

Unlocking the Future of Engineering Biology Regulation

Christopher Till, Innovate UK Business
Connect

Tom Jenkins, Innovate UK

11 February 2026



The UK's innovation agency



Agenda

10.00 - 10.10 **Welcome and Introduction to the Engineering Biology Innovation Network**

Christopher Till, Knowledge Transfer Manager – Agrifood, Innovate UK Business Connect

10.10 - 10.20 **Scene Setting**

Tom Jenkins, Deputy Director – Transforming Food Production, Innovate UK

10.20 - 10.30 **The Future of novel foods: An FSA Perspective**

Rebecca Lamb, Head of Innovation Research Programme, Food Standards Agency

10.30 - 10.40 **Inside the Sandbox: What the CCP Sandbox offers**

Melanie Harries, Head of Cell-Cultivated Products Policy, Food Standards Agency

10.40 - 10.50 **Case study: Hoxton Farms**

Joe Taylor, Head of Innovation, Hoxton Farms

10.50 - 11.20 **Panel Discussion & Q&A**

All speakers

11.20 - 11.30 **Menti-meter Session**

11.30 - 11.50 **Breakout Session**

11.50 - 12.00 **Closing Remarks**

Housekeeping

Audio & Video

> Please **keep your microphone muted & videos off** throughout the session unless invited to speak.

Chat and Q&A Etiquette

> Feel free to introduce yourself in the chat: name, organisation, role and a give/get.

> Please keep chat contributions **professional and relevant** to the discussion.

> Use the **Q&A function** to pose questions to the speakers (pre-screened by IUKBC staff)

> We are **unable to share the chat post event**.

Mentimeter Session

> Please have your **phone to hand or a web browser** page at the ready.

Breakout Rooms

> Opportunity to **network and discuss challenges and opportunities** in Engineering Biology and Regulation.

Slides & Recording

> The session is **being recorded**, and the recording will be shared afterwards.

> Presentation slides and relevant links will also be circulated to attendees.

We are the UK's innovation agency

As part of UK Research and Innovation (UKRI), Innovate UK is publicly funded to drive innovation and productivity across the UK.

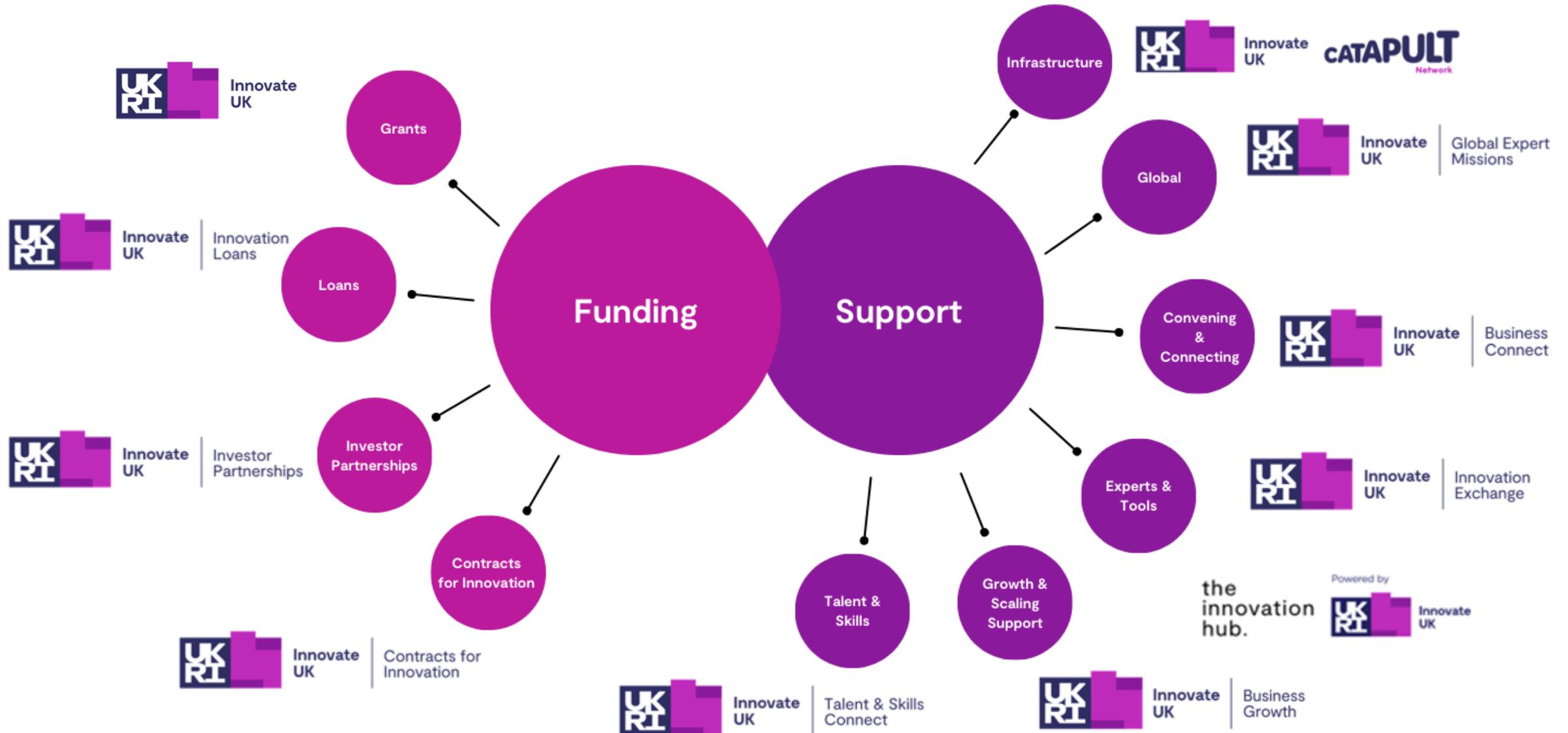
We work for you to create a better future by inspiring, involving and investing in businesses developing life-changing innovations.



