



Innovate
UK

Innovate UK Global Expert Mission Report

Engineering Biology in Switzerland



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01. Executive Summary

As global governments look to solutions to tackle critical challenges in food security, energy and environmental degradation, engineering biology has become a focal point for research and innovation. This rapidly evolving field enhances sustainability through the application of new technologies to achieve economic and societal benefits.

Within the UK, engineering biology has been recognised as one of the Frontier Technologies within the UK's Modern Industrial Strategy, forming an integral part of the Digital and Technologies Sector Plan that recognises sectors with the greatest growth potential for the UK. This recognition has enabled engineering biology to become an industry of increasing investment and research funding, as well as a focus topic for international collaboration opportunities, due to its potential wide-ranging applications.

With Switzerland's strength in clean technology, agricultural biologics and novel agrifood innovation, Innovate UK explored the country through a Global Expert Mission (GEM) in October 2025. This built on the 2022 Memorandum of Understanding (MOU) to formalise scientific collaboration between the UK and Switzerland, recognising the strengths of each nation in innovation. The visit looked to build on this critical relationship, raise awareness of UK capabilities, understand key Swiss expertise, and develop strategies for future collaboration between the UK and Switzerland in the engineering biology space.

The GEM found a Swiss ecosystem closely engaged with fundamental science and the various opportunities that are available to move scientific concepts into engineering biology applications. Representatives were keen to further explore opportunities of working more closely with the UK and to share learnings from both sides on scientific breakthroughs and more commonly, the battle to scale solutions effectively. Similarities between the UK and Swiss ecosystems, and therefore potential opportunities for collaboration and shared learnings for mutual benefit, were evident throughout the GEM, with particular areas including:

- UK and Swiss academic strengths with applications for engineering biology.
- Challenges in accessing scale up infrastructure.
- Small domestic markets and high costs of production
- An eagerness to work internationally through innovation.



