# Innovation & Collaboration Funding

Dr Ashley Stewart

28th September 2022

# Housekeeping

- Please turn off cameras and microphones

- Use chat box to briefly introduce your business, what you want to achieve from joining the event and the types of connections you'd like to make

- Please drop comments/questions into the chat box and one of the team will raise it with the speakers

LOCATION DATA SCOTLAND

# Agenda

| | |
|---|---|
| 10.30 – 10.40 | Welcome - Location Data Scotland, Dr Ashley Stewart |
| **AVAILABLE SUPPORT & PIPELINE OF FUNDING** | |
| 10.40 – 10.55 | Innovate UK, Carol Sutherland |
| 10.55 – 11.10 | European Space Agency, Ken Gordon |
| 11.10 – 11.30 | Scottish Enterprise – Funding Information & Support Service, Tracey Ward |
| **PREPARING A FUNDING APPLICATION** | |
| 11.30 – 11.50 | Panellists will share top 5 tips for preparing a funding application |
| 11.50 – 12.00 | Closing remarks |

LOCATION DATA SCOTLAND

# Introduction

- Explore the innovation & collaboration funding opportunities available from Scotland, wider UK and international providers

- Receive guidance and support – top tips – on preparing an application and building a consortium of partners

- Networking - introduce yourself and your organisation in the chat box.  Use this tool as a means to identify opportunities to collaborate, partners or simply connect

LOCATION DATA SCOTLAND

# Location Data Scotland



Location Data Scotland is an inclusive geospatial community across Scotland, established to unlock the value in location data.

We have been created to leverage location data as an enabler of innovation and to create greater efficiency in the products and services delivered and utilised by organisations and the public sector in Scotland.



WHAT WE DO    EVENTS    NEWS    RESOURCES    DIRECTORY    CONTACT US

LOCATION DATA SCOTLAND

Developing Scotland's Geospatial Community

https://locationdatascotland.com

LOCATION DATA SCOTLAND

# Aims of Location Data Scotland

- To establish an **inclusive** geospatial community across Scotland to **unlock the value** in location data.

- We will **connect, inform and facilitate collaboration** between industry, academia, public and third sector, across multiple sectors, to drive innovation, unlock skills and enable economic growth.

# Facilitating Connections & Collaboration

- *"We are really lucky to be working on such fascinating projects that are making huge impacts on sustainability. Having partners such as the European Space Agency, Location Data Scotland and the Geospatial Commission opens up a wealth of opportunities for SMEs in Scotland. Ashley at LDS has been a great advocate of our technology and ensures **she links us with key opportunities** where possible."* (Peter Young, CEO, GSI)


- *"Ashley at Location Data Scotland **has a fantastic network of connections** and she easily started **opening doors for us to the right people** across the location data domain."* (Arun Gopinath, CEO, Vahanomy)

LOCATION
DATA
SCOTLAND

# Scotland's Location Data Directory

# Scotland's Location Data Directory



**Scotland's Location Data Directory - Put Your Organisation on the Map**

Does your organisation use or supply location data in innovative ways to solve problems, improve services, enhance skills and/or refine customer experience?

Benefits of being listed:

- Find Customers

- Find Suppliers

- Collaborate with new Partners

- Find out about Funding Sources and Opportunities

**Get your organisation listed:**

https://locationdatascotland.com/directory/

LOCATION
DATA
SCOTLAND

# Scotland's Location Data Directory

# Facilitating Connections & Introductions

- Facilitated approx. 50 connections and introductions
  - ➤ Peer to Peer – introducing organisations to share best practice & explore collaborative opportunities
  - ➤ End User – connecting suppliers to potential end-users
  - ➤ Dataset Access – introducing data providers to organisations using data to develop products/services

*"LDS have been instrumental in helping us network into other industries and opened doors to potential collaborations in the agricultural sector"*

LOCATION DATA SCOTLAND

# Signposting

- UK-based funding: highlighting opportunities from UK agencies e.g., UK Space, CivTech,  Scottish Enterprise

- European funding: Aerospace Valley, France: H2020 UFO Project funding opportunity & matchmaking event

- Support organisations: introductions to SE/SDI re inward investment & export assistance

- Support organisations: introduction to Innovation Centres to facilitate R&D

- Recruitment: shared vacancies and job opportunities

# Supporting Geospatial Innovation

# Innovate UK

Carol Sunderland, Innovate UK

# Innovation

The process of taking new ideas and research to the marketplace.

The development of a new solution that:

➢ addresses a specific challenge

➢ results in a new product, process or service

➢ delivers value to the user

➢ generates a market

# The importance of innovation

Innovation:

- ➢ drives productivity, exports and economic growth

- ➢ helps solve society's challenges

Innovate
UK

# Innovate UK

- We are the UK's innovation agency

- We support business-led innovation in **all sectors, technologies and UK regions**

- We help convene, connect and enable collaboration

- We are a key delivery body of the Government's Innovation Strategy

UKRI Innovate UK

# UK Research and Innovation

UK Research and Innovation brings together the 7 Research Councils, Innovate UK and Research England.

As part of UK Research and Innovation, Innovate UK drives productivity and economic growth by supporting businesses to develop and realise the potential of new ideas including those from the UK's world-class research base.

