UKRI Innovate UK

Healthy & Living Agriculture

Review 2025

Contents

Healthy planet.
Healthy people.
Reaching everyone.

Foreword

At Innovate UK, our vision is to drive business growth by inspiring and unlocking innovations that make life better.

Our Healthy Living and Agriculture activities support UK innovators tackling some of the most pressing systemic challenges we face — from population growth and demanding food production, to disease and climate change.

This review looks back on our journey so far, showcasing the UK-wide impact of our funding and investment in business-led innovation across four core themes:

- **AgriFood Systems:** Delivering resilient and sustainable agricultural systems that provide healthy, affordable, and tasty food for all.
- **Healthy Lives:** Helping people live longer and more fulfilling lives by maintaining health and wellbeing in both mind and body.
- **Health Tech:** Promoting better health outcomes for patients and populations by leveraging tech to deliver insight and interventions.
- **Future Medicines:** Future proofing medicine through innovation and emerging modalities delivered by sustainable supply chains.

We see increasing overlap and connection with programmes spanning all four themes. Our flagship Biomedical Catalyst supports high-potential, technology-agnostic innovations across the entire portfolio. Our investment in Life Sciences, Agri-Tech, and the emerging field of Engineering Biology aligns with the UK government's Modern Industrial Strategy. With a focus on this space, we're ensuring UK businesses have the support they need to turn world-class research into real-world impact.

In this review, we demonstrate the breadth and impact of innovation delivered to date and how we are helping businesses start, grow, scale, and stay in the UK to enable widespread adoption and long-term economic resilience.

Whether it's unlocking the power of data in diagnostics, supporting sustainable farming, or developing the next generation of medicines, Innovate UK is proud to support the businesses and innovators who are shaping a healthier future for people and the planet.

This review celebrates the momentum we've built while offering a glimpse of the opportunity ahead, where UK-led innovation will transform how we grow, connect, and thrive.

Dr Stella Peace
Executive Director
Healthy Living & Agriculture

Healthy Living and Agriculture five-year impact

Since 2020, across the UK, Innovate UK has:

Commited over
£1bn
to Healthy Living and Agriculture projects*

Enabled over
£9.7bn
to be raised in private investment for SMEs

Supported
3,569
companies

SMEs awarded Healthy Living and Agriculture Research and Innovation grants from Innovate UK have:

Generated over
£3.6bn
Gross Value Added (GVA)

Created over
25k
jobs in Healthy Living and Agriculture

Exported over
£759m
in goods and services

Our five-year spend

by Healthy Living and Agriculture theme:

£327m
AgriFood Systems

£129m
Healthy Lives

£363m
Health Tech

£195m
Future Medicines

*This figure includes Innovate UK funding committed to the Catapult Network in 2024/25 as the funding is allocated over 5 years. It also includes programmes which are funded by other government departments such as Defra, but managed by Innovate UK

AgriFood Systems

Andy Cureton
Director of AgriFood Systems

The environmental impact of feeding a growing global population, in tandem with concerns over food security and resilience, is driving the need for new technologies to be adopted within our food production system.

Innovate UK's AgriFood Systems programmes are addressing these challenges by supporting and funding businesses to develop and commercialise innovations in areas including agri-tech, engineering biology, alternative proteins, and food manufacturing.

Our programmes capitalise on the UK's leading base of research and expertise to drive economic growth and sustainability across agriculture and food systems.

This includes projects focused around reducing emissions associated with crop and livestock production, addressing labour shortages, and developing novel food production systems.

These innovations will deliver solutions that enable efficient, profitable, sustainable, and resilient agriculture and food production, supporting the production of healthy, affordable, and tasty food for the UK and globally.

Our support enables innovations to be developed and demonstrated at scale, helping businesses access the expertise, capabilities, and funding they need to succeed, while encouraging greater commercialisation and adoption of new technologies and processes across the food supply chain.

AgriFood Systems programmes aim to achieve the following objectives:

- **Drive innovations that enhance the productivity, sustainability, and resilience of agriculture**
- **Accelerate the development of alternative protein sources**
- **Improve the nutritional content of food and drink**
- **Create more sustainable, resilient, and efficient food supply chains**

Objective

Driving innovations that enhance the productivity, sustainability, and resilience of agriculture

Feeding the growing global population places an increasingly large demand on the agriculture sector in the UK.

Achieving future production targets will require the ability to produce resilient and sustainable food more efficiently, reducing emissions while minimising waste and improving soil quality.

Through Defra's Farming Innovation Programme (FIP), Innovate UK is helping accelerate the development, commercialisation, and adoption of technologies that help create a more sustainable and efficient farming sector.

RootWave hopes to remove the negative impacts of chemical weed control

Case Study

Reducing reliance on chemical herbicides in weed control

Chemical herbicides have been used widely for generations, but present a number of problems around their restrictive use in different weathers and locations, as well as their impact on safety, health, and the environment. This is largely due to their potential to be absorbed by soils, water, crops, animals, and humans.

With high costs and tighter regulatory controls around their application, alternative weed control solutions to herbicides are now essential for a more sustainable future in food production.

Through a FIP project, RootWave was looking to develop its concept of applying electrical energy to a weed to generate heat and boil the plant from the root upwards in a safe and accurate manner.

Unlike sprayed herbicides, the technology allows users to undertake essential weeding during high winds and bad weather. The technique also removes the negative impact that chemical treatments have on soil health, allowing greater productivity and crop certainty in the longer term.

The FIP project took place between February and July 2024, building on the successes through the UKRI Transforming Food Production Challenge.

Focused on the use of the system in vineyards and orchards, the project looked to further develop and refine the core technology as a standalone power module, as well as its potential for partnership with other technologies for different uses.

The project has also helped demonstrate the commercial and ROI benefits to potential users, as well as the impact on productivity and more targeted weed control.

Innovate UK grant funding and support through FIP enabled additional testing data to take the concept to its next stages.

Following this project and wider development work, the solution now focuses on commercial growth and opportunities for achieving greater adoption.

This potential has been aided by the successful inclusion of RootWave's technology in Defra's Farming Equipment Technology Fund, which provides a financial subsidy to farmers and growers for committing to innovative new technologies that will enhance modern farming practices.

£15m

further investment raised to accelerate regional and international roll-out

Objective

Accelerating the development of alternative protein sources

Food manufacturers face increasing pressure to meet growing consumer demand for products with improved sustainability and reduced ecological impacts, at an affordable price.

Developing new, sustainable sources of protein is a key method by which we can reduce the environmental impact of our food, while still meeting the nutritional needs of a growing population.

Innovate UK is investing in projects that are driving innovation in alternative proteins, including plant-based meats, cultivated meat, and fermentation-derived or novel protein sources, to reduce reliance on livestock and bring more low-carbon food products to market.

