

# ESA ScaleUp Information Webinar for the UK



## ESA COMMERCIALISATION GATEWAY

SPACE FOR BUSINESS  
BUSINESS FOR SPACE

You can submit your questions in the chat during the presentations and they will be addressed at the end of each presentation.

# Welcome

George Pritchard, ESA Industrial Policy, UKSA

Tony Forsythe, Head of Space Technology, UKSA

# Welcome

## Philip Thomas, Head of ScaleUp Programme Division, ESA

# Introduction to ScaleUp

# ESA COMMERCIALISATION GATEWAY

SPACE FOR BUSINESS  
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ESA ScaleUp Information Day for the UK

Philip Thomas  
Head of ScaleUp Programme Division

ESA



## EUROPE'S GATEWAY TO SPACE

### WHAT

22 Member States, 5000 employees

### WHY

Exploration and use of space for exclusively peaceful purposes

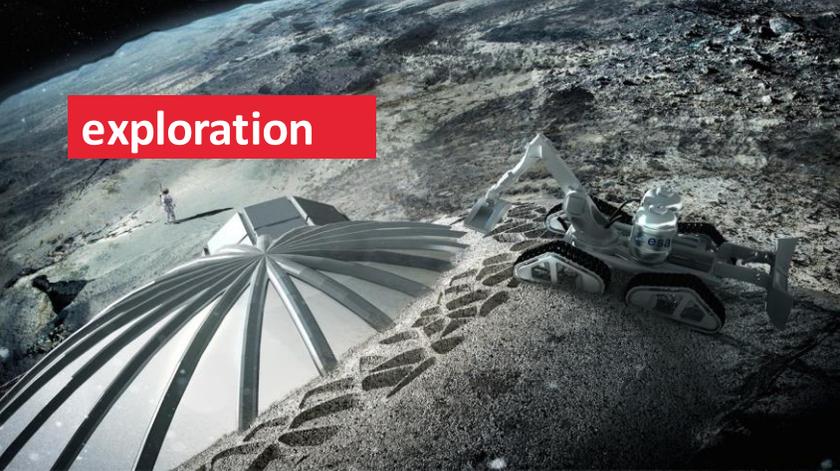
### WHERE

ECSAT in the UK, 7 sites across Europe and a spaceport in French Guiana

### HOW MUCH

€7.08 billion = €12 per European per year





exploration



human spaceflight



science



earth observation



commercialisation



navigation



space transportation



telecommunication



technology

# THE NEW SPACE ECONOMY



# THE NEW SPACE ECONOMY



LAUNCH PRICE  
TO BE DIVIDED  
BY 3 IN NEXT 10Y

HIGHER PAYLOAD CAPACITY  
AND LAUNCH RATE

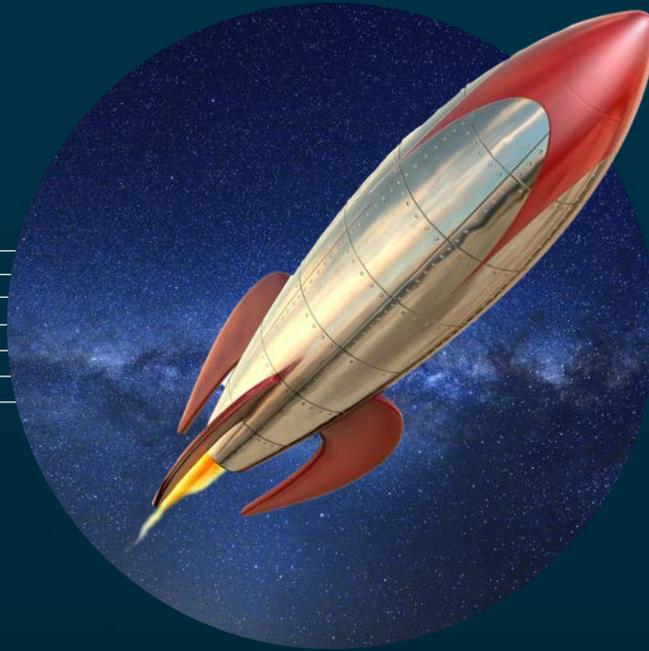
DEORBITING REGULATIONS

SPACE-AS-A-SERVICE

EDGE-COMPUTING/AI  
FOR GROUND SEGMENTS  
AND SPACE DATA

GREEN/ELECTRIC PROPULSION

IN ORBIT SERVICING,  
MANUFACTURING, ASSEMBLY



Avg. Satellites  
launched/year  
2021–2031

**382** → **1,704**

**x4.5**  
demand  
increase

**80%**  
to come from  
constellations

**75%**  
revenues to  
come from  
govt.

Global Private Space Investment

**13 B€** **+95%**  
in 2021 since 2020

Global Public Space Investment

**93 B€** → **113 B€**





# THE ARENAS WE WILL PLAY IN

NON SPACE  
COMPANIES

INVESTORS

STARTUPS

INSTITUTIONS

ACADEMIA

SPACE  
COMPANIES



**ESA AMBITION  
ON COMMERCIALISATION**

TO MAKE EUROPE  
A SPACE COMMERCIALISATION HUB  
TO LAUNCH AND GROW GLOBAL  
SPACE COMPANIES THAT  
MAKE SENSE FOR OUR FUTURE



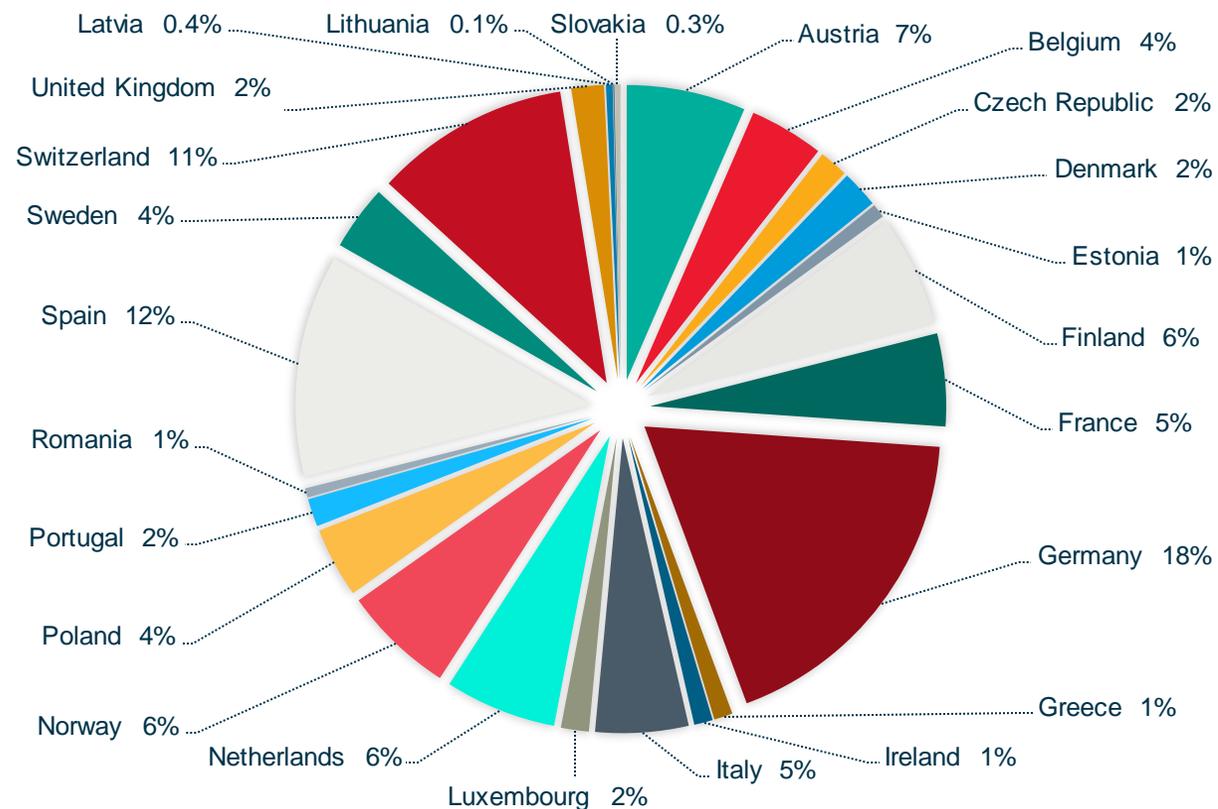
For ESA, there are no “New Space companies”, but a New Space approach which can be observed from large well-established companies to small newcomer entities. This approach implies a business mindset based on private investments leveraging on speed, customer focus and new risk acceptance culture.



