

Space for Safeguarding of Children

ESA Business Applications Space Solutions

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ESA Business Applications

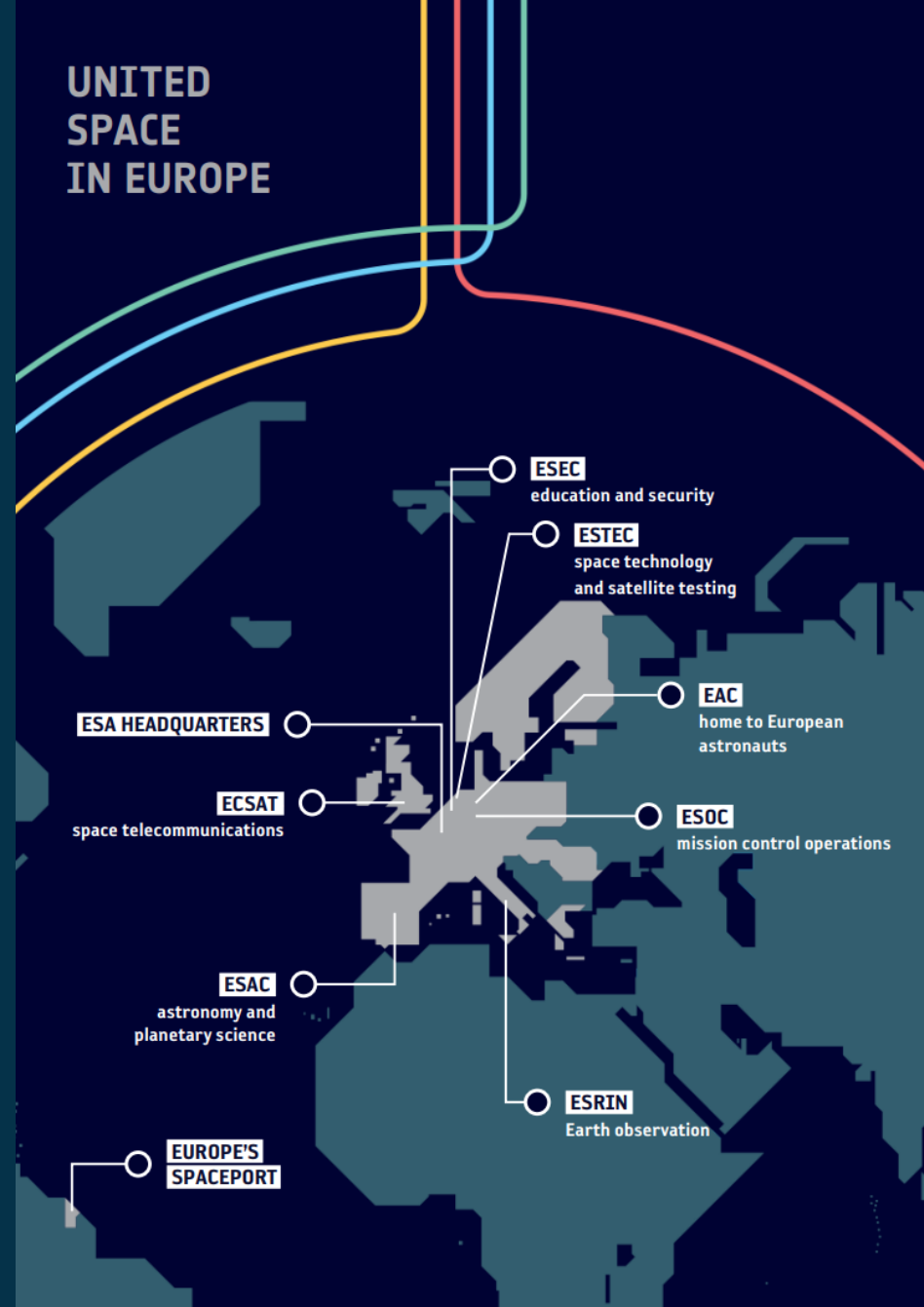
Agenda



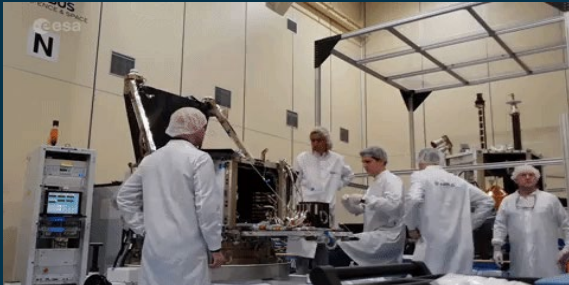
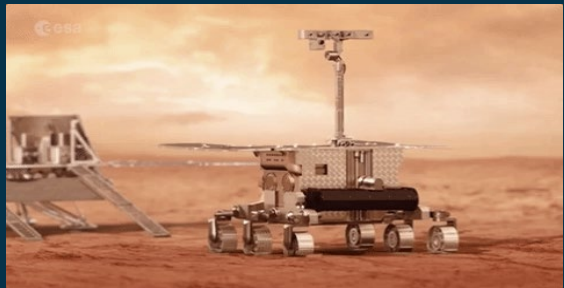
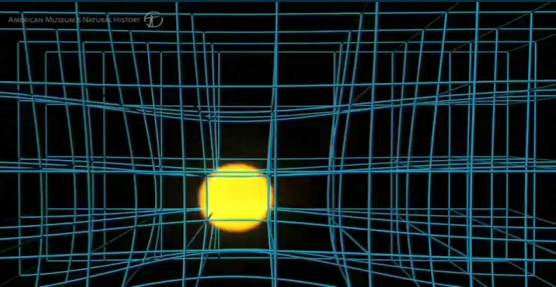
1. Introduction
2. European Space Agency
3. Business Applications Space Solutions (BASS) Programme
4. Space for Safeguarding of Children
5. Guest Speaker
 1. Bob Cunningham, CEO - International Centre for Missing and Exploited Children (ICMEC)
6. BASS Project/Study Examples
7. How to Apply
8. Q&A

European Space Agency

- Europe's gateway to space
- Peaceful exploration and use of space for the benefit of everyone
- Established in 1975 - over 50 years of experience
- 22 Member States + Additional Associate & Cooperating States
- 8 sites across Europe and a spaceport in French Guiana
- Promote European scientific and industrial interests in space



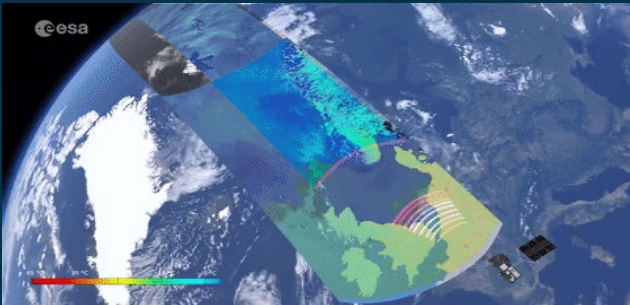
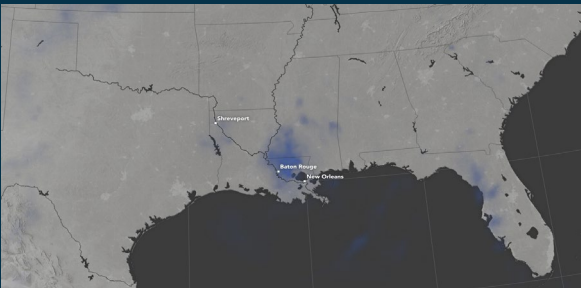
Science and Exploration



Enabling and Support

Safety and Security

Applications



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.





Space Improves Life on Earth



Space Technology...

X

... non-Space Technology...

=

... more applications, more value ...



Big Data Analytics

VR/AR/XR

Artificial Intelligence

Distributed Ledger Technology

Robotics

Internet of Things

Digital Twins

Drones

Cloud Technologies

5G (<https://artes.esa.int/esa-5g6g-hub>)



What can you do with Space Technology?



Satellite Positioning



Global Positioning
Navigation
Velocity
Precision Timing
Activity Tracking
Route Optimisation
Surveying
Machine Control

Satellite Communication



Reliable and Secure
Communication
Remote Connectivity
Backup to Terrestrial
Infrastructure
Broadcast to
Widespread Users

Earth Observation



Land, Sea, Air Monitoring
Infrastructure Monitoring
Resource Mapping
Environment Sensing
Change Detection
Weather and Pollution
Forecasting

Human Spaceflight Technologies (Spin-Outs)



Augmented Reality
Health Sensors
Procedures
Big Data Processing
Artificial Intelligence

Desired
by customers
customer engagement

Viable
business
sustainable
operational
services

Feasible
technology
added value of
space

What ESA Space Solutions Offers...

