Space and Digital Platforms Kick-Start

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Space and Digital Platforms

Agenda

1. Introduction
2. ESA Space Solutions
3. Kick-Start Programme
4. Space and Digital Platforms
5. How to Apply
6. Q&A

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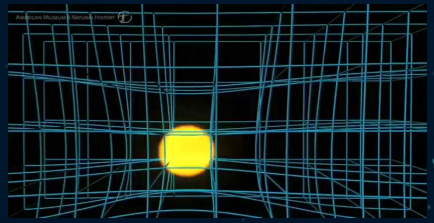
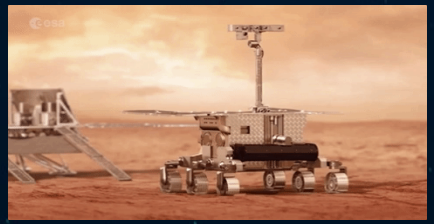
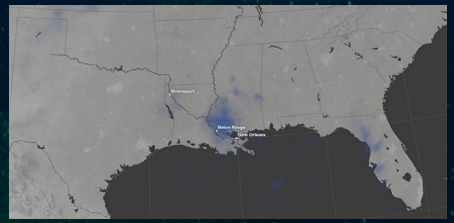
Science and Exploration

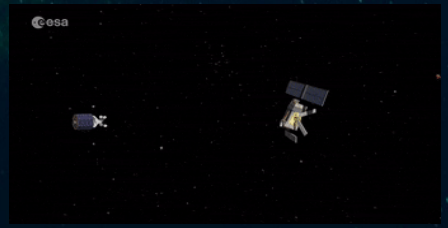




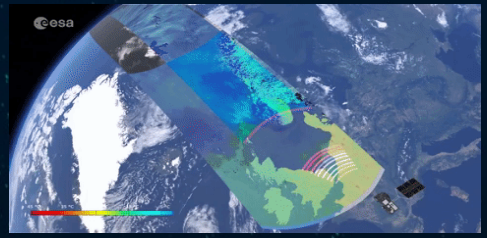
Enabling and Support

Safety and Security





Applications



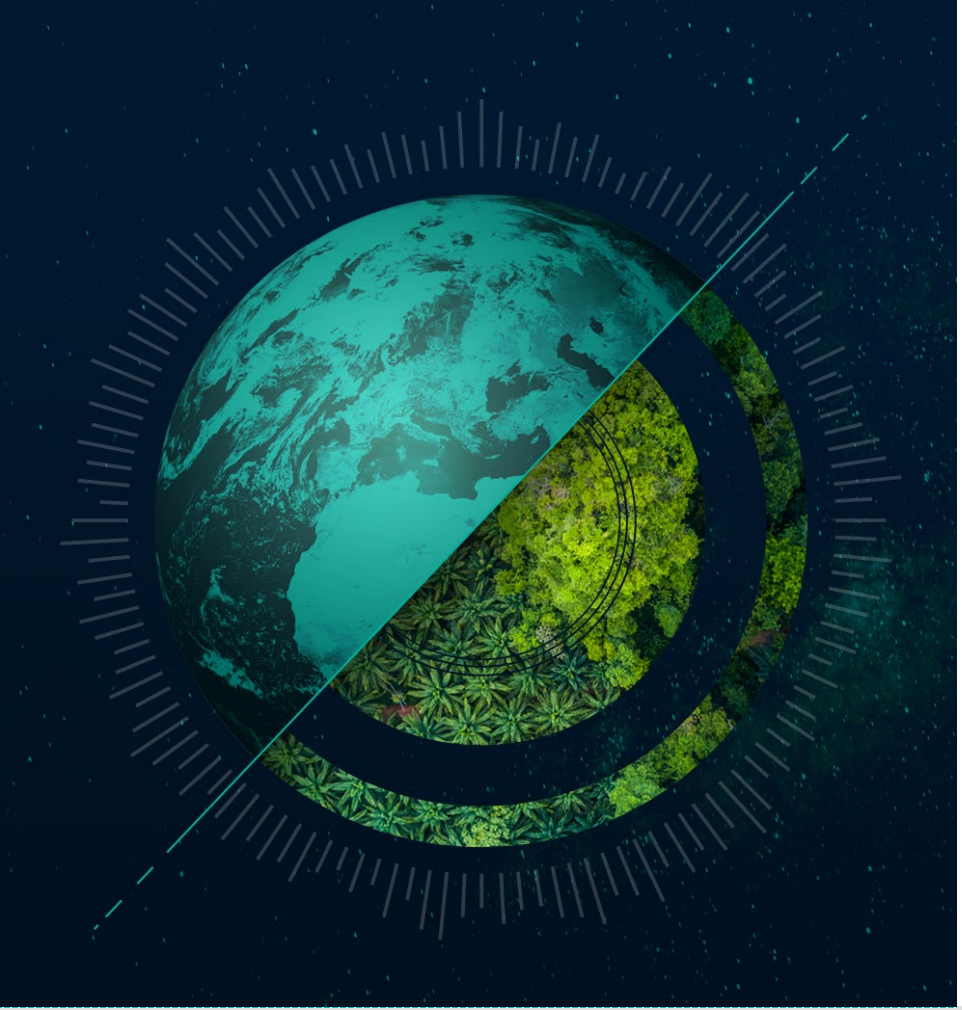

