SPACE SOLUTIONS

Diversity, Equity and Inclusion

WEBINAR

Manon.Houyet@esa.int

Guillaume.Prigent@esa.int

ESA UNCLASSIFIED

Welcome to the Webinar!

esa space solutions

Before we start...

- Please keep your microphones muted during the webinar and make sure your webcam is switched off.

- You can use the conversation function anytime to submit your questions. They will be addressed during the Q&A at the end of the webinar

Agenda

ESA Welcome and Introduction

About ESA

Diversity, Equity & Inclusion and Space

→ Clarisse De Cerjat - Eurocities: Inclusive Cities

How to Apply to the *DE&I* Competition

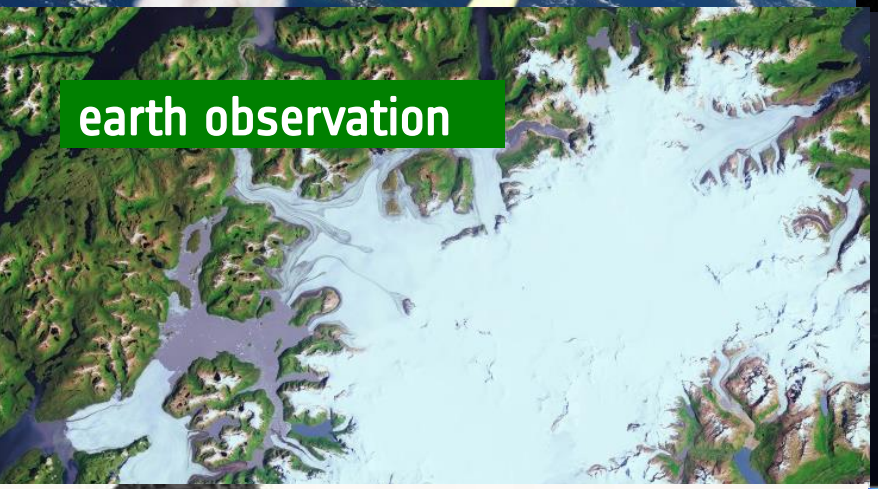
Q&A Session

ESA UNCLASSIFIED

space transportation

science

human spaceflight


earth observation

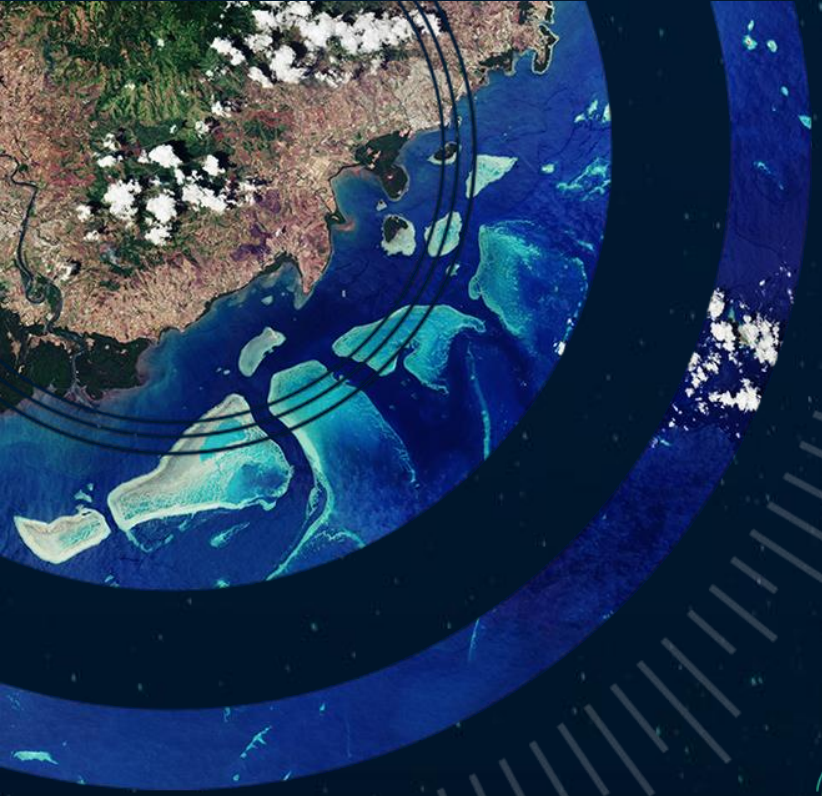
telecommunications
and applications