# Inspire | Involve | Invest

Make the opportunity visible and compelling

Bring relevant organisations and people together

Convene the resources needed, including our own

Innovate UK

# Innovation specialists

| Innovate UK | Innovate UK KTN | Innovate UK Edge | Catapult Network |
|---|---|---|---|
| ▪ Funding and support for innovation projects | ▪ Connecting to new partners and opportunities | ▪ Growing your innovative business | ▪ Specialist facilities & experts in technologies |

UK RI

# UK-wide presence

From funding and advisory services to facility and technology access, the Innovate UK group supports innovative businesses across every nation and region in the UK.
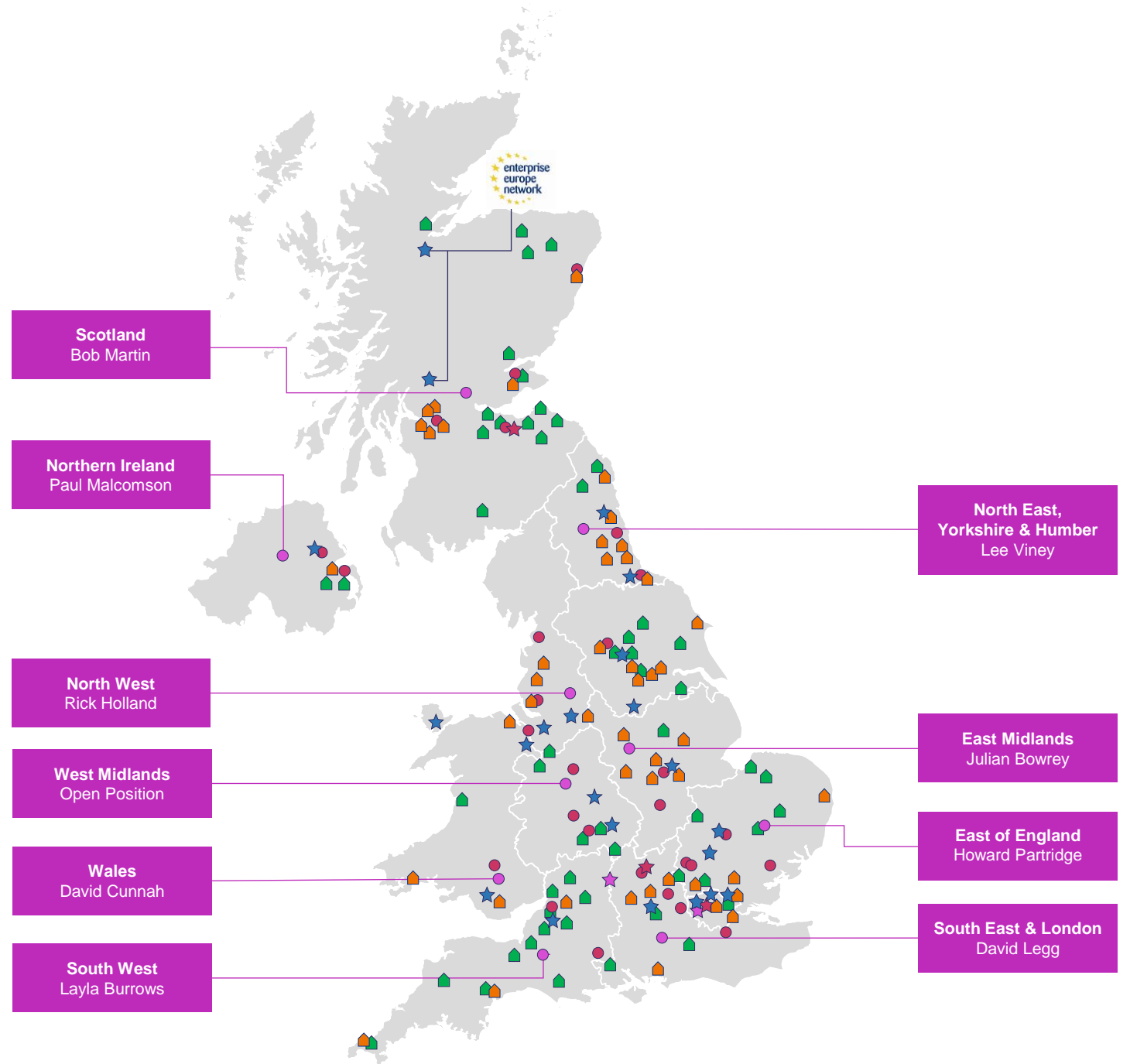
The geographical distribution of our staff and facilities ensures we engage place-based stakeholders and meet regional needs.
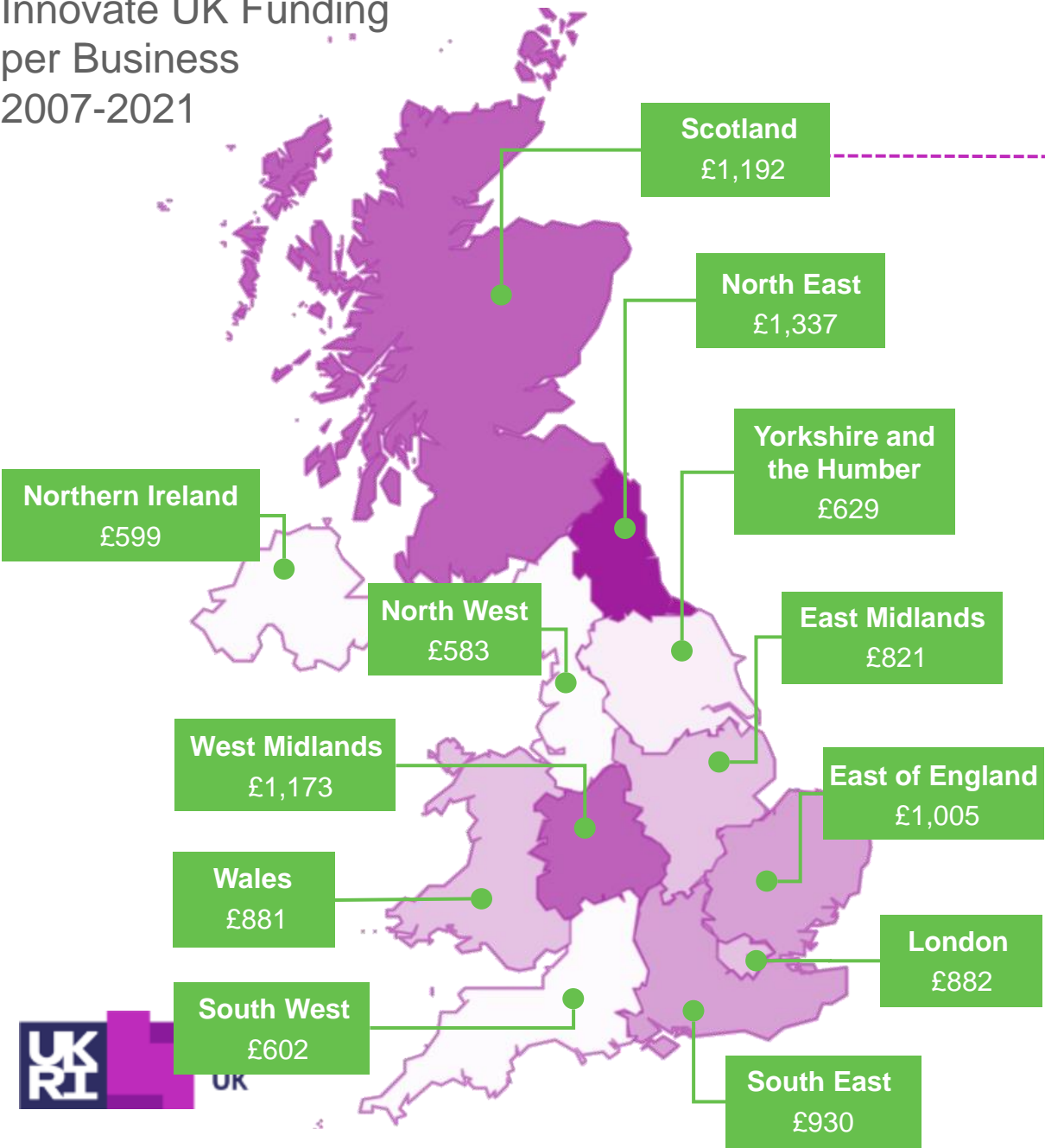
## Symbols