£23m

of co-investment and support committed for National Alternative Protein Innovation Centre

Case Study

Launching a national innovation centre for alternative proteins

Developing new, sustainable sources of protein is a key method by which we can reduce the environmental impact of the UK's agricultural sector, while still meeting the nutritional needs of a growing population.

The Biotechnology and Biological Sciences Research Council (BBSRC) and Innovate UK have invested £15m in the new National Alternative Protein Innovation Centre (NAPIC) to drive research and innovation in the UK's alternative proteins sector.

The centre is a collaboration between researchers at the University of Leeds, the James Hutton Institute, Imperial College London, and the University of Sheffield, and aims to cover the breadth of the alternative proteins supply chain.

From plant-based protein and lab-grown meats to protein-rich algae, the science and innovation supported by NAPIC will strengthen the UK's leadership in this critical sector and foster international collaboration to ensure a more sustainable and secure food future for all.

This aims to address a range of research and innovation challenges, from fundamental discovery research and pre-competitive opportunities to proof-of-concept and commercially focused activities.

Lab-grown proteins among the solutions being developed

More than 100 UK and international stakeholders are already engaging with NAPIC, which includes small and medium-sized enterprises, multinationals, academia, and third sector partners.

These partners have committed £23m of co-investment and support for NAPIC in addition to UKRI's £15m funding.

Looking to the future, the NAPIC is planning to grow further by attracting additional investment and engagement leading to a pipeline of new, alternative proteins.

Innovate UK's strategic partnership with BBSRC continues to enable UK businesses to collaborate with the UK research base to tackle global challenges like food security and sustainability while driving economic growth.

Objective

Improving the nutritional content of food and drink

The way we produce food can potentially have a significant impact on our health, lowering the nutritional content and overall quality of the products we consume.

Coupled with the need for UK supply chains to remain profitable while ensuring minimal impact on our environment, an opportunity arises for innovative technologies that can improve our food production systems for both manufacturer and consumer.

Innovate UK's Better Food for All programme is driving the development of solutions that enable more efficient, sustainable, and resilient UK food production to provide more nutritious, more affordable, and tastier products with a longer shelf life.

Xampla delivers materials innovation using natural plant polymers

Case Study

Helping to bring nutrient microencapsulation to market

Vitamin D deficiency affects around 1 billion people globally and is becoming more prevalent, making the fortification of food and drink even more vital for addressing this to reduce the negative impacts on bone health and immunity across all ages.

Fruit squash and other concentrated soft drinks are widely consumed and affordable, making them an ideal candidate for fortification, however, this can be challenging as UV light, low pH, and pasteurisation can degrade Vitamin D within the product.

To overcome this, materials innovation company, Xampla, has developed an innovative microencapsulation technology using plant proteins that allows drinks to be more widely fortified with Vitamin D.

Based on 15 years of research, Xampla's technology is scalable, cost viable, and vegan, aligning with the company's mission-led approach and B Corporation status.

In 2023, Xampla partnered with drinks manufacturer, Britvic, on a project to fortify their line of concentrated soft drinks to deliver wider public health impact without passing significant cost on to the consumer.

Through the Innovate UK Better Food for All competition, Xampla was awarded late-stage grant funding to de-risk the scalability and improve the cost efficiency of its patented microencapsulation technology.

This allowed the development of large-scale processes for microcapsule production, including pilot and factory trials, Vitamin D stability tests in the final product and further studies around the improved bioavailability benefits.

After the completion of the project and the successful roll-out of one SKU of fortified Britvic squash, Xampla has since gone on to partner with Lehmann Ingredients to make its technology available at scale to fortify a wide range of food and drink products.

Innovate UK funding and support allowed Xampla to accelerate its ambitious plans, not only to launch with Britvic but also produce volumes required to supply more customers and deliver healthier food and drinks for the global population.

1bn

people affected by Vitamin D deficiency worldwide

Objective

Creating more sustainable, resilient, and efficient food supply chains

There is no single solution to address the productivity, sustainability and resilience challenges in the agri-food system – it will require a number of interventions throughout, on farms, in manufacturing, and in reducing waste.

It is vital that we drive innovation throughout the agri-food system and ensure that positive changes being made in one area won't have a detrimental effect elsewhere.

Through the UKRI Transforming Food Production Challenge, Innovate UK has helped to support cross supply chain innovation, bringing different parts of the supply chain together to have a more significant impact than they could do alone.

Improving the monitoring of livestock performance

Case Study

Boosting the adoption of new technologies in livestock farming

Creating a strong pipeline of innovation into the agriculture sector requires aligning farmers to consumers using modern data, decision support, and precision agriculture techniques.

Dunbia is one of the UK's leading beef and lamb processors, using technology and data to innovate processes, inform decision making, and deliver a more efficient and sustainable livestock sector.

In 2019, Dunbia received funding through the first Collaborative R&D competition run by the UKRI Transforming Food Production Challenge to develop, test, and grow the adoption of an innovative technology platform to improve the monitoring of livestock performance.

Alongside project partners Breedr and Scotland's Rural College (SRUC), Dunbia's project focused on encouraging the adoption of new technology that would enable farmers to more effectively manage their herds than previous manual recording techniques would allow.

With more than 12,000 animals involved in the study, this research was the first of its kind and by far the largest assessment of animal performance data in the UK sector.

Dunbia was able to demonstrate the benefits of data insights and benchmarking to raise standard farming practices and processes throughout the beef supply chain.

The technology gave farmers valuable insights to enhance meat quality, boost livestock performance, and reduce emissions – efficiencies which could lead to more informed decisions that will benefit farmers, retailers, and consumers alike.

Grant funding through the Challenge allowed Dunbia to focus on continuous improvement projects and enhance their service offering to different stakeholders, while expanding the team to develop a wider skill set within the business.

With 62 of the farming research partners still using the new technology after the end of the project, Dunbia has successfully taken advantage of both Innovate UK funding and support to accelerate their ambitions for innovation adoption and behavioural change on farms throughout their supply chain.

£394m

leveraged co-investment across the Transforming Food Production Challenge portfolio

Healthy Lives

Dr Cynthia Bullock
Director of Healthy Lives

Facing a growing disparity between our ageing population and the length of time spent in good health, the UK faces a challenge in helping everyone irrespective of age and background to remain active, productive, independent and socially connected for as long as possible.

Innovate UK's Healthy Lives programmes aim to address this by supporting innovators to come to market with products and services that help people look after their own health and wellbeing, to live a fulfilling life for longer.

Championing links to behavioural science, our programmes take a whole-life course approach to improving health and wellbeing by tackling issues around mental health, dementia, addiction, obesity and nutrition, occupational health, and social care.

