing water scarcity threatening 45% of global GDP by 2050 **water solutions represent a compelling, future-oriented investment with strong environmental and social returns**
- Water industry offers a pathway for **unique investment objectives.**
- Solutions needed to **source, treat, monitor, manage, protect and distribute water.**
- Space can help to ensure that **water is abundant, safe, affordable and used more efficiently.**



Call open for:
-proof of concept studies
-pilot projects

APQ submission open from
12 May until 30 August 2026

<https://business.esa.int/funding/call-for-proposals-non-competitive/digitalisation-water-sector>

PARTNERS



Bioeconomy Task Force Members



Water Sustainability including

- Water quality monitoring
- Water availability management
- Water Sanitation
- Monitoring of Industrial Discharges

Water Resilience including

- Infrastructure monitoring
- High-Non Revenue Water
- Failures in Sewage
- Resilience to drought and flooding

Involvement of representative of the user communities is mandatory



I – Environmental Protection & Climate Resilience

→ APQ opening June 2026 – Closing September 2026

Topics of relevance:

- Aquaculture and Fishery Resilience
- Environmental Protection

<https://business.esa.int/funding/call-for-proposals-non-competitive/arctic-region-environmental-and-economic-resilience>



II - Safety, Navigation, and Operations

→ APQ opening September 2026 – Closing November 2026

Topics of relevance:

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



III - Security & Critical Infrastructure Protection

→ APQ opening November 2026 – Closing January 2027

Topics of relevance:

Key capabilities:

- Maritime Security
- Critical Infrastructure Protection



Space-Enabled Solutions for Resilient Grids



Objective

Develop space-enabled solutions that strengthen the resilience, security, and operational continuity of European power grids



Why it matters?

- Energy infrastructure faces growing physical, cyber, and climate-related risks
- Extreme weather events (wildfires, floods, storms, heatwaves) increasingly affect grid operations
- Digitalisation and interconnected power systems increase dependency on secure infrastructure
- Disruptions to energy systems can have economic, societal, and national security impacts



The role of space technology

Space assets provide critical capabilities to support grid resilience:

- Satellite Earth Observation (SatEO) – monitoring infrastructure, environmental risks, and damage assessment
- Satellite Navigation (SatNav) – precise positioning and time synchronisation for digital grid operations
- Satellite Communications (SatCom) – secure and resilient connectivity during outages or emergencies



With support from ENTSO-E

ENTSO-E is the European Network of Transmission System Operators for Electricity and represents ~40 TSOs from 36 European countries. Several TSO's involved via ENTSO-E, have provided use cases with the aim to support and guide incoming Proof-of-Concepts and/or Pilot Projects, ensuring relevance for real grid operation





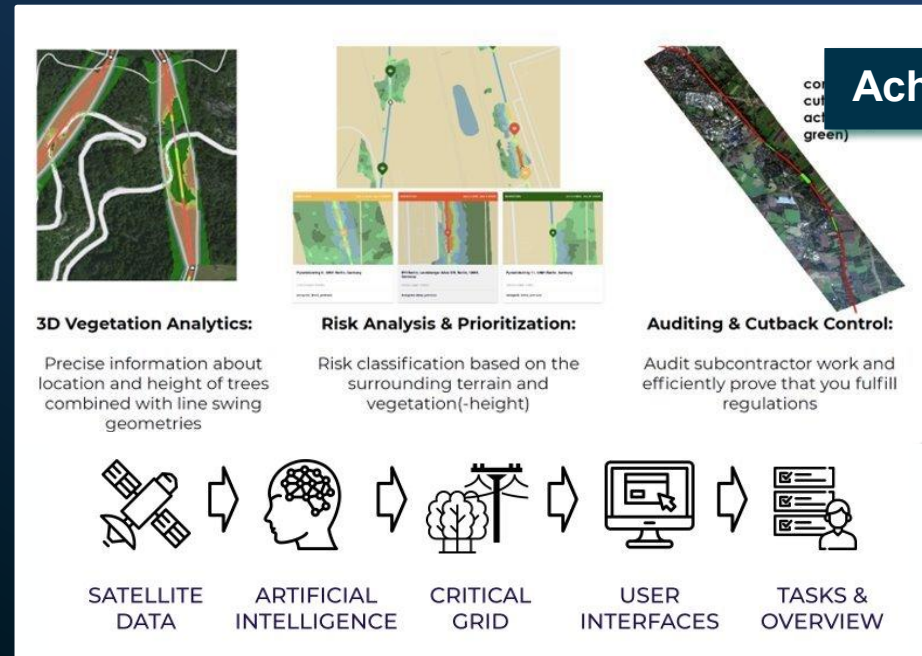
Infrastructure monitoring, vegetation detection, and predictive maintenance

