

Space and Digital Transformation for Green Energy Utilities

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ESA Space Solutions

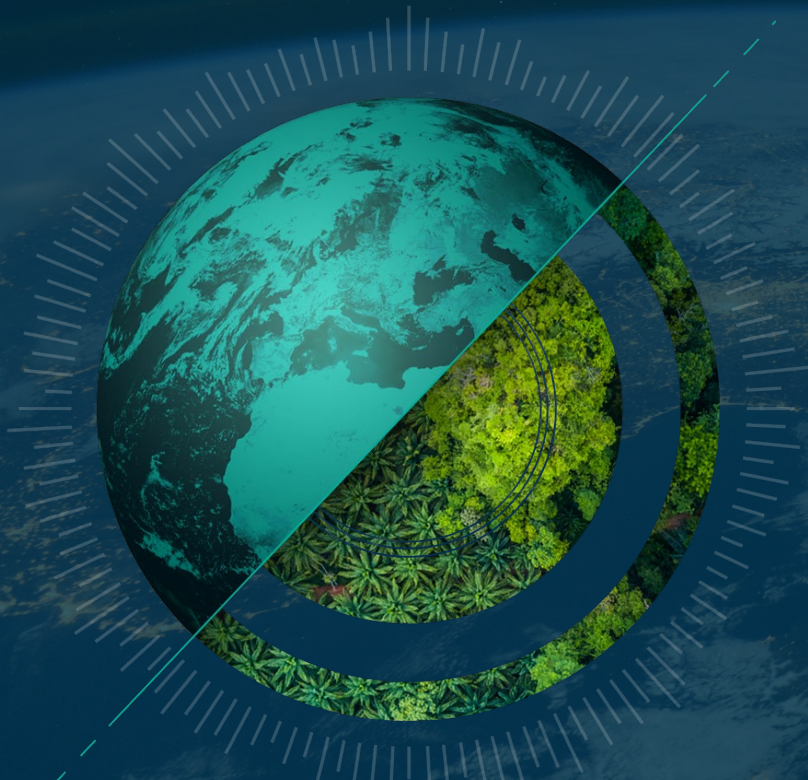
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The largest space innovation network in the world

- The go-to place for great business involving **space to improve everyday life**.
- Supporting European companies including **start-ups and SMEs** to develop businesses using space technology and data.
- Offering **funding, business and technical support** to help to generate successful business and create jobs.





Zero-equity funding (from €50k to €2M+ per activity)



A personalised ESA consultant



Technical support and commercial guidance



Tailored project management support



Access to our international network of ESA and partners



Access to our network of investors



Credibility of the ESA brand

Portfolio of funded projects: business.esa.int/projects

Space Technology...

- Earth Observation
- Satellite Navigation
- Satellite Communication
- Spaceflight Technologies
- Space Weather

... coupled with...

- Big Data analytics
- VR/AR
- Artificial Intelligence
- Mega-constellations
- Crowdsourcing
- IoT
- Cybersecurity
- Blockchain
- 5G (<https://artes.esa.int/esa-5g6g-hub>)

... to serve Users & Market

- Maritime
- Agriculture
- Environment
- Healthcare
- Financial
- Transport
- Education
- Media
- Energy
- Aviation