● Expertise     🏠 Facilities     ★ Offices

## Colours

■ Innovate UK

■ Innovate UK EDGE

■ Innovate UK KTN

■ Catapuls

■ Agri-Tech Centres

**UKRI** Innovate UK

**Scotland**
Bob Martin

**Northern Ireland**
Paul Malcomson

**North West**
Rick Holland

**West Midlands**
Open Position

**Wales**
David Cunnah

**South West**
Layla Burrows

**North East, Yorkshire & Humber**
Lee Viney

**East Midlands**
Julian Bowrey

**East of England**
Howard Partridge

**South East & London**
David Legg

enterprise europe network

# Innovate UK Funding per Business 2007-2021

**Scotland** £1,192

**North East** £1,337

**Yorkshire and the Humber** £629

**Northern Ireland** £599

**North West** £583

**East Midlands** £821

**West Midlands** £1,173

**East of England** £1,005

**Wales** £881

**London** £882

**South West** £602

**South East** £930

UK RI UK

# Innovation Support Scotland

Total Innovate UK spend since 2007

Total Grant Value:

## £389,203,513

Number of Participants:

## 2,205

Average Award:

## > £176K

UK RI Innovate UK

SME 52%

Large Business 11%

Academic 31%
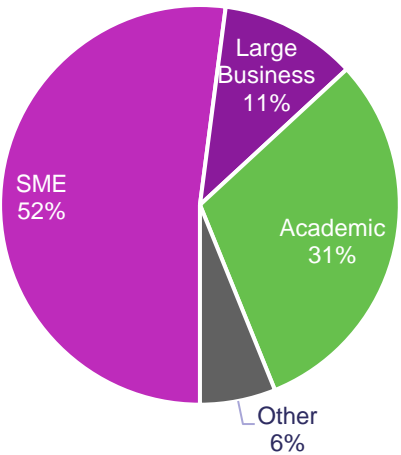
Other 6%

'Other' includes Catapults, Public Sector and Research technology Organisations.

# Supporting Geospatial Innovation

Geospatial innovation includes developments related to:

- geospatial data generation and / or
- geospatial data application

Innovation in geospatial solutions can benefit from funding and support in a range of:

➢ related technology areas*

➢ application areas*

➢ responsive* and generic programmes

* subject to specific competition scope

# Agriculture

Geospatial developments relating to agriculture can enable insights about crop and pasture growth, animal tracking, virtual fencing, autonomous tractors and more sustainable farming.

*Example development that received funding:*

Developments in advanced crop analytics using remote sensing imagery and sophisticated AI, led by Hummingbird Technologies. These help customers detect crop issues at an individual plant level and enable:
- ➤ earlier, more informed decision making
- ➤ targeted early-stage application of pesticide
- ➤ yield prediction
- ➤ verification of sustainable farming



Hummingbird Technologies Ltd

# Maritime and Port Logistics



SiriusInsight.AI

The digital revolution and geospatial innovation are enabling a cleaner, more efficient, agile and better regulated maritime industry, streamlined port operations and marine environment monitoring.

*Example development that received funding:*

Development of near real-time maritime situational intelligence through AI and Earth Observation data, led by SiriusInsight.AI.
This enables:

➢ risk management of vessel sanction breaches
➢ insurance risk visualisation and quantification
➢ automation of vessel monitoring

Innovate UK

# Construction and Infrastructure



Earth-i Spectrum platform

Geospatial innovation is enabling cost savings, productivity gains, greater resilience and safety improvements in construction and infrastructure sectors.

*Example development that received funding:*

Development of a risk monitoring solution for construction and supply chain assets such as roads, rail, ports and pipelines, led by Earth-i. This involves AI driven analytics using data from remote sensing, including video, and terrestrial sources to provide change detection and risk alerts, on a global scale. This enables:

➢ reduction or prevention of costs from construction delays and asset failure
➢ monitoring efficiencies

# Rail

The need for precise and cost effective train positioning is stimulating positioning system developments.