An industrial infrastructure monitoring service tailored to **energy utilities, railways and pipeline companies** including:

- vegetation analysis to detect any danger posed by trees to overhead electricity lines and railways
- pipeline analysis to identify ground movement and third party influences close to pipelines.

Customer Groups: Energy and infrastructure operators

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



Achievements

Operational expenses reduction by ~25%.

- ✓ Private investment leverage: Series A investment raised August 2022 to accelerate market
- ✓ Expansion and enter new markets such as insurance
- ✓ Solution already used by:





Smart irrigation advise for urban green areas

AERIUS-EO service is **based on the remotely sensed assessment of the current soil moisture, vegetation vitality and weather forecasts.**

It combines optical and synthetic-aperture radar (SAR) earth observation, weather forecast data derived from meteorological satellites like Meteosat and MetOp and geographical information data

Customer Groups:

Germany: Frankfurt, Essen, Darmstadt, Hannover, Wuppertal, Bad Nauheim, Usingen, Baden-Baden

Romania: Galati



✓ According to the adoption of the EU Restoration Law (Regulation (EU) 2024/1991), provision to the municipalities of reports which contain ecological indicators such as green space development, urban tree coverage, water bodies, and emissions

Team:





Satellite-Enabled Robotic Weeding for Organic Grasslands

- ✓ Fully electric, GNSS-based robot fleet for mechanical weed removal
- ✓ Customer portal enabling contractor coordination and automatic reporting and >60 registered clients
- ✓ Strong demand in DACH region, with >150 interested farmers (customers) and 10+ contractor leads (users / partners), 8 paying clients

Scalable Business Model

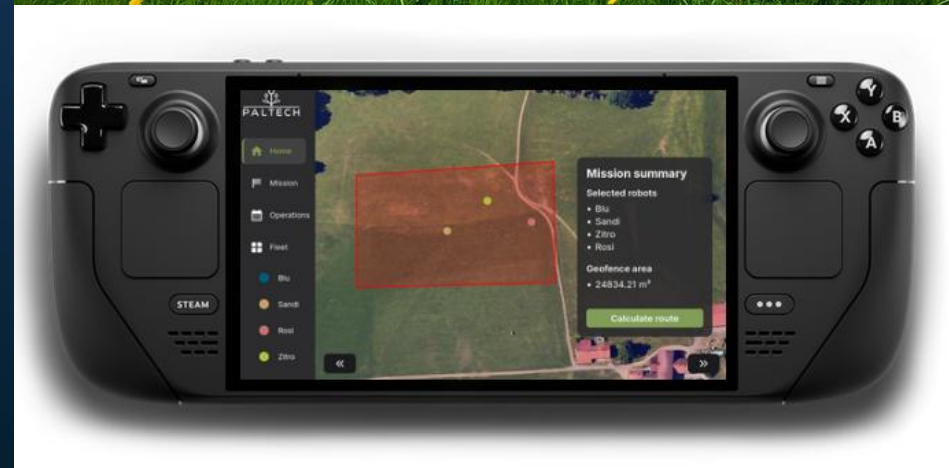
Five robots are projected to be sold in 2026 and forty in 2027. Starting in 2027, “Weeding as a Service” will be launched as a second business area.

Sustainable Impact

Fully mechanical weeding replaces herbicides, saving up to 500 labor hours/ha for the farmers (customers) and supporting organic compliance.

Use of Space Assets

GNSS enables precise root-level weed removal; EO data integration planned for future site targeting.



Activity and Task
Force logos:



Contractor(s)
logo(s):



Thank you

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