The journey towards a commercial service





✓ CONCEPT DESIGN

Enabling Study



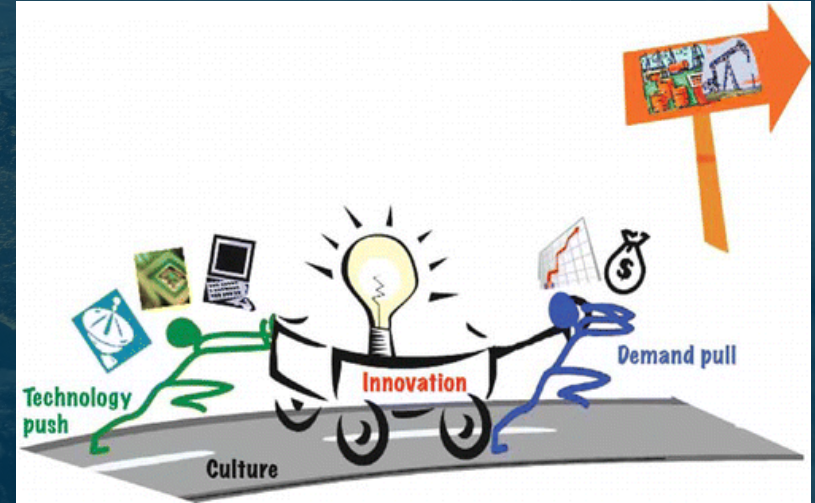
✓ PROTOTYPING

Feasibility Studies: Up to 50% co-funding*

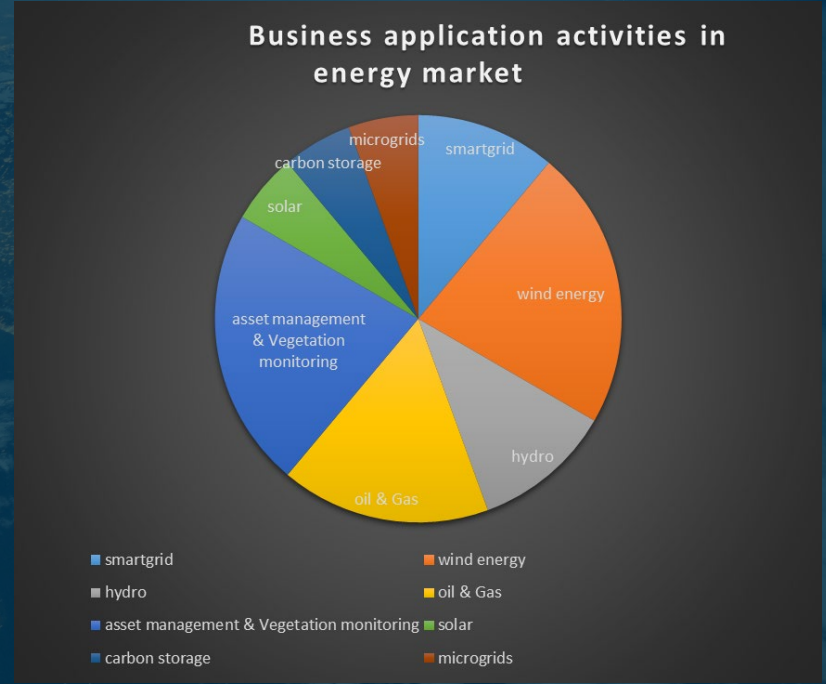
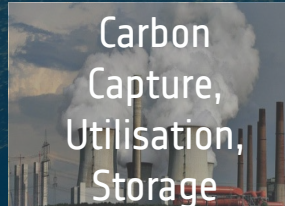
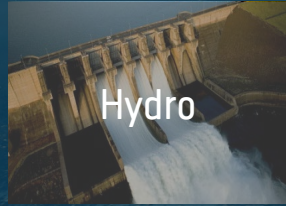


✓ DEVELOPMENT AND VALIDATION

Demonstration Projects: Up to 50% co-funding*



* Up to 80% for SMEs (pending specific initiative and approval of National Delegation)



Space and Digital Transformation for Green Energy Utilities



Resulting from the cooperation between **ESA** and several partners:

- the **UK Department for Digital, Culture, Media and Sport (DCMS)**
- the **UK Department for Business, Energy & Industrial Strategy (BEIS)**
- the **Electric Power Research Institute (EPRI)**



<https://business.esa.int/funding/space-and-digital-transformation-for-green-energy-utilities>



The call aims at developing **cutting-edge solutions leveraging space assets**, to address the current priorities in the energy sector regarding renewable energies.

Scope: Feasibility Studies and Demonstration Projects

Closing Date: 31 March 2023
under extension

<https://business.esa.int/funding/space-and-digital-transformation-for-green-energy-utilities>

Key areas of interest

NET POSITIVE ENVIRONMENTAL IMPACT



Environmental **impact** throughout the **lifecycle** of renewable energy, promoting **circular economy**, long-term impacts of renewable energy sites, public acceptance

MONITORING RENEWABLE CAPACITY



Increasing **efficiency** of green renewable energy and **safety** of operations, seamlessly measure, monitor, and manage the status of the infrastructure