Our aim is to work together to make your idea commercially viable, with:



Zero-Equity
Funding
(€50K-€2M+)



Tailored Project
Management
Support



Access to our
Network and
Partners



Use of ESA
Brand for
Credibility

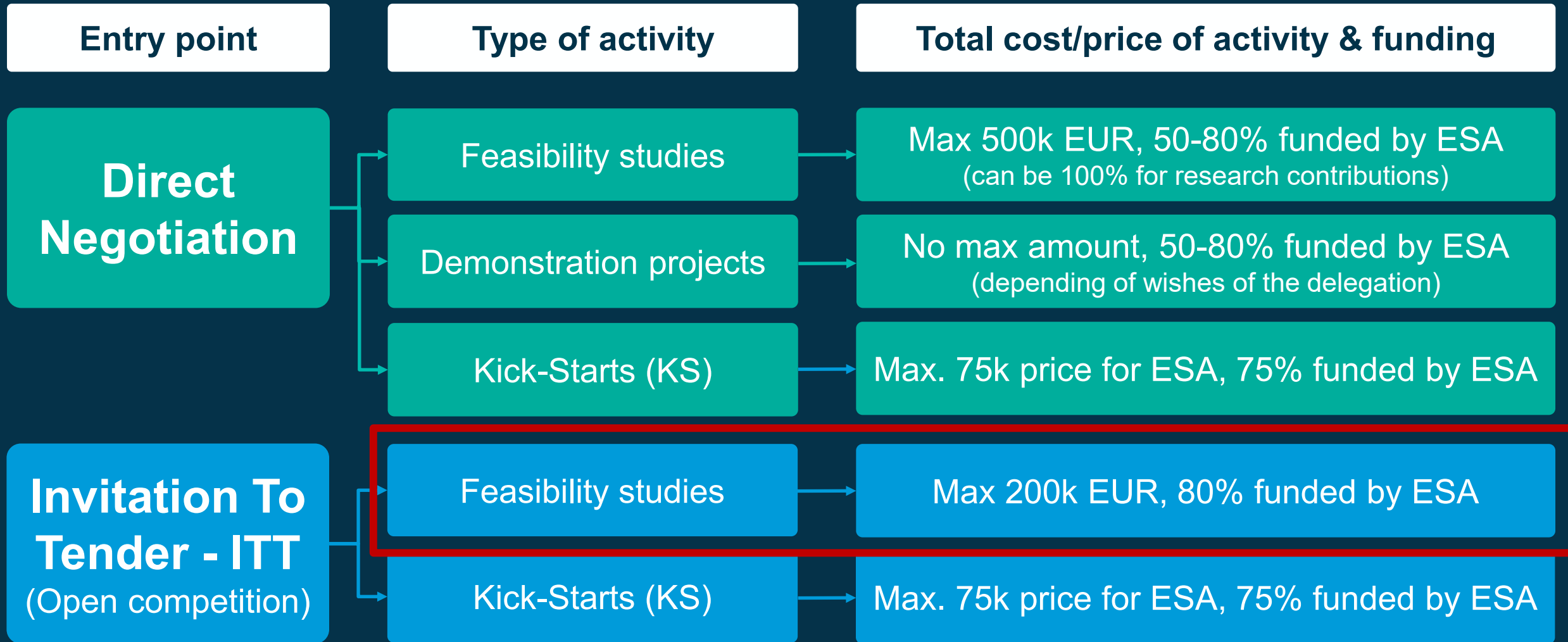
Demo projects: Mature value proposition & business plan and demo your service with customers

Feasibility studies: Explore ideas, create a business plan & connect with potential users

Kick-Starts: Thematic activities



Funding Schemes



After market-entry ESA can provide support through access to an investor network and media promo

What's in it for us?

SOCIO-ECONOMIC IMPACT

Deliver **social value** and
economic sustainability



USE OF SPACE TECHNOLOGY

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



Cooperations with Non-Space Stakeholders*

* These are entities who do not receive funding from ESA through the cooperation but have mutual objectives in running initiatives with ESA



Seeking innovative space solutions to support safeguarding of children worldwide.

