UKRI Innovate UK

UK Science & Technology Network

Global Insights: Engineering Biology in Switzerland

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Housekeeping

- Please note that this session is being recorded and will be shared on the Innovate UK Business Connect website.
- All attendees will be muted, and cameras will be turned off – we encourage you to introduce yourself and the organisation in the chat.
- Please use the Q&A tab throughout the webinar – we will answer questions near the end.
- Should you have any technical issues during the webinar, please let us know in the chat box.
- Please scan the QR code for our report.

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Agenda

Time	Item	Speaker
10:00-10:05	Welcome and House keeping	**Alexandra Leech-Gribben**, *Knowledge Transfer Manager, Global Alliance* - Innovate UK Business Connect
10:05-10:15	**Introduction to Innovate UK's activities in Engineering Biology**	**Tim Padgett**, *Innovation Lead, Engineering Biology* – Innovate UK
10:15-10:20	**Overview of Global Expert Mission**	**Alexandra Leech-Gribben**, *Knowledge Transfer Manager, Global Alliance* - Innovate UK Business Connect
10:20-10:35	**Key findings**	**Dana Heldt**, *Knowledge Transfer Manager, Synthetic Biology* – Innovate UK Business Connect
10:35-11:10	**Panel Discussion** Key insights and lessons for future UK-Swiss collaboration.	**Co-chairs** – **Tim Padgett** & **Dana Heldt** **Panellists**: **Lavanya Kala**, *Head of Innovation Research Policy* - Food Standards Agency **Stephen Wallace**, *Professor of Chemical Biotechnology* - University of Edinburgh **Will Milligan**, *CEO* - Extracellular
11:10-11:25	Audience Q&As	UK GEM Delegation
11:25-11:30	Next Steps and Close	**Dana Heldt**

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Introduction to Innovate UK & Engineering Biology programs

Tim Padgett

UKRI Innovate UK

The UK’s innovation agency

We are the UK's innovation agency

As part of **UK Research and Innovation (UKRI)**, Innovate UK is publicly funded by the Department of Science, Innovation and Technology (DSIT) to drive innovation and productivity across the UK.

We work for you to create a better future by inspiring, involving and investing in businesses developing life-changing innovations.

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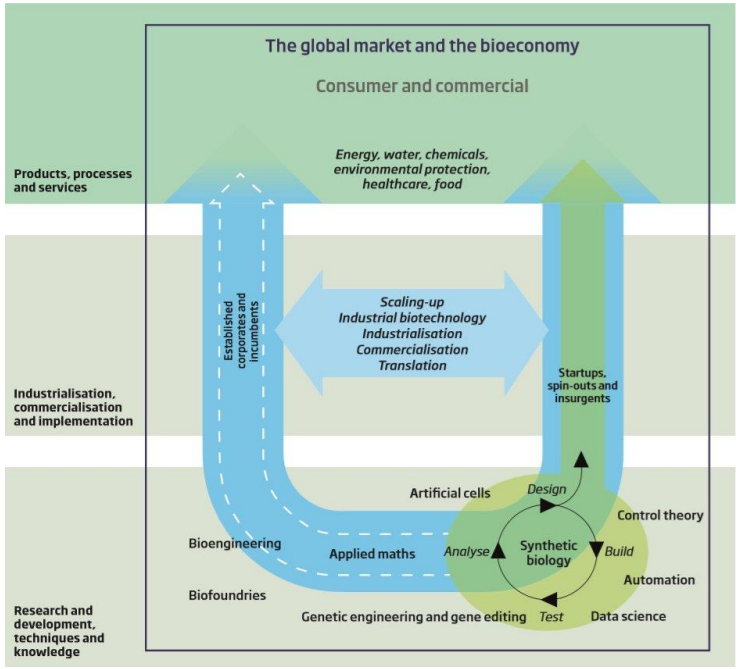
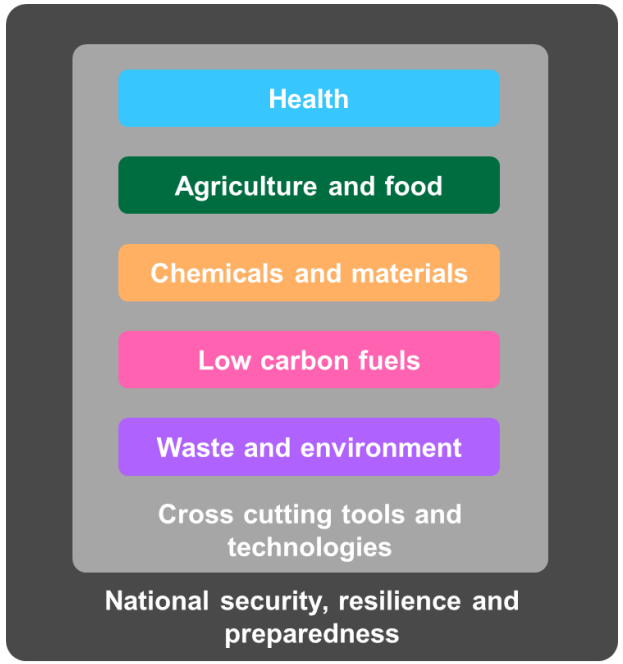
Engineering biology: critical technology for growth