navigation

exploration

operations

technology



MARITIME

HEALTHCARE

TRANSPORT

ENVIRONMENT

AGRICULTURE

MEDIA

ENERGY

EDUCATION

AVIATION

FINANCIAL

SPACE WEATHER

EARTH OBSERVATION

SATELLITE NAVIGATION

SATELLITE COMMUNICATION

HUMAN SPACEFLIGHT TECHNOLOGIES

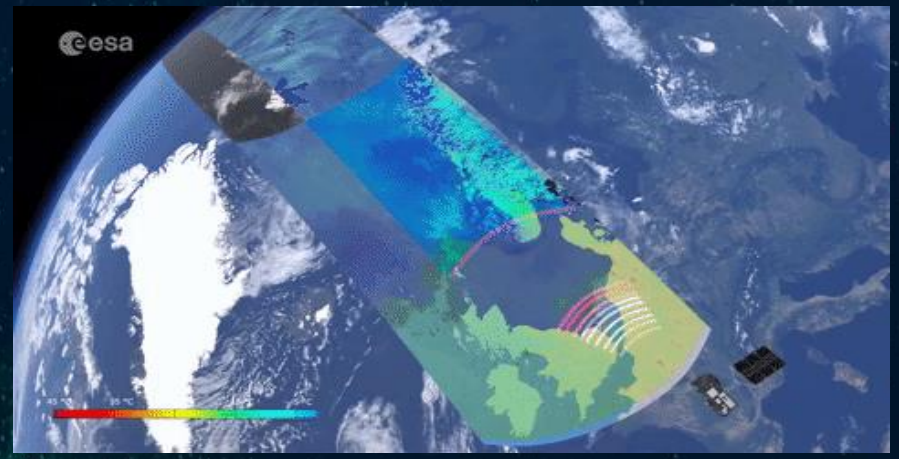
esa space solutions

Supporting the Development of Services on Earth that Involve Space

ESA UNCLASSIFIED

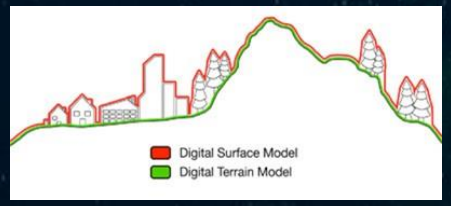
Space assets

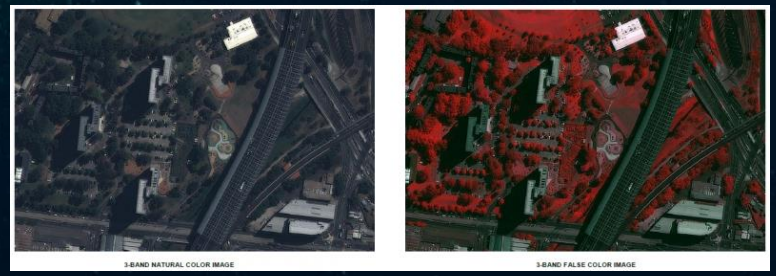
Earth Observation



- **What:** Monitoring large areas, consistently across time, historical data to train ML, wide range of parameters accessible(IR, UV, Microwave..)

- **Added value:** Source of data not requiring human inputs, access to remote areas or areas not accessible via other means, relatively affordable data.





