Engineering Biology Contracts for Innovation engagement workshop

26th February 2026

UKRI Innovate UK

The UK's innovation agency

Welcome

Dana Heldt
Innovate UK Business Connect

Tom Jenkins
Innovate UK Business

UKRI Innovate UK

Housekeeping

- Keep yourself on mute
- The webinar is being recorded and a link to the recording will be shared afterwards
- Use the chat box to introduce yourself

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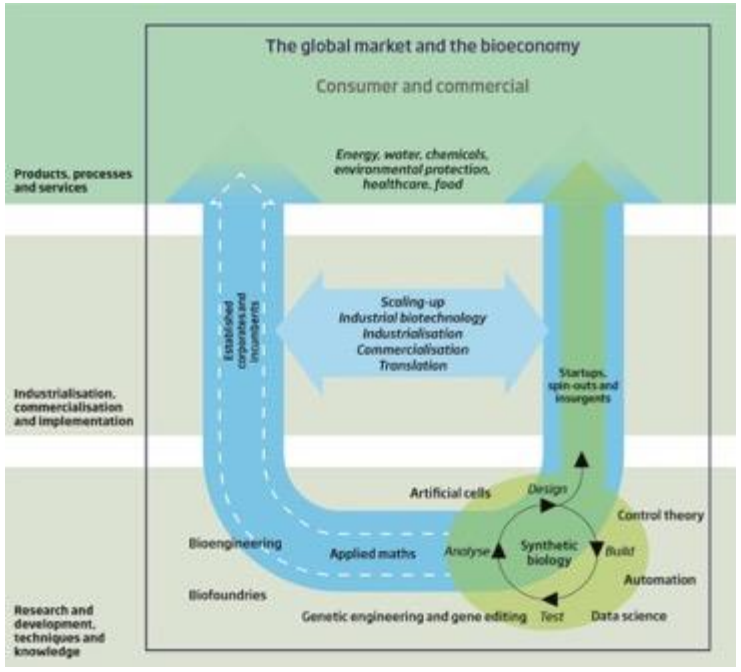
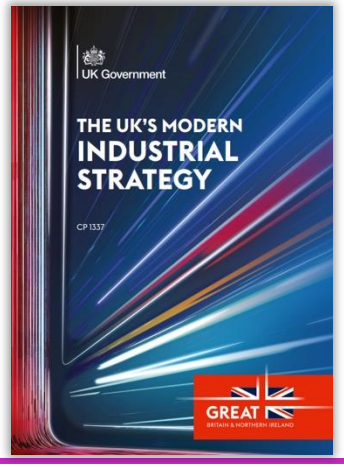
Engineering biology: critical technology for growth