GEM Delegation at Empa Wood & Cellulose Materials Lab

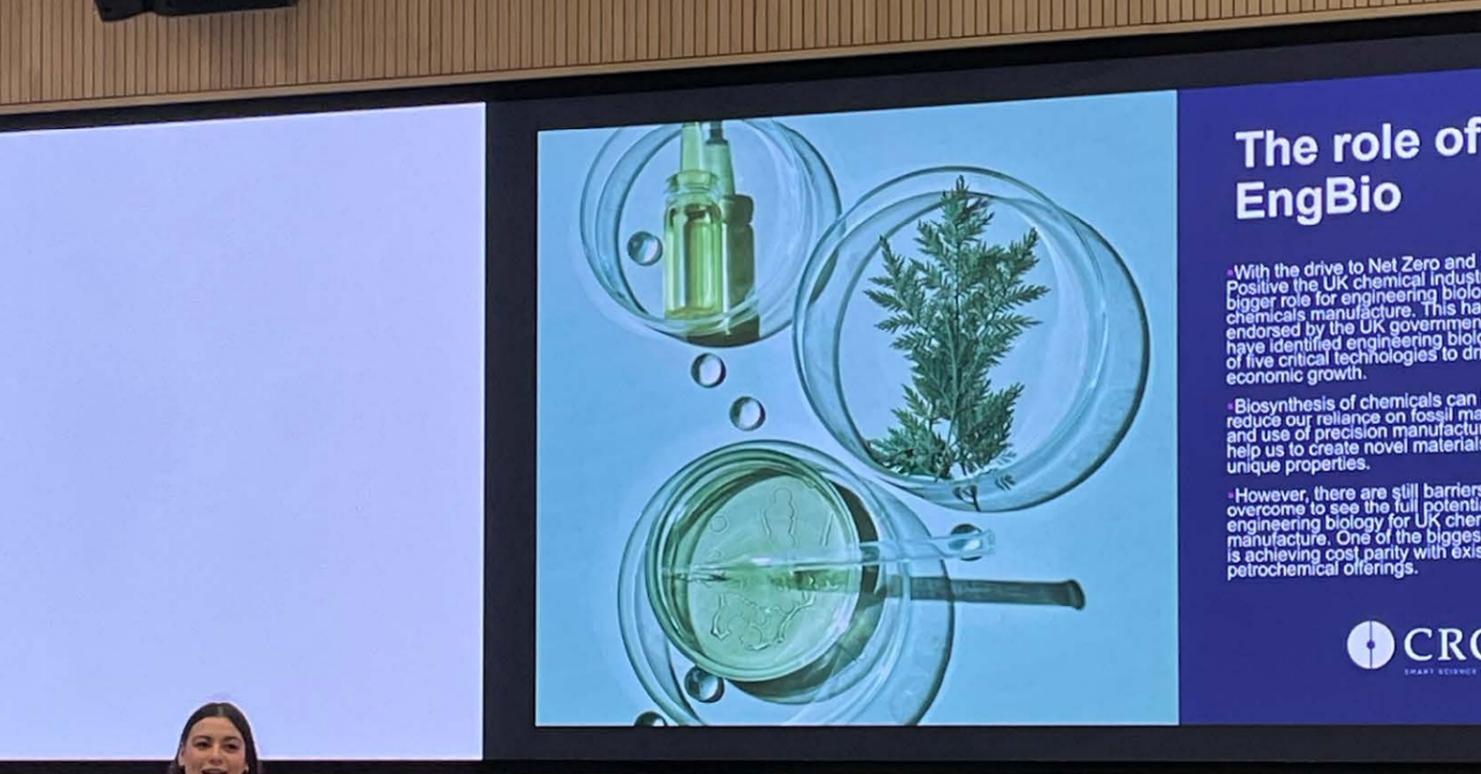


A number of opportunities to enhance bilateral collaboration in the engineering biology sector were identified through this GEM. Key findings include the chance to share learnings and engage early with regulators to help shape nascent legislation, as well as create hack events for start-ups and innovators to tackle problem statements set by big industry. The GEM also identified a wide range of soft-landing support for UK businesses looking to expand and scale in Switzerland, alongside opportunities to form consortia through Horizon Europe.”

Challenges remain that need to be addressed in order for innovation partnerships to grow. Regulatory and policy hurdles exist between the two ecosystems through differences in regulatory norms and Switzerland’s sector and technology agnostic funding support, rather than being specific to engineering biology. Closer and more efficient ties to neighbouring European markets, as well as a challenging investment landscape still learning how to complete effective due diligence on this emerging sector, are further obstacles that need to be addressed for the countries to maximise partnership potential.

There is, however, real value in building upon the connections made and the enthusiasm for closer ties that were seen throughout the visit. There is understanding that the UK and Switzerland share similarities in the international recognition of their academic and research expertise, as well as in their non-EU status within the European and global markets allowing for greater control in the design of regulation and policy. By continuing with inward and outbound missions of this kind, and exploring networking and researcher exchange programmes, there is the potential to create valuable ties between the two countries for mutual benefit in the competitive and developing global engineering biology landscape.

Presentation at Empa



02. Acronyms

The following are common acronyms used throughout this report:

B2B	Business to Business
B2C	Business to Consumer
DBT	Department for Business and Trade
DSIT	Department for Science, Innovation and Technology
FCDO	Foreign, Commonwealth and Development Office
GBIP	Global Business Innovation Programme
GEM	Global Expert Mission
GIP	Global Incubator Programme
IUK	Innovate UK
STN	Science and Technology Network
TMF	Technology Missions Fund
UKRI	UK Research and Innovation

03. Introduction

Innovate UK, Innovate UK Business Connect and the Global Expert Missions

Innovate UK, part of UK Research and Innovation, is the UK's innovation agency. Innovate UK supports business-led innovation in all sectors, technologies, UK regions and globally. It helps businesses grow through the development and commercialisation of new products, processes, and services, supported by an outstanding innovation ecosystem that is agile, inclusive and easy to navigate.

As innovation is increasingly a global endeavour and more UK businesses have the ambition to grow and scale globally, it is important to create the right opportunities on which businesses can capitalise. Innovate UK's Global Expert Missions (GEM) programme draws on the expertise of the UK business community to better understand the opportunities in specific countries, technology and sector areas. Delivered by Innovate UK Business Connect, the GEMs provide the evidence base for where Innovate UK (and wider UK Government) should commit resources to enable opportunities for UK businesses to build partnerships and collaborations with key economies. Built around UK business, policy and research representation, a GEM's objectives are:

1. Building International Collaborations

The expert insights will help inform how Innovate UK can best support UK innovators and businesses find and exploit opportunities for innovation partnerships that bring mutual benefits and help drive the long-term success of the sector. The GEM creates connections with key organisations and people that will deepen and widen the collaboration with the partner country to the benefit of researchers, innovators and companies from both nations.

2. Informing UK businesses and Government

The mission findings and expert insights resulting from the GEM are made available to UK businesses and Government departments. These inform UK businesses and the Government about potential opportunities for innovation in a country of interest and how it can help UK businesses make the most of those opportunities.

3. Sharing UK Capabilities

During the Mission visit, the delegation of experts used the opportunity to share the UK's innovation strengths and identify where there are synergies between the two countries that can help inform and benefit the Swiss stakeholders hosting the delegation during the GEM.

Mission Overview and Objectives

Engineering Biology has emerged as a critical technology area across a number of sectors underpinning future economic growth and sustainability. It is recognised as one of the UK Government's key priorities as part of the UK's Modern Industrial Strategy and is detailed within the Digital and Technologies Sector Plan as an area for continued UK Government investment as a frontier technology.¹ Engineering biology investments through the UKRI Technology Missions Fund (TMF) is already supporting a wide portfolio of projects that involve both university and industry partners.