*Example development that received funding:*

Development of a virtual transponder in a front-facing windscreen mounted camera and real-time image processing of video feed, led by Reliable Data Systems International.

This is intended to provide a train positioning approach that offers:
- ➢ track-precision
- ➢ lower costs, with a reduced need for expensive physical infrastructure
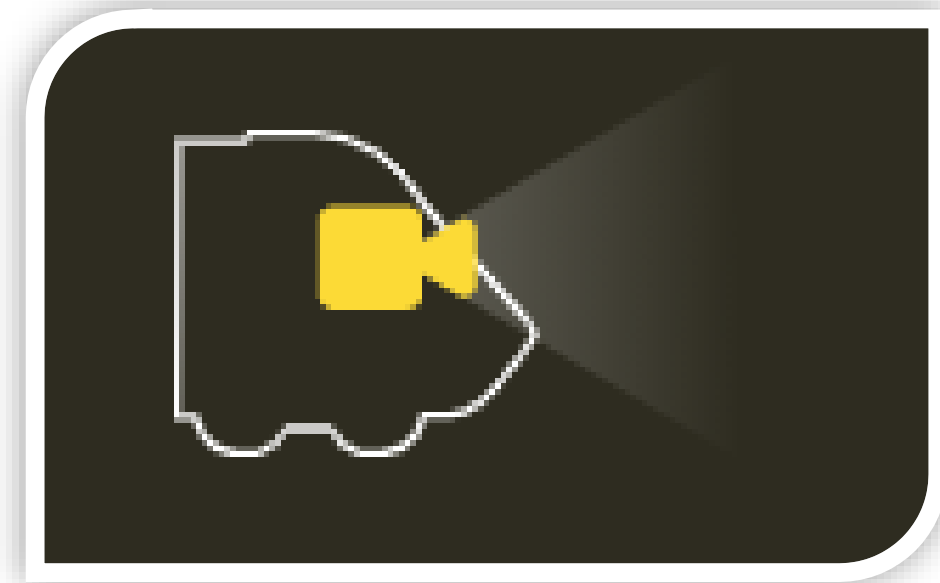


Reliable Data Systems International

# Covid-19 Response

Examples of short, fast start developments that were funded to help address the impact of Covid, at the start of the pandemic:

- Enhanced GPS positioning to improve location accuracy of consumer mobile devices

- Gate sensor data transmission to identify concentrated footfall in rural locations

- Remote monitoring of flood incidents for Environment Agency

- Mapping of local supply chain with health and social care needs

- Staff and contact tracking via location data and AI driven analytics

UKRI Innovate UK

# Building the Future Economy
## Plan for action for UK business innovation



Building the future economy

Plan for action for UK business innovation

inspire | involve | invest

2021–2025

We have launched a plan for action to explain how we will deliver the Government's UK Innovation Strategy, with the vision for the UK to become a global hub for innovation by 2035.

Our actions will be guided and prioritised by the following:

**Strategic Themes**

| Future Economy | Growth at Scale | Global Opportunities | Innovation Ecosystem | Government Levers |
|---|---|---|---|---|

**Strong Foundations**

| Science & Research Strengths | Design Expertise | Societal Impact & Responsible Innovation | Innovation Talent & Skills | Equality Diversity & Inclusion | Place & Levelling Up |
|---|---|---|---|---|---|

Carol Sunderland
Innovate UK
Carol.Sunderland@iuk.ukri.org

# ESA SPACE SOLUTIONS

"In ESA Space Solutions our aim is to show that space is open for business and has the power to improve our everyday lives on Earth."

Programme Objectives

- Promote space applications and services to a wide range of customers, especially those who are not already aware of the benefits

- Support the development of new operational services for these customers

- Projects must make use of at least one space asset (such as satellite communications, earth observation of satellite navigation)

- Support cross-fertilisation with other disciplines

BUSINESS APPLICATIONS     BUSINESS INCUBATION     TECHNOLOGY TRANSFER
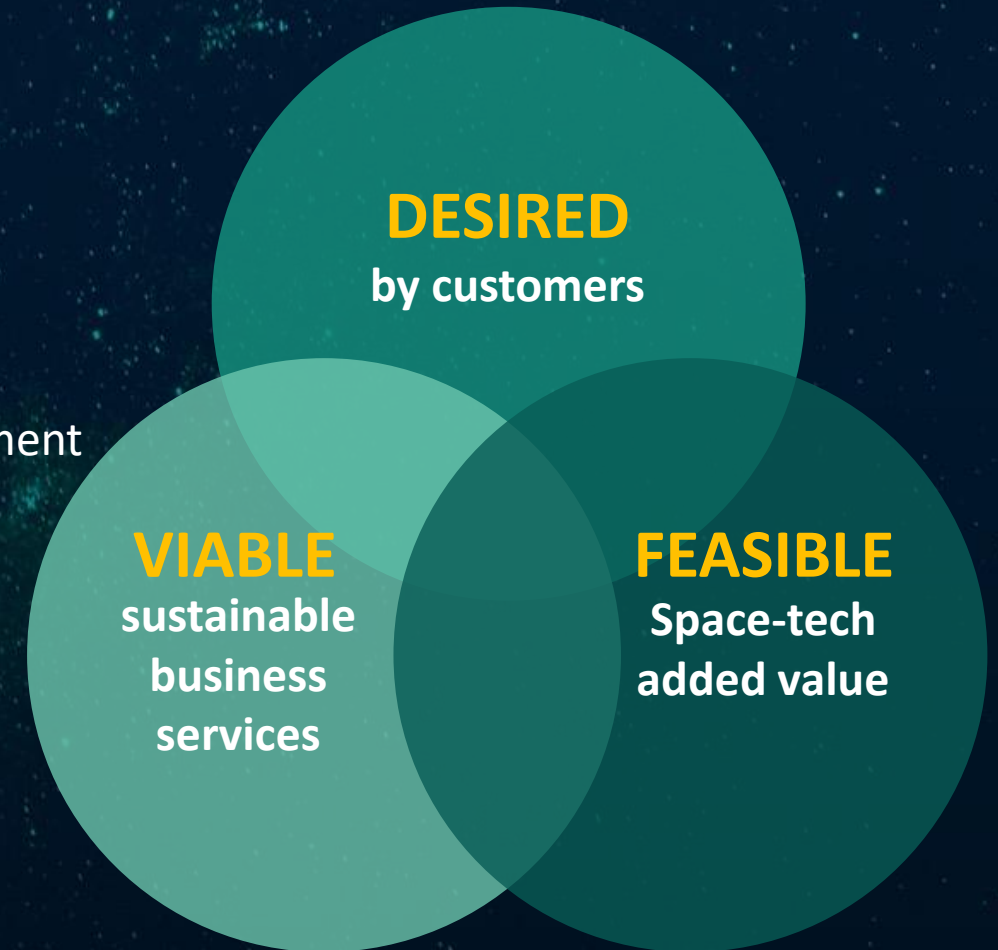
European Space Agency