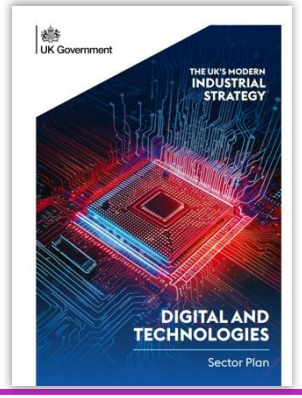
Definition

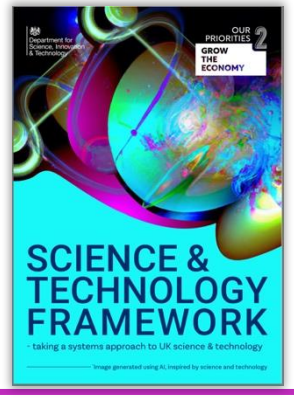


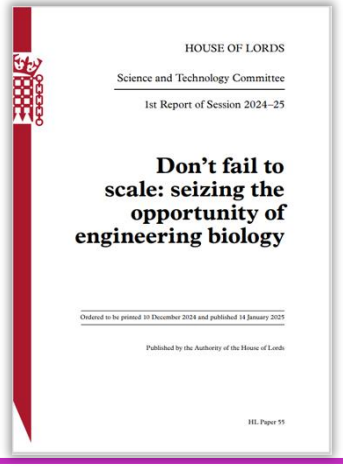
Application

Government priority



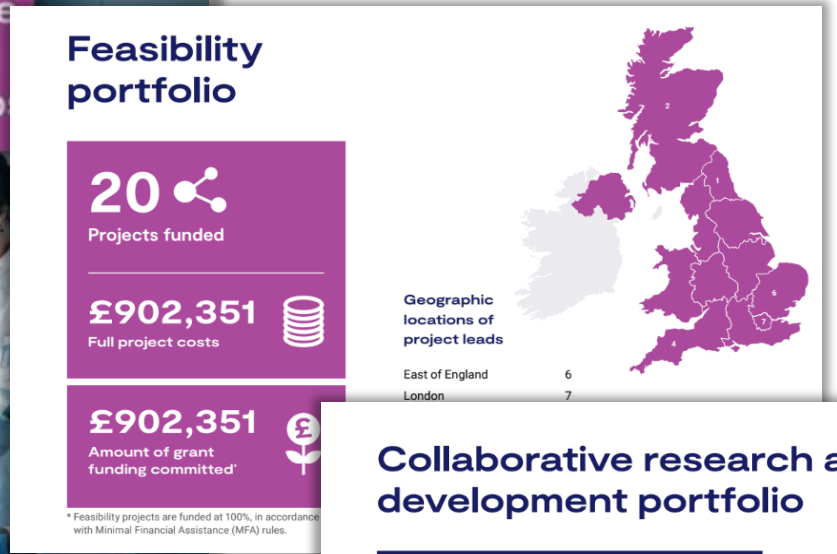


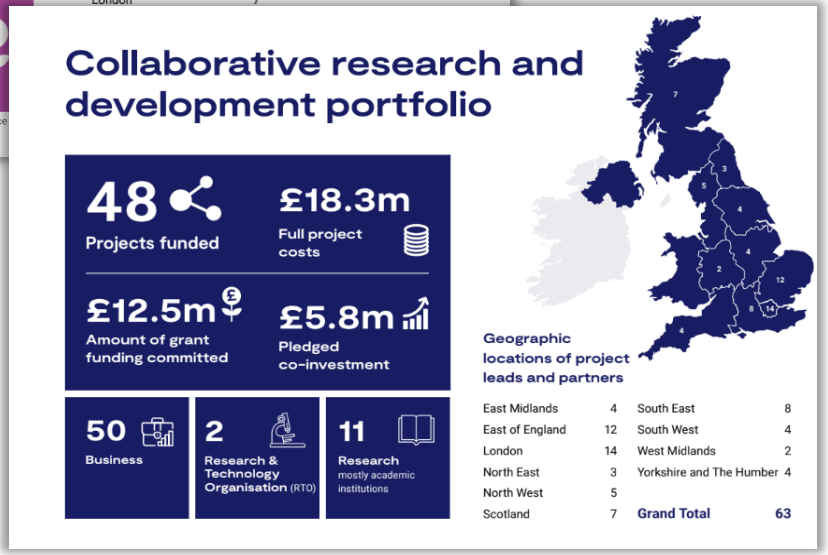




Innovate UK engineering biology portfolio:

Over 60 companies have been supported to date





Download the project brochure: https://bit.ly/EngBio-Projects

Agenda

10:30 Welcome and housekeeping - **Dana Heldt**(IUK BC) & **Tom Jenkins** (IUK)

10:35 Contracts for innovation introduction - **Rhianne Lucas** (IUK)

10:45 Defra overview: priorities and opportunities for Engineering Biology applications - **Professor Anjali Goswami FRS** (Defra)

11:05 Breakout Rooms

11:40 Attendee participation (Menti meter) - **Pedro Carvalho** (IUK BC), **Tim Padgett** (IUK)

11:55 Wrap and close - **Tim Padgett** (IUK)

12:00 End

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Contracts for Innovation

Rhianne Lucas
Innovate UK

Innovate UK

Contracts for Innovation

Rhianne Lucas

Background

- Mechanism to procure R&D services to solve challenges
- Contract between supplier and the funder, opposed to a grant agreement
- Originally developed by the European Commission to procure innovation
- Innovate UK is the custodian of Contracts for Innovation (CfI) and has been used within IUK since 2009.
- Current operating model makes CfI exempt from Subsidy Control
- Usually run as an exempted contract under The Procurement Act 2023

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Contracts for Innovation

The bigger picture

Supporting the Public Sector
CfI has supported public sector organisations across the UK and all key sectors, to solve key challenges and bring about an improved service.
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Supporting SMEs
Our processes makes CfI easier to navigate for SMEs. CfI has a straightforward application process, standard contracts, payments aligned to key milestones and 100% funding.