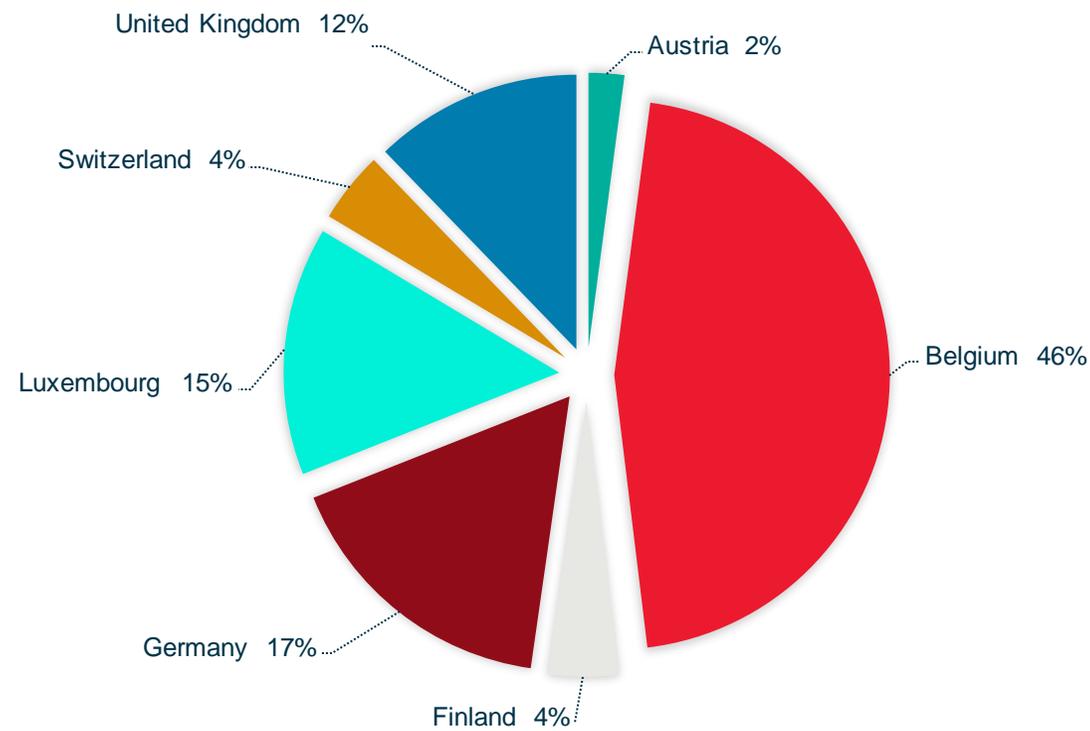
# ScaleUp Programme



## ELEMENT 1 INNOVATE



## ELEMENT 2 INVEST





## ESA BICs

Foster start-up firms that set-up a new and innovative business using space-oriented technology, or data derived from space assets, for products and services in both space and terrestrial markets

## ESA TECHNOLOGY BROKERS

Support technology transfer and appliances between established industry from the space and non-space sector, and within the space sector

## ESA $\Phi$ -LAB NETWORK

Facilitates research teams to engage in groundbreaking science and technology development that have a potential in high-yield commercialisation



$\Phi$ -LAB  
NETWORK

ESA-WIDE COVERAGE  
IN MULTIPLE  
MEMBER STATES

GROUND-BREAKING  
RESEARCH, DIVIDING  
COMMERCIAL  
TECHNOLOGIES

FOR PhDs  
AND RESEARCHERS



BUSINESS  
INCUBATION

**29** CENTRES

**90** LOCATIONS

**200** NEW  
STARTUPS P/Y

**1600**  
STARTUPS SELECTED



TECHNOLOGY  
BROKERS

**9**  
TECHNOLOGY  
BROKERS

**404**  
TECHNOLOGY  
TRANSFERS



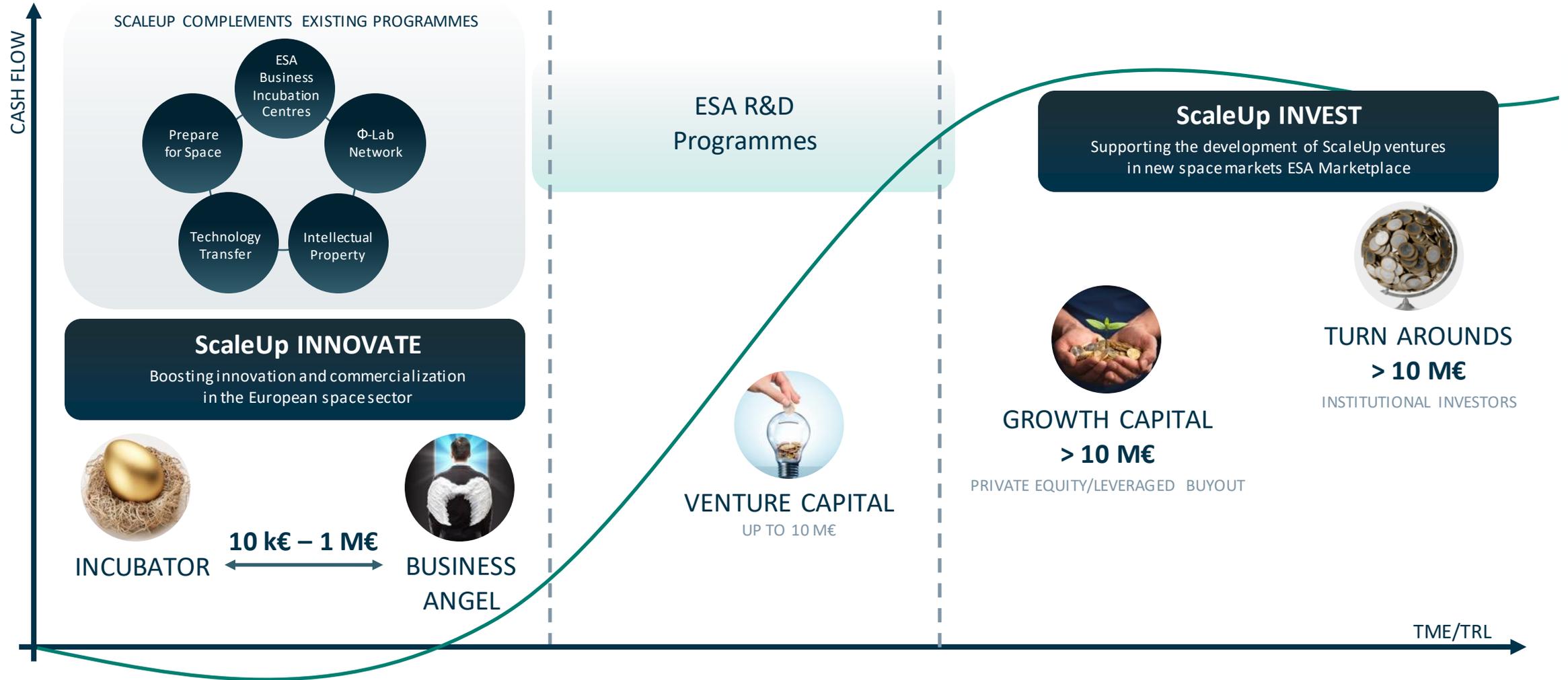
PARTNERSHIPS

FOR ENTREPRENEURS,  
CORPORATES, INSTITUTES,  
AND BUSINESS SCHOOLS

SUPPORTS START-UPS,  
ALUMNI AND  
NEWCOMERS

CONNECTING TO  
CURRENT & FUTURE  
DECISIONMAKERS

# CONTRIBUTIONS IN THE COMPANY'S LIFE-CYCLE





# Questions - ScaleUp?

[COMMERCIALISATION.ESA.INT](https://commercialisation.esa.int)

# ESA $\Phi$ -Lab UK Opportunity

# ESA COMMERCIALISATION GATEWAY

SPACE FOR BUSINESS  
BUSINESS FOR SPACE

ESA ScaleUp Information Day for the UK

Roberto Cossu  
Commercialisation Officer  
ESA

# Background and mission of $\Phi$ -labNET

## Background

- Commercialisation of the space sector has been identified as one of the five top priorities for ESA in Agenda 2025.
- **Talent**, access to capital and **fast innovation** must form the basis of the Agency's vision for competitiveness.

## Mission

The mission of  $\Phi$ -labNET is to accelerate the future of Space by **introducing innovation at fast pace** with **talented** researchers and business developers, thus strengthening Europe's world-leading commercial competitiveness.

## ESA PHILABNET MAP

### LEGEND

- Large Philab
- Small Philab
- Pilot Philab



**11+**  $\Phi$ -Labs

**31 Meuro**  
ScaleUp

**15 Meuro**  
Basic Activity



A Local Administrator within the Participating State is contracted to perform activities as stipulated by the ESA  $\Phi$ -labNET common approach:

- $\Phi$ -labs may be located in a national centre of excellence (already established or to be established) or in any other location deemed suitable for the activities;
- $\Phi$ -labs will focus their innovation in any **pre-defined area(s)** that can be space-wide or specialised / monothematic in scope. Each  $\Phi$ -lab shall be in the position to support the researchers during the entire research journey, up to the inception phase market adoption;
- $\Phi$ -labs will be **managed** by the  $\Phi$ -lab local administrator with the ESA technical, commercial, and methodological continuous support. The activities of each  $\Phi$ -lab will be overseen by the Agency through an ESA  $\Phi$ -lab Officer (i.e. Technical Officer);

$\Phi$ -labs are **targeted** at research projects that lead to new products and services and/or space-based solutions in the specific thematic area of the hosting  $\Phi$ -lab.