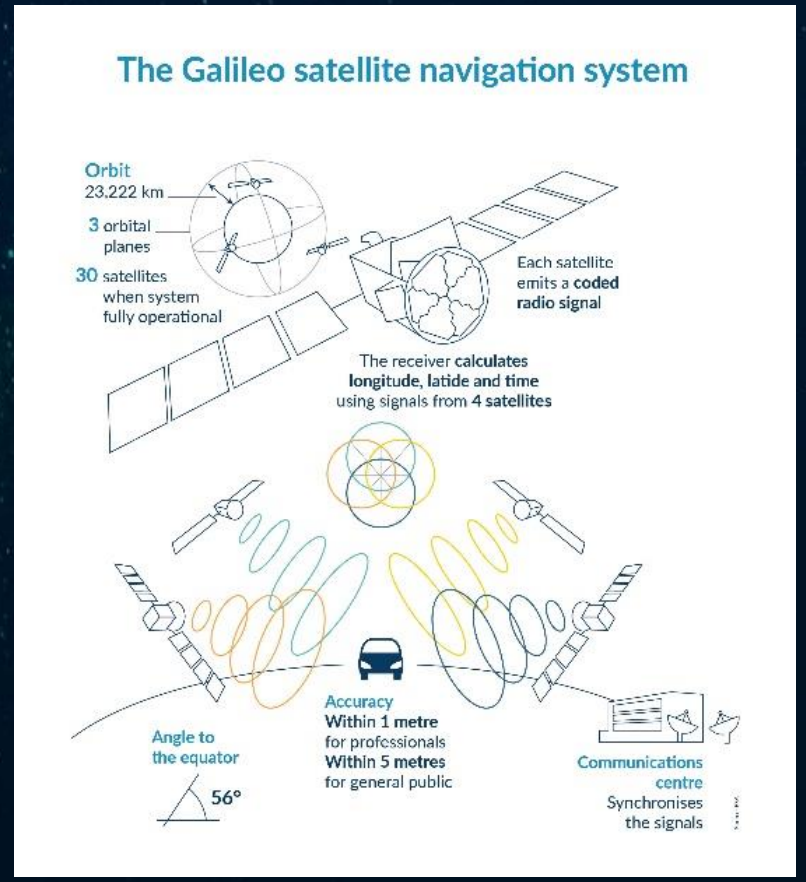
[Newcomers Earth Observation Guide | ESA Business Applications]

ESA UNCLASSIFIED

Space assets

Satellite Navigation & GeoIntelligence

- **What:** Localization of a person or a device anywhere in the world
- **Added value:** Help to contextualize the information