This GEM to Switzerland took a delegation of six UK experts in engineering biology to visit key stakeholders from across academia, research, business and public agencies, to identify collaboration opportunities between the two countries in this sector for mutual benefit. The findings are disseminated publicly through this report, and key recommendations will be taken forward by Innovate UK and shared with relevant UK Government departments and organisations. The visit aimed to explore shared priorities across the UK and Swiss ecosystems, understand the wider innovation landscape and complementary capabilities within engineering biology and where these solutions could be applied to address global challenges across the agri-food, cleantech and environmental sectors.

UK activities

To help unlock the potential of engineering biology to address key societal challenges, UKRI has invested £70 million between 2023 and 2025 through the Technology Mission Fund (TMF).² Innovate UK funding through the TMF programme has included a successful Accelerator programme – with two rounds running since 2023 that have supported 40 founder-led companies – as well as 20 Feasibility grants to SMEs and 48 Collaborative R&D grants to support business-led innovation focused on food systems, biomedicine, clean growth and environmental solutions.

Themes

The GEM to Switzerland was focused on exploring the opportunities of collaboration and where UK innovations in engineering biology could be applied to industry-relevant problems across a range of application areas, building on the investments and capacity developed through TMF investments. The GEM therefore focused on key thematic areas to help focus and direct meetings with various Swiss stakeholders.

The following technical areas were identified as areas of focus for the GEM:

- Agricultural Biologics (e.g. Precision Breeding, novel modality biologicals to displace traditional crop protection products).
- Agri-food (e.g. Cultivated, fermented, or plant-based alternative proteins).
- Clean technology (e.g. Speciality bio-based chemicals, bio-renewable alternative fuels, bio-based materials).

For the purpose of this GEM visit, areas of engineering biology directly linked to health and life sciences have been omitted. The purpose of this was to maximise focus on those wider engineering biology areas, and also in light of previous engagement with the Swiss ecosystem on life sciences in an Antimicrobial Resistance-led GBIP in 2024³ and a bilateral collaborative R&D call in 2023.⁴

It is intended, however, that any agreed follow-up activity from this GEM visit – alongside findings from these two previous programmes – should include health and life sciences within their scope as part of an overarching engineering biology sector.

Objectives

The objectives of the Mission were to:

- Gain an understanding of the engineering biology landscape in Switzerland, including related challenges and opportunities, to help inform UK businesses and the government about the potential in this country of interest.
- Share an overview of the UK's landscape to stakeholders in Switzerland, to highlight opportunities to collaborate.
- Understand the Switzerland market dynamics and trends in engineering biology, as well as priorities of the Swiss Government to identify synergies with those of Innovate UK.
- Identify potential collaborators or partner organisations also seeking to invest in and support the development of the engineering biology sector.
- Explore key geographical hubs for innovation and potential locations for future activities for mutual benefit.

¹ Digital and Technologies Sector Plan | Gov.UK

² UKRI Technology Missions Fund | UKRI

³ Global Business Innovation Programme in Switzerland - Antimicrobial Resistance (AMR) | Innovate UK Business Connect

⁴ UK – Switzerland Bilateral: Collaborative R&D | Innovate UK Business Connect

04. Sector Overview

Global Engineering Biology Landscape

Globally, the engineering biology (Eng Bio) sector is in a position to scale and grow, with many novel technologies commercialising its proof-of-concept products and efforts globally to support continued research into new techniques. The development of these innovations is playing a key role in the expected growth of the global synthetic biology market from US \$16.5 billion, in 2023, to US \$96.4 billion, by 2033.⁵ Through targeted efforts to overcome regulatory, scientific and commercial challenges the sector has the potential to generate between US \$0.8tn and US \$1.2tn annually, and generate up to 60% of the world's physical inputs.⁶

Whilst historically dominated by healthcare, novel solutions in agri-food, cleantech and environmental solutions are a growing revenue source. EngBio is transforming agri-food systems through the development of agricultural biologics, precision fermentation and engineered microbial platforms that enable more sustainable food sources, resilient crops and efficient food production aligned with climate and food security goals. In parallel, it is driving clean technology innovation by supporting bio-based chemicals, novel materials and circular manufacturing processes to scale high-value, low-carbon solutions. These processes have the potential to provide a further US \$200bn to US \$300bn in terms of direct annual impact.⁷

Although North America has remained the largest market to date, with around 42% market share in 2024, the Asia Pacific market is the fastest growing, thanks to significant investment from government and private companies. Europe continues to be a strong region too, with many of its most engaged nations benefiting from innovation-driven landscapes, collaboration among stakeholders, and government support for infrastructure development.