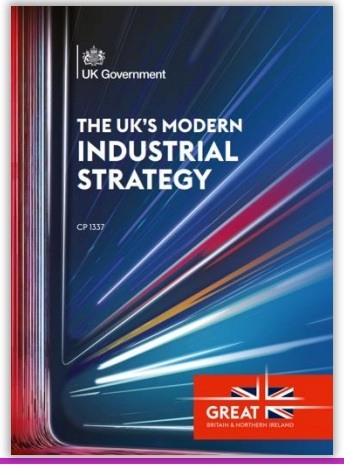
Definition

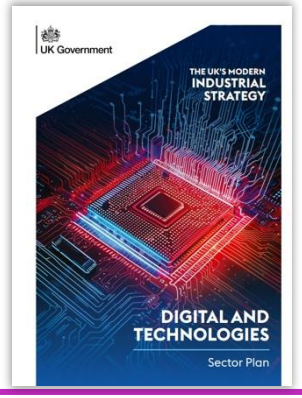


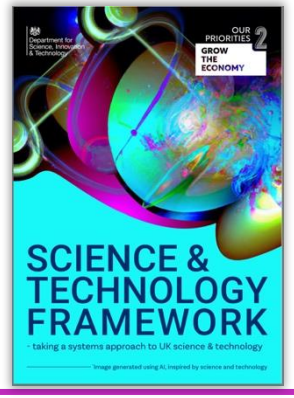
Application

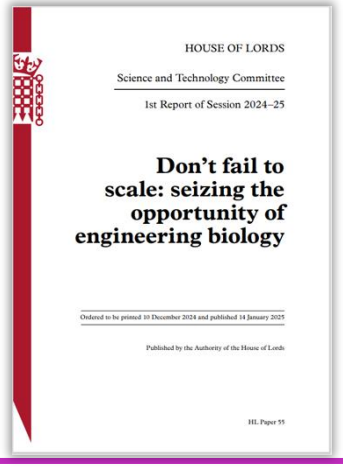


Government priority









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Engineering biology: cross UKRI collaboration

Technology Missions Fund: £70m UKRI programme
(Apr 2023 – Mar 2025)

Biotechnology and Biological Sciences Research Council

£48m*

- 6 Research Hubs
- 22 Mission Awards
- Seedcorn Awards

Engineering and Physical Sciences Research Council

£2m

- POC Awards

Innovate UK

£16m

- 2x Accelerator comps
- 2x Feasibility comps
- 2x CR&D comps

IUK £16m

Accelerator & Feasibility

- 40 founder-led companies receiving entrepreneurial training and business support
- 20 companies awarded Feasibility funding to develop R&D pipelines and technology maturity

CR&D

- 48 projects across 4 themes: healthcare, food systems, clean growth, environmental solutions