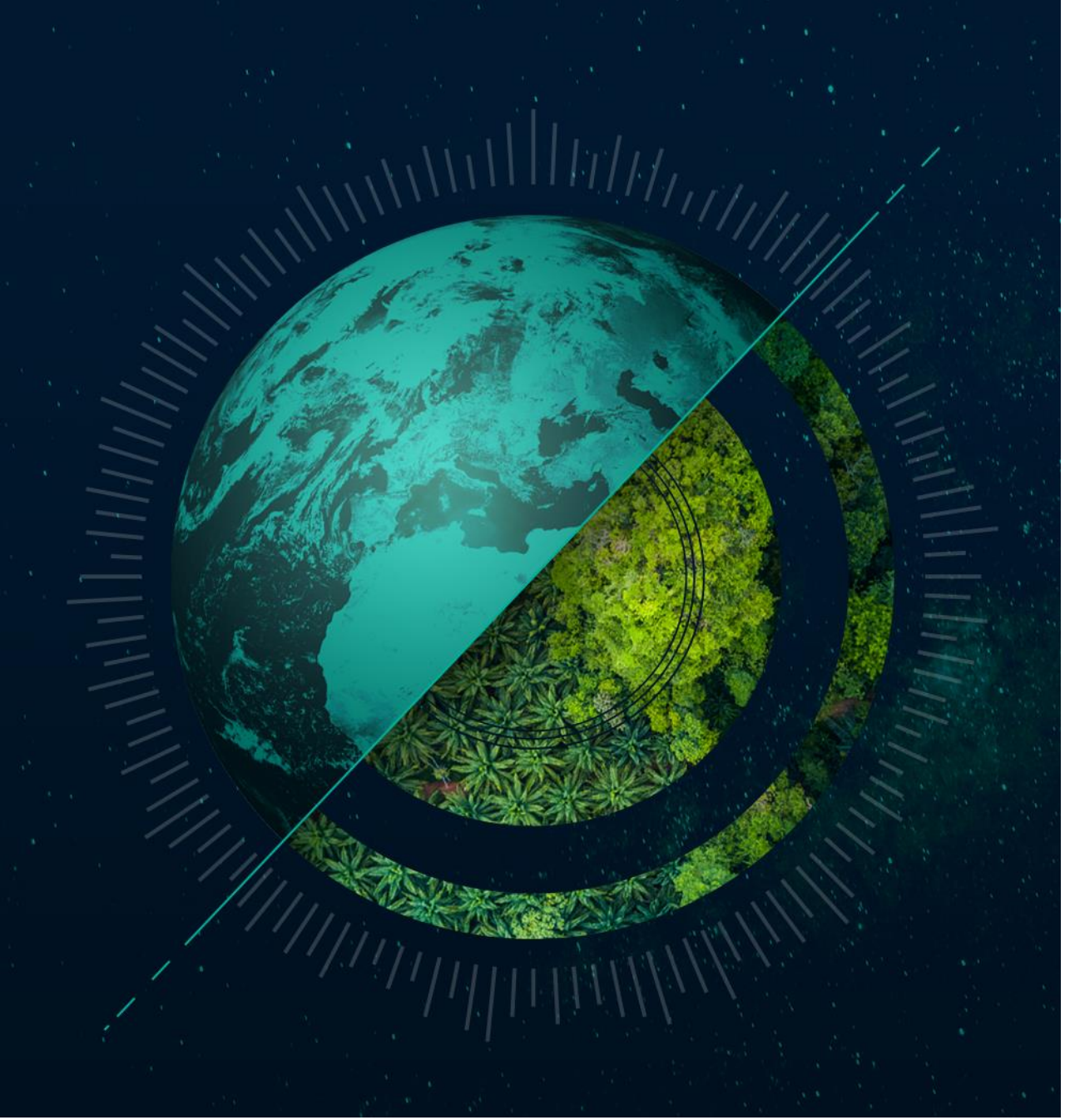
ESA UNCLASSIFIED

Space assets

Satellite Communication

- **What**: Transfer information from and to anywhere around the world
- **Added value:** Access to remote areas helping to tackle the digital divide, backup for critical services (health, security)

ESA UNCLASSIFIED



ESA SPACE SOLUTIONS

- 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

Diversity, equity & Inclusion and Space

ESA UNCLASSIFIED

Diversity, Equity and Inclusion

Context

- Increase in ageing population
  - Increasing need for tailored services and products

- Discrimination leads to economic inefficiencies
  - In USA, $64 billion annually

Opportunities

→ Promote fairness and equal opportunities for all

→ DE&I improves organisational performance

Scope KS: investigate technical feasibility and viability of space technologies to address challenges related to DE&I

Kick-Start Study

6 months

€60k co-funding

Diversity, Equity & inclusion

Relevant topics

- Inclusive Corporate Cultures and Business Models
- Inclusive Society for Elderly Citizens
- Inclusive Cities

ESA UNCLASSIFIED

Diversity, Equity & Inclusion

Inclusive Corporate Cultures and Business Models

- Diversity at work = Better performance
- Inclusive Business Model = DE&I incorporated into the design of products/ services and the value chain
- To delete existing market failures and inefficiencies

Satellite Communications

Connect remote and underserved communities to internet and other communication networks:

- Access to information & services
- For training
- Support local centres business

Diversity, Equity & Inclusion

Inclusive Society for Elderly Citizens

Demographic inversion: Increase ageing population

This leads to some Challenges, among them:

- Decreased active population and workforce
- Increased pressure on healthcare system
- Elders' isolation and limited moving ability

Diversity, Equity & Inclusion

Inclusive Society for Elderly Citizens

Demographic inversion: Increase ageing population

Challenges lead to opportunities:

- Automation for safer less manually intense work
- AI & big data analytics for new opportunities for elderly workforce
- Adapted Healthcare system

Satellite Navigation

- Locating and mapping accessible healthcare facilities
- Automated vehicles

Satellite Communications

- Digital health services

Diversity, Equity & Inclusion

Inclusive cities

= Accessible, inclusive and safe for all

Ex. Making public spaces accessible, access to essential services

Earth Observation

Data on physical environment for urban planning decisions. Identify areas that:

- Underserved or with inadequate access to services
- Not accessible for those with disabilities
- High level of crime or not well lit at night
- Inadequate public transportation or no cycle lanes