# WHAT ESA IS LOOKING FOR

## INNOVATIVE SERVICES THAT:

- Start from **market demand**, not technology push

- Are focussed on **business development**, not technology development

## OBJECTIVES:

- Foster utilisation of **existing space capabilities**
- **Avoid research** and new technology developments
- Work in close partnership **with users/customers**
- Develop integrated and **sustainable services**

**DESIRED**
by customers

**VIABLE**
sustainable business services

**FEASIBLE**
Space-tech added value

European Space Agency

## Open Call ("Direct Negotiation")

- Permanently open
- 50% match funding
- Feasibility Studies (cap at €250k, 9 months), Demonstration Projects (€Negotiable)
- Any topic, any time
- Zero-equity funding (from €60k to €2M+ per activity).
- A personalised ESA consultant.
- Technical & commercial guidance.
- Access to our network of partners.
- Credibility of the ESA brand.

- Consult your UK Regional Ambassador Platform(s) for advice

https://business.esa.int/ambassador-platforms/ap-uk

*https://business.esa.int*

*https://business.esa.int*

**Currently Kickstart Activities supported in the UK**

Kick-Start activities are funded at 75% by the European Space Agency for a maximum of €60K per contract.
None are supported by the UK currently

**Competitive Tenders (50% funded) – Feasibility Studies and Demonstration Projects**

**Closing THIS MONTH**

Space for Tourism                                                    (Closes 30/09/2022)
Space and Digital Transformation for Green Energy Utilities          (Closes 30/09/2022)
NHS Future Hospitals Initiative                                      (Closes 30/09/2022)
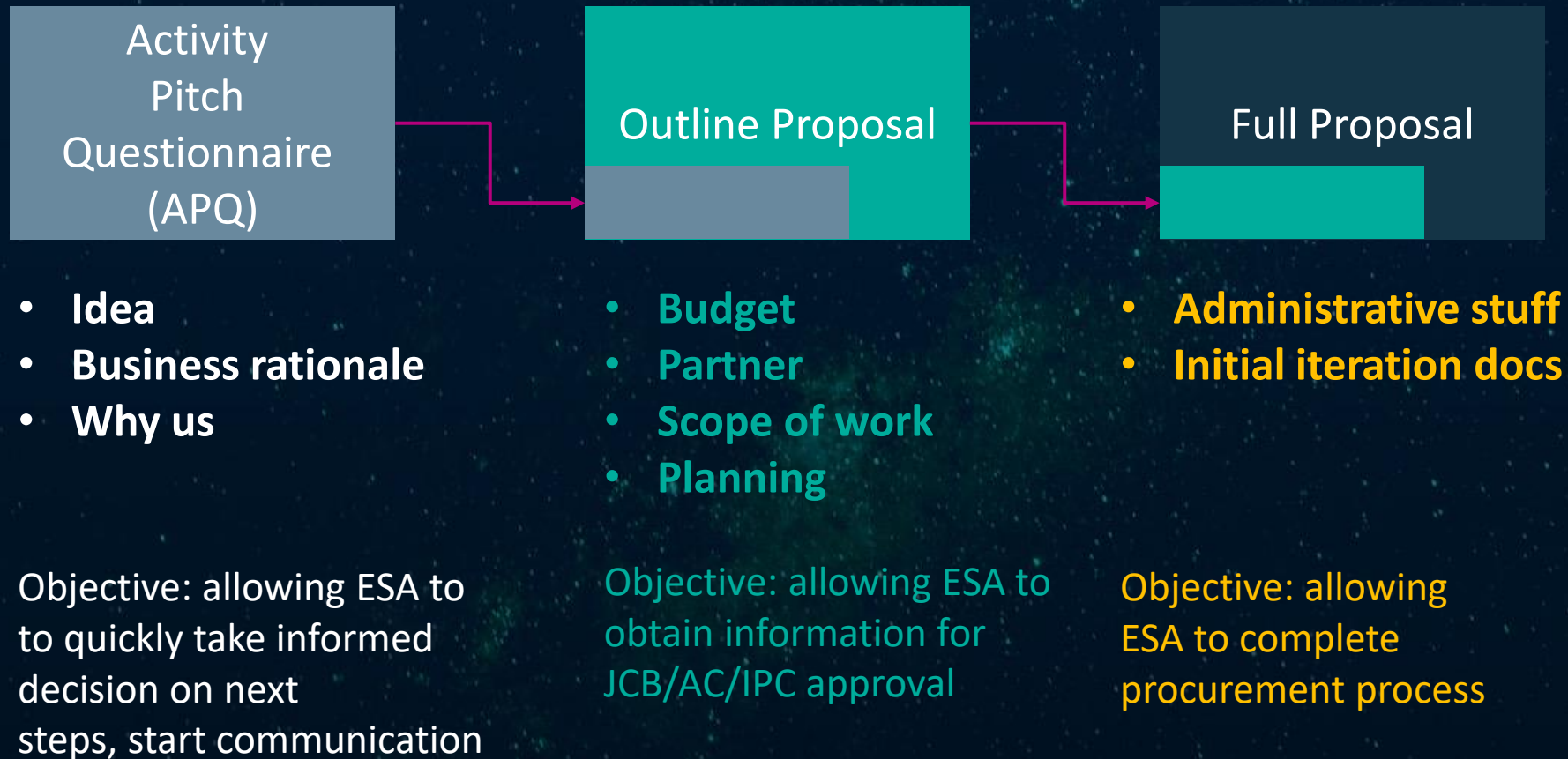Digital Supply Chain                                                 (Closes 30/09/2022)