Space Improves Life on Earth

→ ESA SPACE SOLUTIONS

esa space solutions

The largest space innovation network in the world

- The go-to place for great business involving space to improve everyday life.
- Supporting European 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.



ESA SPACE SOLUTIONS OFFERS

- 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

Space Technology

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

Users & Markets

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

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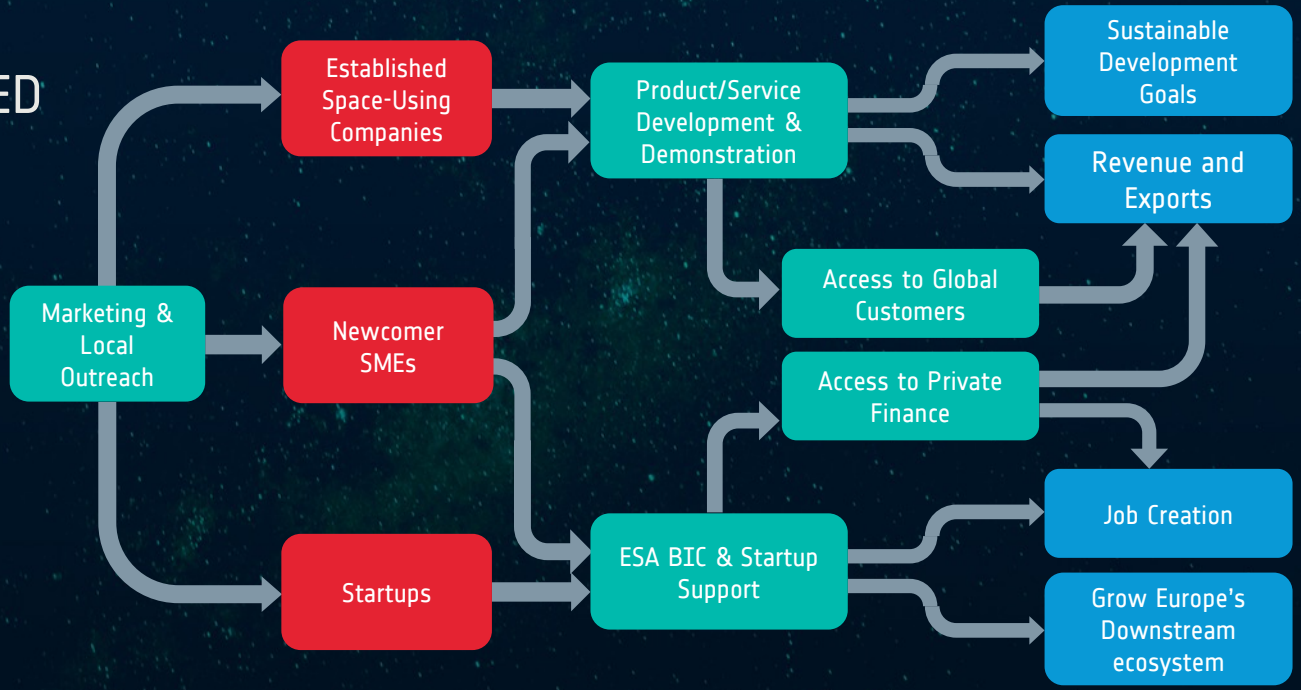
A FULLY INTEGRATED TOOLKIT FOR DOWNSTREAM BUSINESSES