Continued growth with year-on-year investment
CfI has supported thousands of businesses to undertake ambitious, disruptive R&D with a high potential for commercial success

Return on Investment
CfI not only supports the public sector in solving tough challenges and developing key capabilities in the UK, but also adds significant value to the wider economy.

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Why would you use Contracts for Innovation?

- Solve challenges where a commercially available solution doesn't exist
- Potentially procure solutions delivered
- Limited solutions available – improve cost/ efficacy
- Drive public sector efficiencies
- Inform policy decisions
- Create a market and build capability in the UK
- Stimulate follow-on private investment

Key Features

- Focus on outcome-driven solutions and well-defined challenges
- 100% funded procurement contract for R&D services awarded to a single lead organisation
- Open to all organisations worldwide
- Payment made on successful delivery of milestones
- Encourages end user/ customer collaboration throughout
- Completely flexible – stages/ budget/ duration
- Grants the Funder IP licence rights

Developing cutting edge solutions

- Contracts for Innovation encourages applicants from other sectors.
- Removes barriers to entry such as matched funding, market pull, customer engagement.
- Focus throughout on meeting customer needs and developing commercially viable solutions

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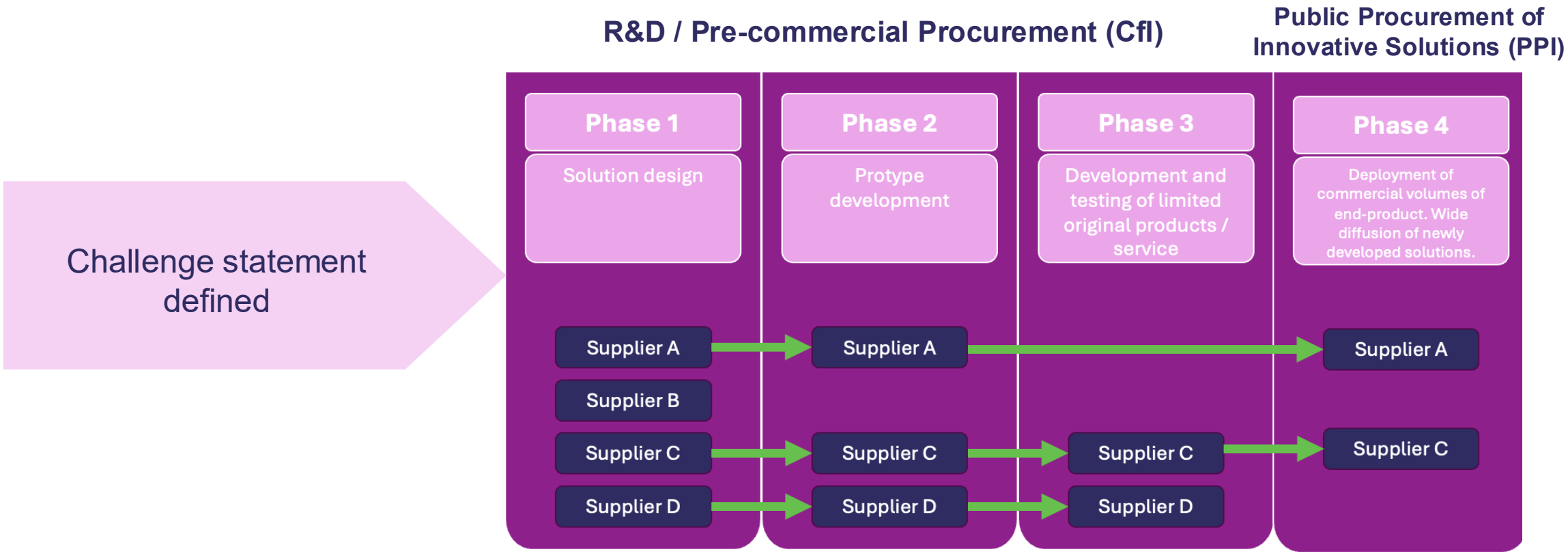
The Process

The Contracts for Innovation process is shaped and tailored depending on the current state of the technology/ sector.

The below is indicative only, many competitions start at high TRL, but CFI operates between TRL 2-8.



What isn’t covered

Contracts for Innovation should not be seen as a route to circumvent a commercial procurement, but complimentary to The Procurement Act 2023.

