Accelerating Innovation in Space Through Strategic Partnerships

Second United Nations World Geospatial Information Congress, Hyderabad - India

TP10C – Effective Partnerships, 12.10.2022

Asimina Syriou – European Space Agency
We Are European Space Agency (ESA)

EUROPE’S GATEWAY TO SPACE

<table>
<thead>
<tr>
<th>WHAT</th>
<th>22 Member States, 5000 employees</th>
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<tbody>
<tr>
<td>WHY</td>
<td>Exploration and use of space for exclusively peaceful purposes</td>
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<tr>
<td>WHERE</td>
<td>HQ in Paris, 7 sites across Europe and a spaceport in French Guiana</td>
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</tbody>
</table>
ESA’s 4 main pillars

Science and Exploration

Enabling and Support

Safety and Security

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

**SOCIO-ECONOMIC**

Deliver *social value* and economic sustainability

**SPACE USE**

Expand the utilization of space in new markets and user communities

**INDUSTRY COMPETITIVENESS**

Strengthen European Industry competitiveness on the global space and non-space markets
Cooperation with “non-space” businesses to…
FROM MONITORING TO ACTING

Accelerating the green Transition

Support emergence of Green economy in vertical markets

Energy Transition
Sustainable Tourism
Sustainable Mobility
Protecting Ecosystems

Sustainable Farm to Fork
Circular Economy
Clean Water
Green Finance

Integrating space data and innovative technologies

Satellite Communication
Satnav
SatEO
Virtual Reality
Automonomous Vehicles
Artificial Intelligence
Robotics
5G/6G

Engage with industry stakeholders and public entities for delivering the green transition

Decarbonisation

Green Buildings & Sustainable Cities
Sustainable Farm to Fork
Circular Economy
Clean Water
Green Finance
#1 SPACE IN RESPONSE TO HUMANITARIAN CRISIS

**Objective:** to deliver space-based services supporting the humanitarian efforts in response to the crisis

- Supporting the physical, emotional, psychological, social, or economic well-being of refugees/IDPs
- Supporting post-conflict recovery efforts
- Supporting communities hosting displaced people
- Supporting humanitarian and governmental organisations to forecast, respond to, and manage displacement crises

**Stakeholders:**

https://business.esa.int/funding/invitation-to-tender/space-response-to-humanitarian-crisis

**Call opened:** 25 April 2022

**Deadline:** 31 October 2022 – might be extended
#2 SPACE FOR TOURISM

https://business.esa.int/funding/space-for-tourism
VIDA (Village Data Analytics) enables off-grid electrification planning through AI connected solutions for decentralised energy systems.

Gas usage and carbon dioxide emissions from power generation are reduced. Cost and time reduction of over 70% is achieved compared to traditional site scoping methods.
Water Managers around the world are confronted with new challenges related to climate change and lack proper information on water availability.

OWASIS draws together information from a variety of sources to improve water resource management and to reduce flood and drought-related risks.

The service is having a significant impact in the Netherlands, South Africa, and Colombia. Contracts have already been signed with the Dutch Water Authorities, with one regional water authority attributing a cost saving of 150 kEUR to OWASIS due to reduced electricity and fuel usage for pumping systems.

Clean Water is a key priority topic for the future. ESA BASS is working with CEO Water Mandate to support the development of services that:

- Improve water sustainability in businesses by tackling issues in the value chain.
- Digitise water basins to improve the monitoring of – and acting on – water resilience.

**ARTES 4.0 Fixed Call for Proposals on “Digitising Water Resilience: Acting on Water Stress in Basins”**
136 proposals received; more than 40 projects implemented

Space in response to COVID-19 outbreak

In cooperation with IT Minister for Technological Innovation and Digitization, UK National Health System and other stakeholders

NASA and ESA to fund coronavirus projects

Space in Response to COVID-19 Outbreak

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<thead>
<tr>
<th>ESA-STAR REF</th>
<th>A010314</th>
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<tr>
<td>ACTIVITY</td>
<td>Demonstration Project</td>
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<td>OPENING DATE</td>
<td>31-03-2020</td>
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<td>CLOSING DATE</td>
<td>20-04-2020</td>
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Image credit: Sam Wordley
#6 SMART CITIES INITIATIVES AND STAKEHOLDER ENGAGEMENT

- **2019**
  - Mols and Partnerships with Cities

- **2020**
  - Follow-up Demonstration Projects

- **2021**
  - Space for Green Construction
  - Space Applications to Advance Innovation on Circular Cities
  - Cultural heritage, Law enforcement and emergency response, Intelligent transport and Structural monitoring - L’ ART (L’ Aquila, Abruzzo Region, Rome, Torino) – 10 Activities

- **2022**
  - Space for Urban Air Mobility
  - 5G/6G Services

- **2023**
  - Post-COVID Health and Well-being
  - Micro-Mobility

- **2024**
  - Smart Workforce (Home automation)
  - Space for Olympic Games
  - 5G/6G Services

- **2024**
  - Connected cities
  - Connected Gadgets

- **Global Alliance of Smart Cities - Proposed**
  - European Smart Cities Themed Workshops - Proposed

- **Smart Cities Initiatives – Ongoing**
  - New Education

**Proposed Follow-up Demonstration Projects**

**5G/6G Services**

**Space Applications to Progress Circular Cities**

**Space for Olympic Games**

**Post-COVID Health and Well-being**

**Micro-Mobility**

**Connected cities**

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**New Education**
CURRENT BUSINESS APPLICATION FUNDING OPPORTUNITIES

5G/6G SERVICES
CASE: COMMERCIAL APPLICATIONS ENABLED BY SPACE ENVIRONMENTS
DIGITAL TRANSFORMATION AND GREEN ECONOMY
DIGITAL SUPPLY CHAIN
SPACE FOR TOURISM
DIRECT NEGOTIATION - GENERIC PROGRAMME LINE

SUSTAINABLE DIGITALY CONNECTED SOLUTIONS FOR THE COMMODITIES CRISIS
SPACE ACTING FOR DECARBONISATION
SPACE IN RESPONSE TO HUMANITARIAN CRISSES
SATTELITE CONNECTIVITY FOR AUTONOMOUS LAND VEHICLES SAFETY
SPACE FOR OLYMPIC GAMES
SPACE FOR GREEN CONSTRUCTION

PEOPLE, PLANET, PROSPERITY
SPACE AND DIGITAL TRANSFORMATION FOR GREEN ENERGY UTILITIES
SPACE APPLICATIONS SUPPORTING DIGITAL TRANSFORMATION IN PUBLIC SAFETY
ICT AND ELECTRONIC DEVICES SUSTAINABILITY
NATURAL CAPITAL
POST-COVID HEALTH AND WELL-BEING
Thank you! नमस्ते

Asimina (Mina) Syriou

https://business.esa.int