⁵ Synthetic Biology Market Size | Market.US

⁶ The Bio Revolution: Innovations transforming economies, societies, and our lives | McKinsey

⁷ Synthetic Biology Market Size & Outlook, 2025-2030 | Grand View Horizon

Switzerland a Global Research and Innovation Leader

Switzerland has proven itself as a global science innovation powerhouse, leading the Global Innovation Index for the 14th year running,⁸ while also leading the European Innovation Scoreboard in 2024.⁹

The country is also one of the highest investors in research and development in the world, with almost £21 billion invested annually across all sectors – equating to 3.15% of its gross domestic product. Around 70% of this figure in 2019 (more than £14 billion) was funded by the private sector, demonstrating the breadth with which innovation is supported throughout the country, beyond government policy alone.¹⁰

For a country of its size, Switzerland also outperforms in its scientific publications, being the tenth highest by impact,¹¹ and in patent applications – where it is third in Europe by number, but the highest in patents per capita.¹²

⁸ Switzerland Ranking in the Global Innovation Index 2025 | WIPO

⁹ European Innovation Scoreboard 2025 Country profile Switzerland | European Commission

¹⁰ Research and Development | Confédération Suisse

¹¹ 2024 Research Leaders: Leading countries/territories | Nature Index

¹² Switzerland tops list for patent applications per capita | SWI swissinfo.ch



Swiss Engineering Biology Priorities

While Switzerland does not have a dedicated government policy explicitly targeting engineering biology in the same way that the UK has recognised it as a frontier technology, Swiss innovation policy provides strong indirect support. Through Innosuisse, the national innovation agency, funding is allocated via bottom-up, merit-based mechanisms, enabling organisations to access grants based on the quality and potential impact of their technology rather than its alignment with a predefined sector.

The Swiss approach aims to leverage its leading research base within both academia and industry to drive the progress of innovation and attract talent to key developing sectors, including engineering biology, where novel concepts are being created. In this space, developing engineering biology-led solutions help support a more sustainable future for business through cleantech solutions, waste valorisation and biofuels, as well as for society as a whole with alternative food, energy sources, and waste and water management.

05. The Innovation Landscape

Innovation Support

Federal Mechanisms & National Organisations

Innosuisse¹³

Innosuisse are Switzerland's innovation agency, supporting the innovation and R&D journeys of research institutes, start-ups, SMEs, organisations and entrepreneurs. Much like Innovate UK, Innosuisse bring together research and implementation partners in projects offering science-based innovation for tackling key challenges. Offering direct funding support, as well as different support, coaching and networking opportunities, Innosuisse are also responsible for international collaboration and are key to funding and cooperative calls linking overseas partners with Swiss experts.

State Secretariat for Education, Research and Innovation (SERI)¹⁴

SERI is the federal government's lead body for education, research and innovation (ERI) policy at both national and international levels. It sets four-year strategic objectives for the Swiss ERI system and oversees key funding bodies, including Innosuisse and the SNSF. Rather than funding innovation directly, SERI enables innovation through a bottom-up, framework-setting approach, ensuring that public support mechanisms remain competitive, internationally connected and driven by excellence.

¹³ [Homepage | Innosuisse](#)

¹⁴ [Homepage | SERI](#)

Swiss National Science Foundation (SNSF)¹⁵

The SNSF is a leading funding body within Switzerland for supporting scientific research across a range of academic areas. Focused on backing research across the country's universities and academic institutions, SNSF organises and evaluates a range of competitive proposal processes. Outside of direct funding, SNSF also runs programmes to support early-career scientists and researchers, and to encourage knowledge sharing and international partnerships to help drive the impact of both Swiss and global research developments. The organisation works closely with Switzerland's two federal institutes of technology (ETHZ and EPFL) and universities.

Euresearch¹⁶

Funded by SERI, Euresearch is a non-profit advisory organisation that supports Swiss organisations in accessing European research and innovation programmes, particularly Horizon Europe. With offices across Switzerland, Euresearch provides guidance on consortium building, proposal development and partner search, and plays an important role in facilitating international collaboration, including opportunities for UK–Swiss consortia through EU-level funding mechanisms.

Switzerland Global Enterprise (S-GE)¹⁷

S-GE supports Swiss companies with export promotion and international market access, and works closely with innovative SMEs scaling technologies abroad. The organisation can also support international organisations to enter and understand the Swiss market, helping identify collaboration partners for innovation and growth.

Cantonal Support

Regional support is key to the Swiss ecosystem, with devolved power among the country's cantons being a valuable resource for researchers, academics and businesses alike, for supporting new innovation. The GEM delegation engaged with some examples of these organisations, while also being informed of the wider landscape during meetings. Key aspects on regional support include:

Swiss Innovation Parks¹⁸

The Innovation Parks are a valuable part of the Swiss landscape, helping to connect research and industry across tailored cutting-edge facilities. By supporting collaboration, knowledge-sharing and technology transfer, the parks have brought together innovators from around the world to drive forward scientific and technology solutions to critical challenges.

