Business Applications and Space Solutions - BASS

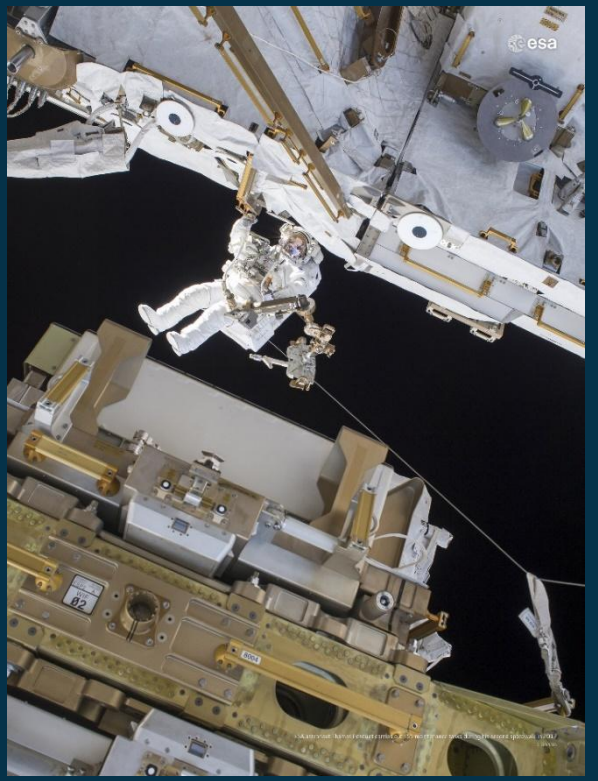
ESA ACCESS/BASS Programme

Enrico Spinelli

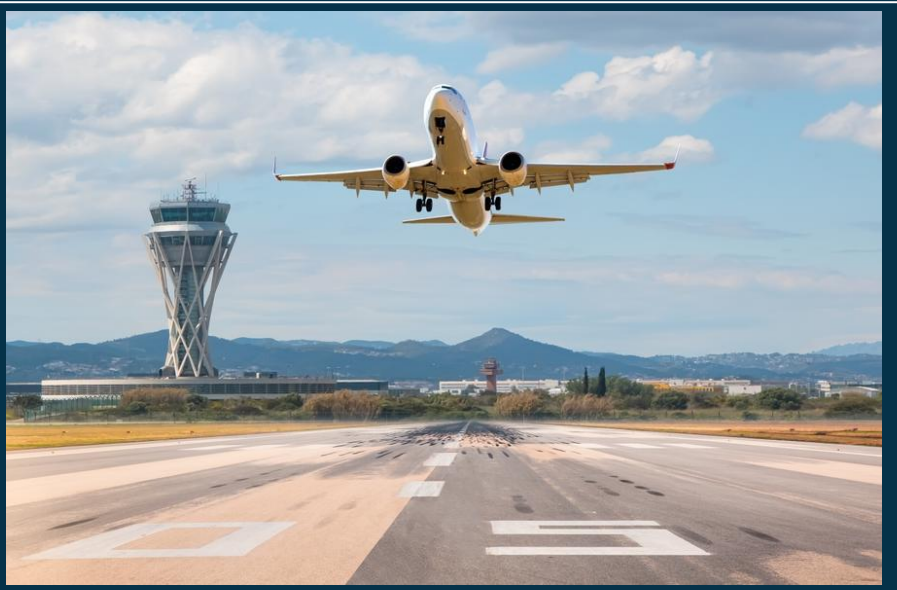
Applications Engineer

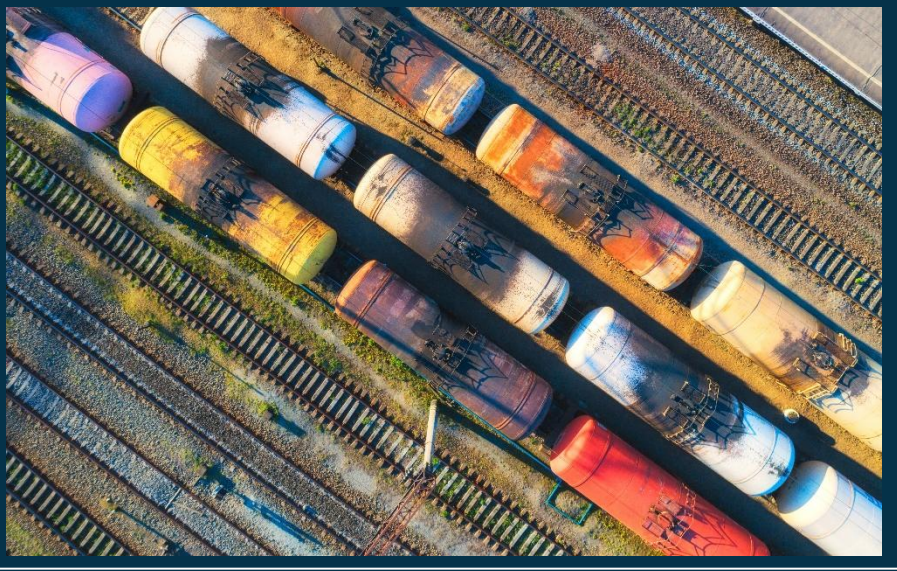
Space Business Forum – 20 April 2026

What do you picture when you think of space?



But space can also be this…





How?

A wide variety of markets addressed by BASS

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

Green

Societal

Economic

What ESA BASS offers