Department for
Science, Innovation
& Technology



Innovate UK Ecosystem





About us

Innovate UK Business Connect exists to connect innovators with new partners and new opportunities beyond their existing thinking – accelerating ambitious ideas into real-world solutions.



Innovate
UK

Business
Connect



Make powerful connections



Secure funding



Get expert insight



Keep up to date

Engineering Biology

Synthetic biology is the design, engineering, and re-engineering of biological parts, devices, and systems.

Engineering biology is the wider capability and ecosystem that supports the use of synthetic biology to tackle big societal and economic challenges.

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 and funding

How to get involved

IUK Business Connect IN delivery - Sector Teams



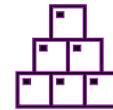
AgriFood



Chemistry &
Industrial Biotechnology



Health



Materials &
Manufacturing



Emerging & Enabling
Technologies

Lead Contacts (Business Connect)

Pedro.Carvalho@iukbc.org.uk - KTM AgriFood

Dana.Heldt@iukbc.org.uk - KTM Synthetic Biology

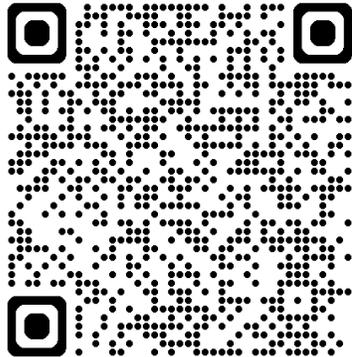
Innovate UK HLA

Tom Jenkins

Gordon Ford

Tim Padgett

Webpage



Stay informed via our Engineering Biology Innovation Network [webpage](#) and sign up to be part of the Network or join our LinkedIn Page

LinkedIn



Upcoming Events – EngBio Innovation Network

10th February 2026

10:00 – 12:00

Unlocking the Future of Engineering
Biology Regulation
Online

26th February 2026

10:30 – 12:00

Engineering Biology Contracts for
Innovation Engagement Workshop
Online



19th February 2026

13.30 – 14.30

Engineering Biology for Materials
session: Material Research Exchange
Business Design Centre 52 Upper St
London, N1 0QH