The parks hold more than 700 companies, and 70 research and academic partners. Their facilities provide laboratories, offices, event spaces and clean rooms across Switzerland, and can be found in the following regions:

- West EPFL
- Biel/Bienne
- Zürich
- Basel Area
- Innovaare
- Ost

¹⁵ [Homepage | SNSF](#)

¹⁶ [Homepage | Euresearch](#)

¹⁷ [Homepage | S-GE](#)

¹⁸ [About us | Switzerland Innovation](#)



Regional promotion agencies

Throughout Switzerland's cantons, regional promotion agencies assist domestic and international businesses with scaling their operations by providing connections to new partners, supply chain stakeholders, financiers, and wider promotional and business development specialists. Those highlighted through the GEM include:



GEM Delegation at Innovaud Roundtable

Regional promotion agency	Canton
Innovaud ¹⁹	Vaud
Greater Zürich Area ²⁰	Zürich
Bern Economic Development Agency ²¹	Bern
Greater Geneva Bern area ²²	Bern, Fribourg, Vaud, Neuchâtel and Geneva
BaselArea Business & Innovation ²³	Basel



Incubators, Accelerators & Ecosystem Enablers

Supporting the Swiss EngBio sector are a number of incubators, accelerators and ecosystem enablers. These provide funding, training, scale-up facilities and networking opportunities for SMEs and startups. Within this sector, Switzerland has a highly supportive ecosystem, particularly for life sciences, through the scope of the GEM, the following have been highlighted to our delegation:

Organisation	Description
MassChallenge ²⁴	An equity free, early-stage accelerator for startups, with challenge areas inclusive of climate and sustainable food systems.
The Cultured Hub ²⁵	An incubator based in The Valley, Kemptthal, focused on precision fermentation and cultured meat innovation, co-created by Bühler, Migros Industries and Givaudan.
BioArk ²⁶	A biotech cluster in Valais providing lab space, GMP facilities, and scale-up support to SMEs and startups, including biologicals, bioprocessing, and bio-based chemicals organisations.
Swiss Food & Nutrition Valley (SFNV) ²⁷	A networking organisation, connecting food innovators across Switzerland, including startups, SMEs, government, academia and investors.
Bühler - Protein Application Center ²⁸	Based at Bühler's headquarters in Uzwil, the centre provides wet and dry processing facilities to develop, test, and scale alternative proteins.

19 [Homepage | Innovaud](#)
 20 [Homepage | Greater Zürich Area](#)
 21 [Homepage | Bern Economic Development Agency](#)
 22 [Homepage | Greater Geneva Bern area](#)
 23 [Homepage | Basel Area](#)

24 [Switzerland Homepage | Mass Challenge](#)
 25 [Homepage | The Cultured Hub](#)
 26 [Homepage | BioArk](#)
 27 [Homepage | Swiss Food & Nutrition Valley](#)
 28 [Protein Application Center, Uzwil | Bühler](#)

Academia

Switzerland is renowned for the quality of its higher education system, including two of the top 10 universities in Europe – the Federal Institute of Technology Zürich (ETHZ) in first place and the Swiss Federal Technology Institute of Lausanne (EPFL) in 10th.²⁹

The Swiss higher education landscape comprises ten Cantonal universities and two Federal institutes of technology, alongside a network of education institutions focused on particular subject areas. Within applied sciences, centres are geared towards practical training and applied research, with more than 10 dedicated public university facilities. The country also boasts a successful network of federal institutes that provide targeted research, applied science, and innovation development. Centres of note in this space include:

- Paul Scherrer Institute (PSI)
- Swiss Federal Laboratories for Materials Science and Technology (EMPA)
- Swiss Federal Institute of Aquatic Science and Technology (EAWAG)
- Swiss Federal Institute for Forest, Snow and Landscape Research (WSL)

Wood & Cellulose Materials Lab at the Swiss Federal Laboratories for Materials Science and Technology (EMPA)

Part of the ETH Domain through EMPA, the Wood & Cellulose Materials Lab conducts interdisciplinary research to transform renewable wood-based polymers, including cellulose, hemicellulose and lignin, into advanced, sustainable materials. The lab combines green chemistry, materials science and engineering biology tools, such as through the use of fungi and microbial fibres for novel innovations from early-mid TRL.

The lab is able to valorise waste materials to tailor biomass for novel technologies, working closely with industry. Recent applications include fungal-based biodegradable bio-batteries³⁰ and biodegradable and tear-resistant fibre materials.³¹ This work is supported by a strong portfolio of European and national funding, including four ongoing Horizon Europe projects, as well as SNSF- and Innosuisse-backed collaborations, and is closely linked to industry-facing projects aimed at translating laboratory-scale innovations into scalable, bio-based material solutions.

³⁰ The biobattery that needs to be fed Electric fungi | Empa

³¹ Researchers develop living material from fungi | Empa



Industry

Switzerland is home to a number of leading international businesses with applications and research interests in the engineering biology space. Many of these companies have substantial R&D commitments within Switzerland, recognising the country's expertise and available academic talent, as well as its innovative landscape that supports the development of new ideas.

As a result, there are tangible opportunities for UK businesses to utilise connections and partnerships with these stakeholders to access to global markets and support their commercial growth and scaling ambitions.