* Plus £70m from BBSRC core

Invention → Innovation → Scale

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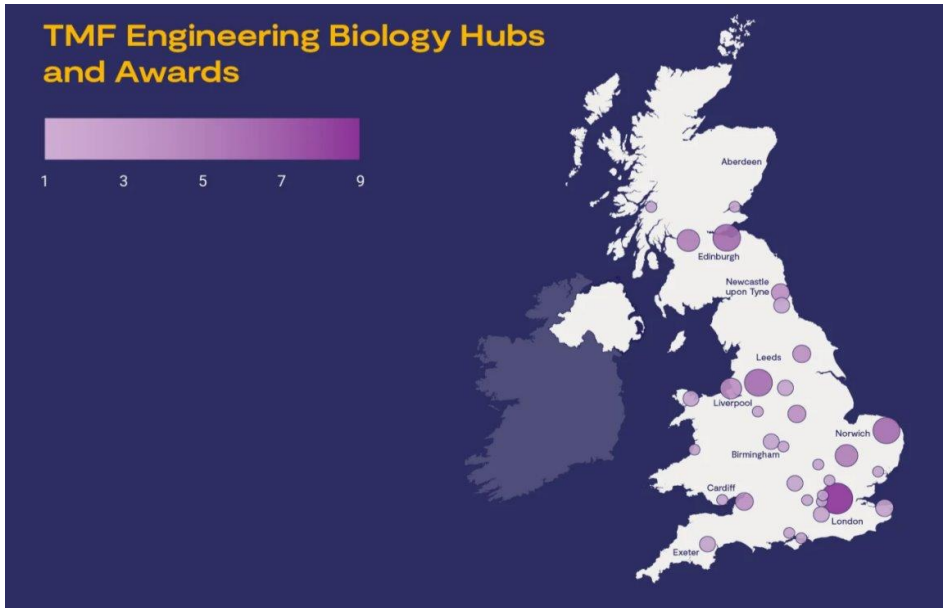
Engineering biology: Mission Hubs and Award

In 2024, UKRI invested over **£100 million** in **six Mission Hubs** and **22 Mission Awards** through our National Engineering Biology Programme

These investments **build on the UK's world-class engineering biology capabilities** – established through £800m UKRI investment since 2007 – to **unlock the potential of engineering biology across a broad range of application areas**

They aim to drive engineering biology research and innovation toward **tangible, mission-oriented impacts**, ultimately delivering **economic and societal benefits** to UK citizens

- Environmental Biotechnology Innovation Centre
- Engineering Biology Hub for Microbial Foods
- Engineered Genetic Control Systems for Advanced Therapeutics
- Engineering Biology Hub for environmental processing and recovery of metals
- GlycoCell Engineering Biology Mission Hub: Transforming glycan biomanufacture for health Preventing Plastic Pollution with Engineering Biology



Geographical spread of Mission Hubs and Mission Awards

[UKRI Engineering Biology Mission Hubs Showcase - YouTube]

Innovate UK and BBSRC

Accelerator: supporting early-stage companies

Building a UK-wide pipeline of engineering biology start-ups

ScienceCreates

The Engineering Biology Accelerator is an Innovate UK initiative, backed by over £800,000 in funding, and delivered by Science Creates. It is a fully-funded, equity-free programme designed to support innovators in commercialising engineering biology innovations. Since its launch in 2023, the programme has established itself as a national resource for nurturing deep tech entrepreneurship, accelerating the development of novel technologies addressing critical challenges in healthcare, climate, food and sustainability.

The nine-week, full-time programme is aimed at individuals with transformative ideas or very early-stage engineering biology companies, and is delivered in a flexible format, accessible to participants across the UK, helping drive the translation of UK world-leading science capability towards commercial opportunities.

The impact to date

Across its first two cohorts, the Accelerator has already demonstrated strong results between September 2023 and December 2024 with:

35+ companies supported
with 17 new companies founded

£3.8m+
in equity investment
raised by participating companies

£2.1m+
in grant funding secured
by participating companies, including 20 feasibility grants

58% of companies grew their teams
following participation

More than **50%** of participants generated new IP

and over **20%** filed a patent within one year

10 alumni start-ups
have gone on to win innovation competitions and awards

Start-ups emerging from the programme are developing solutions in areas including advanced therapeutics, cell and gene therapy, sustainable food production, biomanufacturing, clean energy, and antimicrobial resistance.