18th March 2026

10:00 – 12:00

Engineering Biology SPARK Award
Showcase
Online



Scene Setting

Tom Jenkins
Innovate UK



Developing the ecosystem: novel foods



Alternative Proteins: Identifying UK priorities

A roadmap for the future of the alternative protein sector in the UK

June 2022

GROWING KENT & MIDWAY

Innovate UK



Future Food Innovation

Driving the transition towards a healthier future for people and planet

Innovate UK

Plant-based

Biopolymer Solutions, NuKoKo, MARRABIO, THE GOOD PULSE Co., Tropic, Quest Meat, Extracellular, Cellcraft, Cellular Agriculture, Bio Vit, STARS, THIS, SPG innovation, Rooti-Ful, Nandi proteins, Dyson farming, ADAMO FOODS, evolor, Novatica Technologies, HER LAB, CLEAN FOOD GROUP, ARBOREA, AGRIFOODX

Cultivated meat

CELL guidance systems, multus Feeding food, unicorn

Fermentation

National Alternative Protein Innovation Centre (NAPIC)

National & international leadership



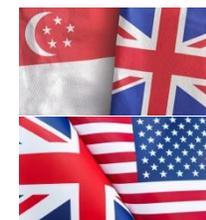
Innovation and Knowledge Centre (IKC)

Vision: Helping alternative proteins go mainstream for a sustainable planet

CURRENTLY A £30M COHESIVE ENTITY WITH 150+ PARTNERS

Innovate UK and BBSRC, National Alternative Protein Innovation Centre (NAPIC)

PROTEIN INDUSTRIES CANADA



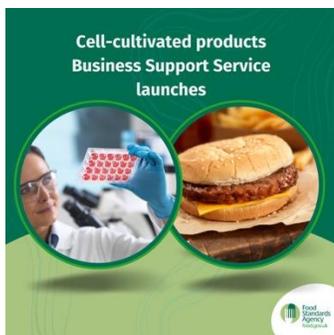
GBIP & GIP Singapore

GEM - USA

Regulatory leadership



Cell-cultivated products Business Support Service launches



Food Standards Agency

Canada-UK: Plant-based Protein Innovation

- Alternative proteins are strategic focus
- PIC recognised global leader in Plant-based protein innovation
- Bilateral funding competition to support plant-based innovation, enabling access to global markets
- Collaborative projects underway to:
 - Develop nutritionally enhanced plant-based foods
 - Improve the taste and texture of plant-based products
 - Enhance flavour, functionality and sustainability through process optimisation



Innovate UK engineering biology portfolio:

over 60 companies have been supported to date...



Driving innovation through engineering biology

Innovate UK's engineering biology projects from the UKRI Technology Missions Fund



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



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



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



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

Innovate UK engineering biology portfolio

... across a range of application areas

Agriculture & Food



Health



Chemicals



Low Carbon Fuels



Cross cutting tools



Waste & Environment



The Future of novel foods

Rebecca Lamb

Head of Innovation
Research Programme,
Food Standards Agency





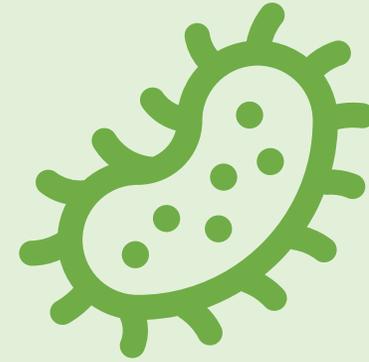
Regulating Novel Foods

Rebecca Lamb

Our programmes



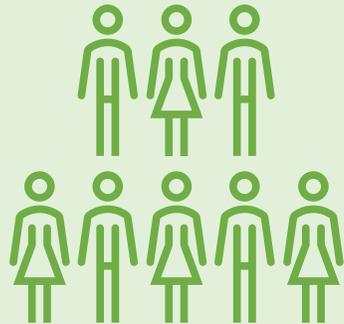
**Cell Cultivated
Sandbox**



**Innovation Research
Programme**



Why now



Consumers want more choice



UK Government focus on growth and innovation



Business demand

Consumer Views



The IRP is working to provide clear and accessible information on precision fermentation to provide assurance to consumers.