→ ESA BUSINESS APPLICATIONS

Zero-equity co-funding up to €2M

- Demo projects: Mature value proposition & business plan and demo your service with customers.
  - Up to 50% co-funding*
- Feasibility studies: Explore ideas, create a business plan & connect with potential users.
  - Up to 50% co-funding*
  - 100% funding under Competitive Tender
- Kick-Starts: Thematic activities.
  - Up to 75% co-funding

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

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Kick-Start Programme

Kick-Start: Background

- In 2017, ESA Business Applications launched a Kick-Start (feasibility study) framework for providing up to 60k€ zero-equity financing open to any industry in participating Member States.

- Kick Start activities are designed to be particularly interesting for SMEs (including fast-growing) and start-ups looking for opportunities to develop their ideas for new business applications.

→ Kick-Start: Background

6 months duration - Overall cost €80K

€60K ESA funding (75% ESA co-funding)

"Kick-Start Activities" are ESA's funding scheme enabling companies to undertake short Feasibility Studies that explore new service and application concepts making use of space capabilities.

- Limited initial investment by companies, particularly attractive for SMEs and start-ups, granting them an easy entry into ESA Business Applications.
- Semi-Competitive tendering procedure.
- Rapid evaluation process, to allow companies to keep the pace in the market.
- If successful, possible follow-up support via Demonstration Projects

Kick-Start: Goals

Kick-Starts looks at 3 main elements:

1. Engagement with potential end users and customers to understand their needs and translate these into service requirements.
2. Evaluation of the technical feasibility of the service, and definition of the service and system architecture.
3. Evaluation of the economic viability of the service and development of a business plan.

Background

"Digital Platform", here defined - *an online platform facilitating the exchange of goods, information and services between consumers and providers and the broader community that interact with said platform.*

- Highly scalable / leverage on connectivity
- Adaptable to adjacent / alternative markets
- Business resilience due to digital nature
- Companies with largest market capitalisation today are / leverage digital platforms (Microsoft, Google, Facebook, Amazon…)

Background

"Digital Platform", here defined - *an online platform facilitating the exchange of goods, information and services between consumers and providers and the broader community that interact with said platform.*

- **Space for Digital Platforms**
  - Services that integrate space technology with digital platforms.
- **Digital Platforms for Space**
  - Digital platforms that support the space ecosystem.

Call is open from 10th December 2021

Topics

Consumer Services

Connect consumers with services such as ride-sharing, routing and navigation, financial services, goods delivery, rental...

Entertainment

Gaming, edutainment, e-sports, virtual and augmented reality experiences...

Marketplaces and Knowledge

Facilitate access to and trade of space-related assets, financial support, information relating to space.