Central to this has been the UKRI Healthy Ageing Challenge, delivered by Innovate UK and ESRC, that enabled researchers, businesses and social enterprises to develop solutions to support an ageing population while delivering business models that enable them to be adopted at scale.

The Challenge focused on what's best for the people of the UK, and we brought in people with lived experience to be part of the competition governance to encourage an approach of inclusive design within the solutions being developed.

The outcomes of the Healthy Ageing Challenge, which concluded in 2024, have laid foundations for work to continue with a broader whole-live perspective through the Healthy Lives theme.

Healthy Lives programmes aim to achieve the following objectives:

- **Empower people with neurodegenerative conditions to live fulfilling, connected lives**
- **Accelerate, catalyse, and scale UK innovation that supports mental health**
- **Enable people to live independently and stay connected socially**
- **Support solutions that enhance proactive health management**

Objective

Empowering people with neurodegenerative conditions to live fulfilling, connected lives

The impact of dementia and other neurodegenerative conditions represents one of the biggest health and economic challenges of our time, with estimated annual costs to the UK of £25bn.

As well as limiting people's ability to live independently, connect with others, and lead fulfilling lives, those with caring responsibilities can face social isolation and loneliness.

With dementia cases globally predicted to triple by 2050, there is a great urgency to deal with this global health challenge.

Innovate UK's Healthy Lives programmes are accelerating innovations that support greater social connection, positive mental health and brain health for those living with neurodegenerative conditions.

£25bn

estimated annual costs to the UK related to dementia and other neurodegenerative conditions

Case Study

Driving innovations that enable independent living for people with dementia

While existing products for people living with dementia focus on safeguarding and monitoring, there are currently very few solutions that empower them to lead fulfilling, happy lives.

The Longitude Prize on Dementia aims to solve this by facilitating the development of ground-breaking innovations that support people with early-stage dementia to live independently and be able to do the things they enjoy.

This international prize fund is the result of a collaboration between Innovate UK, the Alzheimer's Society and Challenge Works, and hopes to deliver a step change in how assistive, personalised technology supports people in their daily lives.

£3.4m in seed funding and development grants will be available to the most promising solutions. Following the Discovery Awards, five finalists have been selected from the 24 awardees. Each of these teams will receive £300k, before a winner is selected in March 2026.

In addition, through the Discovery Awards, wider support has been funded to provide innovators with crucial insight and expertise, such as access to data and specialist facilities.

Examples of innovations that have been funded include: an augmented reality map to prevent people getting lost or confused; smart glasses to help people recognise familiar faces, provide reminders and alerts, make phone calls to loved ones and monitor vital signs; and a virtual assistant app using AI-powered speech and language processing to fill in missing words during conversation.

As well as co-funding the prize with Innovate UK, Alzheimer's Society is leading on the involvement of people with lived experience across the prize.

A key aspect of the initiative is a Lived Experience Advisory Panel made up of 12 people with lived experience of dementia, which provides feedback on applications to the judging panel and recommends the best ways to involve people affected by dementia throughout the lifecycle of the prize.

Supporting people with early-stage dementia to live independently

Objective

Accelerating, catalysing, and scaling UK innovation that supports mental health

Research shows that nearly half of adults (7.7 million) aged 55+ have experienced depression, and that around the same number (7.3 million) have suffered with anxiety.

This paints a picture of a UK population facing issues that can vastly lower their ability to stay socially connected, sustain work, and live independently.

Solving this requires innovations that not only help the older population, but also young adults and children who are disproportionately affected by mental health issues.

Innovate UK programmes are facilitating the development of new, technology-led approaches to increase the accessibility and effectiveness of mental health therapies, while also reducing cost.

Our significant investment in this area is driving a world-leading, UK-based industry designing products and services to support people's mental health across the whole life course.

Case Study

Immersive tech to treat ageing population anxiety

Over-50s as a group are particularly at risk of social isolation, which when coupled with anxiety and severe fears such as agoraphobia (fear of open spaces) can leave them struggling to remain both physically and mentally healthy.

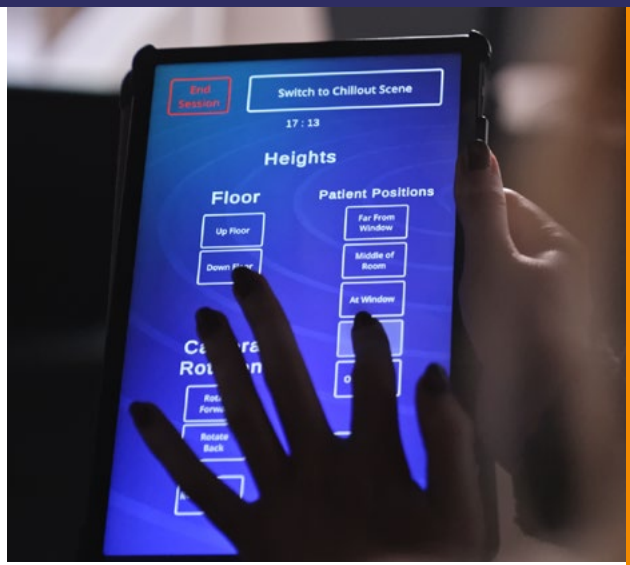
Undergoing traditional Cognitive Behavioural Therapy (CBT) to overcome these issues can take a patient anywhere between 12 to 20 sessions before feeling a noticeable impact.

XR Therapeutics, a spin-out from Newcastle University, hopes to change this by combining traditional CBT with graded exposure therapy. Through XR extended reality, they can display life-like, interactive digital scenes to help treat a wide variety of anxiety disorders over a shorter time frame.

Compared with traditional CBT, the impact of this treatment has been felt by patients after only two to three sessions over a two-week period, with a noticeable impact after just one hour when treating anxiety.

When fully adopted, this form of treatment would hopefully be more effective, reduce waiting times, and lower the strain on mental health services, allowing more patients to be treated.

Initial grant funding through the UKRI Healthy Ageing Challenge enabled XR Therapeutics to develop and test its solution, including the integration of AI to deliver a more immersive interactive experience for patients.



XR Therapeutics uses VR to treat a variety of anxiety disorders

The project also allowed XR Therapeutics to expand their team from four people to 15, and scale their operations, helping them go on to secure over £900k in additional private equity investment.

Following initial deployment into NHS trusts, XR Therapeutics has received further funding via Innovate UK's Mindset Extended Reality for Digital Mental Health programme to adapt their solution for a wider age group, as well as deployment through their new screen-based platform. This allows users to access treatment via their phone, tablet or laptop, making the technology more accessible than ever.

£900k

secured by XR Therapeutics in follow-on private equity investment to support further innovation

Objective

Enabling people to live independently and stay connected socially

Caring for both younger people living with disabilities and an ageing UK population staying in their own homes for longer poses mounting economic and social challenges.