- To exploit the capabilities of space-based and complementary technologies, techniques and datasets to protect children from abuse and exploitation.
- Main areas of interest are identification of missing children, and protection of migrant children.
- Study (before development) of solutions that support law enforcement, NGOs, humanitarian organisations, civil protection bodies, national authorities...
- Support could be through tools for identification of, or response to, relevant events and proxies thereof.
- Open to feasibility studies (9 months, 200kEuros at 80% ESA co-funding)



Protecting Migrant Children

- Migrant children can suffer food insecurity, lack of access to healthcare, shelter and drinking water. Additionally, they face a greater chance of abuse and exploitation when in transit.
- Effective response requires multi-sectoral coordination across regions, enabled by sophisticated datasets, tools and technologies, including locating blind spots in migration routes.

Missing Children

- There are hundreds of thousands of missing children reports each year, though in several countries limited data is available.
- Unaccompanied children are vulnerable to violence, abuse, abduction and trafficking.
- One of the biggest barriers to ending exploitation of children is having reliable, timely, spatially explicit, and scalable data on trafficking activity.



The Power of Space Technology and Data



Satellite Earth Observation

- ❑ Change detection to identify proxies and trends indicative of trafficking or migrant activity.
- ❑ Imagery to characterise land and building use, population density, and further proxies.
- ❑ Radio Frequency analytics datasets to identify unusual activity, on land or at sea.



Satellite Positioning

- ❑ Positioning information for tracking and navigation of first responders and operators.
- ❑ Positioning information for navigation of UAVs, and geo-/time-stamping of collected data.



Satellite Communications

- ❑ Rural, remote and offshore connectivity.
- ❑ Multi- and broadcast capabilities for disseminating alerts or other information.

SPACE FOR SAFEGUARDING OF CHILDREN



Guest Speaker

BOB CUNNINGHAM

CEO, ICMEC



Bob Cunningham, CEO
*International Centre for Missing and
Exploited Children (ICMEC)*



Why ICMEC Exists

ICMEC is an organization that makes the world a safer place for children by tackling complex issues related to missing children, child sexual abuse, and child sexual exploitation.

The vulnerability of missing children is terrifying, the ways children are abused are horrifying, and the exploitation of children by adults is heart wrenching.

We know these terrible situations impact children at every age, in every nation, and of every ethnicity, religion, and socio-economic class. Failure to protect children is the failure of our society as a whole, and each of us has a social, an intellectual, and a moral imperative to do what we can to make the world safer for all children.

ICMEC's Impact

Over the last two decades, ICMEC has worked in more than 120 countries, empowering the global community with the tools, training and technology to create a safer world for children.



Global impact by the numbers.



120+

The number of countries where we have worked.



800,000

We have provided training to 2,000 school professionals across 87 countries, impacting more than 800,000 students across the world.



155,000+

The number of criminal justice professionals, educators, and healthcare professionals we've trained worldwide since inception.



19

We've helped 19 countries develop Rapid Emergency Child Alert Systems similar to AMBER Alert in the United States



30

The number of countries represented by ICMEC's Global Missing Children's Network, which offers resources to support the search for missing children globally.



38

The number of member organizations committed to the US Financial Coalition.



International CentreTM
FOR MISSING & EXPLOITED CHILDREN

How ICMEC helps children

At ICMEC, we maximize our impact by focusing our work on the levers that can create social change and durable impact - **Policy, Technology, and Capacity Development** for professionals in the best position to protect children.

Stakeholder engagement and partnership development are the keys to our success.

OUR PROGRAMS AREAS:



LEGAL RESEARCH & POLICY



TECHNOLOGY



NATIONAL CAPACITY BUILDING



OCSEA:

We protect children from online child sexual exploitation and abuse.

Initiatives

- Multi-sectoral gap assessments
- Specialized police units
- Law enforcement and criminal justice professionals training
- Corporate child safety training
- Financial industry coalitions and projects
- Policy roundtables
- Global reviews, model legislation, & policy advocacy
- Awareness and informational activities and publications
- Tech company partnerships



Child Trafficking:

We disrupt cross-border child trafficking networks.