Syngenta³²

Global agricultural biologics technology and innovation specialists, Syngenta offer cutting-edge products and solutions in crop protection and plant science research. Their aim is to use novel solutions to improve food production, tackle disease and pests, and increase sustainability within farming. With 500 ongoing projects globally, and 75 focused on synthetic biology, they are keen to collaborate with innovators from other countries in the pursuit of viable successes in these areas.

Syngenta is already strongly established in the UK and Switzerland with its global research headquarters are based in Basel and its largest R&D site worldwide at Jealott's Hill in the UK.³³ The Biofoundry at Jealott's Hill is notable for its engineering biology innovation, and provides advanced automation, design-build-test-learn workflows, and translational capacity. With expert teams in both countries across microbial technologies, strain engineering, bioprocess development, and plant biology, Syngenta provides deep technical breadth relevant to engineering biology.

Their open innovation platform, Shoots by Syngenta,³⁴ offers an additional route for engagement, with the UK being the third highest collaborator of its 250 proposals received to date. Open to startups, SMEs and academics, their 'challenges' provide a route for innovators to collaborate with their global network of 6,000+ scientists to advance sustainable agriculture.

Bühler³⁵

A key manufacturer of equipment in the novel agrifood space, Bühler are a significant global player across the sector for novel production techniques. Bühler has developed manufacturing, research and digital solutions capabilities in the UK,³⁶ whilst its headquarters are in Switzerland, providing significant investment and focus to the Swiss agrifood ecosystem.

In the dedicated engineering biology space, their focus includes precision fermentation, novel proteins and cell culturing, as well as biomanufacturing and process engineering. For SMEs they can support R&D and scale-up through their Protein Application Center, offering both dry and wet processing options for plant proteins.³⁷ With connections to the Grain Innovation Center³⁸ and their Extrusion Application Center³⁹ this lab space provides key opportunities for SMEs to develop novel agri-food proteins.

Throughout Switzerland it is well connected to the agri-food innovation ecosystem, such as MassChallenge⁴⁰ and The Valley, a developing technology park in Kempthall.⁴¹ This allows them strong links to innovative startups, venture capital and sector experts, with 1,000-2,000 customers a year visiting Bühler's Uzwil site. Their significant investments of scale-up facilities in Switzerland, and links to the UK, gives Bühler strong opportunities to support SMEs in developing their technologies for industrial application on a global scale.

³² Syngenta Switzerland | Syngenta

³³ Jealott's Hill | Syngenta

³⁴ Welcome to Shoots by Syngenta | Syngenta

³⁵ Uzwil Homepage - Bühler

³⁶ Bühler UK Limited, United Kingdom | Bühler

³⁷ Protein Application Center, Uzwil | Bühler

³⁸ Grain Innovation Center | Bühlergroup

³⁹ Extrusion Application Center, Uzwil | Bühler

⁴⁰ Switzerland | MassChallenge

⁴¹ Homepage | The Valley



GEM Delegation at The Cultured Hub

Givaudan⁴²

Givaudan are a global industry leader for food flavouring, fragrance and wellbeing. They are also a valuable source of research and innovation in this space, both within the Swiss ecosystem and internationally.

With manufacturing sites and innovation-led research centres across Switzerland, Givaudan are also a founding partner of the Cultured Hub in The Valley, alongside Bühler and leading retailer Migros.⁴³ This site, along with Givaudan's biotechnology centres, offers opportunity for UK connection and collaboration in new EngBio-led techniques and concepts, particularly scale-up opportunity for cultured meat, fish, seafood, and precision fermentation products.

Nestlé

As the world's largest food and beverage company, Nestlé play a key role not only in food production, but in research and development opportunities nationally and internationally. Nestle collaborate with EPFL in a range of areas, including as founders of the Swiss Food & Nutrition Valley research centre in food science and cellular nutrition among other key areas.

Nestle also sponsor and co-fund a range of research with ETH Zürich under the Future Food Initiative, looking at nutritional quality, sustainability, climate change impact and novel foods.

Wider engineering biology ecosystem

It's also important to note as part of the wider engineering biology space, that renowned companies such as Novartis and Roche – while primarily aimed at the medical and therapeutics sectors beyond the scope of this GEM – are also playing a role in the development of research in the fields of biologicals, biocatalysis, protein engineering, green chemistry and cleantech solutions that can impact the sector as a whole. Their strong presence in Switzerland demonstrates the broader capabilities within the ecosystem.



⁴² [Homepage | Givaudan](#)

⁴³ [Accelerating Cultured Food to Market | The Cultured Hub](#)

White Papers and Policies

Federal strategy and funding for education, research, and innovation 2021 to 2024

The Swiss State Secretariat for Education, Research and Innovation (SERI) publishes a white paper for Parliament every four years, entitled 'Federal Council Dispatch on promotion of education, research and innovation'.⁴⁴ In the latest iteration, the outlined priorities for the period 2025 to 2028 focus on:

- Digitalisation.
- Sustainable development.
- Equal opportunities.
- National and international cooperation.