1 Support to EU* companies (service providers)

Zero equity funding

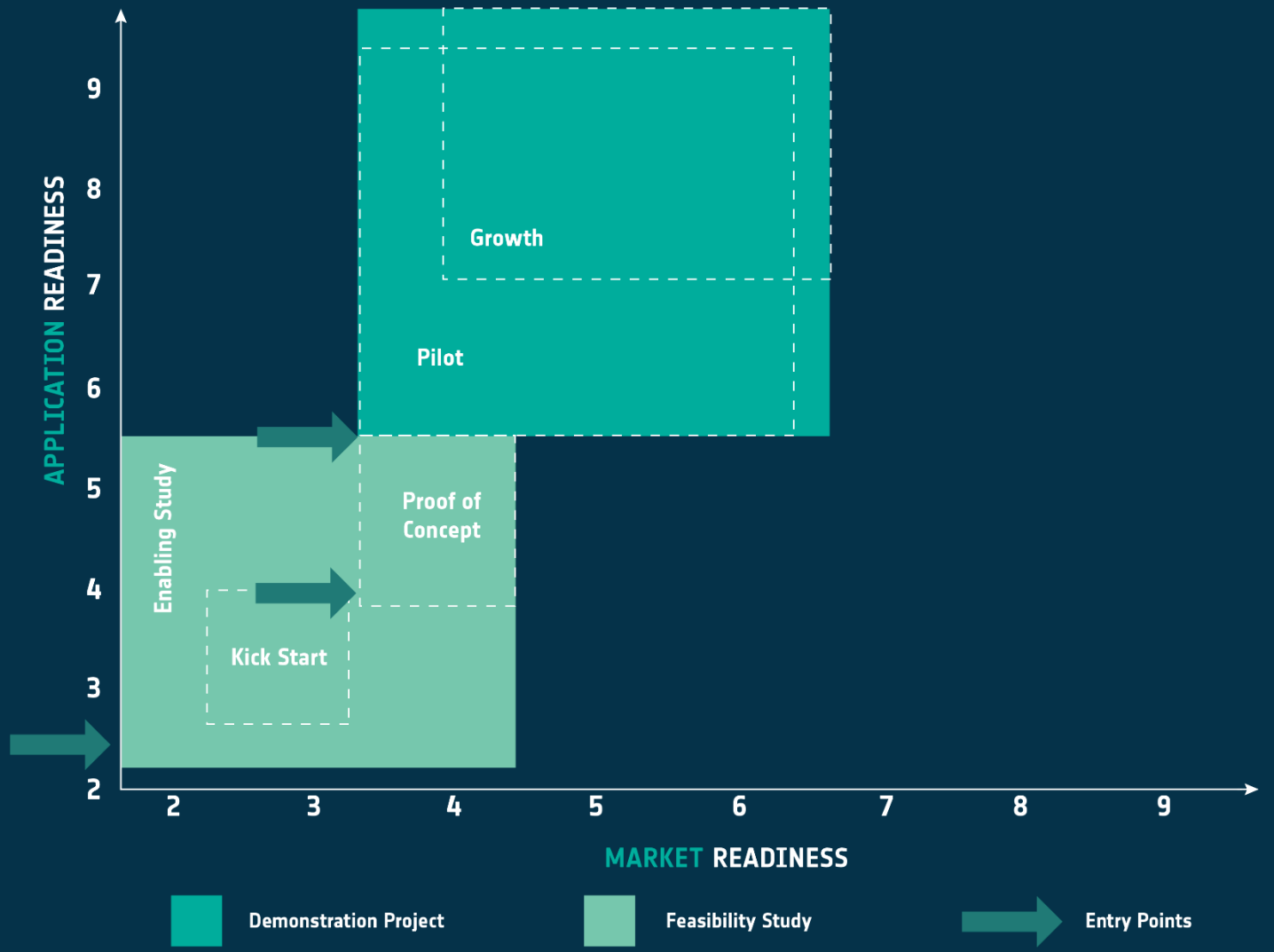
- Always open for businesses from start up to large companies* in any market sector
- Focus on close to market applications exploiting space technologies (e.g. SatNav, SatCom, SatEO)
- User driven, innovative and sustainable services that help companies to be on the market
- Activities initiated by companies in response to thematic calls for proposals or generic open call for proposals