RENEWABLE ENERGY DEPLOYMENT



Planning and **bankability** of green renewable energy, infrastructure planning (e.g.: electrical vehicle charging points and new grid connection points to optimise grid stability), green financing

SMART ENERGY SYSTEMS



Digitalization of utilities infrastructure, **control** storage and dispatch of distributed energy resources, **monitor** major energy flows on the electricity grid in real time, self-healing grids



Hybrid terrestrial-SatCom 5G networks: e.g. low latency communication technologies for real-time network and asset monitoring in remote locations



Satellite Earth Observation – e.g. SatEO data to monitor environmental changes over the lifecycle of deployed renewable generation installations, to monitor onshore wind and solar installation sites and assess key factors like degradation, cleaning, and necessary replacement

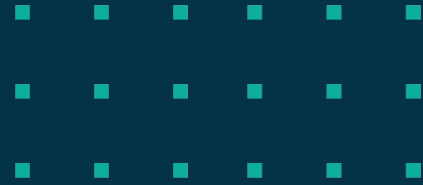


Global Navigation Satellite Systems (GNSS) – e.g. UAV operation



Mark McGranaghan

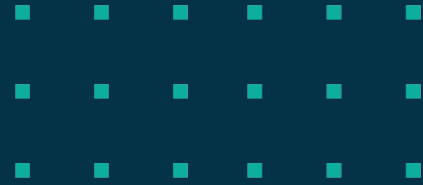
Electric Power Research
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Laura Schade