As a result of this Dispatch, the Swiss Parliament has approved a total of around CHF 29.2 billion in guaranteed credits and payment frameworks for the 2025 to 2028 period, with detailed funding allocations still need to be decided by Parliament.

⁴⁴ Federal education, research and innovation policy 2025–2028 | Confédération Suisse

UK / Swiss Cooperation

2022 Memorandum of Understanding

In November 2022, the UK and Switzerland signed a Memorandum of Understanding (MOU) to deepen the two countries' relationship in research and innovation across the deep science and deep tech spaces, as well as commercialisation through innovation.⁴⁵

As two of the leading European nations for research universities, there are natural synergies to be explored for mutual interest in deep science, industrial commercialisation, and international regulation and standards. The MOU outlines specific avenues of cooperation, that include: visits and delegations, workshops and conferences, joint initiatives and projects, strategic meetings, information and knowledge exchange, and plans for an annual Anglo Swiss Research Collaboration Council.

⁴⁵ UK signs major science co-operation agreement with Switzerland | Gov.UK

⁴⁶ Horizon Europe | Innovate UK Business Connect

Horizon Europe⁴⁶

While there are many mechanisms that are successfully bringing together UK and Swiss innovation, the Horizon Europe collaborative funding path has proven particularly valuable in collaboration between researchers and innovators in the two countries.

Since both gaining access to the strategic calls, it was presented to this GEM that there have been more than 100 collaborative projects containing collaborative UK and Switzerland project partners across a range of industries and problem themes. From these, 14 projects have already come under the engineering biology themes, for both academic and industrial collaborative research and application in this space.



06. Collaboration Opportunities

Regulatory

The GEM identified key differences in approaches taken by the UK and Swiss regulators, as well as those who engage with them. It was evident that real benefit could be seen by forming closer links and more joined up thinking between regulatory bodies in the engineering biology space.

- Swiss stakeholders were very positive about the proactivity and sector engagement shown by the UK regulatory bodies, particularly by the Food Standards Agency, in working so closely with innovators to help shape emerging regulation and head off potential hurdles at earlier stages. Engaging in in-person and online activities to share knowledge and best practice from the UK for the benefit of Swiss counterparts would help position the UK as a leading voice in progressive regulation and develop the respective Swiss ecosystem further.
- Equally, there are learnings from the Swiss market that could be interesting and beneficial for the UK counterparts to consider. Those identified include the pathway of getting novel foods to market more quickly, as well as how to limit regulatory red tape in early-stage innovation.

Facilities and infrastructure

Switzerland is home to a number of key international businesses, institutions and research facilities, each with the potential to provide support, collaboration and insights to work successfully alongside UK stakeholders. Some identified opportunities include:

- Switzerland's six Innovation Parks,, offer neutral infrastructure for industry-academia collaboration, distinct from university campuses. Their focus extends beyond publication metrics to international partnerships and translational outcomes. These parks may not only represent good locations for UK stakeholders to access and connect with Swiss innovations, but can also act as landing places for UK researchers and SMEs looking at the Swiss market or ecosystem to further their own development.
- Switzerland hosts a number of head offices of major agrifood companies, including their management teams for R&D activity and associated technical facilities. Links between these companies, regional universities and other innovation providers are strong and represent a potential route to expanding UK involvement in these local networks through increased B2B collaboration.

- Providing processing support or new materials to these global companies gives a clear, and mutually beneficial, route to market. Collaborations where the UK provides its more advanced engineering biology capability with more traditional Swiss expertise in chemical production, food processing and material science, has real potential.
- Support from regional promotion agencies, incubators, accelerators & ecosystem enablers exist throughout Switzerland, facilitating further opportunity for UK SMEs and entrepreneurs. Regional promotion agencies, such as BaseLaunch,⁴⁷ can support SMEs to develop connections and an understanding of that region. Meanwhile, scale-up support opportunities for engineering biology SMEs can be found at facilities such as The Cultured Hub,⁴⁸ the Bühler Protein Application Center⁴⁹ or through funders such as MassChallenge.⁵⁰

Early-stage innovation

Switzerland has a strong and concentrated collection of high-level knowledge within a small region. This presents the opportunity of an engaged and collaborative science base for the UK to work with on novel ideas and knowledge-sharing and learnings, as well as testing new concepts.

- The quality of the UK's academic research in engineering biology was highlighted throughout the GEM, alongside its connection to industry. Switzerland's strong higher education system, with notable applied sciences institutes, provides strong collaboration opportunities. Opportunities particularly exist between connecting Switzerland's green chemistry research to the UK's engineering biology innovation.