Satellite Navigation

- Automated Mobility
- Smart Mobility Platforms
- Smart Parking Solutions

EUROCITIES

REINVENTING CITIES

G
C

Guest Speaker: Clarisse De Cerjat

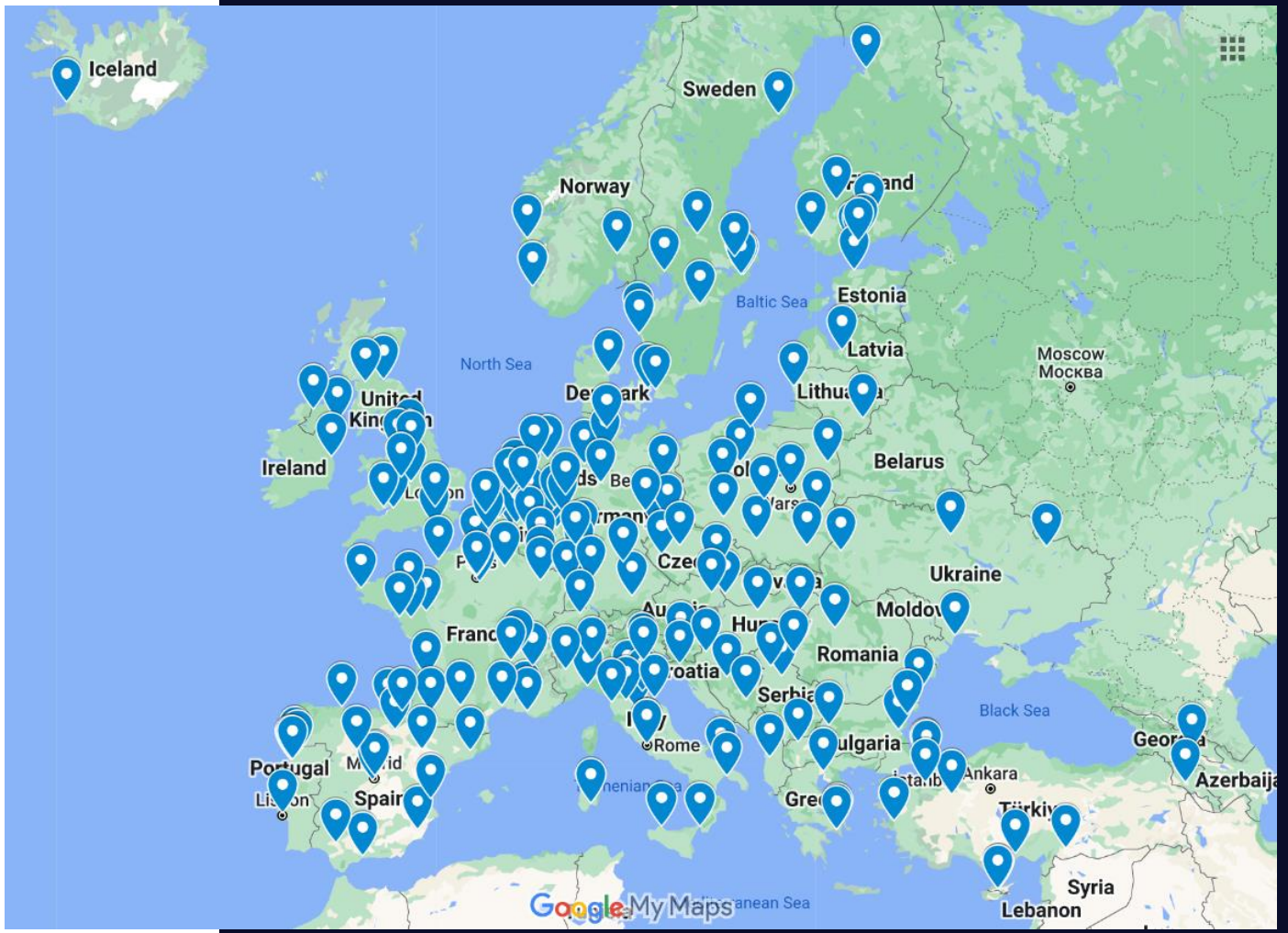
ESA UNCLASSIFIED

ESA Webinar: Importance of Diversity, Equality and Inclusion for Cities in Europe

Clarisse de Cerjat, Eurocities, Project coordinator

We connect 200+ cities across Europe

representing more than 135 million people



Discover them all on: eurocities.eu/cities

EUROCITIES

Vision and mission

Eurocities is the leading network of major European cities, working together to ensure a good quality of life for all our citizens

We work in all areas of interest for cities, from culture to mobility, environment to social affairs, economic development to smart cities.

We facilitate learning experiences between cities, and represent cities' interests towards the European Union.