- Direct participation of **ESA and MSs** to the **selection** of the research projects proposed by Economic Operators;
- Selected research teams are **supported** in terms of access to facilities and equipment, access to expertise, business coaching, research mentoring and IPR/legal consultancy by the  $\Phi$ -lab local manager. Technical support may be also provided by ESA.

- **Innovate and apply an “under-one-roof” approach:** teaming up with academia, research centres, national space centres, industry as well as intermediary entities such as ESA Business Incubation Centres (ESA BICs), Technology Brokers, Accelerators, and private investors, including Venture Capital organisations.
- ESA evaluates as positive the participation in the Consortium/Partnership of **Industry/-ies** interested in the possible update of the research outcome. Possible involvement:
  - Requirements in terms of problems to be addressed;
  - Additional Co-funding for Research projects addressing topics aligned with their interest;
  - Access to license(s) (both as “donor” and “receiver” , fees may be considered)
  - Possible sharing IP generated from Research projects in case of co-funding

# The Approach

Work packages

DEFINE FIELD OF RESEARCH

SELECTION OF RESEARCH TEAMS

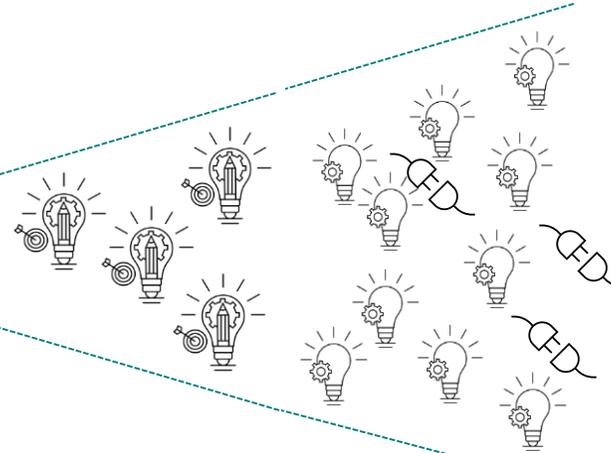
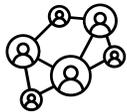
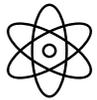
SUPPORT TO RESEARCH TEAM

PREPARING FOR MARKET READINESS AND SHOWCASING

CREATING OPPORTUNITIES

MANAGEMENT AND REPORTING

Research Journey



Activities

Programme Proposal

Selection

Support

Graduation

Dissimination, Inception, Commercialisation support.

Methods

- Defining research thematics by MS, ESA and local Φ-Lab
- Promote the local Φ-Lab as a centre for disruptive innovation in the proposed thematic area;
- Publication of Call

- Scout for research project(s)
- Selection of research project(s)
- Goal Setting
- Selection or acquisition of research equipment
- Contract/agreement with selected teams

- Administer ESA Seed Innovation Funds
- Allocating experts
- Utilization of laboratory equipment
- Monitor milestone progress (MTR&FR)

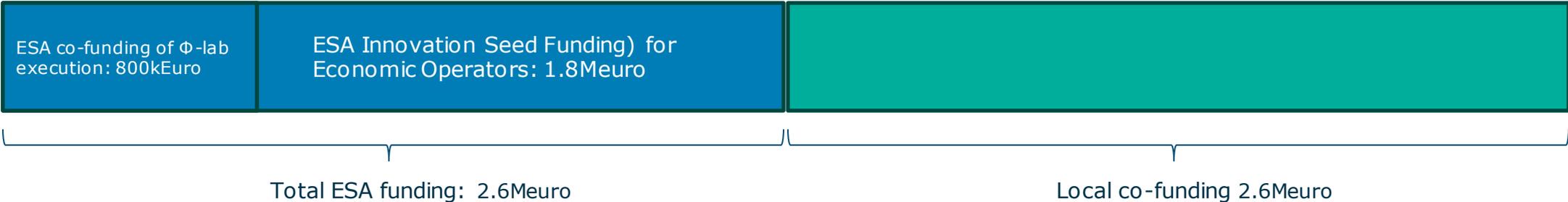
- Approve final deliverables (prototypes, simulations, papers, etc)
- Contract closure

- Inspiring with showcases stories
- Connect to talented entrepreneurial
- Connect to prospective integrators / Customers
- Connect to intermediary firms e.g.:
  - ESA BICs,
  - Accelerators,

- In the case of a small  $\Phi$ -lab, ESA total funding is 2.6Meuro:
  - 800kEuro have to be used by the  $\Phi$ -Lab to cover recurring costs linked to the execution of the ESA  $\Phi$ -Lab;
  - 1.8Meuro have to be used for supporting the Economic Operators of the selected Research Activities ( ESA seed fundings cover 50% to 100% of the cost of the research activities depending on the Legal Status of the Economic Operator).

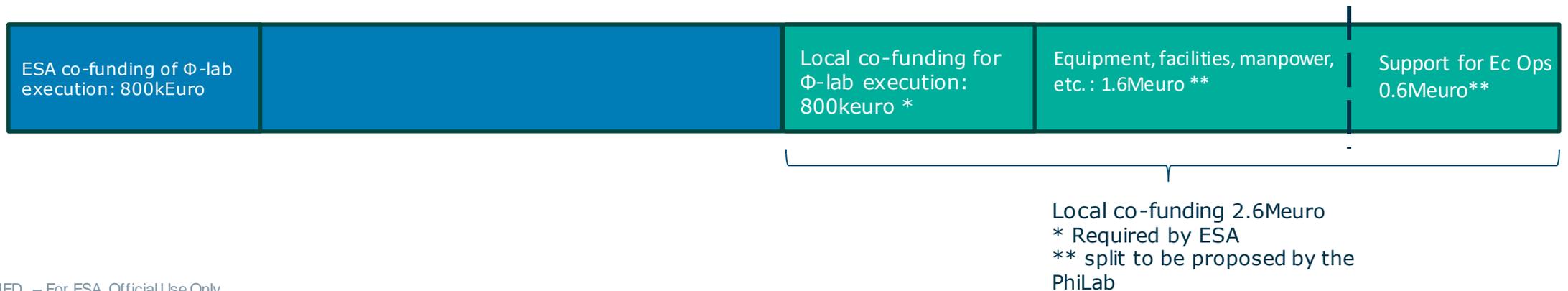


- The Local Administrator shall complement the overall ESA funding with local co-funding for a value of at least 2.6Meuro, in kind or cash. The local co-funding can include facilities, manpower, funds from Local/Regional Government, etc. The co-funding can come from different sources.



## Overall $\Phi$ -Lab incl Research Activities

- The  $\Phi$ -lab **shall** use 800kEuro of local co-funding (cash or in-kind) for complementing the ESA co-funding of 800kEuro.
- Within the limits and the conditions set by the Local co-funder(s), the  **$\Phi$ -lab can decide** how to use the remaining local co-funding, e.g.:
  - 1.2Meuro for purchasing new Equipment and Facilities for the benefit of the  $\Phi$ -lab itself and in line with the focus of the ESA  $\Phi$ -lab activities;
  - the additional 0.6Meuro can be used to further support Economic Operators of selected Research Activities. (This may result in shared ownership of the IP generated within the Research Activities).



- Note: the Local Co-funder(s) may impose specific conditions on the use of co-funding. For instance, some local co-funders may request that their contributions are used for Economic Operators only. In this case the Local Administrators shall identify additional sources to guarantee the developments and operations of the Philab in line with the objectives of the activity.