Funding and support systems

There are a variety of mechanisms in Switzerland that look to support the development of ideas and innovation, as well as drive solutions towards market readiness. Some of the opportunities identified on the GEM are either comparable or complementary to UK mechanisms, while others provide learnings for the UK to consider their own equivalent. As a hub for international headquarters, these Swiss mechanisms can also provide additional opportunities to enhance international collaboration.

- Programmes at EPFL and ETH actively train 'scientific entrepreneurs', similar to the UK's ICURe⁵¹ and Innovation Fellowships, but more deeply embedded in institutional structures. Bringing stakeholders together to share experiences and processes could help ensure support is maximised and connections developed.
- Innosuisse's coaching and advisory voucher schemes help SMEs prepare strong funding bids – an idea that could be replicated to increase the impact of UK translational funding.⁵²
- Innovaud provides canton-funded support for SMEs transitioning from prototype to scale, operating programmes such as Scale-Up Vaud and Sci-preneurs that combine funding, business school engagement, and hands-on mentoring.⁵³ This cohort-based model of progressing mid-TRL technologies – integrating facilities, training, and investment – could inform a UK equivalent leveraging regional innovation hubs.



⁴⁷ [Homepage | BaseLaunch](#)

⁴⁸ [Homepage | The Cultured Hub](#)

⁴⁹ [Protein Application Center, Uzwil | Bühler](#)

⁵⁰ [Accelerator 2026 | MassChallenge](#)

⁵¹ [ICURe | Innovate UK Business Connect](#)

⁵² [Core Coaching | Innosuisse](#)

⁵³ [Scale-Up Vaud | InnoVaud](#)



Circular solutions

The GEM highlighted a range of opportunities that exist for UK-Swiss collaboration in areas such as clean tech, waste valorisation, and sustainable biomanufacturing, with engineering biology positioned as a powerful enabler for next-generation circular technologies. By converting waste streams into high-value inputs, engineering biology offers scalable routes to support agri-food innovation, agricultural biologics and bio-based materials, while reducing environmental impact. Particular insights discussed through this GEM include:

- Syngenta identified the circular economy as a key focus, offering various R&D partnership and innovation showcase opportunities. For Syngenta, ambitions centred around more sustainable manufacturing and circular use of waste streams, with interest in robust fermentation, high-throughput process optimisation, and bio-inspired adhesion systems.
- With previous examples of success for bilateral engineering biology collaboration, such as in the UK, Bühler demonstrated their strong global sustainability commitments and circular processing of food waste. The specialised equipment manufacturer highlighted how microbial, engineering biology and biotechnological routes continue to offer opportunities to develop circular economies.

- Soil health is the subject of different novel research projects, with microbial engineering and predictive modelling the key to innovative ideas, particularly between academics. With the UK's own success in soil health protection and in the development of its benefits in the agrifood space, there is real potential for knowledge sharing and partnership in novel soil research.
- Both countries boast strong university infrastructure and technical knowledge to support fundamental science and early-stage ideas. Greater peer-to-peer knowledge-sharing, connections and collaboration among scientists and researchers – including potential researcher exchange programmes - would bring new world-leading expertise to both sides to help the wider progression of the sector. Particular opportunities could be between insights from the UK researchers' insights into engineering biology innovation, and Switzerland's green chemistry ecosystem.



07. Conclusions

The GEM visit showed two countries with similar outlooks towards, and expertise in, the emerging engineering biology sector. Both nations boast leading global roles in novel science and similar commitments to funding research and innovation for a range of new applications.

The stakeholders hosting the delegation and taking part in the workshops were positive about the potential for greater collaboration between the UK and Switzerland, and about identifying pathways to engagement on both a one-to-one and a wider network basis with UK counterparts. It was recognised that the UK's strengths in science and scaling matched Swiss ambitions, while the direct commitments of proactive regulatory bodies and specific engineering biology-focused funding from agencies were seen as lessons the Swiss ecosystem could learn from.

The resource available across Switzerland to support emerging businesses has proven beneficial to Swiss start-ups in the engineering biology sector and beyond, and could provide similar opportunities for soft landings of UK businesses. From regional organisations providing business, legal and infrastructure support, to new scale-up facilities, and connections with international chemical and agrifood corporations, the Swiss ecosystem has plenty to offer ambitious UK entrepreneurs and SMEs.

The GEM also identified opportunities for both countries to collaborate in key areas of interest like waste and byproduct upcycling and valorisation, as well as in cleantech concepts and a range of novel science methods in biologicals, microbial and biotechnology solutions. New developments in research are showing complementary solutions and processes, where closer working between the UK and Switzerland could help drive and refine progress even further.

Taking advantage of the similarities between the two ecosystems presents an ideal environment for collaboration and to both benefit from knowledge sharing and new partnership opportunities. As the engineering biology sector continues to develop, there is a real chance for the UK and Switzerland to remain at the forefront of its innovation.



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CONTACT

Alexandra Leech-Gribben

Knowledge Transfer Manager

Alexandra.Leech-Gribben@iukbc.org.uk

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