Initiatives

- Victim and criminal identification task forces
- Policy round tables and publications
- Awareness activities for policy makers
- Financial services industry projects
- Healthcare service provider training



Missing Children:

We locate and identify children who are missing.

Initiatives

- Multi-sectoral gap assessments
- Global Missing Children's Network
- Global Missing Children Alerts platform
- Amber Alert systems
- Financial services companies rapid response
- Policy round tables
- Model policy framework
- Awareness and informational activities and publications
- Prevalence estimation model

Together, We Can Do So Much More!

The goal of our collaboration would be simple:

Combine information from space technologies with other sources of data to create tools that make the world safer for children.

Challenges your tools could address:

- Confusion and breakdowns in processes caused by migration puts children at greater risk.
- Patterns in behavior of criminals and victims exist, but they are not recognized by those in the best position to intervene.
- Organized criminal activity is often more sophisticated than local resources can handle.
- When children are missing and / or being exploited, by the time authorities and concerned organizations recognize what is happening, the children are gone.
- Lack of communication is often the greatest barrier to effective intervention.



ICMEC can help by:

- Engaging stakeholders to clear barriers to projects
- Facilitating partnerships that can help to determine markets, acquire data, get products tested, etc.
- Making introductions to promote the success of the projects

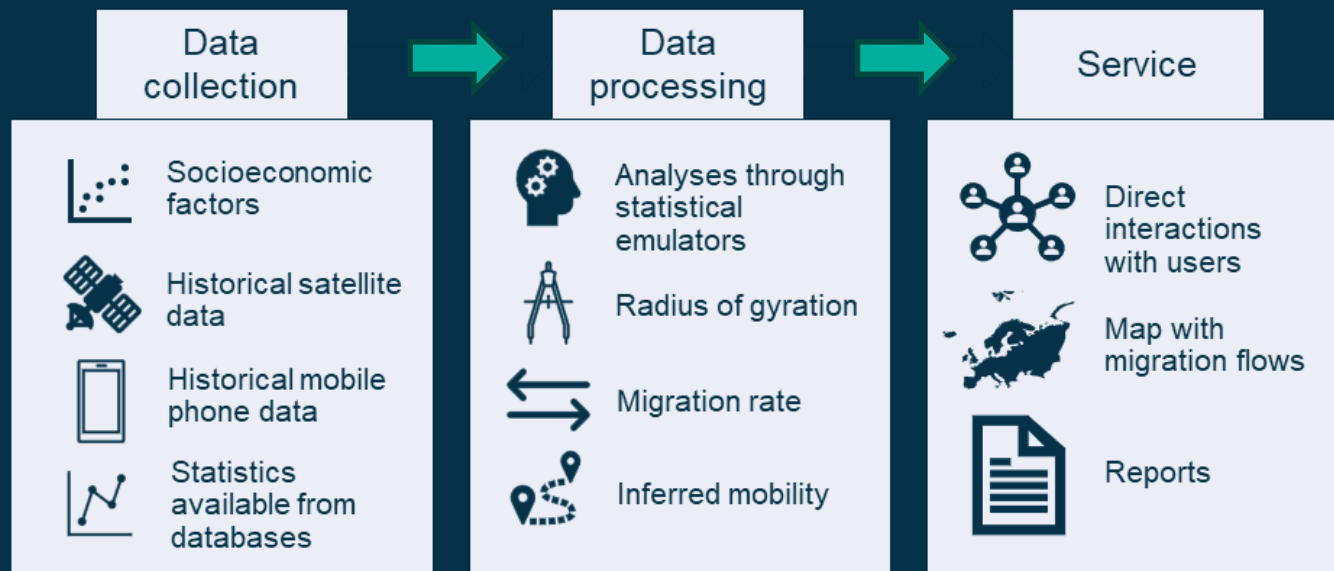
ESA Business Applications

Study Examples

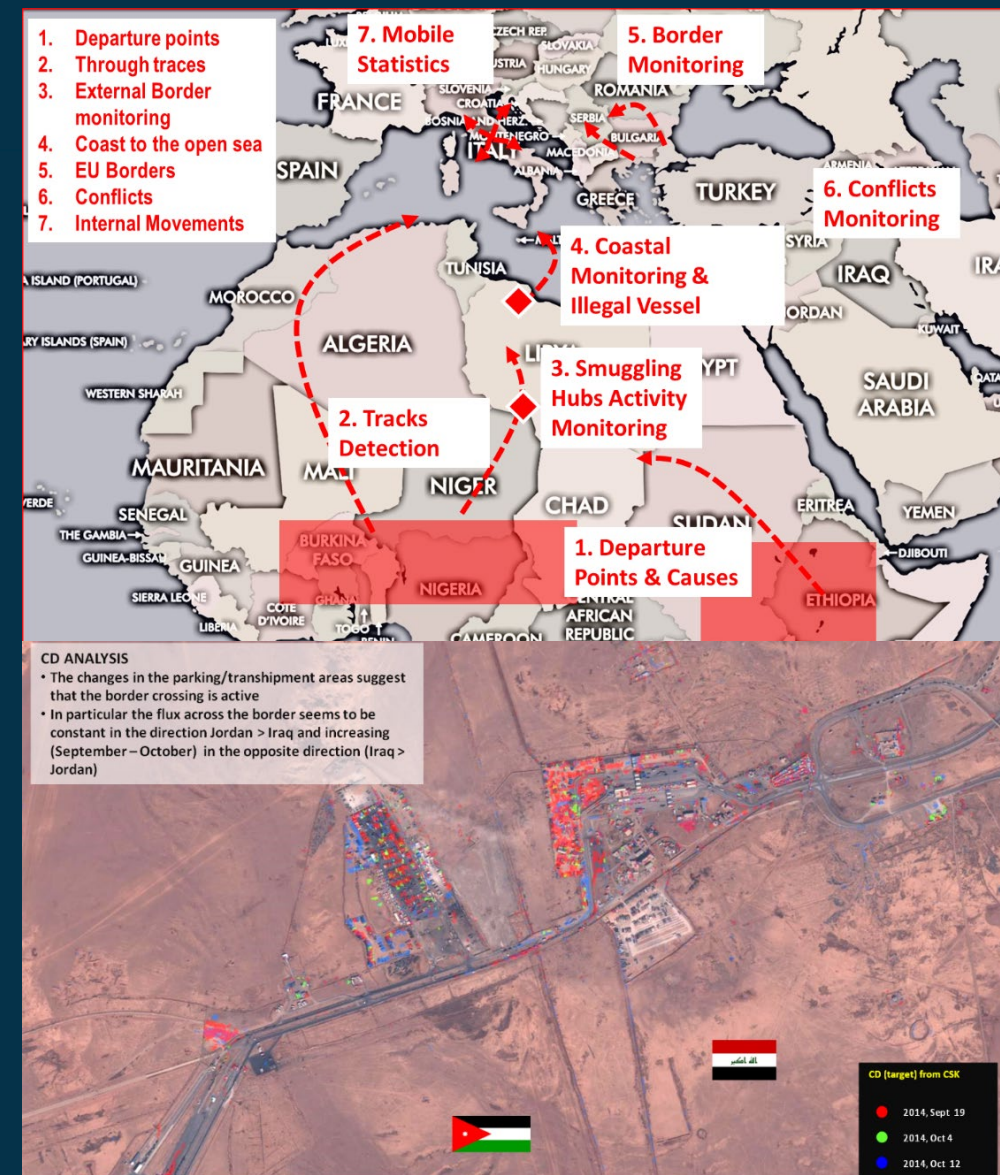
Big Data for Migration

Feasibility Study

Service uses aggregated call and mobile phone data, and socioeconomic factors coupled with earth observation data. Specifically focused on anticipating potential migration flows.



Targeted Users: EU Agencies, National Coordination Centre, humanitarian aid and civil protection actors, NGOs involved in migration crisis, national authorities.



Rf ApplicaTIOns (RATIO) project (ongoing)

Feasibility Study

The intended service is designed to monitor migration flows using radio frequency (RF) analytics.

Migration routes are often characterised by stations with RF sources, which can be cross-checked using satellite imagery (temporary settlements, vehicle tracks etc.). RF leaves behind distinguishable information that can return important spatial-temporal information on migration patterns.

Targeted Users: Maritime safety agencies, refugee councils, coast guards



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 12527' from 6th September 2024: [esa-star Publication](#)

Create

Create 'Bidder Restricted Area' in ESA-STAR Tendering

Write

Write your proposal and obtain Letter of Authorization from National Delegation.