EUROCITIES

Areas of work

Eurocities' Digital Goals & Strategic Objectives

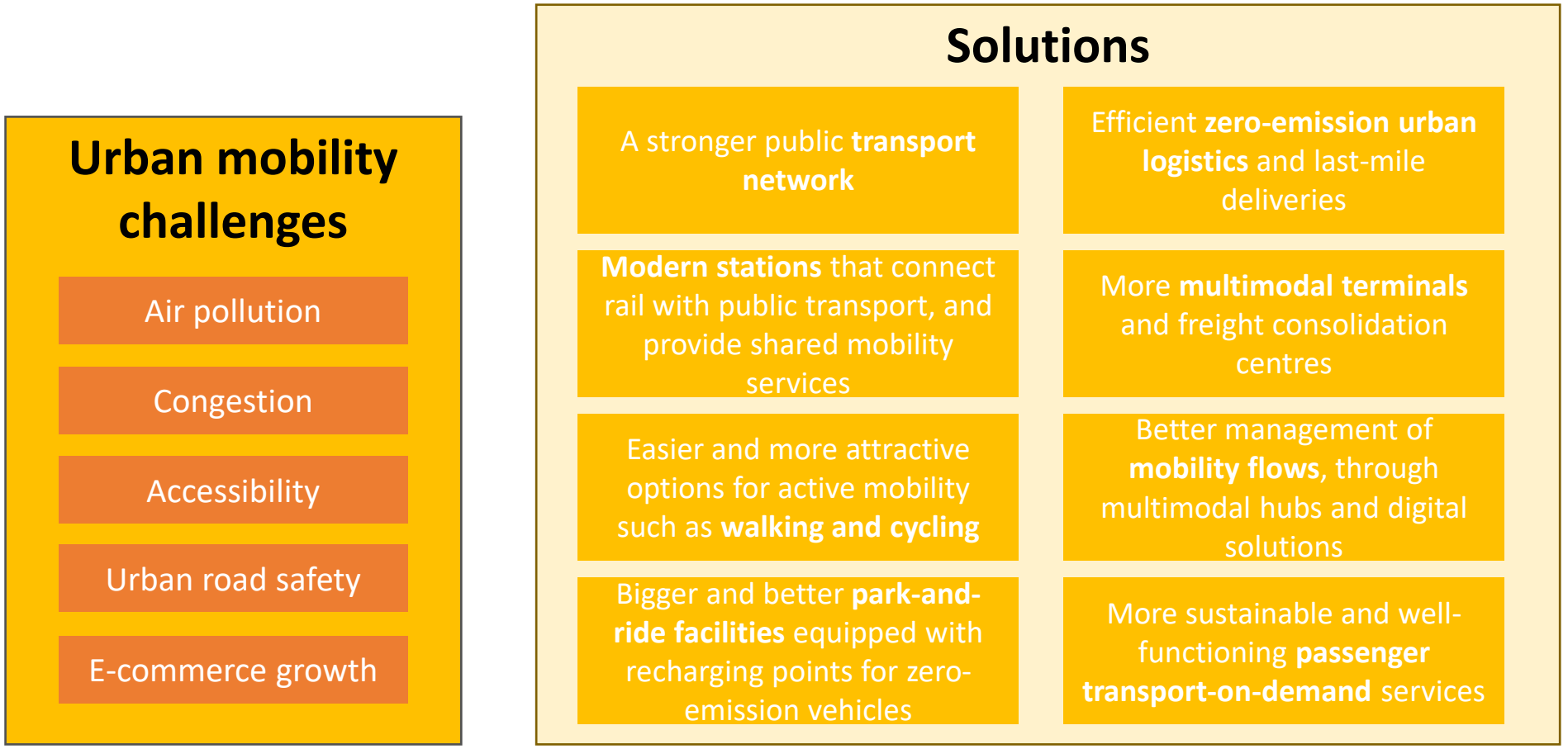
- Reinforce the **access to and use of data** for better informed public policies
- Promote and defend **digital rights**, including through the responsible use of AI and other emerging technologies
- Reduce the **ecological impact** of digital technologies and infrastructure

Satellite technology & Cities

Ways in which space-based technologies already play a role to improve the quality of life in cities:

- Optimising resource allocation and enhancing urban services
- Environmental monitoring and sustainability (i.e., GIS)
- Disaster management & resilience
- GPS for real-time location information and directions to users
- health indicators (e.g., satellite-based remote sensing
- Global navigation and positioning services

The Case of Sustainable Urban Mobility

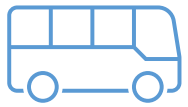


*based on EU Urban Mobility Framework

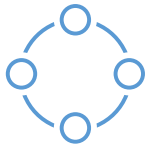
Advantages of space-based technologies for urban mobility

Precise Positioning: Satellite navigation systems, such as Galileo, provide highly accurate location information, enabling precise positioning of vehicles within urban areas.