** Companies need to reside in one of the ESA BASS member states, targeted market instead can be anywhere in the world*

2 Potential users/ customers in a market sector

Opportunity for cooperation

Business Applications instruments: tailored to companies' needs



Feasibility Studies

- Explore the viability of new service concepts, consolidate the user landscape and requirements
- Evaluate the economic sustainability and technical feasibility of space-based solutions to user needs

Demonstration Projects

- Validate a technical solution and its business model
- Ensure user engagement
- Provide a transition towards operational activity

ESA BASS - key points for applying

- ✓ Typical applicant to ESA BASS: service provider (alone or in a consortia)
  - ✓ Applicants must reside within ESA BASS member states , co-funding scheme
  - ✓ Targeted market can be anywhere in the world
  - ✓ Commercial opportunity in the short/medium term (e.g. 2-5 years)

- ✓ Letters of support from potential customers/users

- ✓ Development of commercial services with *operational involvement of customers during activity,* using space technologies

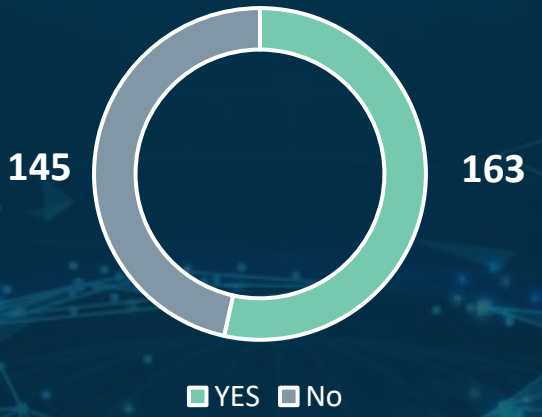
- ✓ Application starts with APQ submission (max 8 pages – What/Why/How), incremental and iterative process
  - ✓ Streamlined templates and tools
  - ✓ ESA BASS Ambassadors
  - ✓ Support required by National Delegation(s) of the country where company resides

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



180 M€
Industry co-funding

196 M€
Member States investment

308 projects with demonstrated Achievements

1561 jobs created

1649 partnerships established

COMMANDER

Digital Marketplace for smart port and smart shipping services

Service:

- Scalable marketplace for smart port and smart shipping services. Satellite enabled services include Ship arrival predictions, Smart weather warnings, or Dark ship detection amongst others.
- One-stop shop solution for sea voyage, smart port services, and logistics.
- Platform open to third-party solution development.