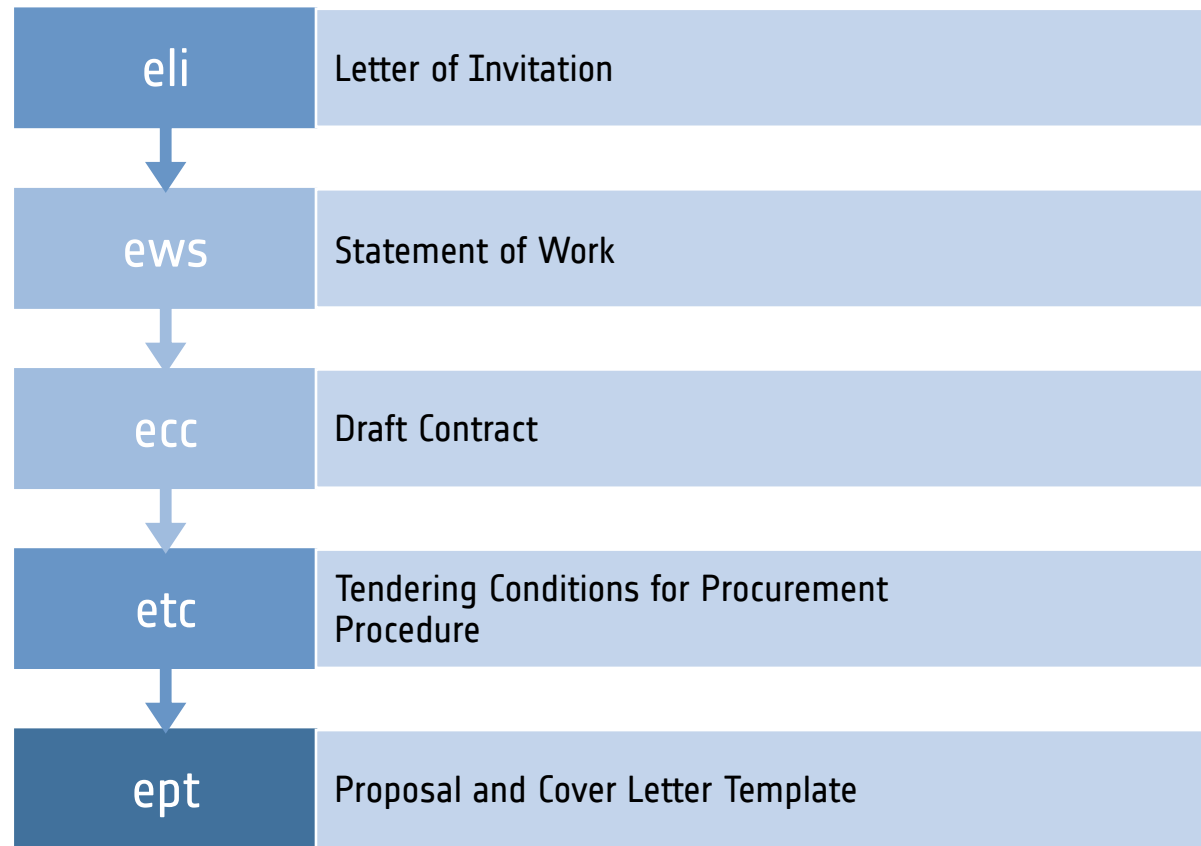
Submit

Submit your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering [[Doing Business with ESA](#)] before 6th November 2024 (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 12527' and includes:



- The authorisation from National Delegation for this Competitive Tender against which you submit your Proposal is an admissibility criterion. Proposals not authorised at the closing date of the Competitive Tender will not be admitted for evaluation
- To be eligible for funding, your team must be based in one of the following countries: **Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Slovenia, Sweden, and Switzerland**. Teams can involve non-European entities, but their contribution to the activity cannot be funded by ESA. Authorisation of Funding letters from the corresponding National Delegations are required as part of the application.
- Prospective bidders must contact their national delegations to secure an Authorisation of Funding (that should be submitted with their proposal). The contact information of the National Delegations can be found at <https://business.esa.int/national-delegations>

Thank you!

For more information:

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

Space for Safeguarding of Children (esa.int)

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