This is especially difficult when many homes are unsuitable for independent living and can cause hazards and falls.

With increasing demand placed on under-resourced health and social care services, there is an urgent need for solutions that can help people live safely within their own homes, while potentially saving the NHS millions every year.

Innovate UK's Healthy Lives programmes are helping deliver housing that meets this change, accelerating the adoption of thoughtful, non-stigmatising innovations and home adaptations to improve people's quality of life, now and as they age.

5,000

interventions made across 2,500 homes over three years

Case Study

Whole-house solutions for safe, energy efficient, independent living

As an energy provider, E.ON already crosses the threshold of thousands of homes every year to install products, take meter readings, and perform safety checks.

During these visits, they were able to see the reality of people's living arrangements, which for a large number of older people weren't properly catering to their needs or were potentially unsafe.

Through the UKRI Healthy Ageing Challenge, E.ON proposed interventions they could provide to tangibly improve older people's lives, securing grant funding to develop the project in collaboration with Newcastle University, Invisible Creations® and ADL Smartcare.

The resulting 'Homes for Living' solution sought to understand older individuals' needs and the areas of greatest risk in their homes. This would then allow E.ON to deliver and install free, tailored interventions to improve both their quality of life and the safety of their homes.

These non-stigmatising interventions empower older people to live independently without feeling or looking more vulnerable as a result; from stylish, discrete mobility aids in the home and garden, to smart watches that monitor health and encourage activity, to smart speakers that connect them with services and loved ones digitally.

Over three years, E.ON delivered over 5,000 interventions to the homes of 2,500 customers and non-customers alike, carrying out assessments of each person's home and living arrangements to make recommendations before integrating and installing the chosen adaptations.

The project was evaluated by their partners at Newcastle University, with results showing a positive improvement in mental health, increase in mobility and greater independence among those with solutions installed.

By building on energy efficiency services and joining up existing and new innovations, E.ON has created a whole-house solution with inclusivity, dignity, and independence in mind, bringing with it a huge potential cost saving on social care.

Homes for Living adaptations improve mobility and independence

Objective

Supporting solutions that enhance proactive health management

Staying physically active, socially connected, and mentally well are vital for maintaining a healthier, longer life and preventing the onset of conditions that pull people out of work early.

The Health Foundation reported that around a fifth of working-age people in the UK – over 8 million people – have long-term health conditions that affect their ability to work.

This includes musculoskeletal conditions, which affect over half of all people who are out of work due to ill health and have undoubtedly contributed to declining employment rates among people in their 50s and 60s.

Through the Healthy Lives programmes, Innovate UK is investing in projects helping adults stay active and engaged in their communities to reduce the risk of physical and mental health issues and keep them in fulfilling employment for longer.

13m

people aged 55+ are living with MSK disorders

Case Study

Transforming gyms into community MSK hubs

Musculoskeletal (MSK) disorders that keep people out of gainful employment disproportionately affect older UK adults, with over 13 million people aged 55+ living with MSK disorders.

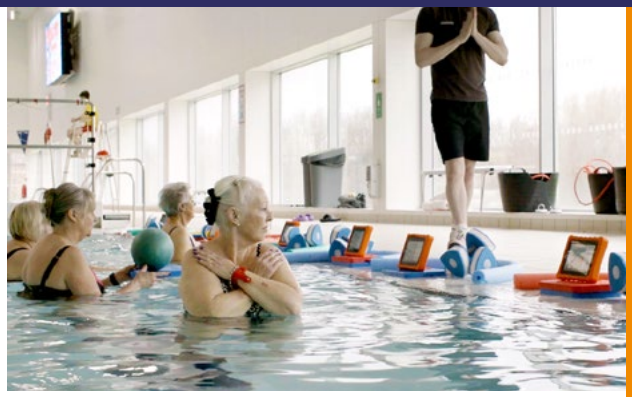
Social enterprise Good Boost is helping to solve this, pioneering software solutions to help people with MSK disorders and related disabilities improve their strength and mobility to reduce their pain and experience a better quality of life.

Their mission is to not only reduce the impact of conditions that keep people out of employment, but also alleviate the strain and requirement for surgery on the NHS, which could potentially save the service £200m by 2030.

Good Boost's AI-driven software delivers personalised exercise routines and teaches condition self-management. This solution effectively transforms local leisure centres and swimming pools into community hubs where trained staff can support people in their therapeutic exercise.

Innovate UK supported the development of Good Boost through the UKRI Healthy Ageing Challenge, providing grant funding that enabled the company to test and deploy its solution across the UK.

People using the service have seen immediate benefits to their physical health. The service provided such significant improvements, it has even led to surgical cancellations.



Good Boost helps support people in therapeutic exercise

Longer term, this shows great promise in helping the wider population manage MSK disorders and maintain good health that keeps them out of hospital and in fulfilling employment for longer.

In providing funding, the Challenge immediately recognised the project's scalability and business model of utilising existing infrastructure and resources to benefit not only the individual, but also the leisure centres themselves as a way to recruit new members.

82% of the UK population live within two miles of a public swimming pool, making the solution highly accessible and inclusive for people to engage in supported self-management for MSK disorders.

Since participating in the UKRI Healthy Ageing Challenge, Good Boost has won multiple awards and been successful in expanding their solution to be deployed in leisure centres, swimming pools, and gyms across the UK and internationally.