Customer Groups:

- port authorities, terminal operators, shipping agents, shipping lines, port service providers and cargo owners

Achievements

- ✓ Commercial agreements established before its dissemination.
- ✓ Winner of the innovation and product launch categories at Ship Technology Excellence Awards 2023.
- ✓ Partnership established with Finnish Lead Fintraffic to promote MSW (Maritime Single Windows) in Finland.

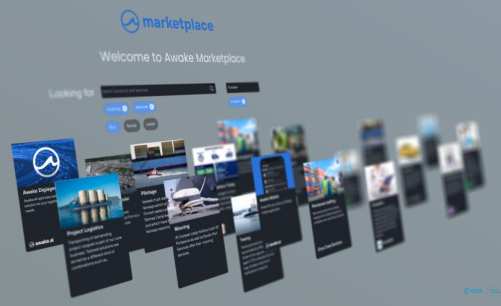
Team: Prime: Awake.ai

Space Data: COMMANDER fuses GNSS data with satellite Earth Observation (Sentinel 1 and 2) and weather data.

COMMANDER to DECARDIS The journey continues

SPACE SOLUTIONS

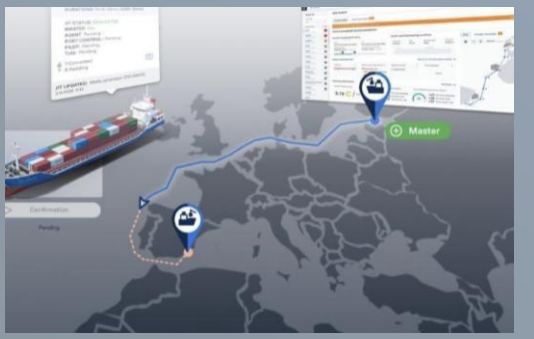
awake.ai



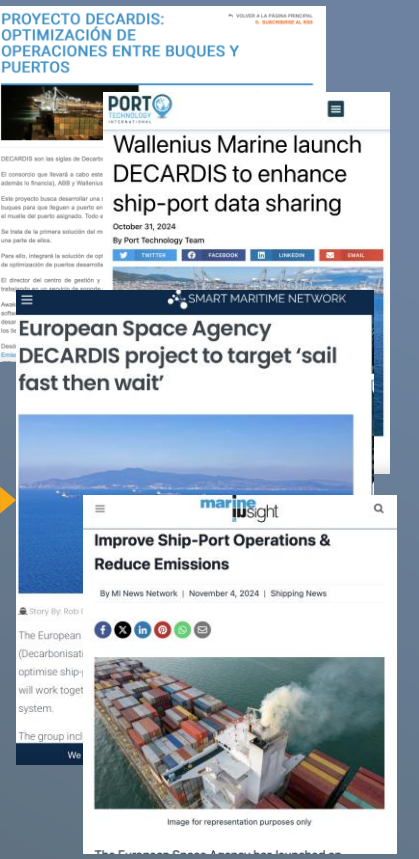
COMMANDER offers a scalable marketplace for smart port and smart shipping services. Satellite enabled services include Ship arrival predictions, Smart weather warnings, or Dark ship detection amongst others.

ABB

WALLENIUS WILHELMSEN MARINE



With satellite connectivity, and EO derived intelligence, DECARDIS links ship routing and speed decisions with just-in-time berth arrivals. It introduces the world's first system to optimise entire voyages and port calls reducing ship emissions by 15-20%.



QR code for the “generic” open call for proposals

Task Force Members

ENERGY
Launched Sept 22

areg · Decommission · dena · dewa · E.DSO · entsoe · EPRI · Friends of Sustainable Grids · Global Alliance for Sustainable Energy · IESA India Energy Storage Alliance · Net Zero Technology Centre — Technology Driving Transition

SMART & GREEN CITIES
Launched Sept 23

City of Amsterdam · Bari · Bologna · Stadt Essen · eurotowns — Big enough to cope, small enough to care! · EXPO CITY DUBAI · Comune di Firenze — Florence · Genova · Glasgow City Council · Liverpool City Council · City of Lodz · ICLEI — Local Governments for Sustainability · Naples · Portsmouth City Council · Ville de Paris · Mairie du 15 Paris · Taranto · Città di Torino — Turin · Venice · West of England Combined Authority · World Urban Parks