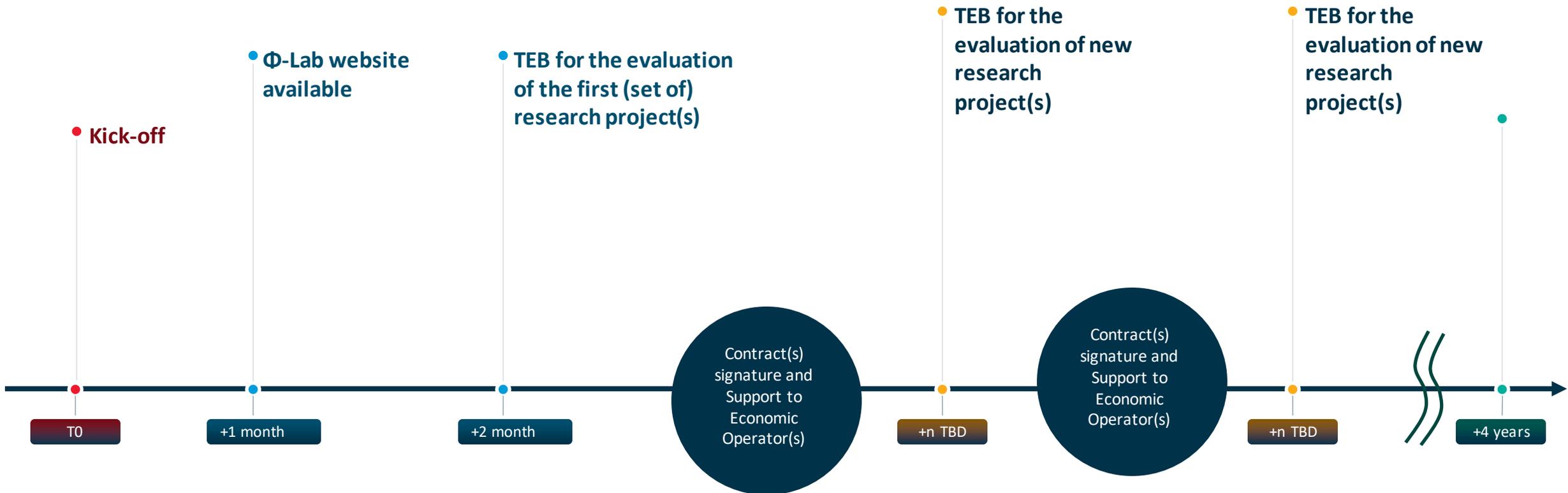


- **Different**  $\Phi$ -Labs may have different business models that may bring to different strategies for the Intellectual Property (IP) generated in Research Projects executed by the Economic Operators.
- The bidders are invited to detail their strategy the strategy for the Intellectual Property (IP) generated within the Research Projects. Some considerations:
  - Tech Support is to be considered as consultancies and doesn't generate any right for IP
  - A bigger involvement of  $\Phi$ -Lab staff in the "co-creation / innovation" may be result in shared ownership of IP ( $\Phi$ -Lab + Economic Operator) or access at favorable conditions to licence(s)
  - Supporting the Economic Operator with additional local co-funding coming from Local Government usually has no impact on IP generated
  - Supporting the Economic Operator with additional local co-funding coming from  $\Phi$ -Lab internal sources may result in shared ownership of IP ( $\Phi$ -Lab + Economic Operator) or access at favorable conditions to licence(s)
  - Shared ownership may impact the role of the  $\Phi$ -Lab in the commercialisation of the IP generated.
- IP clauses will have to be discussed and agreed in the contract that  $\Phi$ -Lab will sign with the single Economic Operators.



\* Details in the next slide

- The Tenderer shall submit a number of Outline Proposals for Potential Research Activities.
- For this purpose, the Tenderer is requested to carry out a scouting activity within the tendering period.
- The purpose is to demonstrate the interest of Economic Operators in the thematic area proposed by the Tender and to speed up the ramp-up process of the  $\Phi$ -Lab after the Kick-off.
- It is suggested to submit between 3 and 6 proposals. Each Proposal shall be a maximum of 4 pages, be signed by the Economic Operator that will execute the Research activity, and shall contain the following information as a minimum:
  - Description of the idea - this must be disruptive, of potential high socio-economic impact, based on solid research-driven evidence.
  - Brief description of the background and experience of the team and Economic Operator / Consortium
  - Evidence of any market pull or research push that would facilitate the future market adoption of the envisaged solution
  - Preliminary activity plan with clear milestones - .project timeline shall be realistic and achievable.
  - Budget request. This shall be described and well justified. Any needs of purchasing Hardware and/on accessing  $\Phi$ -Lab facilities shall be identified



# Questions – ESA Phi Lab?

[COMMERCIALISATION.ESA.INT](https://commercialisation.esa.int)

# ESA Technology Broker UK

# ESA COMMERCIALISATION GATEWAY

SPACE FOR BUSINESS  
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Enhancing commercial opportunities for spin-off and spin-in

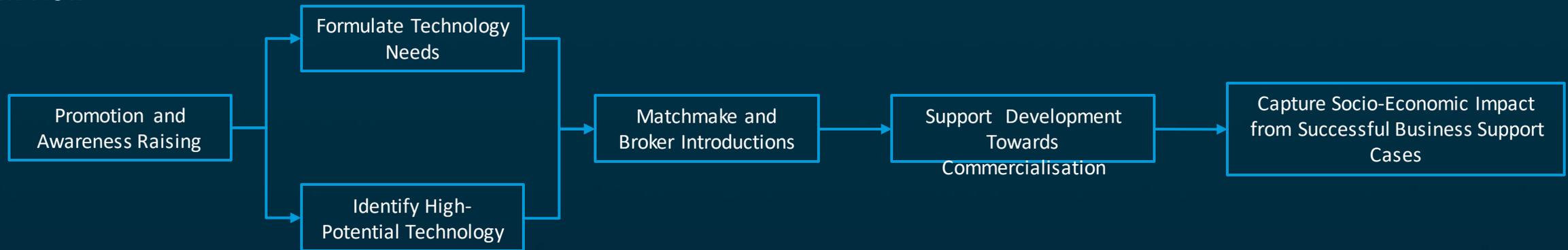
Matthew Edwards  
Commercialisation Officer

ESA<sub>t</sub>

# What does an ESA Technology Broker do?

“Supporting the integration of space in your business, and your business in space”

## Work Flow



## Key Activities

- **Promote** the use of space technology to solve industrial challenges, as well as how space can be a genuine business opportunity
- **Matchmake** and brokering introductions between Technology Providers and Product Developers
- **Support** the creation of innovation projects, developing successful business cases, providing technical and/or commercial guidance
- Identify **Funding** opportunities to support innovative projects reach commercialisation

# ESA Technology Broker Network



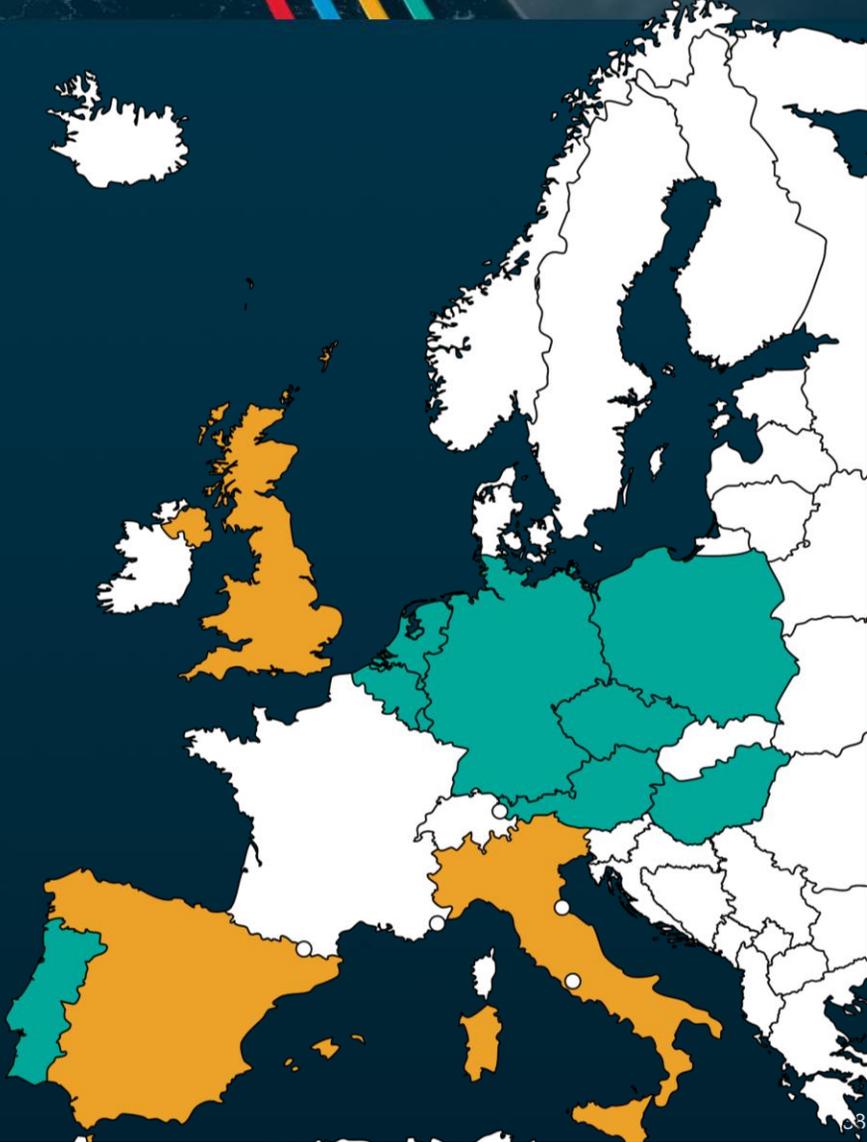
There are currently 9 countries covered by ESA Technology Brokers:

- Austria
- Belgium
- Czech Republic
- Germany
- Hungary
- Luxembourg
- The Netherlands
- Poland
- Portugal

There are currently 3 countries where procurements are ongoing for the establishment of an ESA Technology Broker:

- Italy
- Spain
- United Kingdom

Pan-European collaboration is a key strength of the network!



## “Supporting newcomers to overcome the barriers of entry to the space industry”

### Scope

- Enabling companies to understand the space market and where they can position themselves within the space supply chain
- Training to navigate ESA and national programmes, and how to identify and respond to opportunities.
- Dedicated support to boost their business proposition (financial, managerial, business case)

### Work Flow



The exact packages of support shall be proposed by the bidder but should cover topics such as:

- Intensive workshops to identify relevant technical domains/competencies relevant for space, determine where they could be positioned within the value chain, define a value proposition and USP vs the competition.
- Coaching companies on relevant funding calls covering how to apply, where to find partners, and other relevant strategies.
- Coaching companies over a longer period (~12 months) and to ensure that they are connected to potential customers and collaborators, as well as relevant contacts in other national and European support programmes.