Projects must have at least 50% of the contract value attributed directly and exclusively to R&D services, including solution exploration and design. R&D does not include:

- commercial development activities such as quantity production
- supply to establish commercial viability or to recover R&D costs
- integration, customisation or incremental adaptations and improvements to existing products or processes

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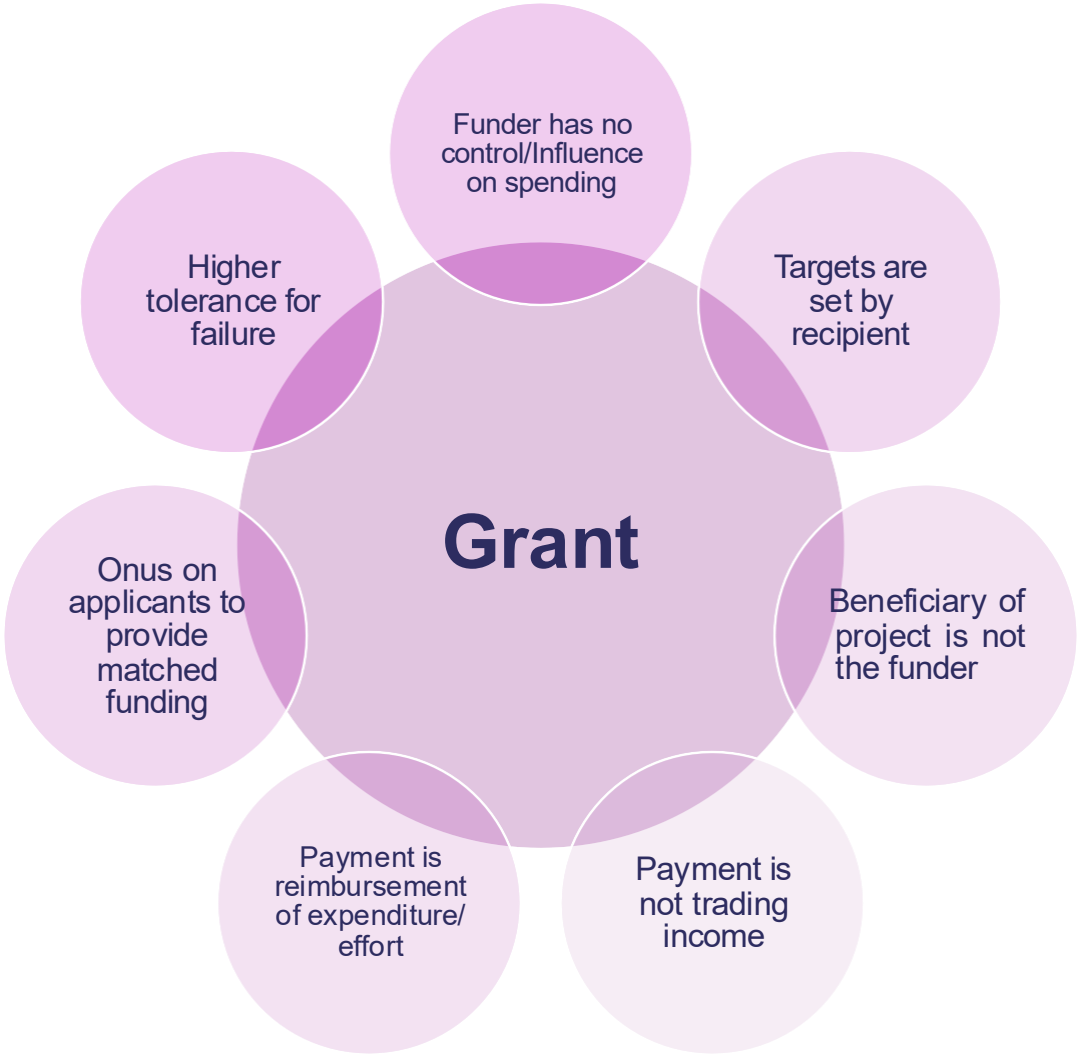
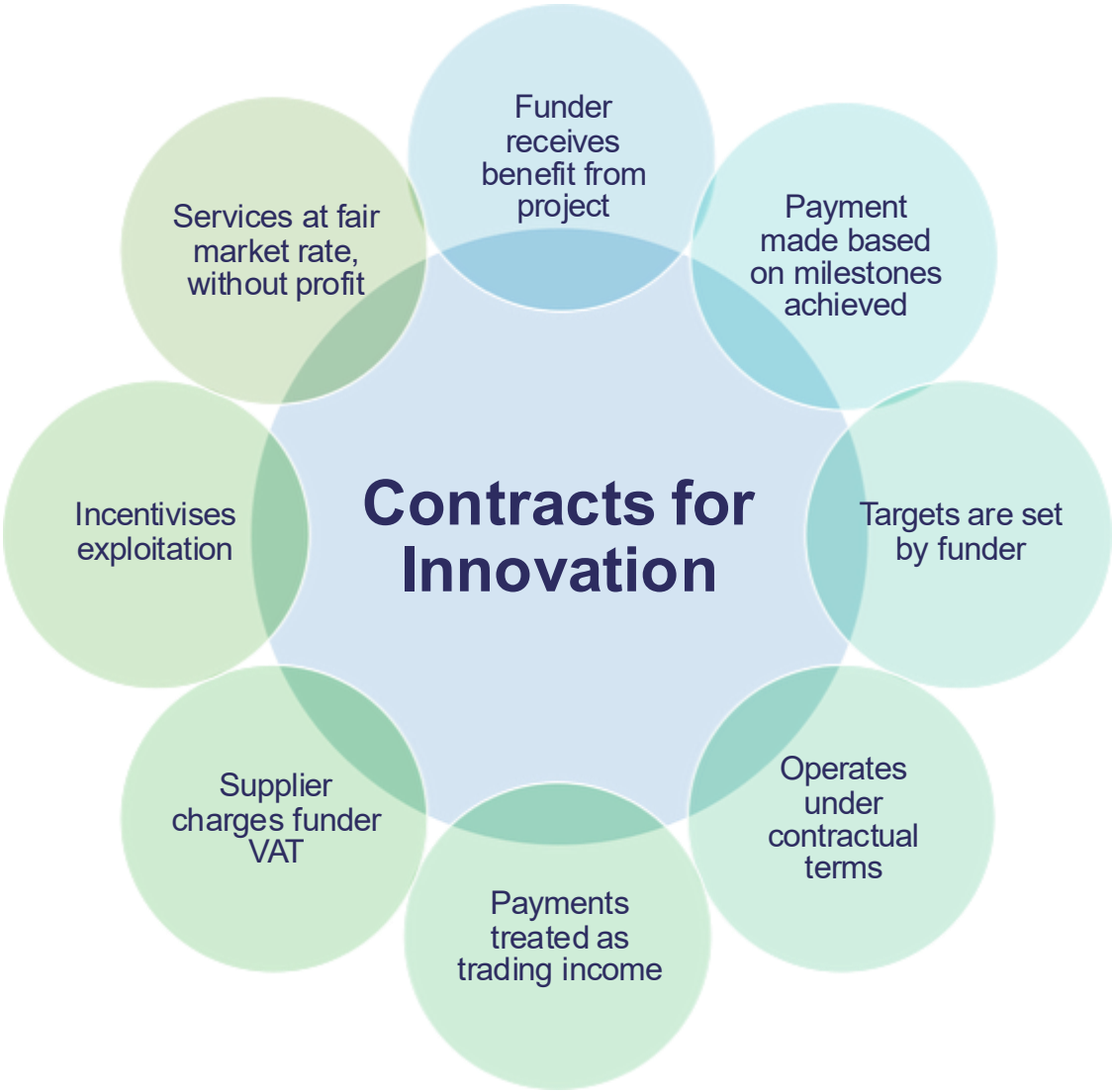
Grant vs Contracts for Innovation