Health Tech

Dr Adrian Hill
Director of Health Tech

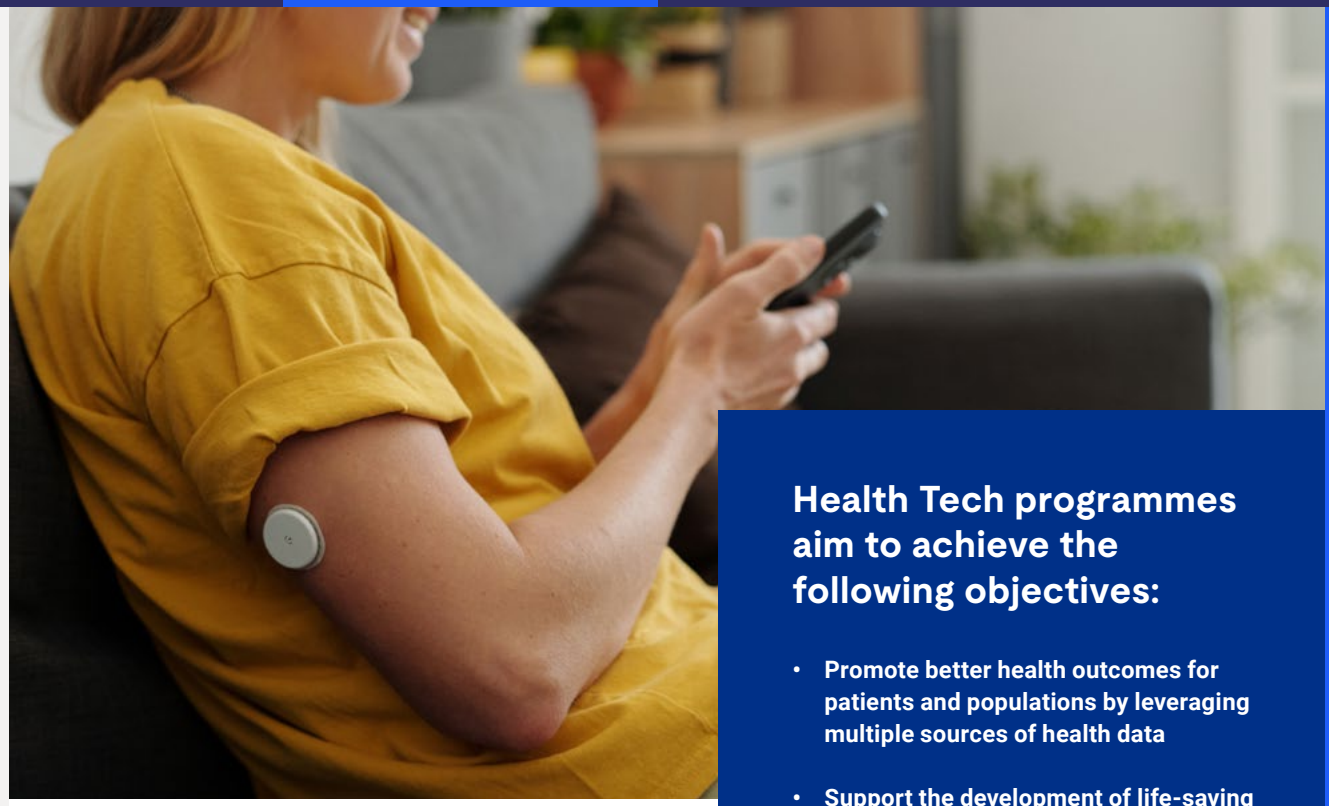
The health technologies sector is helping to tackle some of the world's most pressing challenges, from an ageing population to rising healthcare costs to the impact of infectious and chronic diseases.

Through data-driven innovations in therapeutics, digital health, and medical tech, there is huge potential to expand access to healthcare, enable earlier diagnosis, and deliver better patient care.

For companies developing these solutions, Innovate UK's Health Tech programmes provide vital funding and support across the full innovation pathway, from research and development through to commercialisation.

Our flagship grant funding programme, the Biomedical Catalyst, helps companies test ideas, validate new technologies, gain clinical evidence to support regulatory approval, and attract further investment to support their growth.

Targeted activities like these can derisk challenging science and facilitate adoption of new solutions into the healthcare system, resulting in tangible impact on patients and clinicians, as well as generating economic growth for the UK health tech sector.



Health Tech programmes aim to achieve the following objectives:

- Promote better health outcomes for patients and populations by leveraging multiple sources of health data
- Support the development of life-saving medical devices
- Increase the feasibility and adoption of technologies that streamline healthcare delivery
- Drive the development of emerging medical technologies to solve global challenges

Initiatives like the Biomedical Catalyst help companies advance and apply technologies to drive greater impact, from testing and developing new products and approaches, to creating systems that streamline processes for stakeholders like the NHS – all while empowering patients to more easily monitor and understand their own health.

The Biomedical Catalyst has seen:

£388m
grant funding committed to date

500+
UK-based SMEs supported

£1bn
further funding secured for portfolio companies

1,200
jobs created and retained

Objective

Promoting better health outcomes for patients and populations by leveraging multiple sources of health data

Advances in healthcare mean people in the UK are living longer, yet many still face challenges with poor health in later life.

Shifting the focus of healthcare from treatment to prevention requires greater access to patient health data to build a more accurate picture of the UK population and provide insight that can drive earlier interventions and better health outcomes.

Initiatives like the UKRI Accelerating Detection of Disease Challenge, delivered by Innovate UK, are funding the next generation of data-driven solutions ensuring that future generations can live healthier lives for longer.

1.3m

volunteers – the world's largest health research programme of its kind

Case Study

Delivering the world's largest health research programme to prevent and treat disease

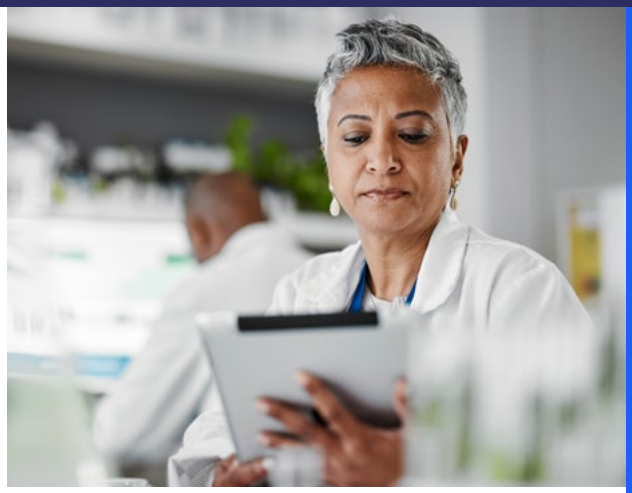
Helping researchers tackle the continued impact of disease in the UK requires a more detailed understanding of what makes some people more likely to develop certain health conditions.

Our Future Health, the world's largest health research programme, is building a world-leading health research resource that truly reflects the UK population, so more effective tests and treatments can be developed for life-changing conditions like cancer, dementia, diabetes, heart disease, and stroke.

The programme is a collaboration between the public sector, life sciences companies, and leading UK health charities, bringing people together to develop new ways to prevent, detect, and treat disease.

Our Future Health was set up with £79m of funding from the UKRI Accelerating Detection of Disease Challenge. This enabled it to raise significant additional resources, including securing commitments of over £180m from the life sciences industry and charities, and attracting additional public funds of £67.9m for 2023-25 through the Office for Life Sciences.

Industry partners have worked collaboratively with Our Future Health to develop new methods of prevention, early detection, and treatment, with a major focus on identifying diseases such as cancer and heart disease before symptoms would normally be detectable.



Enabling greater access to patient health data

The programme has already recruited over one million full participants, including the largest ever number of participants from under-represented groups in a health research programme.

Health records, genetic data, and other information provided by these volunteers can enable research that benefits everyone and reduces health inequalities by tackling diseases that disproportionately affect certain groups.

This transformative scientific resource will power health discoveries for decades to come, helping researchers develop new ways to detect disease at an earlier stage and identify those at higher risk.