CR&D funding: maturing technology towards market applications

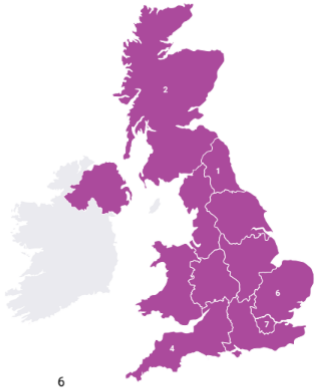
Feasibility portfolio

20 Projects funded

£902,351 Full project costs

£902,351 Amount of grant funding committed*

* Feasibility projects are funded at 100%, in accordance with Minimal Financial Assistance (MFA) rules.



Geographic locations of project leads

East of England	6
London	7
North East	1
Scotland	2
South West	4
Grand Total	20

Collaborative research and development portfolio

48 Projects funded

£18.3m Full project costs

£12.5m Amount of grant funding committed

£5.8m Pledged co-investment

50 Business

2 Research & Technology Organisation (RTO)

11 Research mostly academic institutions

Geographic locations of project leads and partners

East Midlands	4	South East	8
East of England	12	South West	4
London	14	West Midlands	2
North East	3	Yorkshire and The Humber	4
North West	5		
Scotland	7	Grand Total	63

Overview of the Engineering Biology in Switzerland Global Expert Mission

Alexandra Leech-Gribben

The UK’s innovation agency

UK-Swiss Past Collaboration

Switzerland-UK MoU on cooperation on scientific research and innovation

On 10th November 2022, Switzerland and the UK signed a Memorandum of Understanding to deepen bilateral cooperation that delivers excellence, and impacts across all fields of research and innovation, particular focus on deep science, industrial commercialisation and international standards and regulation.

Joint UK–Swiss Collaborative R&D Call

2024 CR&D Call from Innosuisse & Innovate UK

- Funded joint projects from organisations in the UK & Switzerland.
- Encouraged UK & Swiss collaboration particularly within:
  - life sciences
  - AI
  - semiconductor applications
  - quantum

Antimicrobial Resistance (AMR) Global Business Innovation Programme

2025 programme from Innovate UK

- Introduced 16 UK organisations working in the life science sector to the Swiss ecosystem.
- Identified key stakeholders for tackling AMR and mapped the innovation landscape.
- Facilitated activities to identify collaboration opportunities between the UK and Swiss organisations.

Overview of Innovate UK Global Team Products + Services

Drive UK businesses to realise their global potential

Products and services

Opportunity definition	Entering new markets	Facilitating R&D and innovation
New geographies and sectors	**Support innovative business to grow and scale**	**Access to innovation knowledge through partnerships**
Market Research	Global Business Innovation Programme	Collaborative R&D Programmes
Global Scoping Workshop	Global Incubator Programme	Access to Horizon Europe
Discovery Visit	Global Explorers	Bilateral Collaborative R&D
Global Expert Mission		Eureka

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Switzerland GEM Objectives

Building International Collaboration
Understanding the landscape for Engineering Biology innovation in Switzerland, the path for scale-up and key stakeholders within:

- Agri-Food
- Agricultural Biologics
- Clean Technology.

Informing UK businesses and Government
Develop these findings into strategic actions for Innovate UK & HMG to build on. Provide information to enable UK and Swiss companies to exploit collaboration opportunities.

Showcasing UK Capabilities
Promote the UK's technological and business strengths to be the "Partner of Choice" in future innovation partnerships with Switzerland.