Our partners

We work with a wide range of partners to design and manage programmes that deliver government priorities, address industry challenges, and turn science into value-added business reality.

We collaborate with the organisations shown, local authorities and many more organisations in the UK and across the globe.

Department for Science, Innovation & Technology

Department for Environment Food & Rural Affairs

Intellectual Property Office

Department for Transport

Department for Energy Security & Net Zero

Department of Health & Social Care

Defence and Security Accelerator

Department for Business & Trade

Ministry of Defence

National Measurement Office

Cabinet Office

Foreign, Commonwealth & Development Office

Llywodraeth Cymru
Welsh Government

Invest Northern Ireland

The Scottish Government

ofgem

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CEFAS – multi-stage CFI programme

The **Seafood Innovation Fund (SIF)** was a research and development (R&D) fund that launched in July 2019 and ended in March 2025. The SIF programme was part of the **UK Seafood Fund.**

The programme was delivered by CEFAS on behalf of DEFRA, with a budget of £117m.

The SIF programme focused on:

•delivering longer term, cutting-edge innovation across the seafood sector

•helping to take innovative ideas from early-stage research to commercial viability

Success Stories

The UK’s innovation agency

Transreport

Disabled passengers who opt to use the railway, must provide the train operator with **at least 24 hours' notice** of their intention to travel if they require assistance. Assistance is hit and miss, not always guaranteed and there is no consistent method among train operators to request assistance. SBRI competition on behalf of DfT, managed by Innovate UK was launched in 2018 with up to £350k per project. Transreport (SME) proposed a '**Passenger Assist System' technology enabling real-time assistance** on smartphones.

- **Significant growth**. Technology was rolled out across the entire rail network in Spring 2020 by Rail Delivery Group (RDG).
- Transreport is now on the path to **expanding Passenger Assistance usage overseas** and has rolled out the technology in aviation.
- **Headcount increased significantly** since the start of the SBRI competition, from 2 to 8 in 3 years.
- **Public Benefit** – new product providing more accessible network – no requirement to book 24hrs in advance – expected increase in numbers of disabled people using network.

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The Challenge

The Results

"Early adopters and trial participants have shared nothing but positivity on how this technology will transform their lives. Innovate UK funding helped the company grow, and enabled us to recruit, adding to our already talented team".

Jay Shen, Managing Director Transreport Limited

Child Health: Restoring Function – Open Bionics' Hero Arm

The competitions was launched in 2017, as part of an overarching competition to **support self-care and independence for children with long-term conditions**. Restoring function to support independence amongst children and young people with long-term conditions was identified as a priority unmet health need that required innovative solutions. Open Bionics worked with the West of England AHSN, and were funded £800k to develop affordable, 3D-printed, bionic prostheses for children and young people. The Hero Arm was the end product developed by Open Bionics as a result of their SBRI Healthcare competition journey

- Over **£5m** of public and private sector investment leveraged to support the development of Hero Arm.
- **Eight times increase in revenue** and over **three times growth in number of employees**.
- The Hero Arm is now available in the **UK, EU, Russia, USA and Australia**.
- **65 patients** have now been supported worldwide, the Bionic Squad, each with their own success stories of how the Hero Arm has transformed their day-to-day lives.
- **Building confidence and independence** for people with upper limb deficiencies through the technology itself and through the wider ethos of the Hero Arm of disabilities as superpowers.
- Prospect of **NHS cost savings** and efficiency gains if adopted in the future.

'The world's first clinically approved 3D-printed bionic arm'

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The Challenge

The Results

Useful Links

Case Studies
SBRI Evaluation Report
Live Funding Opportunities

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Thank you

Defra overview: priorities and opportunities for Engineering Biology applications

Professor Anjali Goswami FRS
Defra

Innovate UK

Department for Environment, Food & Rural Affairs

Innovate UK

Innovate UK and Defra Engineering Biology Contracts for Innovation Market Engagement Event

Defra overview: Priorities and Opportunities for Engineering Biology Applications

Professor Anjali Goswami FRS

Defra's Chief Scientific Adviser

Environment Agency

Forestry Commission

NATURAL ENGLAND

Supporting innovation through smarter regulation

- Cross- government push to make regulation more innovation friendly
- Ambition: lower administrative burden, greater transparency, better performance
- Ensuring regulation can adapt to fast moving technologies like engineering biology.

Why Engineering Biology Matters for Defra

- Delivering clean water, healthy ecosystems, reduced pollution, and strong biosecurity
- Engineering biology opens new ways to manage disease, improve monitoring, and remediate pollution
- A chance to apply cutting- edge science to real environmental challenges
- Today's six areas highlight where Defra may procure solutions- not the full scope of Eng Bio's relevance to us.

Now is a pivotal moment for UK leadership in engineering biology

- UK is seeing the benefit of years of strong investment
- Recent government investment: £380m for R&D and infrastructure, plus £100m from UKRI for six Mission Hubs and 22 Mission Awards
- Strong support from Innovate UK in helping industry turn Eng Bio into viable, real- world solutions
- A timely moment to accelerate translation and adoption across priority sectors

Challenge Area 1

Low-Cost, Real-Time Water Quality Monitoring for Policy, Public Health, and Ecosystem Management

Limitations of manual sampling

Current monitoring depends on manual sampling and lab analysis, leaving gaps and missing pollution events

Need for affordable monitoring tools

There is a critical need for low- cost, high- frequency monitoring tools that detect pollutants and pathogens effectively.