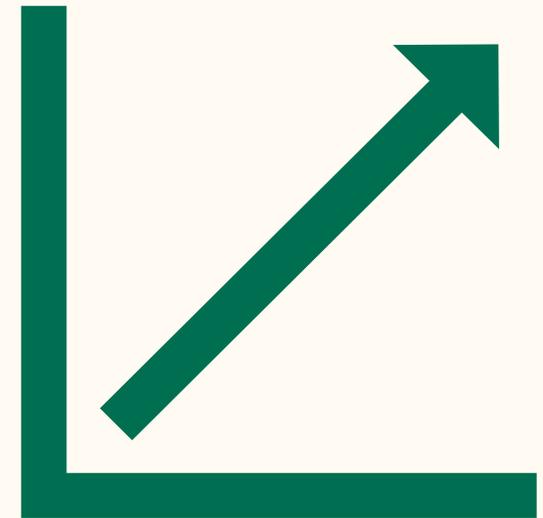
FSA research:

- 7-20% of consumers have heard of precision fermentation¹
- Overall, consumers are cautious to try precision fermented products
- Those who have heard of precision fermentation, and those who are confident in its regulation are more likely to be willing to try precision fermented products
- People are more willing to try precision-fermented dairy/egg (52-68%) than they are to regularly purchase or incorporate these products into their diet (17-35%)²

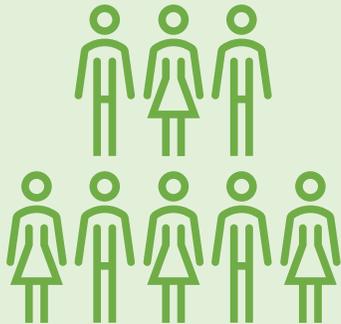
1. FSA Consumer Insights Tracker (July 2025 – September 2025)
2. FSA A Rapid Evidence Review on Consumer Responses to Precision Fermentation 2025

UK Government Interest

- There is a UK Government focus on economic growth
- Alternative proteins could deliver 25,000 additional jobs in the UK and add £6.8b to the economy annually¹
- £73.6m investment for Engineering Biology Missions and Hubs



Why now



Consumers want more choice



UK Government focus on growth and innovation



Business demand



Our Successes to Date



**Launched the
Innovation Guidance
Hub**



**Developed a robust
evidence base**



**Held Expert
Elicitation Events**



**Launched the
Business Support
Service**



**Conducted Risk
Management on PF
Applications**



**Held workshops with
Innovators**



**Conducted Consumer
Engagement**



**Learned Lessons
from Other
Regulators**



Food
Standards
Agency
food.gov.uk

Contact us

InnovationResearch@food.gov.uk

What the Cell Cultivated Proteins (CCP) Sandbox offers

Melanie Harries

Head of Cell-Cultivated Products
Policy | CCP Sandbox Programme,
Food Standards Agency



Innovate
UK

Inside the CCP sandbox

Melanie Harries

Head of Cell-Cultivated Products Policy

February 2026

Inside the CCP sandbox



Overview of the CCP sandbox



Achievements so far & what's to come



Business Support Service & Taste Trial guidance



How to engage with the programme

The FSA's role



- **Our mission is food you can trust.**
- We do this by ensuring **food is safe and what it says it is.**
- We are here to ensure novel foods, such as cell-cultivated products, are **safe for consumers.**
- We are not here to promote or advocate for a specific technology.

NEWS

Groundbreaking sandbox programme for cell-cultivated products announced

The Food Standards Agency (FSA) has won a bid to run a programme designed to make sure cell-cultivated products are safe for consumers to eat before they are approved for sale.

The FSA, in collaboration with Food Standards Scotland (FSS), is delighted to be awarded £1.6 million in funding from the Government's Engineering Biology Sandbox Fund (EBSF) to launch an innovative sandbox programme for cell-cultivated products (CCPs).



NEWS

FSA announces £1.4 million funding for launch of new innovation hub

As part of the Regulatory Innovation Office (RIO)'s mission to promote a pro-innovation regulatory system, the Department of Science, Innovation and Technology (DSIT) has awarded the Food Standards Agency (FSA) £1.4 million to support a new innovation hub. This hub will develop and expand specialist expertise in regulating innovative technologies such as precision fermented foods, making sure these products are safe to eat before they are sold.