MARITIME
Launched Jan 24

DAMEN · DNV · EMSA — European Maritime Safety Agency · Grimaldi Group · IWSA · msc · Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping · Ocean Autonomy Cluster · ONE SEA · Fundación Valenciaport · TMA BlueTech — Promoting BlueTech & Blue Jobs · W

BIOECONOMY
Launched Oct 24

1t.org · CEPF — Confederation of European Forest Owners · copa cogeca — european farmers · european agri-cooperatives · EAPO · eustafor — Managing State Forests Responsibly · GAP INC. · Global Organic Textile Standard · FSC Forests for All Forever · ERA-NET Cofund ICT-AGRI-FOOD · International Advisory Council on Global Bioeconomy · ISSF International Seafood Sustainability Foundation · Marine Stewardship Council · PEFC · Rabobank · Water Europe — Technology & Innovation

LOGISTICS & INFRASTRUCTURE
Launched Mar 26

alice — Alliance for Logistics Innovation through Collaboration in Europe · ITS Norway · LIMOWA · Logistics in Wallonia · Fundación Valenciaport · VIL — Empowering Logistics

Space for Logistics and Resilient Infrastructure TF

Key Objectives

- Supporting the development and demonstration of sustainable space-based applications that will accelerate the digitalisation of the logistics sector and make transport infrastructure more resilient
- Raising awareness of space-based solutions which address the logistics and related infrastructure ecosystem, and increasing their impact within the sector

Cooperation is key

alice | Alliance for Logistics Innovation through Collaboration in Europe

FUNDACIÓN VALENCIAPORT

ITS Norway

LIMOWA

LOGISTICS WALLONIA

VIL Empowering Logistics

Launched in March 2026!!! Other members expected to join

The Arctic Region Thematic 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.

Sub-calls thematics & timing

I – Environmental Protection & Climate Resilience

→ APQ opening June 2026 – Closing September 2026

Topics of relevance:

- Aquaculture and Fishery Resilience
- Environmental Protection

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

Sub-Themes

Sub-Theme #1 - Situational Awareness for Critical Events

Develop solutions that improve real-time monitoring and decision-making before, during, and after high-impact events.

Key capabilities:

- Early detection and monitoring of wildfires, floods, extreme weather, and infrastructure failures
- Monitoring of transmission corridors, vegetation encroachment, and environmental risks
- Integration of space weather information for grid risk forecasting
- Post-event damage assessment and operational recovery support
- Scalable and interoperable platforms supporting multiple TSOs

→ APQ opening September 2026

Sub-Theme #2 - Strengthening Operational Resilience for the Grid

Enhance the security and continuity of grid operations through resilient space-enabled capabilities.

Key capabilities:

- Secure and high-accuracy timing for digital substations and protection systems
- Precise positioning for onshore and offshore grid assets
- Detection of interference, spoofing, and signal degradation
- Satellite backup communications when terrestrial networks fail
- Secure connectivity for grid restoration and emergency operations

BASS Security and Dual/Use Roadmap 2026

Wildfires

Commercial Applications of Space Weather Data

Arctic Region

Adversarial Threats

2025 2026 2027 2028 2029

Wildfires Thematic Call for Proposal

A two-phase wildfire initiative supporting studies and projects that address both immediate response and longer-term resilience:

Phase 1: Wildfire Response

Open: 2 March – 2 June 2026

Scope:

- Early fire detection
- Near real time fire monitoring
- Fire behaviour modelling, simulation and prediction

Focus: outcome-oriented solutions enabling diverse technical approaches, including multi modal sensing, high frequency data acquisition and improved system integration.

Phase 2: Wildfire Preparedness Call

Opening September – December 2026

Scope:

- Wildfire risk assessment
- Fuel and vegetation management
- Adaptation and long-term resilience measures

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.**

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

Bioeconomy Task Force Members

APQ submission open from 12 May until 30 August 2026

We support space and non-space companies
through ESA ACCESS/BASS!

https://business.esa.int/

Enrico Spinelli
Enrico.Spinelli@esa.int