Engineering Biology solutions may improve data collection

Better data enables regulators, water companies, and the public to act sooner

Challenge Area 2

Novel Biopesticides for pest, weed and disease management in agriculture

Pressure on current crop protection tools

Farmers need effective ways to manage pests that do not compromise biodiversity or water quality.

Gap in safe biopesticide options

For many major crops, safe and scalable biopesticide alternatives remain limited.

Engineering Biology opportunities

Targeted, biological pest-control approaches could reduce chemical use while meeting farmer needs and regulatory standards.

Challenge Area 3

Accelerating Next-Generation Veterinary Vaccine Platforms through Engineering Biology

Impacts of animal disease outbreaks

Animal disease outbreaks can cause severe biosecurity risks and major economic disruption.

Limitations of current vaccine pathways

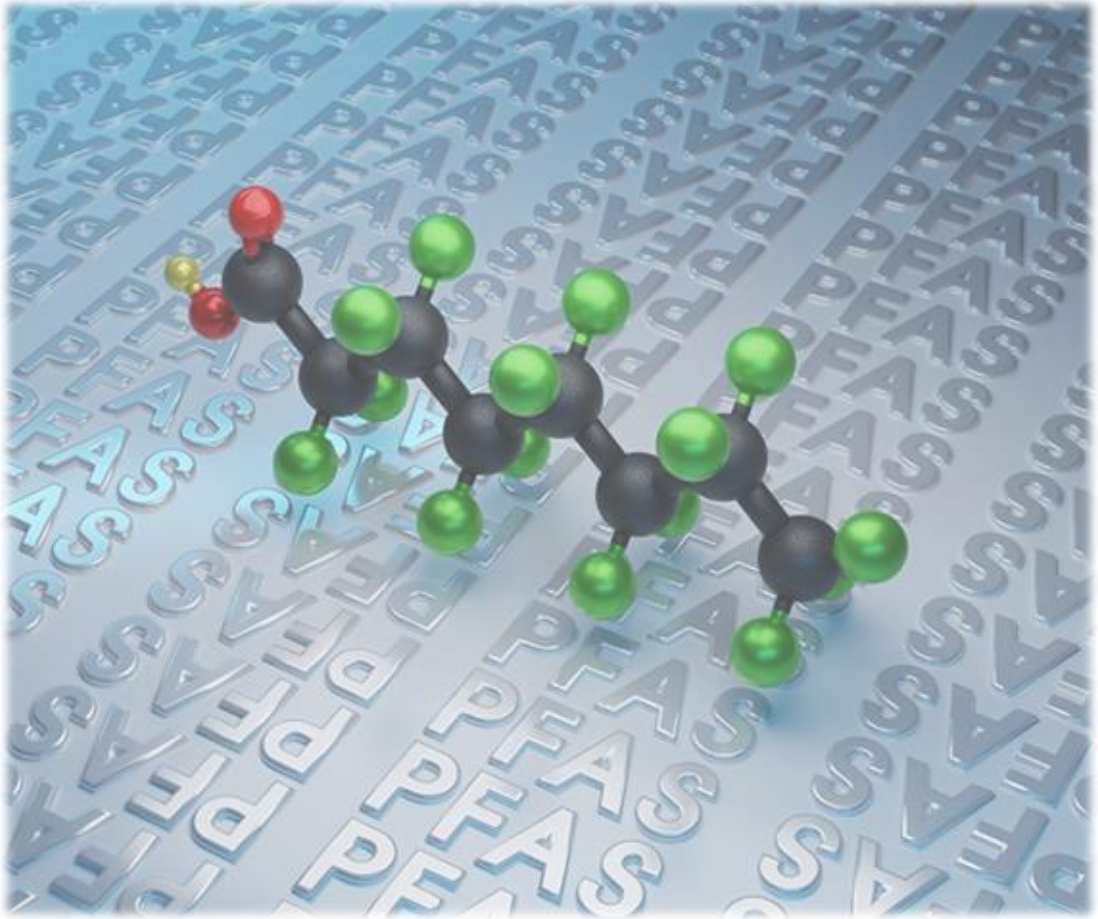
Traditional vaccine development is often slow, inflexible, and vulnerable to supply constraints.