GB market authorisation system



- The Food Standards Agency (FSA) and Food Standards Scotland (FSS) run the market authorisation system for all regulated products in Great Britain (Northern Ireland still uses the EU's market authorisation process).
- Novel foods, which are those with no significant history of consumption in the UK and EU since 1997, must undergo assessment via the market authorisation system.
- A company applies by submitting a dossier full of information about hazards and mitigations. It's a story about what the food is and why it is safe. The FSA and FSS assess this dossier (suitability), gauge whether applicants have sufficiently identified and mitigated risks (risk assessment) and then work out how to further mitigate other risks (risk management).
- We consult on the findings and, if we believe it is safe, we recommend to ministers that it is put on the market.

CCPs pose unique questions

Cell-cultivated products (CCPs) are completely novel technologies, that pose unique safety risks and complex regulatory questions



Safety

What are the safety risks
& how do we mitigate
them?



Current Frameworks

How do current legal
frameworks and guidance
apply?



Industry Knowledge

What is required of
applicants to
demonstrate safety?

Sandbox outcomes



The sandbox will enable extensive dialogue with industry to inform regulation that is proportionate the risks of these products.

Outcomes:

- **Regulatory approvals:** the FSA/FSS has a greater understanding about CCP hazards and production processes, leading to swifter, better-informed risk assessments and recommendations to ministers than are currently possible. Aim to reduce full assessment timeline to 2.5 years by the end of the programme, as opposed to 5 years.
- **Industry confidence:** CCP industry has a much clearer understanding of what information they need to provide in dossiers and how long this will take, reducing delays and being better able to attract investment. As such, companies will have more confidence in choosing the UK as a place to grow their business and submit CCP applications.

Sandbox Participants

CCP Companies

- Blue Nalu
- Gourmey
- Hoxton Farms
- Mosa Meat
- Roslin Technologies
- Vital Meat
- Vow

Research Hubs

- the Bezos Centre for Sustainable Protein
- Cellular Agriculture Manufacturing Hub (CARMA)
- National Alternative Protein Innovation Centre (NAPIC)

Trade Bodies

- The Alternative Proteins Association
- The Good Food Institute

Achievements so far



✓ **Seven workshops** held with industry and trade bodies between April and December 2025

✓ Launched the **Business Support Service** in June 2025

✓ Published **three pieces of CCP guidance** including conducting taste trials; the regulatory status of CCPs; and allergy and nutrition hazards

✓ **Validated two CCP applications**

✓ Shared information with **other UK government departments** and **international regulators**

✓ Published **two literature reviews** on best practice for cell banking techniques and how microbial safety issues associated with meat apply to CCPs

✓ Published accessible, impartial **information for the public** on what CCPs are and what the Sandbox programme is doing

✓ Worked alongside CARMA to complete **three citizen forums**

Key programme outputs 26/27



Publication of technical guidance
toxicology and
production & microbiology



Progressing CCP novel food applications
including completion of the first
two CCP risk assessments



Publication of regulatory positions
inc. hygiene, import/export,
labelling



Continuing industry workshops
gathering insights to fast-track
our knowledge



Delivery of Business Support Service
pre- and post-application support



Commissioning and utilising research
inc. allergy assessment, genetic drift,
CCP identification methods,
consumer views



Continued publication of information on our website
for business and consumers



Communication & engagement
e.g. cross-government &
international regulator networks,
and via industry webinars

Business Support Service

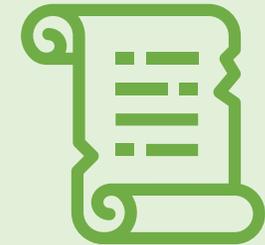
Supports companies both pre and post application for market authorisation of CCPs as Novel Foods



Provides clarification and guidance on applicable regulatory requirements



Provides high-level advice on the GB market authorisation process



Identifies relevant information contained in existing guidance material

What is the impact of the BSS?