Real-time Navigation: Location-based systems use satellite data to offer real-time navigation information, helping users find the most efficient routes, avoid traffic congestion, and reach their destinations faster.



Public Transportation: Satellite-based systems play a crucial role in optimizing public transportation networks. They can provide data for tracking buses and trams, improving schedules, and enhancing the overall efficiency of public transit systems.



Multi-modal Transportation: These systems support the integration of various transportation modes, including buses, trains, bikes, and walking, creating more sustainable and convenient urban mobility options.

Traffic Management: Location-based data aids in traffic management and congestion mitigation. It helps city authorities monitor traffic flow, adjust signal timings, and plan road infrastructure improvements to reduce gridlock and enhance urban mobility.

Space-based technologies for urban mobility in projects

Topic specific

ARIADNA
(2019-2021) Supporting the **adoption of EGNSS for public transport and urban mobility**, by raising awareness of GALILEO and EGNOS benefits

GALILEO4Mobility
(2017-2020) Supporting the introduction of **Galileo technology within the MaaS** context

Data spaces

DATA SPACE FOR SMART AND SUSTAINABLE CITIES AND COMMUNITIES

Real-time data space for optimising the city's physical space (micro-positioning / user-centric positioning)

Read more about Helsinki's real-time data space here

Shared CCAM services

SHOW AUTOMATED URBAN MOBILITY

HD maps for automated driving (comprising satellite positioning, sensors, etc.) for route planning, perception, localisation and positioning, and simulation

Read more about it here

What role can Eurocities play?

- Capacity building, knowledge exchange, etc.
- Liaise interested cities with organisations that can provide some space-based technologies (involves more regular exchanges with ESA)
- Themes that come up within our mobility network:

Data spaces & Digital Twins (real-time data)

MaaS & On-demand mobility services

Intelligent transport systems

Thank you!

Contacts:

Clarisse de Cerjat, Project Coordinator

Clarisse.decerjat@eurocities.eu

How to Apply

ESA UNCLASSIFIED

Who Can Apply?

- To be eligible for funding, your team must be based in one of the following countries:

  Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden or The United Kingdom.

- Germany, Luxembourg and the United Kingdom have pre-approved funding for this Kick-Start activity and applicants from these countries do not need to obtain a letter of authorization from their National Delegation.

- If you are considering applying, you must inform your National Delegation to obtain a letter of authorisation allowing the funding of the proposed activity. Contact details of each National Delegate can be found here: https://business.esa.int/national-delegations-0

How to Apply?

1. Register your team on esa-star Registration today!
   https://esastar-emr.sso.esa.int

2. When the Kick-Start opens on 20th November 2023 visit esa-star Publication and search for this DEI opportunity to download the official competition documents.
   https://esastar-publication.sso.esa.int

3. Use the official documents to prepare your proposal

4. Reach out to your National Delegate (if applicable) to request a Letter of Authorisation. Contact details of each National Delegate can be found here: https://business.esa.int/national-delegations-0

5. Submit your proposal via esa-star Tendering before the deadline!
   https://esastar.sso.esa.int

   Deadline is 26th January 2024

Proposal Template

Your Proposal should 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)

Diversity, Equity & Inclusion : About the Kick-Start

Winners of the competition will run a 6-month study, called a Kick-Start.

During the Kick-Start teams will:

1. Engage with users and potential customers of the proposed service
2. Assess the technical feasibility of the service
3. Develop the business model and plan