https://business.esa.int

**Competitive Tenders (50% funded) – Feasibility Studies and Demonstration Projects**

| | |
|---|---|
| Digital Transformation and Green Economy | (Closes 31/10/2022) |
| Sustainable Digitally Connected Solutions for the Commodities Crisis | (Closes 31/10/2022) |
| Space for Green Construction | (Opens 31/10/2022, Closes 28/02/2023) |
| Satellite Connectivity for Autonomous Land Vehicles Safety | (Opens 30/09/2022, Closes 28/02/2023) |
| ICT and Electronic Devices Sustainability | (Opens 31/10/2022, Closes 16/01/2023) |
| Space Applications Supporting Digital Transformation in Public Safety (2) | (Closes 30/06/2023) |
| Space for Olympic Games | (Closes 31/12/2025) |
| Space4Rail - Future Control-command, Signalling &Performance, | (Closes 31/12/2025) |
| Space Systems for Safety and Security (4S) – "SPL" | (Closes 31/12/2025) |
| CASE: Commercial Applications Enabled by Space Environments | (Closes 31/12/2027) |

# The ESA BASS Open Call Application Process

**Activity Pitch Questionnaire (APQ)**

**Outline Proposal**

**Full Proposal**

- **Idea**
- **Business rationale**
- **Why us**

- **Budget**
- **Partner**
- **Scope of work**
- **Planning**

- **Administrative stuff**
- **Initial iteration docs**

Objective: allowing ESA to to quickly take informed decision on next steps, start communication

Objective: allowing ESA to obtain information for JCB/AC/IPC approval

Objective: allowing ESA to complete procurement process

# Project Portfolio

## Isolation Plus

April 2021

- ESA BIC UK alumnus Isolation Plus uses satellite and ground data to produce new insights visualised at a granular mapping level to shine a light on the hidden vulnerable and empower local organisations to reach out to them and provide the support they need.

- The Isolation Plus product combines satellite and ground data to produce data layers that help to identify where the hidden vulnerable are more likely to reside. The single point of access for this information makes it easier for Community Voluntary Organisations (CVOs) and Local Authorities (LAs) to target and tailor their services to the areas most in need.

- https://business.esa.int/projects/isolation-plus
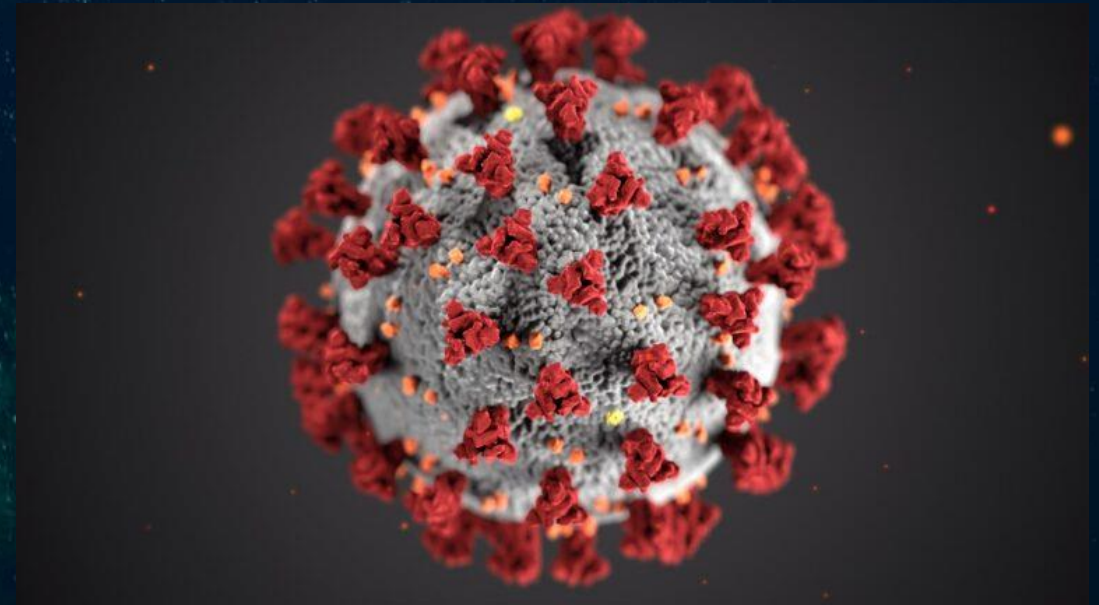
# Project Portfolio

Fusion Platform® - Enhanced agricultural field monitoring services
10th August 2021

- This project demonstrates an automated solution that provides different price/performance options to agricultural corporates for weed detection, frost damage detection, yield prediction and biomass estimation based on the imagery, data and algorithms used.

- Users of the Fusion Platform® can opt to purchase APIs or Standard Service Description (SSDs) bundles to: remotely detect frost damage on their chosen areas; identify weeds in their fallow fields; predict yield several months before they harvest and estimate pasture biomass on demand. The user can compare and select the price and performance of these agriculture services dependent upon their needs and budgets throughout their seasons.