## Scope

ESA Technology Broker  
+  
Prepare for Space

## Duration

4 years  
(3-year main contract  
+ max 1-year run-off)

## Price

745,000 Euro  
(345,000 ESA Technology  
Broker + 400,000 Prepare for  
Space)

ITT due to open November 2023 and close January 2024

# Key Performance Indicators

KPI	Quantity (Contract Duration)	Explanation
Successful Business Support Cases	6	Signature of a sales order, collaboration agreement, contract, license etc.
Facilitations	30	A Broker actively supporting a project's application for funding or provision of business support that could lead to a Successful Business Support Case.
Introductions Brokered	60	A Broker formally bringing together a Technology Provider and Product Developer to discuss a specific project opportunity.
Technology Needs or Technology Descriptions	40 (min 10 TN and 10 TD)	Submission to ESA and other Brokers of Technology Need or Technology Description that has high potential for spin-off or spin-in
Prepare for Space Webinars	6	Open webinars with at least 60 participants in total
Prepare for Space Dedicated Training Packages	20	Companies who successfully complete a dedicated package of training.

# Key Considerations



Prospective bidders should have:

- Access to knowledge of a wide range of technical domains (materials, sensors, electronics etc),
- Strong knowledge of and contacts within the UK space industry,
- Understanding of space and terrestrial funding opportunities at a UK and ESA level,
- Access to a wide range of non-space industries,
- Key competences of innovation management and business development within the core team.

Bids from both individual organisations or consortia are welcomed.

Evaluation Criteria	
1	Background and experience (general and related to the particular field concerned) of the company(ies) and staff (including suitability of proposed facilities)
2	Understanding of the ESA Technology Broker objectives, identification of relevant opportunities and suitability of the proposed approach to achieve the objectives and quantified targets
3	Adequacy of management, costing, and planning for the execution of the work
4	Compliance with administrative tender conditions and acceptance of contract conditions



# Questions – ESA Technology Broker?

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# ESA Technology Broker Austria – Case Study



## ESA COMMERCIALISATION GATEWAY

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ESA ScaleUp Information Day for the UK

Susanne Katzler-Fuchs  
ESA Technology Broker  
Brimatech Services GmbH

Brimatech is a market research and consulting company specialised in technology markets.

- Brimatech is a private limited company with 9 employees
- Brimatech was founded in 2008 in Vienna
- Brimatech staff has more than 20 years of experience in Space (R&D projects, policy support projects with ESA, EC, GSA and national ministry and delegation)
- Brimatech has a broad national and international network
- Brimatech has a strong methodological competence



# Key competences needed

- Know the national players and their competences
- Space: regular exchange with all players, national directory
- Non-Space (events, projects, networking)
- Do Business Development
- Act as a Network Hub – Link national and international players
- Participate in and organize events
- Be Visible - News Stories, Events, Trainingsessions



08.10.2020

## Putting Galileo in the driving seat for autonomous vehicles

Accurate positioning is vital for autonomous vehicles. Now, a new sensor using Galileo's GNSS signals will provide exactly that, thanks to an international collaboration between Deimos Engenharia and Accurision, fostered by three ESA Business Applications Partners.