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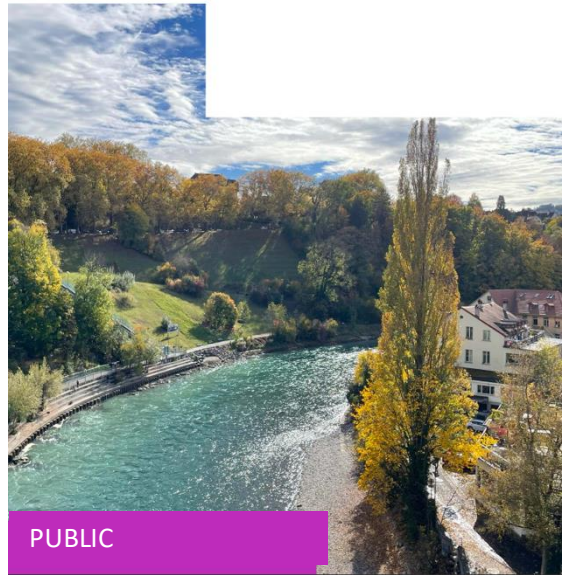
Global Expert Mission Report
Engineering Biology in Switzerland



PUBLIC

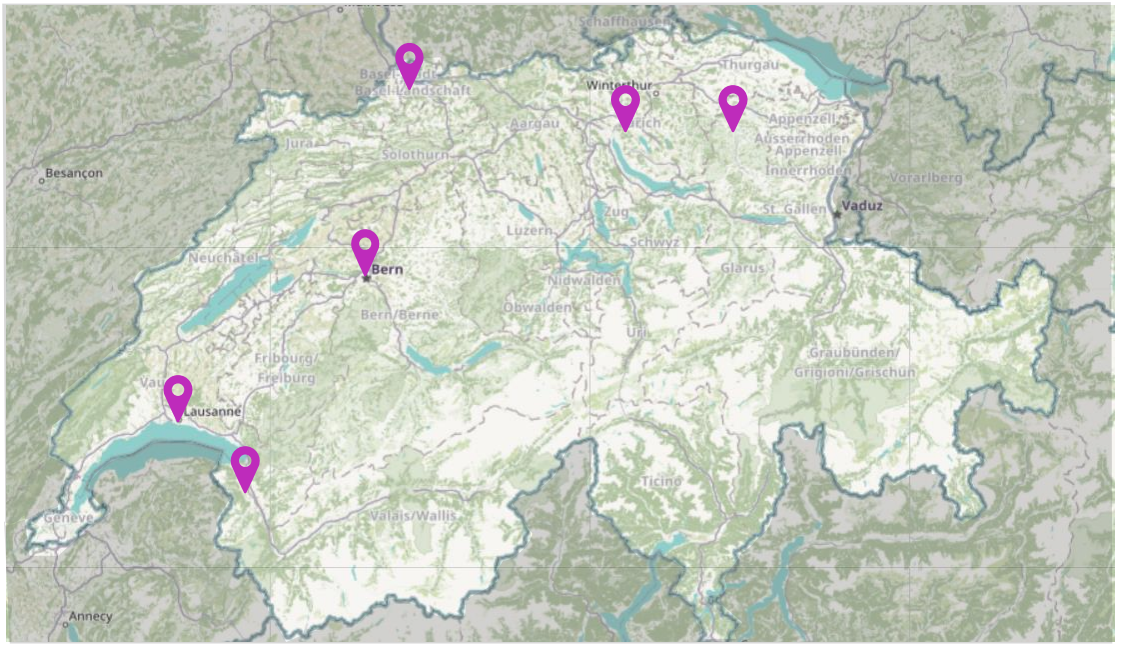
GEM Visit background

UK DELEGATION

- **Lavanya Kala**, *Head of Innovation Research Policy* - Food Standards Agency
- **Robert Edwards**, *Chair in Crop Protection* - Newcastle University
- **Sarah Davidson**, *Technology Development Lead* - Croda
- **Simon Partridge**, *Centre Manager* - Bezos Centre for Sustainable Protein
- **Stephen Wallace**, *Professor of Chemical Biotechnology* - University of Edinburgh
- **Will Milligan**, *CEO* - Extracellular

Observers

- **Mary Jenkinson-Finch**, *Senior Manager* - Biotechnology & Biological Sciences Research Council
- **Ruth Nottingham**, *Head of Strategic Innovation Programmes* - Biotechnology & Biological Sciences Research Council



Agenda

5 Working days meeting with business, government and academic stakeholders across Switzerland:

- Lausanne
- Monthey
- Berne
- Basel
- Zurich
- Uzwil

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Stakeholders met during the GEM