- https://business.esa.int/projects/fusion-platform

## Project Portfolio

### Augmented Quantum Key Distribution Services
Sept 2021

- An 'Augmented Quantum Key Distribution (AQKD)' satellite service that uses nanosatellites (particularly CubeSats) to deliver cryptographic keys and related services for fractions of the cost of traditional satellite constellations.

- https://business.esa.int/projects/a-qkd-s
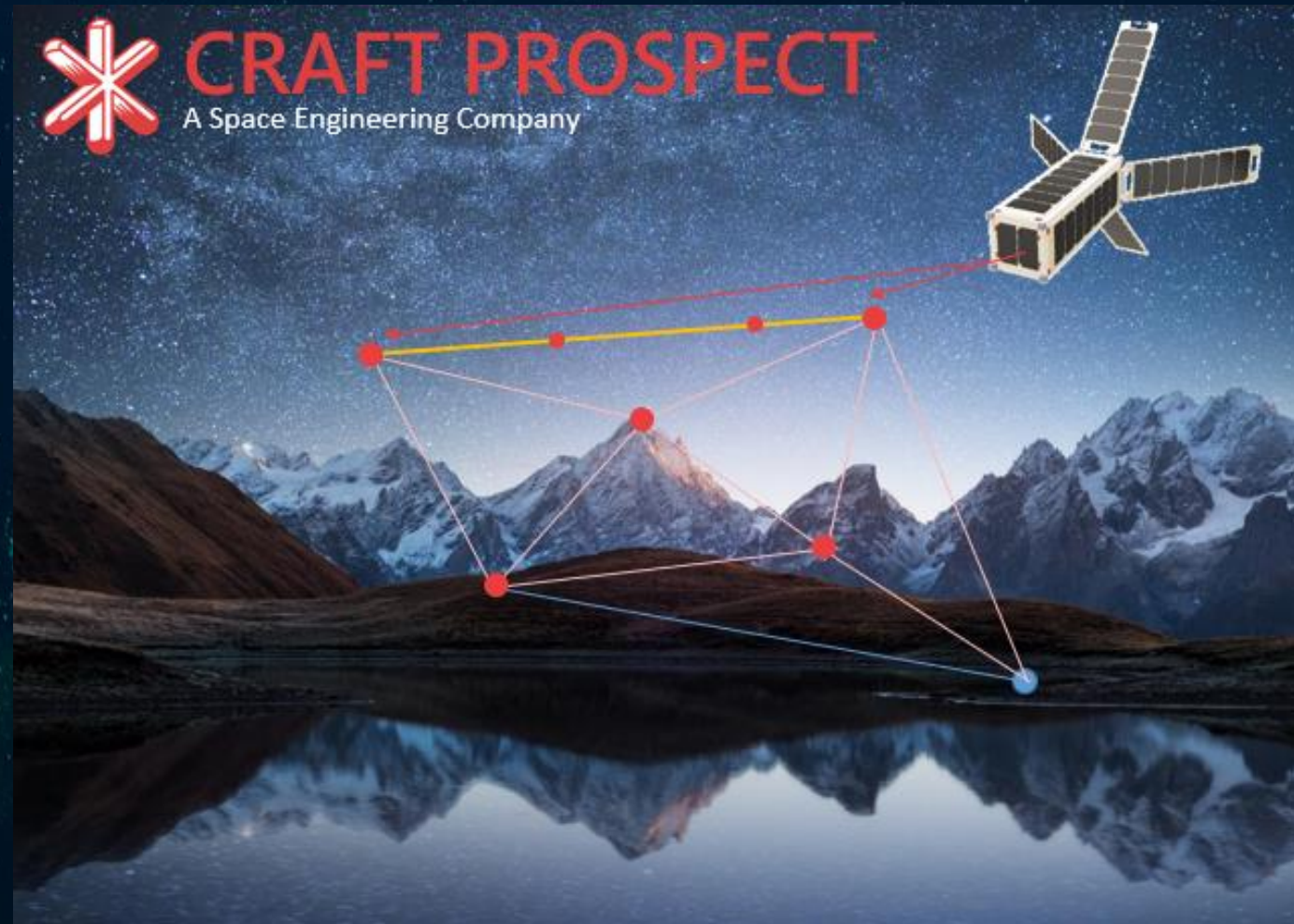
# THANK YOU FOR LISTENING

Ask Questions

Get in Touch

Discuss and develop your idea

CONTACTS:

- kenneth.gordon@tinrocket.space

- +44 7939803360

- linkedin.com/in/kennethgordon/

- Twitter @ESABA_ScotNI

European Space Agency
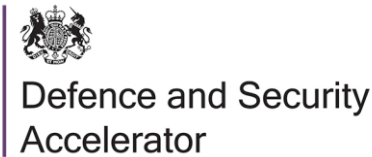
# Funding Information & Support
## Innovation Collaboration & Funding team, Scottish Enterprise

*Tracey Ward*
tracey.ward@scotent.co.uk

*28th Sept 2022*

# EVOLUTION

# INFORMATION

- **FUNDING DATABASE**

 **https://www.scottish-enterprise.com/support-for-businesses/funding-and-grants/innovation-funding**


**https://findbusinesssupport.gov.scot/service/consultancy-and-advice/funding-information-and-support-service**


- **WEBINARS**


- **BULLETIN**
  **https://r1.dotdigital-pages.com/p/53AP-9E2/sign-up-for-email-updates-for-fiss**