Topics

Consumer Services

- Possible services:
  - The platform operator plays a central role in the service provision…
  - The platform operator only operates the platform and hosts relevant content, while services and content are provided by the users…
  - The platform facilitates the connection between consumers and suppliers…
  - Complementary services are provided to add value to the main platform…

Topics

Entertainment and Social

- Possible services:
  - Augmented and mixed reality gaming and entertainment platforms that leverage satellite positioning and geofencing (e.g. PokemonGo).
  - Virtual experiences and games leveraging space data (such as satellite earth observation imagery, and/or satellite positioning).
  - Social platforms to connect people, leveraging space data for varying needs.

Topics

Marketplaces and Knowledge

- Possible services:
  - Facilitate the trade of space-related assets between many actors (equipment, data [raw or processed], or services…
  - Novel financing platforms using innovative mechanisms to support space ventures involving many parties…
  - Knowledge-oriented platforms dedicated to dissemination of information, co-creation, education/edutainment, discussions… related to space and/or using space data.

The Power of Space

Satcom offers reliable connectivity in places with insufficient terrestrial cellular coverage, especially in the case of remote or poorly connected environments. Act as a back-up to terrestrial communications infrastructure. Broadcast/multicast message distribution to vehicles and transport infrastructure..

Satellite Earth Observation: Google Earth is a striking example mapping data consumed by the general public for entertainment or knowledge. More elaborated services would provide terrain classification, environmental, weather or other insights derived from SatEO data. SatEO data can also be leveraged in real-world gaming environments.

Global Navigation Satellite Systems (GNSS) are instrumental for applications requiring the geo-referencing of the consumer's location. E.g. for Uber and PokemonGO, GNSS is instrumental and in particular the availability of GNSS enabled consumer smartphones. Augmentation can achieve higher accuracies, where needed.

Space and Digital Platforms: Examples

ALEEGO / ThermAleego – Drone Mission Platform

Service

ALEEGO is a platform connecting entities requiring drone services with drone operators able to complete the requested missions. Services could relate to energy network monitoring, agricultural services, construction monitoring and more…

Role of Space

Following a mission, drone operators upload the collected data (geolocated imagery using GNSS) and the platform operator carries out analysis of the data and presents it to customers often alongside satellite earth observation data.

ESA Support

Kick-start activity investigating the utilisation of blockchain to support the audit trail of mission request, approval and completion. Follow-up demo project focusing on processing drone-derived thermal imagery for the energy sector.

Further Info

ALEEGO - Blockchain for the ALEEGO Platform | ESA Business Applications

ALEEGO - In the air we go : ALEEGO

Space and Digital Platforms: Examples

Tandem - Tackling Transport Poverty in Towns and Small Cities

Service

Tandem is creating new transport options for people living in towns and small cities – places where poor public transport often prevents access to jobs, healthcare, education and social connections. The project sees Tandem partner with existing local taxi and minibus companies to provide shared transport options to locals.

Role of Space

Satellite positioning is used to share the locations of riders and drivers, geofencing and to guide drivers to pick-up and drop-off points.

ESA Support

Demonstration project supporting the team in testing an MVP with end-users on-board.

Further Info

Tandem - Tandem - Tackling Transport Poverty in Towns and Small Cities | ESA Business Applications

Home | Tandem (ridetandem.co)

Space and Digital Platforms: Examples

Optimal4- AgriTech Platform

Service

Optimal4 is a land management solution allowing land owners to identify the optimal use of their land based on a pre-selected impact goal (e.g. desertification reversal, crop selection, profitability, emissions offsetting…). This is embedded in the MEGA marketplace which connects users with relevant services, products, and data based on the Optimal4 recommendations.

Role of Space

The platform allows land owners to map out their land using smartphone GNSS (automatically identified by the platform) and the platform uses SatEO data to analyse their plot of land (and the surroundings) for the target impact goal.