With the goal of eventually reaching up to five million volunteers, Our Future Health is creating one of the most detailed pictures ever of people's health that truly reflects the whole UK population.

It offers huge potential to make important discoveries, drive business growth, and enable innovations that make life better.

Objective

Supporting the development of life-saving medical devices

Front-line, life-saving medical devices are crucial for improving patient outcomes, enhancing healthcare efficiency, and saving lives.

These technologies enable timely interventions, reduce complications, and support healthcare professionals in delivering high-quality care, ultimately driving advancements in public health and reducing long-term healthcare costs.

More than ever, innovative solutions are essential for optimising healthcare delivery and improving patient outcomes.

Innovate UK is driving these advancements, supporting UK-based innovators who are developing life-saving devices that enhance critical care, diagnosis, and treatment across the globe.

£1.5m

raised in grant funding and private investment

Case Study

Advancing organ preservation for better transplant outcomes

Organ transplant procedures face significant challenges, including the limited viability of donated organs and the short window for successful transplantation.

Traditional organ preservation methods often involve storing recovered organs in ice boxes, which can limit the viability and availability of organs for transplantation.

ScubaTx is addressing these critical issues with innovative technology that extends the viability of organs, improving transplant success rates and offering new possibilities for patients in need.

ScubaTx has developed a portable and cost-effective organ preservation system based on the groundbreaking technique of persufflation – cooling donated organs and oxygenating them with humidified gas at controlled pressures.

This technology extends organ viability beyond traditional preservation methods, with the potential to increase the pool of available organs, optimise transplant logistics, and reduce healthcare costs associated with organ failure.

With the support from the Biomedical Catalyst and its Investor Partnership Programme, ScubaTx has successfully advanced the development of its organ preservation device.

Innovate UK's funding enabled the company to refine its technology and conduct critical studies,

Extending organ viability beyond traditional preservation methods

demonstrating the feasibility and effectiveness of this approach.

In 2023, ScubaTx raised an additional £1.5m, which included a combination of grant funding from Innovate UK and investments from leading life sciences funds, helping the company move closer to obtaining market approvals across the UK, USA, and Europe.

Innovate UK's support mechanisms have been essential in driving ScubaTx's growth, contributing to its ability to expand its operations and attract international partnerships. The company is now focused on bringing its technology to market, initially targeting pancreatic transplant procedures for patients with diabetes.

Their success represents a significant step toward improving the lives of transplant patients globally, while reducing strain on healthcare systems and reinforcing the UK's position at the forefront of life sciences innovation.

By supporting cutting-edge innovations like ScubaTx, Innovate UK is playing a key role in advancing medical technologies that address critical health challenges.

Objective

Increasing the feasibility and adoption of technologies that streamline healthcare delivery

Healthcare in the UK is at a critical juncture, with issues around funding disparities, workforce shortages, and health inequalities across different demographics making it increasingly challenging to provide the right level of care.

There is a critical need for innovations that can streamline the delivery of healthcare to enable an easier working experience for clinicians and better outcomes for patients.

Innovate UK is helping to boost the feasibility and adoption of these technologies, supporting projects across academia and industry to realise a new generation of tech-enabled healthcare.

95%

of GP practices in the UK have access to Appt Health

Case Study

Making it easy for everyone to access vital NHS health appointments

Everyone has the right to preventative healthcare, however issues around communicating and engaging with patients can make it challenging to deliver the level of care needed.

Appt Health is making it easier for all patients to make and attend health appointments with their GPs, thanks to its smart patient engagement and booking service that is simpler to use, more inclusive, and more affordable than current methods.

This intuitive system is proven to increase patient engagement with preventative programmes like vaccinations and cancer screenings, replacing time-consuming letters or phone calls that often fail to reach low-income and marginalised people due to language barriers or digital exclusion.

Appt Health easily connects into pre-existing surgery platforms, and uses appointment system integration, accessible messaging, and patient analysis to ensure patients can book and keep their appointments.

Understanding the value of preventing health conditions rather than just treating them, Innovate UK awarded over £633,000 in grant funding to Appt Health to develop its solution, which has helped to de-risk the process for future customers and investors, create a market demand, and show support for a social enterprise.

Credit: Appt Health

This support allowed the company to conduct clinical trials to prove the efficacy of its solution, with the first trial involving 1,500 patients achieving automated booking rates of over 50% compared to the national figure of 39%, while also improving patient uptake of preventive healthcare programmes by up to 35% and reducing time spent on administration by 20%.

Innovate UK funding has been crucial for the growth of Appt Health over the last three years, with the team growing from four to ten people and the platform now integrated with 95% of GP practices across the UK.

The adoption of new digital behaviours through the Appt Health system will have a long-lasting impact, helping to better reach those who will most benefit from preventive healthcare while reducing the burden of care and cost on the NHS.

Objective

Driving the development of emerging medical technologies to solve global challenges

Global healthcare and biopharmaceutical companies face several challenges in delivering effective treatments, from ageing populations and rising costs, to regulatory complexity and slow drug development processes.

More than ever, innovative solutions are needed to accelerate and optimise care delivery, leveraging digital technologies to improve diagnosis, prevention, and treatment.

Innovate UK is at the forefront of driving these advancements, supporting UK-based innovators developing state-of-the-art solutions that can enhance patient outcomes, streamline clinical trials, and bring new therapies to market faster.

£12m

additional funding secured following Innovate UK support

Case Study

Advancing real-world data capture in neuroscience studies

Dementia and other neurodegenerative diseases pose a growing challenge worldwide, with high drug failure rates, limitations in cognitive assessments, and a lack of reliable biomarkers slowing progress.

Addressing these critical gaps requires cutting-edge technology that improves the way clinical trials are conducted and treatments are developed. Cumulus Neuroscience is reshaping clinical trials by enabling real-world, at-home data capture that makes research more efficient and patient-friendly.

Their platform integrates tablet-based neurological assessments with a wireless EEG headset, allowing researchers to measure multiple aspects of brain function, including cognition, mood, memory, and language, in real time.

The digital biomarkers emerging from these studies have the potential to transform dementia research, accelerating the discovery of new treatments by improving drug target identification, dosing strategies, and trial outcomes.

With over £4m in funding from the Biomedical Catalyst and the National Institute for Health and Care Research (NIHR), Cumulus developed a next-generation portable EEG headset and conducted a real-world study validating its use across younger and older populations.

Credit: Cumulus Neuroscience

Results showed adherence rates of over 94% and demonstrated how frequent at-home EEG monitoring could outperform traditional lab-based assessments, thereby offering a more scalable and cost-effective solution for tracking disease progression.