Lausanne & Monthey

Businesses

- ProSeed
- REM Analytics
- Valsynthèse

Regional Support

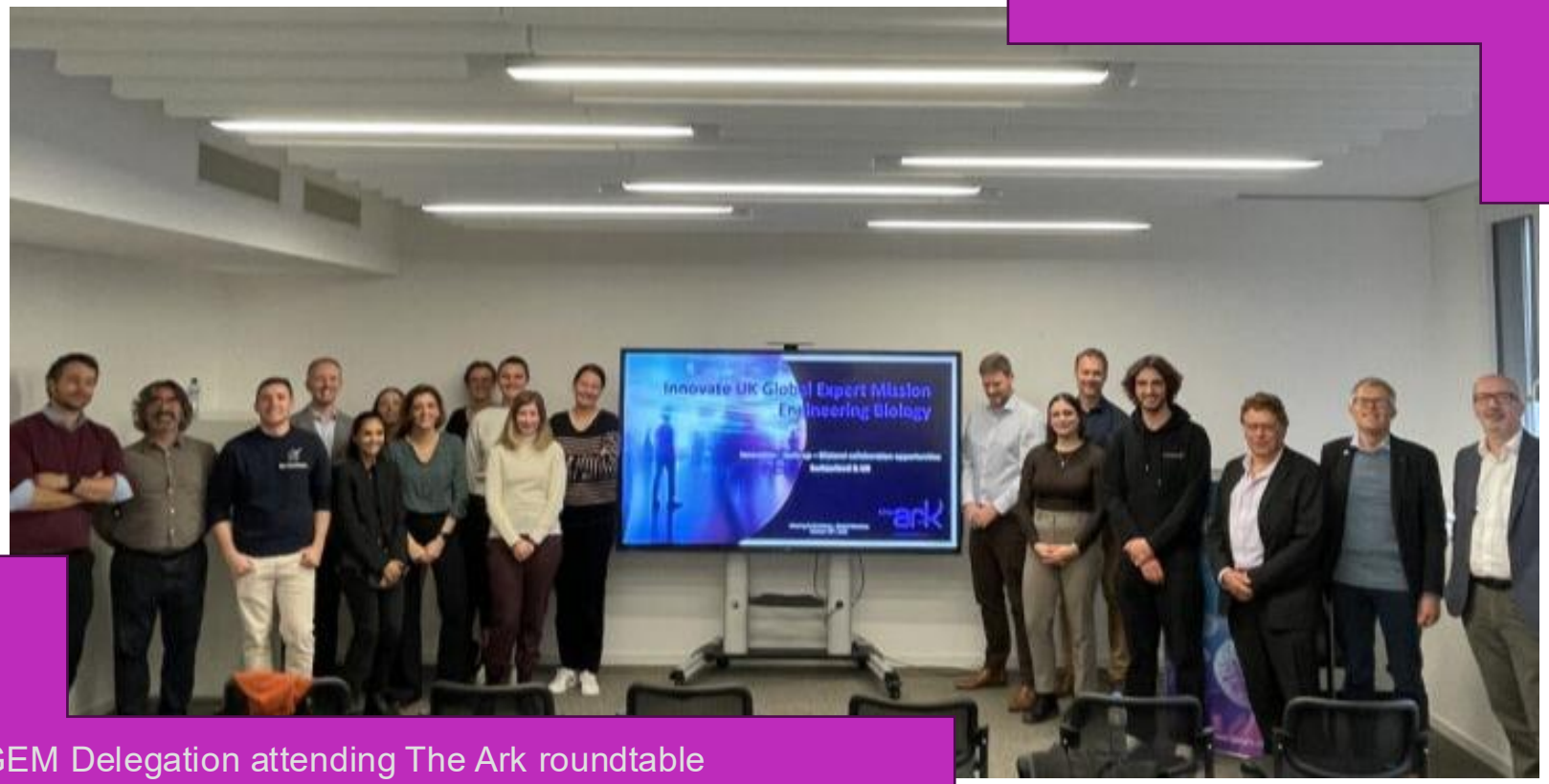
- Innovaud

Networking Communities

- Hack Group

Innovation Hubs

- Agropôle
- BioArk
- EPFL Food & Nutrition Center
- PhytoArk



GEM Delegation attending The Ark roundtable

Stakeholders met during the GEM

Berne & Basel

GEM delegation touring Syngenta-Novartis site

Regional & National Government

- Bern Economic Development Agency
- Euresearch
- Innosuisse
- State Secretariat for Education, Research and Innovation (SERI)