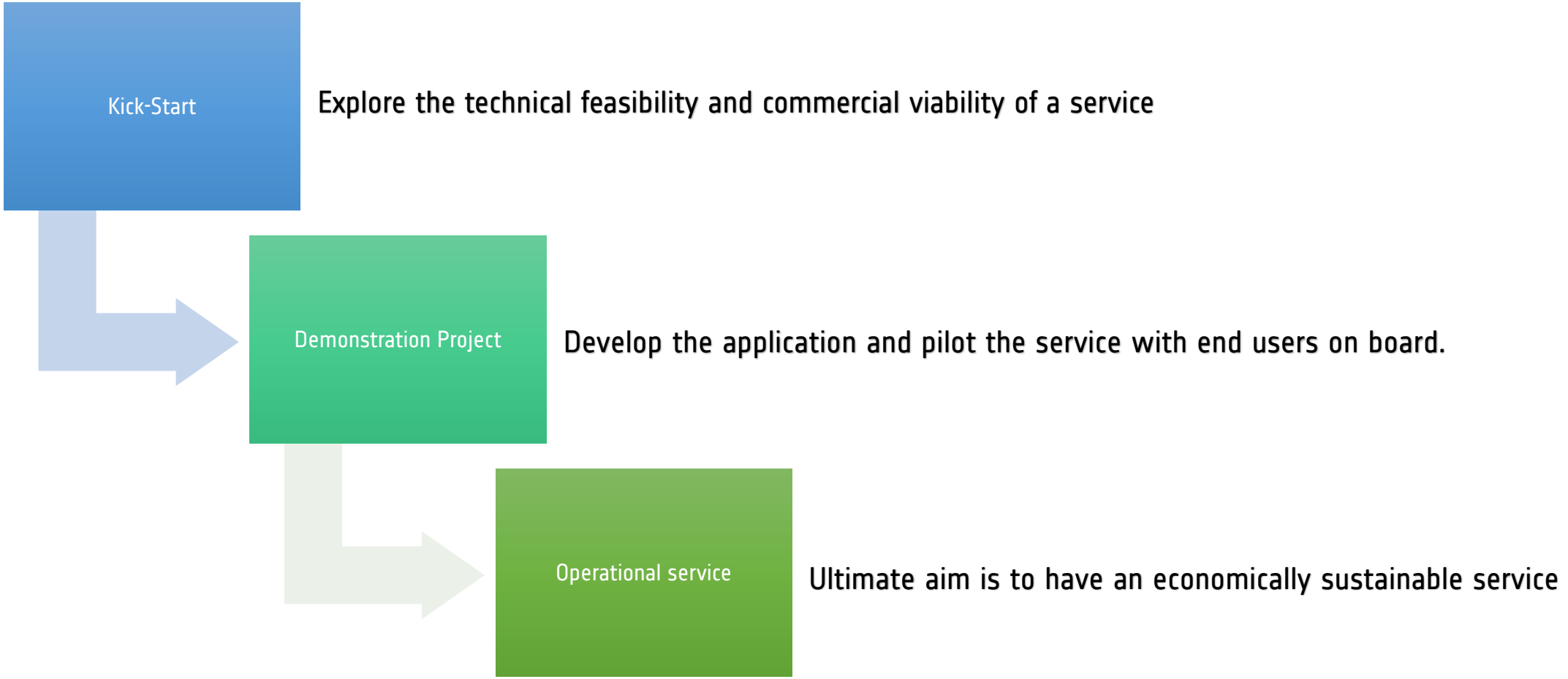
ESA will provide funding of 75% for a maximum of €60K to each winning team.

Visit: Diversity, Equity and Inclusion | ESA Business Applications

Kick-Start Study Tasks

	Study Kick Off Month 0	Mid-Term Review Month 3	Final Review Month 6	<u>Study Outputs</u>
Task 1	Engage with Users and Customers			Service Requirements
Task 2	Investigate Technical Feasibility			Service Architecture Definition
Task 3	Explore Economic Viability			Business Plan

Overall Aim of the Kick-Start



Checklist

Before applying, check that:

1. Your team is proposing a service that could become operational in the near future (1-4 years)
2. Your idea tackles a challenge relating to the Diversity, Equity & Inclusion
3. Your idea uses satellite data or space technology like satellite communication, Earth observation or navigation.
4. Your team is eligible for funding and has attained a letter of authorisation from the National Delegate (if applicable).
5. There is a market for your service and potential users/customers will be involved in the Kick-Start

Q&A session
Opening Date
20th November 2023
Closing Date
26th January 2024
€60k co-funding
6 months study
Click here and visit
Diversity, Equity and Inclusion | ESA Business Applications

Thank you!

Manon Houyet
Business Applications
ESA BASS
manon.houyet@esa.int

ESA UNCLASSIFIED – For ESA Official Use Only