Scottish Enterprise

# SCOTTISH ENTERPRISE

- ***SMART:SCOTLAND***

  *Supporting feasibility studies for high-risk, ambitious projects.*

  *60-70% -£100K max*

- *(APPLYING SPACE DATA TO THE NET ZERO ECONOMY)*

| Competition | Innovate UK Smart | EIC Accelerator | Eurostars |
|---|---|---|---|
| Description | Clear game-changing, innovative and/or disruptive and ambitious idea leading to new products, processes or services. Must demonstrate large market. | The EIC Accelerator supports individual Small and Medium Enterprises (SMEs), in particular Startups and spinout companies to develop and scaleup game-changing innovations. | You can apply for Eurostars funding for any sector and industry. It can address any technological area but must be aimed at the development of a new product, process or service. |
| Technology Readiness Levels | Feasibility (incl. Market Research) and Industrial Research TRLs 3-6 Experimental Development TRLs 6-8 | Experimental Development (TRL 5-8) | Projects should go to market 2 years after the project finishes. |
| Participant requirements | UK SME as a minimum (plus another company if research organisation leads) | Single applicant start up or SME | UK SME + partner from participating country |
| Type of call | Grant | Grant | Grant |
| Funding % | Feasibility/Industrial Research 50-70% Experimental Development 25-45% depending on company size | 70% grant | 60% |
| Funding amount | £100,000 - £500,000 (single SME or collaborative) £100,000 - £2m (collaborative) | Max of €2.5m | €360k per SME partner |
| Closing date | 26 Oct 2022 | 5th October 2022 2023??? tbc | Feb/March 2023 tbc |
| Link | Competition overview - Innovate UK Smart Grants: July 2022 - Innovation | https://eic.ec.europa.eu/eic- | https://www.eurekanetwork.org/countries/united-kingdom/ |

# OTHERS



**FARMING INNOVATION PROGRAMME**
https://apply-for-innovation-funding.service.gov.uk/competition/1279/overview/e7deb89b-2048-4f87-a5a2-019459520d04#summary

**DASA RAPID IMPACT**
https://www.gov.uk/government/publications/defence-and-security-accelerator-dasa-open-call-for-innovation/open-call-competition-document

# SUPPORT

**WHO WE WORK WITH**

- ✓ SMEs (typically 10-250)

- ✓ In Scottish Enterprise or SOSE region (HIE provides similar support)

- ✓ Market-oriented innovation/ research and development (R&D) project

- ✓ Can evidence a market/customers willing to pay

- ✓ Are confident they will be able to match-fund at least 30% of project costs

- ✓ Willing to share results

Scottish Enterprise

# SUPPORT

1. Funding Identification

2. Fit-to-call, including considerations for success.

3. Guidance on proposal writing/Toolkit/other SE resources

4. Proposal review

5. Interview or pitch prep

6. Partnering/ Link to other opportunities*

Scottish Enterprise

# TOOLKIT RESOURCES

| Competing solutions / alternatives | Customer Need 1 | Customer Need 2 | Customer Need 3 | Customer Need 4 |
|---|---|---|---|---|
| State of the art | | | | |
| Alternative 1 | | | | |
| Alternative 2 | | | | |
| Alternative 3 | | | | |
| Alternative 4 | | | | |
| *Your solution* | | | | |

## SCOTTISH ENTERPRISE RESOURCES

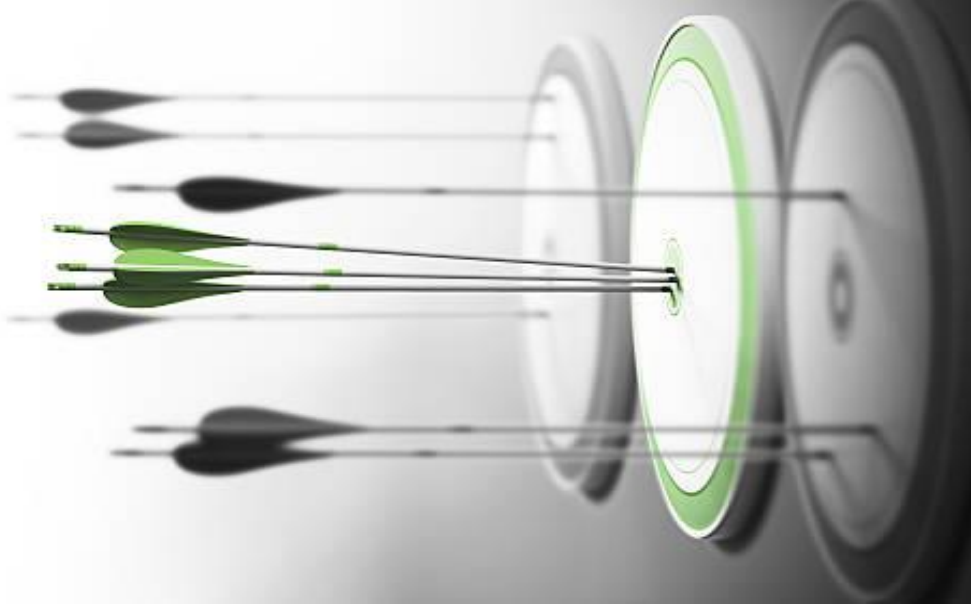- RESEARCH
- IP SPECIALISTS
- SUSTAINABILITY SPECIALISTS
- INNOVATION AND INTERNATIONAL SPECIALISTS
  FINANCIAL READINESS

## WEBINAR RECORDINGS

- EUROSTARS
- IP AND INNOVATION FUNDING  https://attendee.gotowebinar.com/recording/1545414595214278147

Scottish Enterprise

# PROPOSAL REVIEW + INTERVIEW PREPARATION



**CONTACT:**

enquiries@scotent.co.uk

Preparing a Funding Application

Top 5 Tips

LOCATION DATA SCOTLAND

# Conclusions

- There are various opportunities available from a range of funding organisations

- Also support available from e.g. Innovate UK helpdesk, SE advice service, KTN & Enterprise network re partners

- LDS can signpost and provide support to accessing funding and identifying collaborative opportunities

- Calls to action:
  - ➢ Get your organisation listed in Scotland's Location Data Directory
  - ➢ Share ideas for thematic areas for future events
  - ➢ Engage with the community via LinkedIn

LOCATION DATA SCOTLAND

Thank you!

Dr Ashley Stewart

ashley.stewart@optimat.co.uk