Engineering Biology opportunities

Platform- based, adaptable vaccines could be rapidly updated for new outbreaks, strengthening livestock resilience and supporting One Health goals, including tackling antimicrobial resistance (AMR).

Challenge Area 4

Emerging Technologies for Treating PFAS



Persistence of PFAS chemicals

PFAS chemicals are extremely persistent and difficult to remove, and many current approaches simply move contamination rather than eliminating it.

Need for effective remediation approaches

Long- term solutions require technologies that can break down or transform PFAS, rather than displacing it.

Engineering Biology opportunities

Innovative biological pathways could support long-term PFAS remediation, aligning with the UK's wider PFAS strategy and circular economy goals.

Challenge Area 5

Real-time, Affordable, Automated Platforms for Genomic Monitoring and Surveillance of Aquatic Systems

Limits of current genomic monitoring

Manual sampling and central labs restrict how often and how widely we can collect data.

Need for autonomous, real-time systems

We need affordable tools that can sample and analyse environmental DNA automatically.

Engineering Biology opportunities

Real- time, autonomous platforms could detect change earlier across rivers, likes, and marine environments

Challenge Area 6

Predicting Ecosystem Health and Resilience from eDNA via AI-Driven Functional Genomics

Limits of current eDNA insights

eDNA tells us which species are present, but not how ecosystems are functioning or how resilient they are.

Need for functional, predictive tools

We need approaches that reveal ecosystem health and resilience to pressures like pollution and climate change

Engineering Biology opportunities

Combining functional genomics with AI could provide real- time, predictive insights to target interventions more effectively

Department for Environment Food & Rural Affairs

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Thank you

Breakout rooms

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Breakout rooms

Structure

- Defra will outline the challenge statement (1 per room)
- followed by Q&A facilitated by IUK BC colleagues
- use hand raise option if you wish to speak
- make use of chat box to contribute
- breakout rooms are being recorded for internal use only

Defra would like to understand

- What would you change about this challenge to make it clearer or more realistic?
- Where are the biggest barriers and friction points?
- What would help you deliver solutions (and how time-sensitive is this challenge)?

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Breakout rooms

Room	Topic	Defra colleague	IUK BC colleague
1	Low-Cost, Real-Time Water Quality Monitoring	Eleanor D'Arcy Sarah Pick	Chris Till
2	Novel Biopesticides for pest, weed and disease management	Holly Alpren	Joanna Scales
3	Next-Generation Veterinary Vaccine Platforms	Simon Smith-Mullally	Maria McKay
4	Emerging Technologies for Treating Per- and polyfluoroalkyl Substances (PFAS)	Pippa Curtis-Jackson	Dana Heldt, Denise Goldsmith
5	Real-time, Affordable, Automated Platforms for Genomic Monitoring and Surveillance of Aquatic Systems	Kerry Walsh Jono Warren	Liqun Yang
6	Predicting Ecosystem Health and Resilience from eDNA via AI-Driven Functional Genomics	Deborah Steele	Pedro Carvalho

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Menti meter

Pedro Carvalho
IUK Business Connect

Tim Padgett
Innovate UK

Innovate UK

Wrap up

Tim Padgett
Innovate UK

Dana Heldt
IUK Business Connect

Innovate UK

Engineering Biology Innovation Network

Mission & Goals

- Driving the development of a joined-up UK Engbio ecosystem ensuring synthetic biology tools, technologies and processes can be developed and adopted by industry.
- Progress innovations, foster new consortia and create a commercially focused community, across the UK and globally.

Focus Areas

- Agriculture and food
- Materials and chemicals
- Health
- Environmentall solution, including waste recycling
- Energy and low carbon fuels
- Tools

Activities

- Showcases and Webinars
- Community-led insight gathering via workshops
- Global opportunities and partnerships
- Investment (including Pitch training) and funding

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EngBio IN - Future activities

Webinars:

- Global Insights: Engineering Biology in Switzerland - 04/03/2026, 10.00 -11.30 GMT
- Engineering biology SPARK Award Showcase - 18/03/2026, 10.00 – 12.00 GMT

Stay informed

- Engineering Biology Innovation Network webpage
- Engineering Biology Community LinkedIn Group

LinkedIn

Webpage

Lead Contacts

Pedro Carvalho KTM AgriFood, Dana Heldt - KTM Synthetic Biology

engbio@iukbc.org.uk

Innovate UK HLA

Tom Jenkins, Gordon Ford, Tim Padgett

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