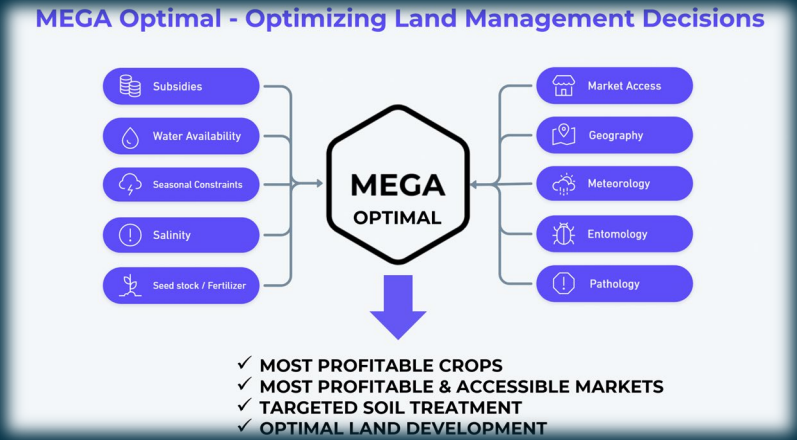
ESA Support

Kick-start activity investigating the technical and economic viability of the solution, in particular with respect to optimal crops for high salinity soils.

Further Info

OPTIMAL4 - MEGA OPTIMAL4 - Optimized crop decisions for enhanced output and profitability while regenerating the Earth. | ESA Business Applications

MEGA – Let's Greenify the Earth (megamaps.io)



Space and Digital Platforms: Examples

Tracematics - Contactless, or On-demand, Mobility-as-a-Service platform

Service

A “contactless” car rental service allowing users to register, book and complete vehicle rentals from different rental companies, solely through a smartphone app. The app combined with an on-board telematics solution manages and monitors the end-to-end rental.

Role of Space

Satellite positioning is used to identify the pick-up/drop-off location of the vehicle, provide geofencing to ensure the vehicle is used as per the rental terms, returned to the correct location, and to monitor the usage of the vehicle (together with other telematics data).

ESA Support

Demonstration project supporting the team in testing an MVP with end-users on-board.

Further Info

[CONTACTLESS - Contactless, or On-demand, Mobility-as-a-Service platform | ESA Business Applications]

[RentalMatics | Proven Telematics Software]

How to Apply (1/2)

Register	Register by completing online questionnaire on ESA-STAR Registration (minimum 'light registration') (Doing Business with ESA)
Download	Download the official tender documentation (Invitation to Tender) via ESA Star Publication 'AO 11088' from 10th December 2021
Create	Create 'Bidder Restricted Area' in ESA-STAR Tendering
Write	Write your proposal and obtain Letter of Authorization from National Delegation, if needed.
Submit	Submit your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering (Doing Business with ESA) by the relevant closing date (don't wait until the last minute!)

How to Apply (2/2)

The Letter of Invitation to Call for Proposals is issued on ESA-Star Publication (Doing Business with ESA) under 'AO 11088' and includes:

Cover Letter	
Appendix 1	Activity Description / Statement of Work
Appendix 2	Draft Contract
Appendix 3	Tendering Conditions for Express Procurement Procedure - EXPRO/TC
Appendix 4	Proposal Template

→ Authorisation from National Delegations

- The authorization from National Delegation for the specific Thematic Call against which you submit your Proposal is an admissibility criterion. Proposals not authorized at the closing date of the Thematic Call will not be admitted for evaluation
- For each individual Thematic Call, dedicated clarifications will be posted in ESA-Star Publication to provide information on the list of Member States that have already provided their pre-authorization to the Thematic Call
- In case your company/organisation resides in a country which has not provided a pre-authorization to the Thematic Call you are interested in, you need to contact your National Delegation. The contact information of the National Delegations can be found at https://business.esa.int/national-delegations

→ Proposal template

Your Proposal shall include the following information:

1. Executive Summary (max 1 page)
2. Business Potential (max 5 pages)
3. Technical Concept (max 5 pages)
4. Team and Resources (max 3 pages)
5. Management (max 4 pages)
6. Financials (max 2 pages)

Thank you!

For more information:

ESA Space Solutions
(https://spacesolutions.esa.int/)

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