Innovate UK's support has been a vital springboard for Cumulus, helping the company secure over £12m in investment in a funding round led by the Dementia Discovery Fund (DDF), alongside LifeArc and the UK Futures Fund.

By investing in pioneering solutions like Cumulus Neuroscience, Innovate UK is accelerating the development of transformative medical technologies that address major global health challenges, helping to bring life-changing treatments to patients faster, at a lower cost, and on a greater scale.

Future Medicines

Dr Sarah Goulding
Director of Future Medicines

There is a growing need for innovations that make healthcare more patient-centric, allowing the right medicine to be delivered at the right time and the right dose.

WIth a thriving life sciences research and innovation sector, the UK is well placed to facilitate the discovery, development, and manufacturing of these more targeted medical interventions.

Innovate UK's Future Medicines programmes deliver support and funding to accelerate the commercialisation of life-changing therapeutics and vaccines, stimulating the UK's economic growth from its vibrant science base across industry and academia.

Through these programmes, Innovate UK is directing innovations in areas of unmet clinical need, such as antimicrobial resistance and cancer, while reducing the time and cost of production to ensure new solutions can be more readily adopted.

We are supporting businesses to seize market opportunities and meet clinical demand, helping them scale efficiently while remaining anchored in the UK to further strengthen our shared culture of scientific innovation.

Future Medicines programmes aim to achieve the following objectives:

- **Enable business-led innovation in the discovery and development of new therapeutics and vaccines in areas of unmet need**
- **Accelerate the development of targeted medical interventions**
- **Drive the development and adoption of flexible, agile, scalable, and sustainable processes for manufacturing medicines**
- **Building an ecosystem for the development and adoption of advanced medicines manufacturing technologies**

Objective

Enabling business-led innovation in the discovery and development of new therapeutics and vaccines in areas of unmet need

Half of the entire UK population will suffer from cancer in their lifetime, and while great progress has been made in cancer diagnosis, treatment, and management, there is still more that could be done.

Innovative approaches are needed to take advantage of opportunities in immunotherapy and cancer vaccine discovery, especially within childhood cancer research where children's biological mechanisms require different therapeutic approaches than using adult treatments with long-term toxicities.

Innovate UK's Cancer Therapeutics programme supports UK entrepreneurs developing life-changing cancer treatments to accelerate the commercialisation of new therapies, as well as addressing unmet medical needs of treating childhood cancers.

£27.6m

in investment leveraged from venture capital and charity partners

Case Study

Driving the adoption of new solutions in the fight against cancer

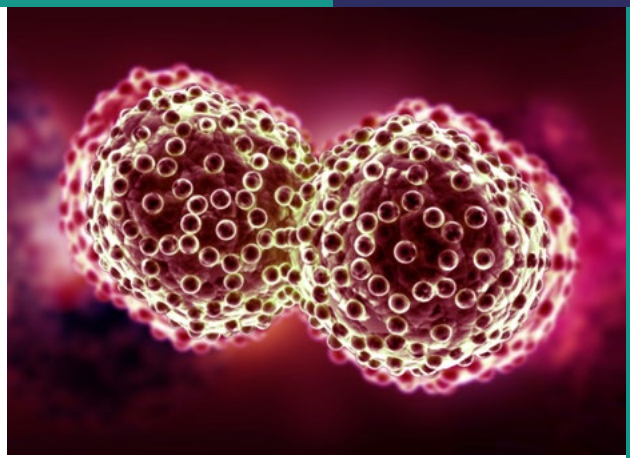
The continued prevalence of cancer, alongside the potentially damaging, long-term side effects of treatment, has driven the need for more widespread adoption of precision therapeutics such as immunotherapies and cancer vaccines.

This includes treatments designed specifically for children and adolescents that can effectively target life-threatening cancers while reducing the far-reaching physical, social, and emotional impacts of potential side effects.

Innovate UK's Cancer Therapeutics programme is enabling innovators to address these challenges by creating a pipeline of support for early-stage companies to enter clinical trials and secure private investment.

The programme has already supported 56 SMEs developing life-changing cancer treatments, including immunotherapies and vaccines, while championing projects that address unmet medical needs for treating childhood and young persons' cancers.

The programme takes a diversified approach of support, combining an accelerator and feasibility competition with a venture creation mechanism, traditional CR&D competitions and Investor Partnerships to offer support for companies at multiple stages of their life cycle.



Cancer therapeutics

Through Investor Partnerships, £8.4m of grant funding has directly leveraged £27.6m in aligned investment into businesses developing the next generation of cancer therapies. This investment has come from multiple venture capital and charity funding partners, including £1.2m of investment from Cancer Research UK.

So far, this investment has supported 12 SMEs developing life-changing treatments, including Infinitopes Precision Innunomics, a cancer vaccine company with world-leading platforms in precision antigen discovery.

Through the Cancer Therapeutics programme, Innovate UK is helping to accelerate investment into these innovative, high-growth potential businesses and capital-constrained SMEs with strong research and development and a clear route to commercial success.

This will drive both early and later stage innovations in cancer therapies, building on UK economic potential in this field while delivering more effective and targeted treatments.

Objective

Accelerating the development of targeted medical interventions

Drug-resistant bacteria and other microbes are evolving faster than we can develop new diagnostics, treatments, prevention, and control technologies to combat them, putting millions at risk of potentially life-threatening illness.

The answer lies in the development of targeted interventions that can combat the spread of a growing number of infectious and often life-threatening diseases.

Innovate UK's Future Medicines programmes are helping to accelerate the development and commercialisation of targeted therapies while growing the capacity and capability of UK businesses to produce innovative medical treatments at scale.

Antimicrobial resistance

Case Study

Accelerating the 'PACE' of antimicrobial development

Ensuring a steady pipeline of innovation is crucial for accelerating the discovery and development of new, targeted antimicrobial medicines, in order to keep pace with the spread of resistant pathogens.

Founded in 2023 through a partnership between Innovate UK, LifeArc, and Medicines Discovery Catapult, PACE (Pathways to Antimicrobial Clinical Efficacy) is a £30m initiative to help innovative researchers in academia and SMEs develop their early-stage antimicrobial drug and diagnostics projects for onward progression and investment.

Deployed over five years, PACE brings together experts in antimicrobial resistance (AMR) research and connects them to the right funding, resources and partnerships to accelerate the delivery of new innovations to tackle one of our most complex health challenges.

PACE supports diverse projects with the most transformational potential so they can reach the market sooner and make a lasting contribution to patient health.

PACE launched its first funding call in 2023, which saw 171 expressions of interest, with 22 projects invited for full application and 11 projects awarded a share of £10m in funding – this was followed by a second £5m funding call in September 2024.

Projects funded so far include Oxford Drug Design, which has developed a powerful computational platform for computer-aided drug discovery, and Glox Therapeutics, which is developing potent, species-specific antibiotics that, unlike conventional antibiotics, do not harm the host microbiome.