## Austrian Space Sector

### Facts & Figures:

120 Space Organisations

1.000 staff

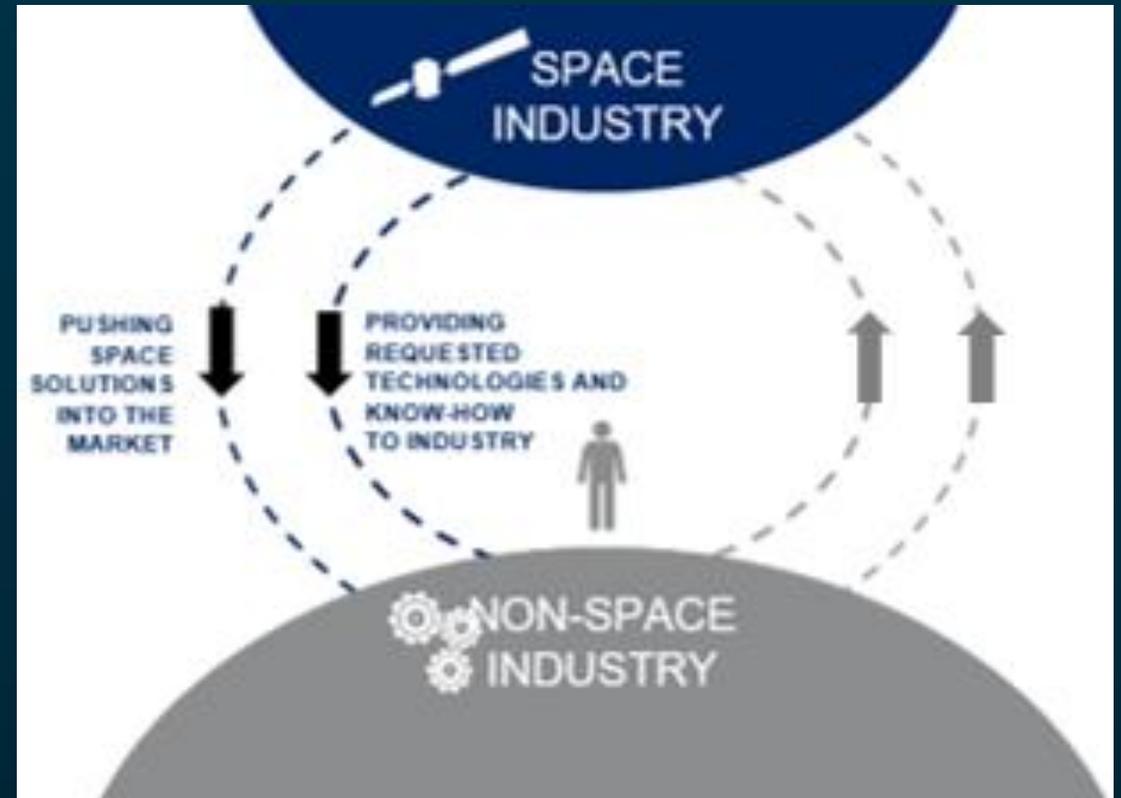
125 Mio € turnover

Visit: <https://austria-in-space.at/en/organisations/>

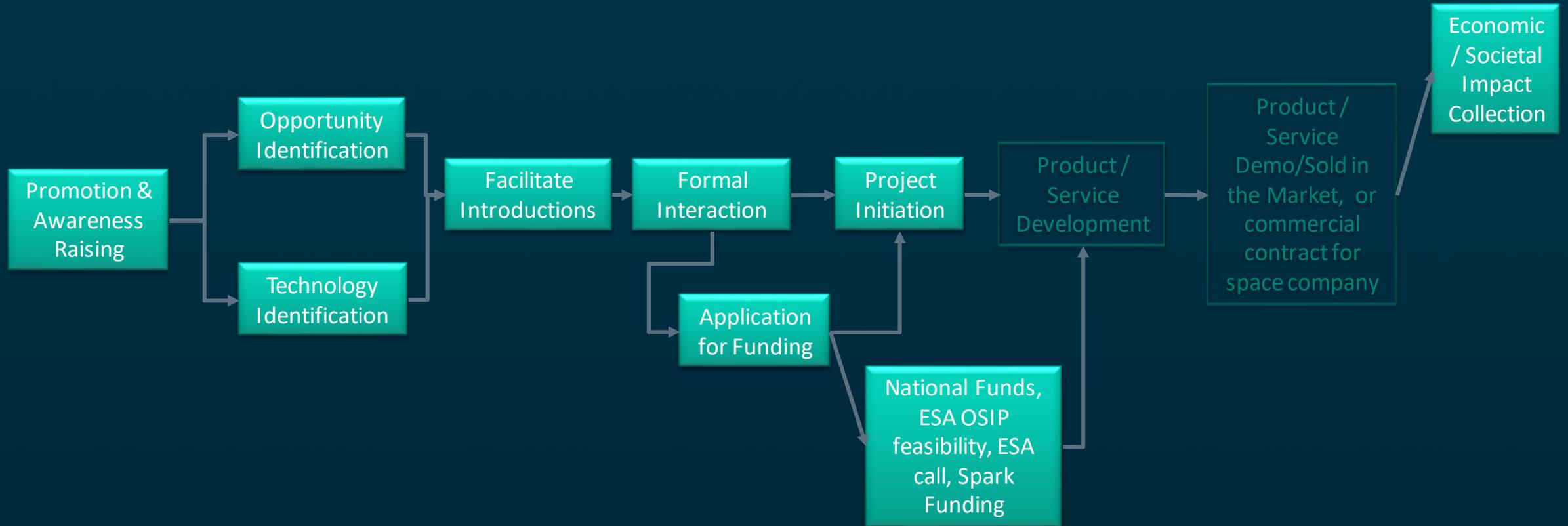


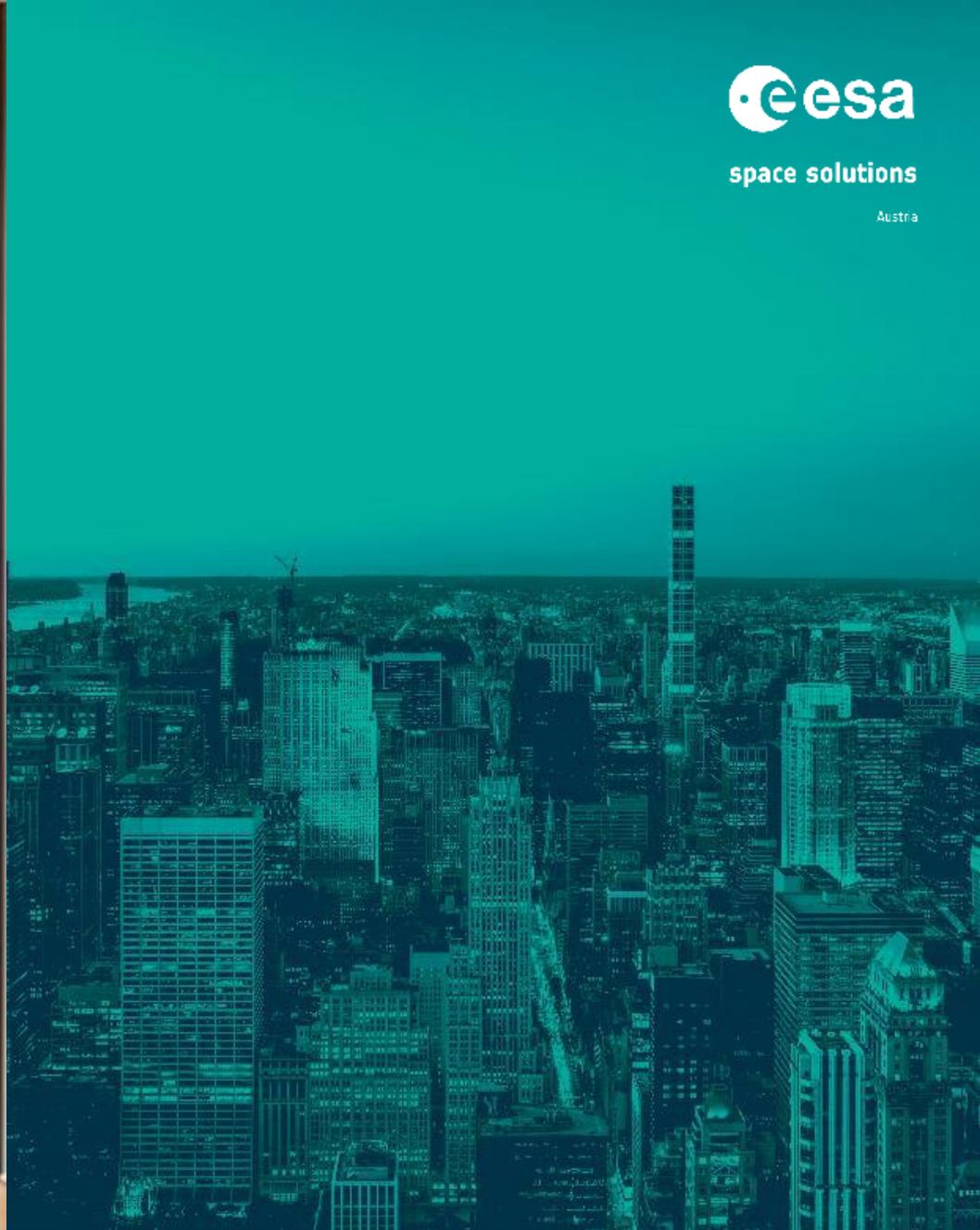
We are looking for

- Spin-off: the use of space technologies for applications on earth or
- Spin-in: The use of terrestrial technologies in space



# Transfer process





2017



## Success Story

### Protect bird lives with UAV window coatings

**A hidden signal revealed: what do spacecraft data analytics and real estate trends have in common?**

From: OMT Solutions

To: Birdshades

Facilitators: ESA Technology Broker Austria Space

Technology: Development of a highly reflective UV coating for the focusing mirrors in the high power UV source of the STAR facility

Earth: Window film/glas visible for birds but not for humans to avoid birds colliding with glas panels

Benefits: material that is highly stable in the UVA-range over years, transparency of the coating – not visible for humans





space solutions

Austria



European Space Agency

## Success Story

### Inspired Innovative Engineering Solutions (IIES) – Keiko GmbH

#### Massage done with satellite technology

From: IIES (Austria)  
 ESA BIC Austria selected company

To: Keiko GmbH (Austria)

Facilitators: ESA Technology Broker Austria

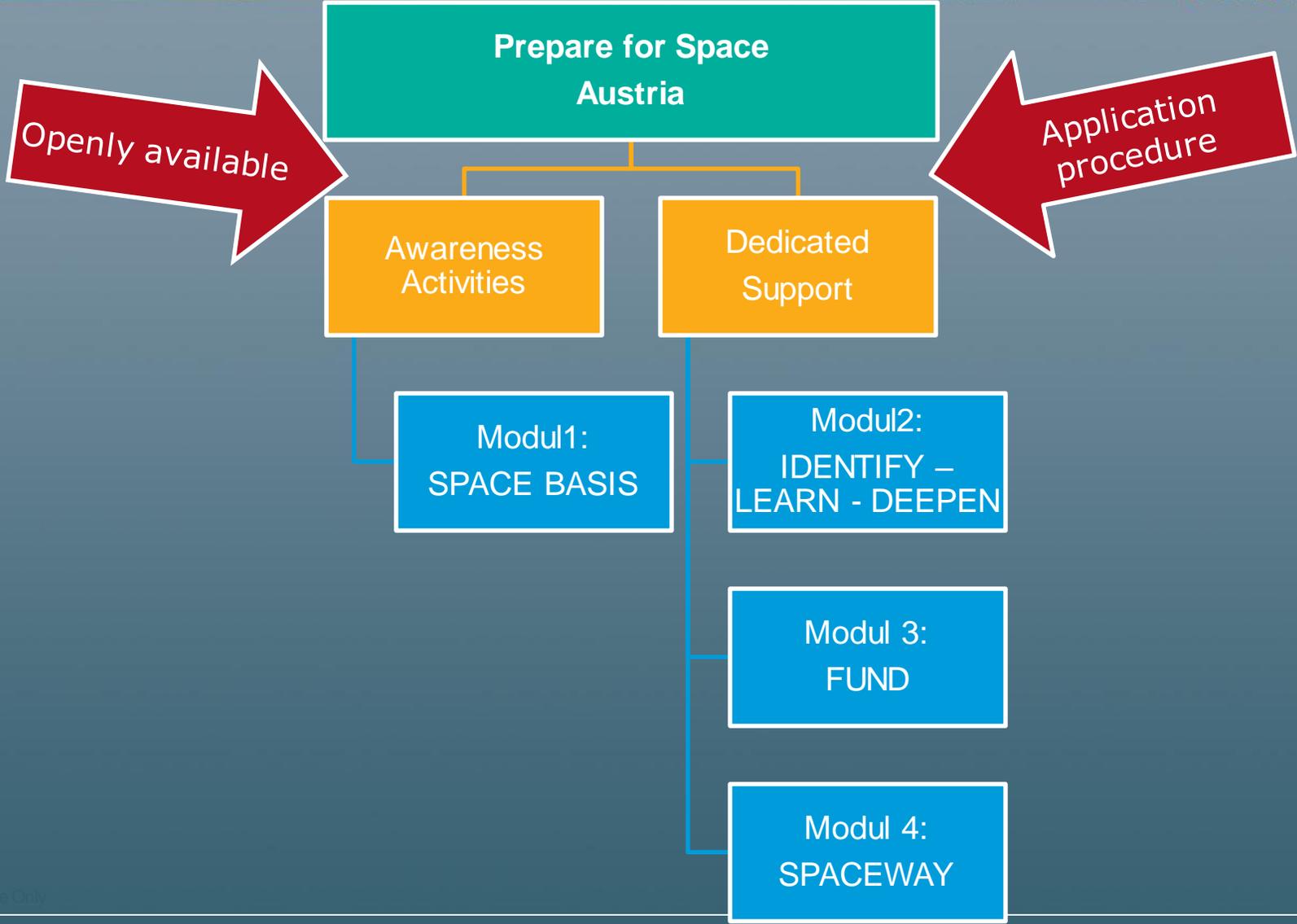
Technology: The Magnetic Gear developed for Space meets the requirements towards the technical safety of a robot in direct interaction with humans (collision avoidance, torque limitation, automatic shutdown)



# Prepare 4 Space - objectives

## Support Space Spin-ins:

- entities that develop technologies relevant for Space
- are not yet engaged in Space



THANK YOU!