UK Department for Business,
Energy & Industrial Strategy

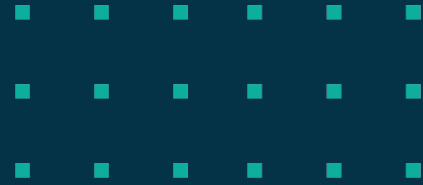




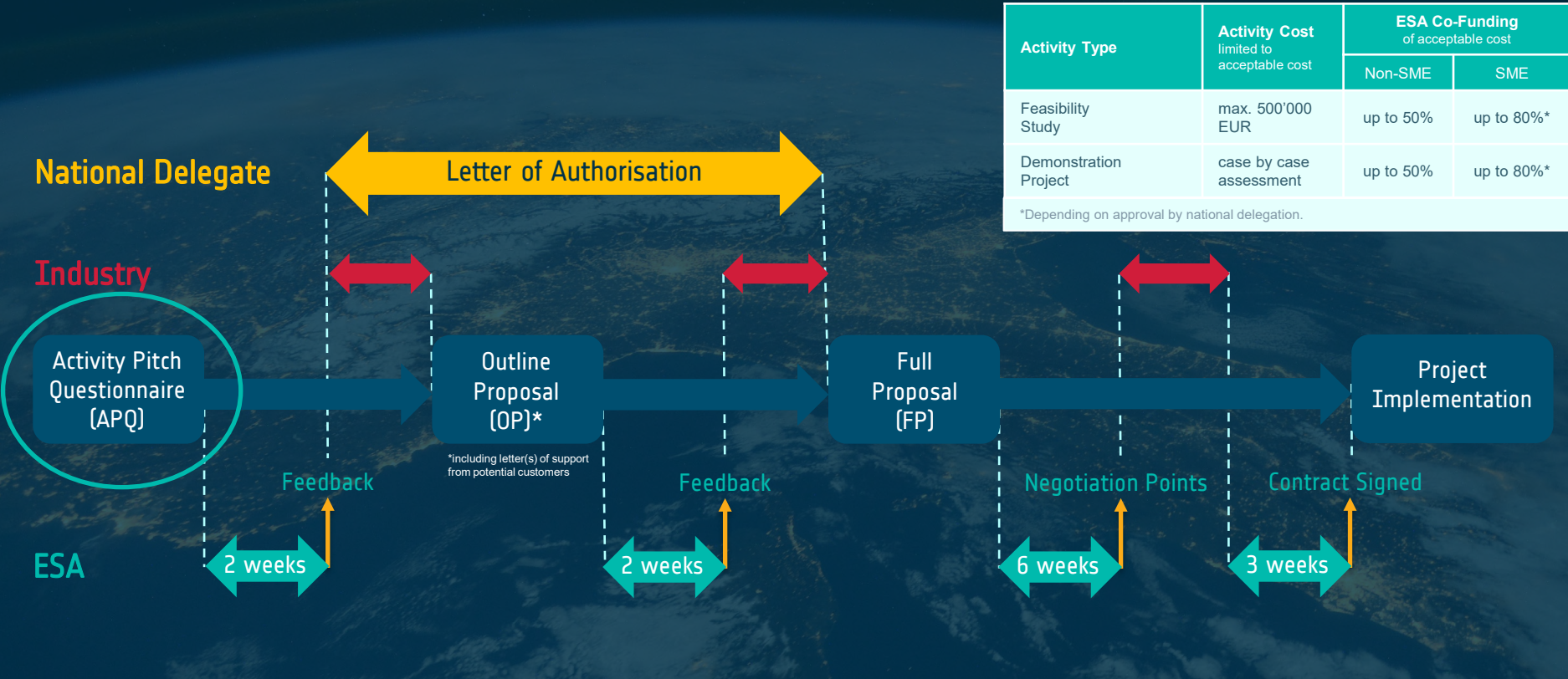
Diana Mathew

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How to apply



Pitch can be submitted anytime



business.esa.int

- Scroll down to the part “Featured Opportunities” to see all activities currently open or in preparation

<https://business.esa.int/funding/space-and-digital-transformation-for-green-energy-utilities>



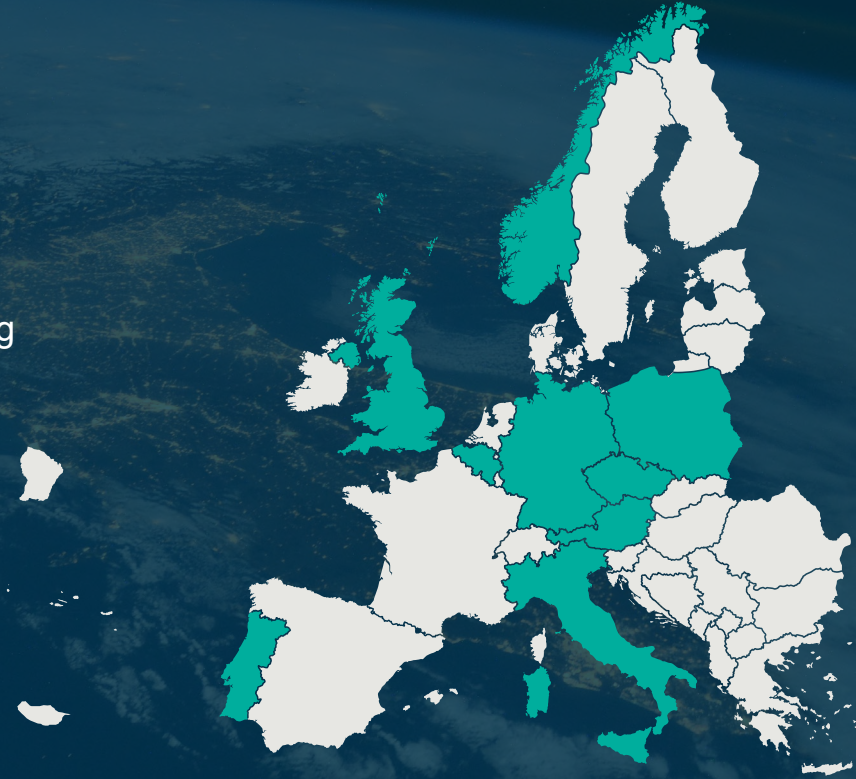
A tool at your disposal – the Ambassador Network

Ambassadors are present in 9 countries

They are your local interface for any questions related to the ESA Space Solutions offer

They can advise you on:

- Preparation of the Activity Pitch Questionnaire
- Give you an overview of ESA Space Solutions funding opportunities



ESA-ECSAT 5G/6G Hub

- A collaborative place
- 5G Engineering Lab, where you can benefit from testing your technology solution in a state-of-the-art hybrid satellite-terrestrial 5G lab environment
- 5G Demonstrations and Applications, to accelerate your technology development
- Events and Showcase



@Harwell Campus – Didcot – Oxfordshire UK

5G@esa.int

Q&A

Thank you!

For more information visit

→ <https://business.esa.int>

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