- Shared learning
 - Advice and clarification on regulatory requirements and authorisation processes
 - Active learning for the FSA on how to make the process clearer
- Effective and efficient risk assessment process
 - Tailored support for companies → high quality dossiers → quicker and more effective risk assessment
 - Minimising the number of RFI and stop clocks

 Any businesses considering using the BSS – take advantage of the resources available and engage early! 

Business Support Service

Cell cultivated products

<https://www.food.gov.uk/business-guidance/cell-cultivated-products-business-support-service>



Precision Fermented foods

<https://www.food.gov.uk/business-guidance/precision-fermentation-business-support-service-bss>



Taste trials guidance



What is a taste trial?

- **Controlled** event, recommended to use a venue not accessible to the public
- Samples of **unauthorised** novel food
- Solely for **R&D** purposes
- Post-trial communication is acceptable if **secondary to research** and does not mislead consumers

Key principles

- Must not constitute “placing products on the market”
- Local Authorities responsible for enforcement

Engage with the Programme



- Business Support Service – for any specific questions about applications for market authorisation
- CCP events - events & webinars hosted by APA and GFI
- FSA and FSS websites:
 - Guidance will be published on the new [Innovative Food Guidance Hub](#) on the FSA website
 - CCP workshop summaries are published on the FSA's website
- Subscribe to the FSA's market authorisation newsletter
- Contact us: ccpsandbox@food.gov.uk/innovationresearch@food.gov.uk



Thank you

An SME Perspective - Engineering Meets Regulation: Challenges & Opportunities

Joe Taylor
Head of Innovation
Hoxton Farms





**HOXTON
FARMS**

**Engineering Biology
Regulation**

February 2026

cultivating a delicious future in London since 2020



**we
craft
delicious,
healthy fats**

- › **healthy**
- › **scalable**
- › **sustainable**

Real fat, ready in two weeks.



stem cells from
livestock



real fat cells develop
in our bioreactors



HOXTON FAT



B2B ingredient for
food manufacturers



delicious, healthy products

plant-based
whole cuts

HOXTON

FARMS



**soups, stocks &
sauces**



HOXTON

premium
cuts

FARMS



How does regulation impact us as a novel food company?

Regulatory uncertainty is a real business risk, affecting R&D, investment, and our go-to-market strategy

- » Cell-cultivated products don't map cleanly onto existing regulatory frameworks
- » Regulatory uncertainty adds risk on top of technical execution and market adoption
- » Regulator expectations shape fundamental R&D decisions
- » Late surprises are expensive, and often fatal for SMEs

Impact of the UK's regulatory approach for Hoxton Farms

The sandbox programme has materially influenced how we design our process and R&D roadmap



The CCP sandbox provides early clarity on regulatory expectations



Signals to investors that the UK is actively reducing regulatory risk



Gives Hoxton Farms a clear route to commercialising in our home market



Time-limited initiative - uncertainty remains after the sandbox

Panel Discussion and Q&A

- **Rebecca Lamb** - FSA
- **Melanie Harries** - CCP Sandbox, FSA
- **Joe Taylor** - Hoxton Farms
- **Chaired by Chris Till**, Innovate UK Business Connect

Mentimeter

Instructions

Go to

www.menti.com

Enter the code

1856 3789



Or use QR code

Breakout rooms

Purpose - Network and identify potential collaboration partners

Discussion prompts:

- **Introduce yourself** - name, affiliation, your engineering biology approach or outline why are you interested in engineering biology
- What's the **biggest challenge** you face that a partner could help solve?
- Do you have an engineering biology technology that could benefit the sector?



Innovate
UK

Upcoming Events– EngBio Innovation Network

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10:00 – 12:00

Unlocking the Future of Engineering
Biology Regulation
Online

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Online



19th February 2026

13.30 – 14.30

Engineering Biology for Materials
session: Material Research Exchange
Business Design Centre 52 Upper St
London, N1 0QH



18th March 2026

10:00 – 12:00

Engineering Biology SPARK Award
Showcase
Online



Wrap-up and close

- Thank you for joining
- Reach out to us if you'd like to be connected with anyone from your breakout room
- [Sign up](#) to our Engineering Biology Innovation Network to keep informed
- Or use this QR code





The UK's innovation agency