PACE has opened up collaborative opportunities across the globe while ensuring investment continues to support new UK businesses.

PACE is the first collaborative programme of its kind in the UK and helps support broader global entities and academics to identify opportunities that diversify and accelerate the pipeline of antimicrobial treatments and diagnostics onto the market.

£10m

awarded across 11 projects in first funding call

Objective

Driving the development and adoption of flexible, agile, scalable, and sustainable processes for manufacturing medicines

Current medicine manufacturing processes can be resource-intensive, generating significant waste and greenhouse gas emissions.

There is an opportunity to reduce these by-products and lower energy consumption, while simultaneously enhancing speed to clinic, productivity, and cost-effectiveness throughout the manufacturing lifecycle.

Innovate UK's Transforming Medicines Manufacturing programme facilitates the development of technologies that improve productivity and resource efficiency, while promoting their adoption across the sector to ensure scalability and widespread use.

It continues the legacy of the UKRI Medicines Manufacturing Challenge, delivered by Innovate UK, which supported innovation in UK medicines manufacturing to drive economic growth and underpin healthcare resilience.

Case Study

Supporting UK growth in technologies for intracellular drug delivery

Companies working in intracellular drug delivery face several challenges, from needing to target a wider range of tissues and cells to enhancing drug transport and release within the body.

Beyond the lab, they must navigate storage and transportation issues, while facing unclear regulatory pathways, a complex IP landscape and high licensing costs.

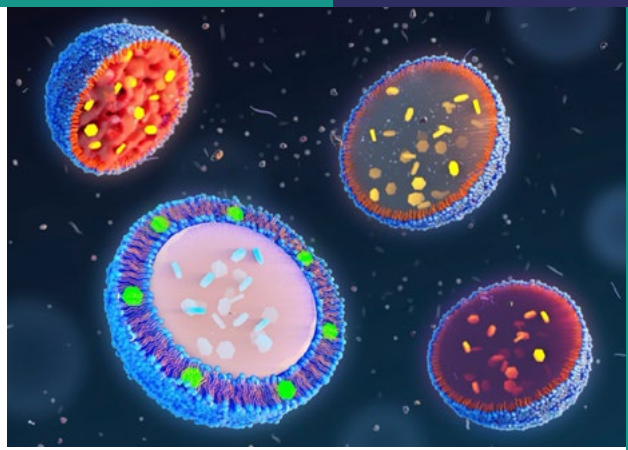
These organisations require support in overcoming these challenges while taking advantage of opportunities to develop and scale manufacturing processes in a sustainable and cost-effective manner.

The Intracellular Drug Discover Centre (IDDC) is funded by Innovate UK's Transforming Medicines Manufacturing programme with a grant of £10m over three years to allow innovators to access new capabilities in intracellular drug delivery.

The IDDC is led by CPI in partnership with the Medicines Discovery Catapult and three leading universities: the University of Strathclyde, the University of Liverpool, and Imperial College London.

£10m

in grant funding over three years provided for the Intracellular Drug Discovery Centre



Intracellular drug delivery

This centre is the first of its kind in the UK, utilising a robotic and digital screening platform to develop, characterise, and understand next generation nano-delivery systems.

By collaborating with academia and industry, the IDDC is helping accelerate the development of new formulations for the delivery of RNA medicine, unlocking greater access to cutting-edge, cost-effective vaccines and therapeutics for patients.

It supports companies and academics to adopt radical innovations, pooling expertise, facilities, and insight into one distributed centre of excellence to catalyse breakthroughs, enable cross-sector learning, and de-risk adoption by industry.

The centre has made significant progress since launching in January 2023, including the creation of a new regulatory roadmap for innovators developing RNA therapeutics and vaccines, making the pathway to product registration clearer.

With support from Innovate UK until March 2026, the future direction and focus of the centre will be guided by the UK's drug delivery community, co-ordinated by CPI.

Objective

Building an ecosystem for the development and adoption of advanced medicines manufacturing technologies

Making the UK a place to de-risk and test novel manufacturing technologies will help boost growth in the sector to enhance UK healthcare resilience and enable the manufacturing of innovative new therapeutics.

Achieving this means nurturing pipelines for both new manufacturing technologies and the next generation of scientists, engineers, and technicians to maintain a thriving UK manufacturing industry.

The Innovate UK Transforming Medicines Manufacturing programme seeks to support and grow UK medicine manufacturing capacity and capability by supporting our innovation centres and catapults, in addition to growing the highly-skilled workforce needed to underpin the sector.

Over

£20m

in partnerships funded by Transforming Medicine Manufacturing

Case Study

Enabling efficient, scalable manufacturing of nucleic acid therapeutics

Oligonucleotides are short strands of synthetic DNA or RNA that can target the underlying drivers of disease to potentially treat otherwise untreatable conditions, from cancers to Alzheimer's.

With the global market for oligonucleotides continuing to grow, projects supported by Innovate UK's Transforming Medicines Manufacturing programme are ensuring patients across the UK and globally gain faster access to these cutting-edge therapies.

This includes a £2.7m, three-year partnership between CPI, the University of Manchester, and four pharmaceutical companies that aims to deliver oligonucleotide treatments more sustainably and economically, with Innovate UK providing one third of the funding.

More recently, CPI announced a collaborative two-year partnership with Intellegens, which will use their machine learning technology to reduce oligonucleotide development times and improve manufacturing processes.

Innovate UK has also supported enzymatic DNA innovation for the gene and cell therapy field – a £1.3m collaboration between Touchlight Genetics and the National Physical Laboratory will deliver a novel 'Megabulb DNA (mbDNATM)' platform for the scaled up GMP-compatible manufacture of a long single-stranded DNA product, significantly improving the safety and efficacy of advanced therapies to facilitate their route to the clinic and make them more accessible to patients.

Nucleic acid therapeutics

Despite advances in sustainable oligonucleotide manufacturing processes, low clinical manufacturing capacity is hindering developers looking to bring these new therapies into clinical trials.

With joint funding from the Office for Life Sciences and Scottish Enterprise, the Oligonucleotides Manufacturing and Innovation Centre of Excellence (OMICE) hopes to address this by catalysing economic growth and collaboration, creating high-skilled jobs, and helping to form an innovative medicines manufacturing cluster in Scotland.

Driving each of these initiatives is the Innovate UK Transforming Medicines Manufacturing programme, which provides grant funding to help advance manufacturing to meet the growing global demand for oligonucleotide medicines.

Making life better

Advancements in Healthy Living and Agriculture can only be realised through the collaboration of policy makers, investors, and innovators.

Find out more about the programmes and funding available at

ukri.org/councils/innovate-uk