Business

- Syngenta

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Stakeholders met during the GEM

Zurich & Uzwil

Incubators

- The Cultured Hub
- House of Lab Science

Businesses

- Bühler
- Planted

Innovation Networks

- Swiss Food Research

Academia

- Empa

Regional Government

- Kanton of Aargou
- Greater Zurich Area

GEM Delegation at Bühler

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Key findings & opportunities for collaboration

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General findings

- no dedicated National Engineering Biology policy
- support through bottom-up approach
- Multinationals play major role, providing R&D capacity, scale-up opportunities and routes to global markets
- fundamental science & strong interest in translating research into applications
- well-developed innovation infrastructure supporting early-stage start-ups and SME
- shared challenges: including small domestic markets, high costs of production, regulation and large -scale-up
- strong appetite for international collaboration

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Infrastructure and Ecosystem support

Ecosystem

- Businesses
- Research facilities
- Innovation Parks
- Accelerators & incubators
- National & Regional agencies

Strategic Relevance for the UK

- Access to R&D capability and pilot facilities
- collaboration with high-growth innovation clusters
- strong regional networks and sector-specific expertise
- supporting international organisations
- opportunities for bilateral partnerships in food, biotech and applied sciences
- Bilateral funding

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Circular and sustainable approaches are a shared priority

Agritech

- agricultural biologics
- crop protection, plant science
- soil health, microbial engineering
- Cultivated meat, fermentation, plant-based alternative proteins

Clean Technology & Environmental

- chemical production, green chemistry, materials
- manufacturing processes and biobased solution
- biomass conversion, cellulose, lignin
- waste valorisation and by-product upcycling
- soil health and environmental microbiology

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Regulation

Findings

- FSA are seen as proactive and innovation-engaged
- Switzerland: faster routes to market in some areas, e.g novel foods
- Evidence requirements differ, especially for novel food
- GM moratorium in Switzerland until 2030 limits large-scale agriculture applications

Opportunities

- regulator-to-regulator collaboration
- UK - Swiss regulatory workshops: align approaches, share best practice, and support innovation

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Funding

- **Innosuisse**
  - Switzerland's national innovation agency drives innovation, providing strong support for research institutes, start-ups, SMEs.
  - coaching and advisory voucher schemes
  - Bilateral funding calls

- **Local agencies:**
  - canton-funded support for SMEs transitioning from prototype to scale
  - programmes that combine funding, business school engagement, mentoring, integrating facilities, training, and investment

- **Horizon Europe matters:** Over 100 UK–Swiss collaborative projects, including 14 in engineering biology.

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UK – Switzerland collaboration: potential next steps

- Global Business Innovation Programme
- bilateral Collaborative R&D call
- EngBio capability mapping
- Problem statement hack event
- Inbound Swiss discovery visit
- workshops on EngBio knowledge sharing, regulation, researcher exchange

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Engineering Biology in Switzerland Global Expert Mission

- Delegation panel

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Engineering Biology in Switzerland Global Expert Mission - Delegation panel

Co-chair

- **Tim Padgett**, *Innovation Lead, Engineering Biology* – Innovate UK
- **Dana Heldt**, *Knowledge Transfer Manager, Synthetic Biology* – Innovate UK Business Connect

Panel (UK Delegation)

- **Lavanya Kala**, Head of Innovation Research Policy - Food Standards Agency
- **Stephen Wallace**, Professor of Chemical Biotechnology - University of Edinburgh
- **Will Milligan**, CEO - Extracellular

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Questions?

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
- 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

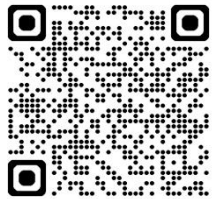
Webinars:

- 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

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Thank you

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