Susanne Katzler-Fuchs  
Brimatech Services GmbH  
skf@brimatech.at

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# ScaleUp INVEST and Investor Network

# ESA COMMERCIALISATION GATEWAY

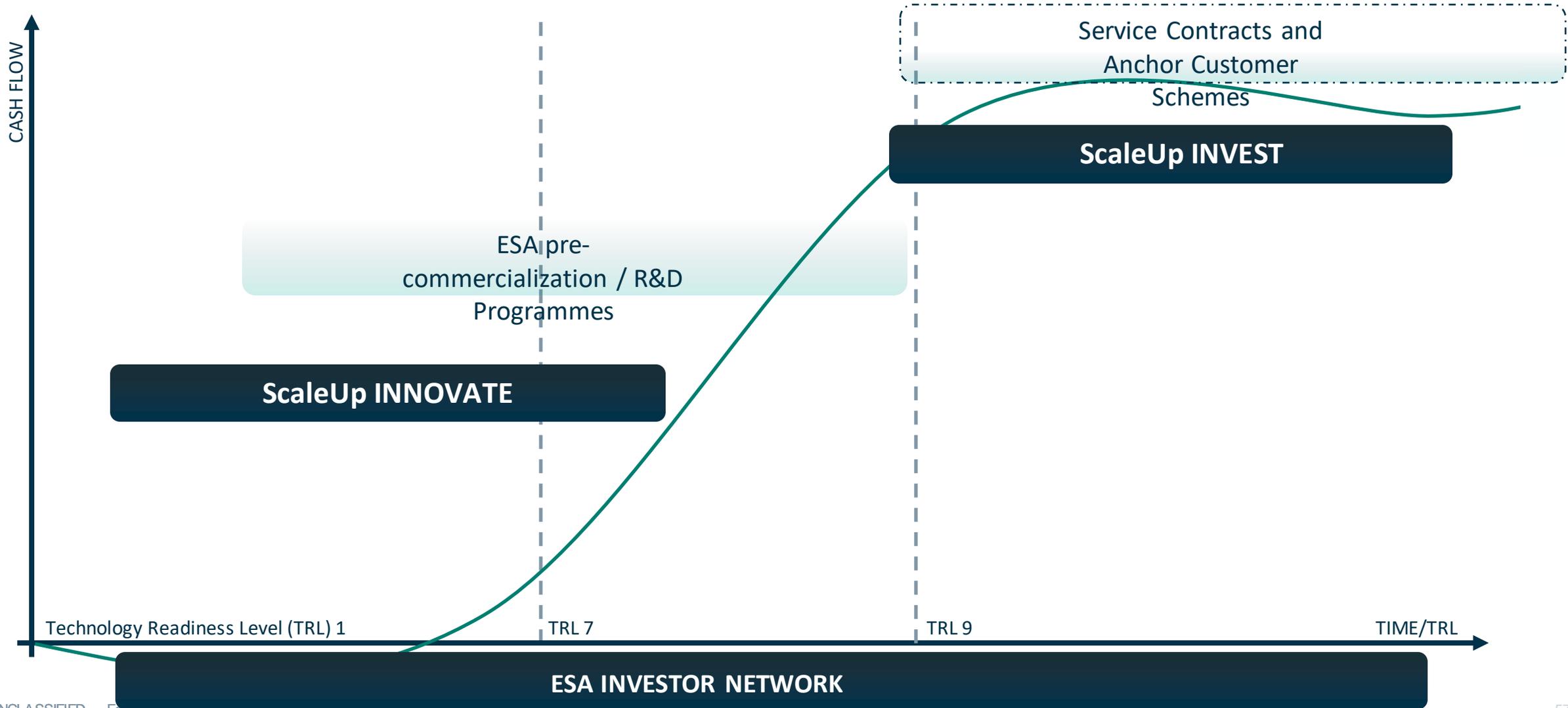
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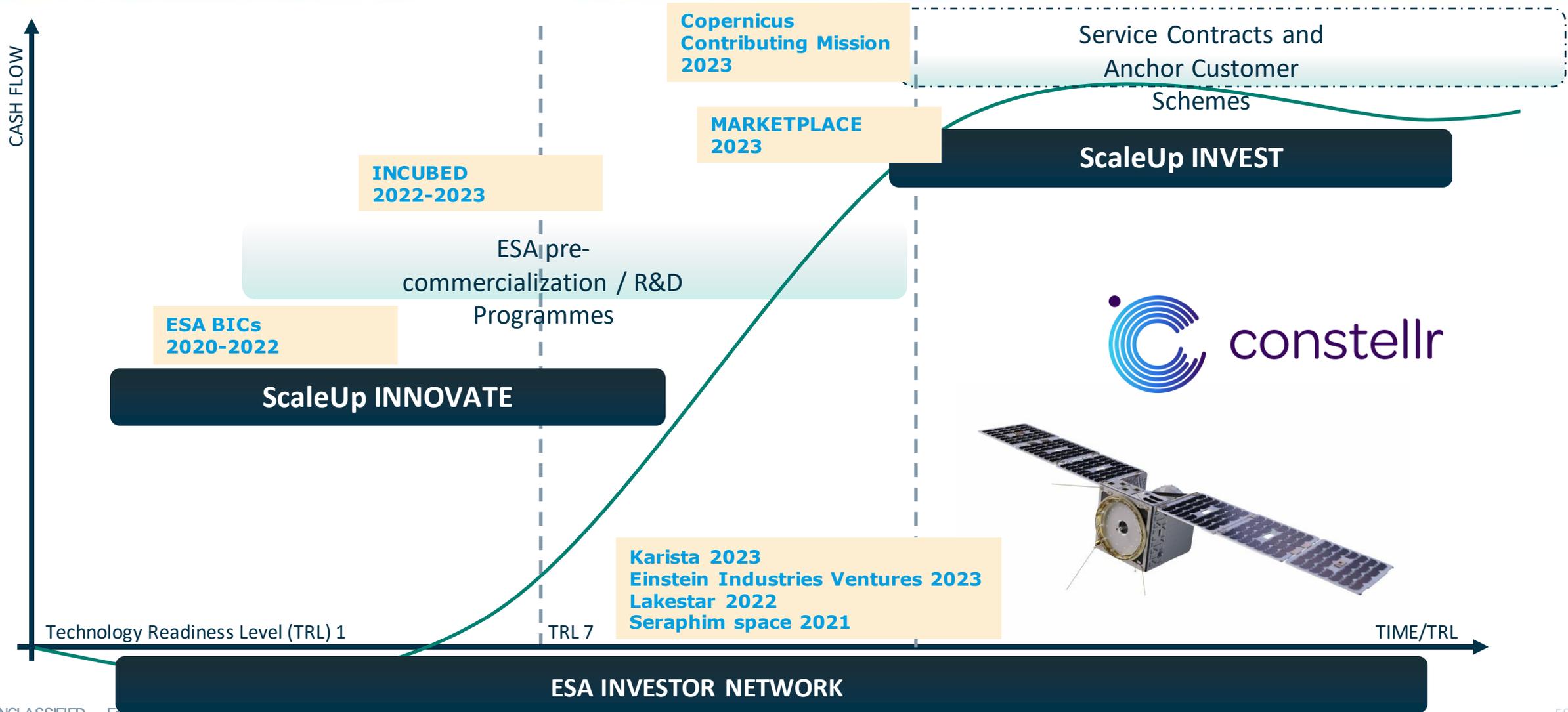
Kais Barmawi  
Ventures and Financing Office

ESA

# ESA CONTRIBUTION ALONG THE COMPANY LIFE-CYCLE



# ESA Contribution on ConstellR



# ESA ScaleUp INVEST

Co-financing B2B deals for accelerated ecosystem growth



## Sustainable Revenue?

- Reach Next Investment Round
- Secure Bank Loans
- Accelerate Growth to Scale Vision



## Global Market?

- Bigger Total Addressable Market
- Secure New Revenue Streams
- Gain Business Resilience



## New Clients?

- Risk Averse Industry
- Forming Long-term Partnerships
- Competitive Agility

Programme  
Solutions:

**Grows Companies' Valuation**

ENABLES AEROSPACE COMPANIES  
**SCALE UP THEIR OPERATIONS**

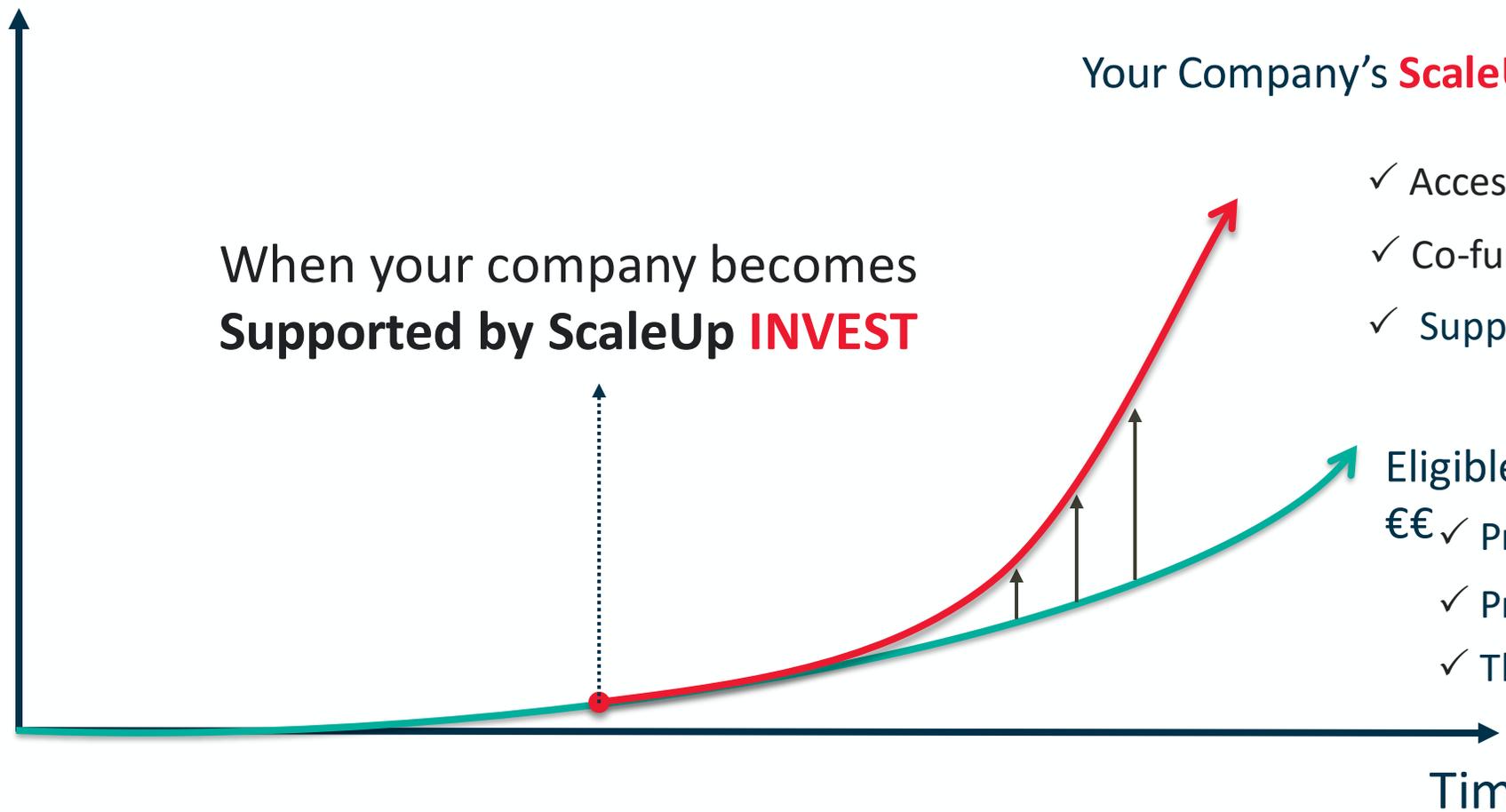
**Accelerates Ecosystem Growth**

ACCESS TO **GLOBAL MARKET** AND  
INCENTIVISING EXPORT SERVICES

**Bridges Supply & Demand**

CO-FINANCING **B2B DEALS**

Revenue €



When your company becomes  
**Supported by ScaleUp INVEST**

Your Company's **ScaleUp-Enhanced** Growth €€€

- ✓ Access to **Millions of €** for B2B deals
- ✓ Co-funding for up to **80% of deal**
- ✓ Support for up to **5 deals**

Eligible Company's **Projected** Growth €€

- ✓ Product or Service Approaching Market
- ✓ Promising Business Model
- ✓ The **VISION**

Seller



Buyer

DEAL

€€€  
to fund deal

BUSINESS & TECHNICAL  
INSIGHT



### Launch Service Provider

- Offer market-competitive pricing
- Secure long-term partnership
- Gain traction, attract investment



### Satellite Company

- Finance cost of payload
- New product launch
- Demonstrate service maturity

€€€  
to fund deal

BUSINESS & TECHNICAL  
INSIGHT



Is your company  
**or partner** from the following  
countries?

- Belgium
- Germany
- United Kingdom
- Luxembourg
- Switzerland
- Finland
- Austria



**Supported by  
ScaleUp**

Join the ScaleUp Marketplace

**Gain ScaleUp **INVEST**  
Financing**

- ✓ Access **Millions of EUR** in co-funding for up to **80%** of maximum of 5 deals
- ✓ **Swift implementation** (Yes/No)

**Fast application  
via [ideas.esa.int](https://ideas.esa.int):**

(in less than an hour)

- ✓ **Top-Level Business Plan**
- ✓ **Product/Service Data Sheet**

**Form Deal Proposal  
with Partner**

- ✓ Outline partnership - **Consortium**
- ✓ Define **Deal**
- ✓ Provide **Co-Funding Scheme**
- ✓ Gain **National Support**

## SATELLITE COMPANIES



IOD/IOV SUPPLIERS



ORIGINAL EQUIPMENT  
MANUFACTURERS  
(OEM)



LAUNCHER COMPANY

DEADLINE:  
**31.12.2023**

CLICK HERE TO

**APPLY**



# The Marketplace by 25/10/2023



# INVESTOR NETWORK

Supporting private capital investment in the  
European space ecosystem

**EUROPEAN COMMISSION  
& EUSPA & EIC**

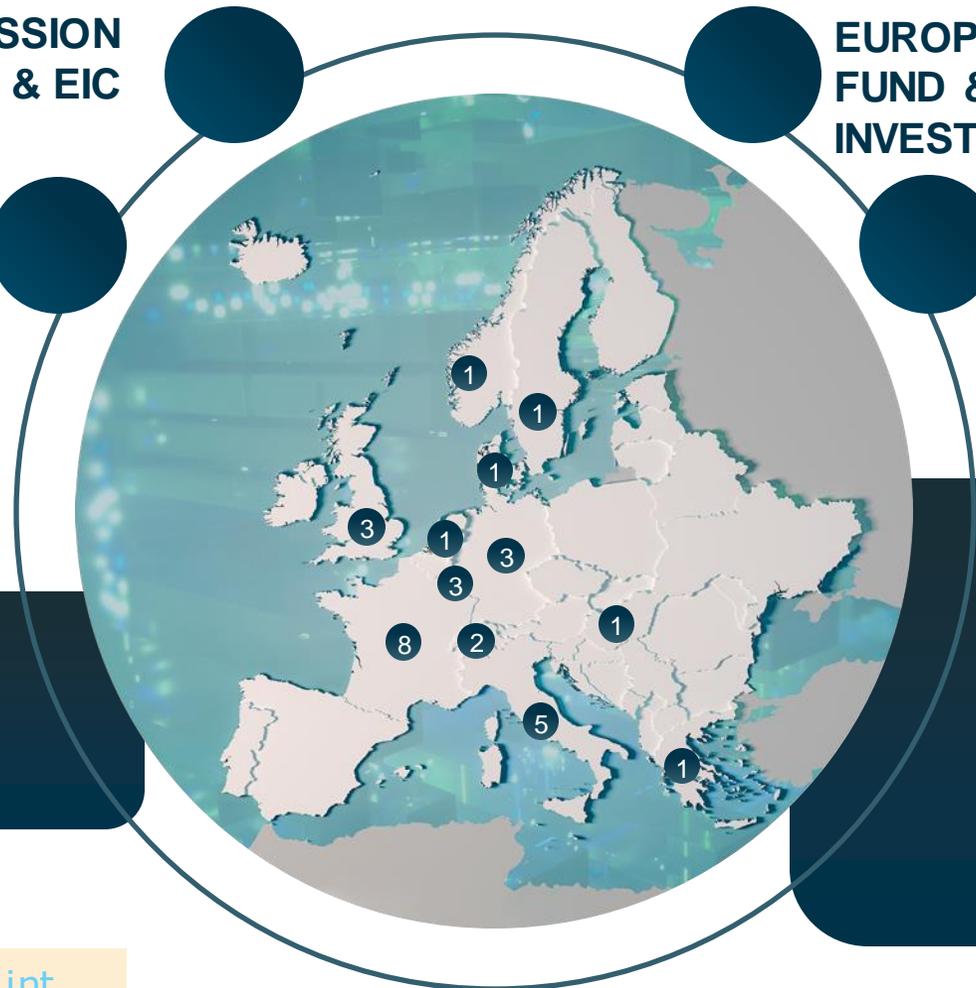
**EUROPEAN INVESTMENT  
FUND & EUROPEAN  
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Venture Capital,  
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Institutional  
investors

## ACCELERATORS

Space founders, Seraphim,  
TakeOff!, CDL Space, Starburst, CASSINI  
Business Accelerator



**30+** MEMBERS OF THE  
ESA INVESTOR NETWORK

- Technical and market advisory
- Investment opportunities
- Dedicated events with the ESA Commercialisation Networks
- Network for exploring new strategic initiatives

Please contact: [investor-network@esa.int](mailto:investor-network@esa.int)

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# Questions – ESA INVEST?

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# UKSA's Investment Activities

## ESA COMMERCIALISATION GATEWAY

SPACE FOR BUSINESS  
BUSINESS FOR SPACE

ESA ScaleUp Information Day for the UK

Daniel Jones,  
Future Markets Lead  
UKSA

Wrap up and close

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