Driving innovation and closing the technology gap with the NHS

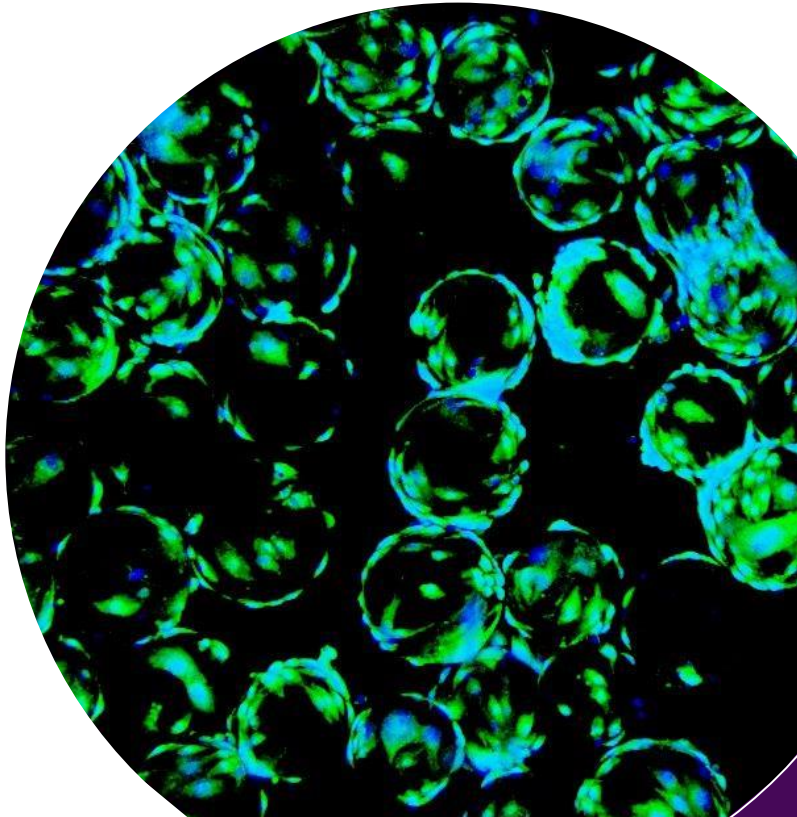
Dr. Kath Mackay
Interim Deputy Director of Health & Care

Innovate UK

Innovate UK – the UK’s innovation agency

We work with people, companies and partner organisations to find and drive the **science and technology innovations** that will grow the UK economy - delivering productivity, new jobs and exports.

Our aim at Innovate UK is to **keep the UK globally competitive** in the race for future prosperity.



F U N D

Investment of
£2.2bn
since 2007

industry match funding taking the total value of projects above
£3.75bn

Up to
£16bn
in added value to the economy

We've funded around
11,000
projects

8,000
unique organisations involved

up to
£7.30
for every **£1** we've invested.

8 jobs for each organisation involved

70,000
jobs created in total

Sectors

Manufacturing & Materials

M&M

Infrastructure Systems

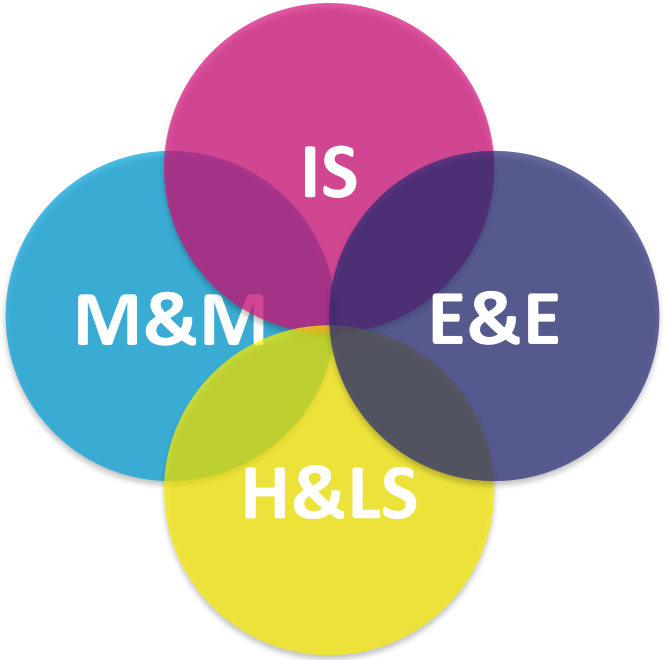
IS

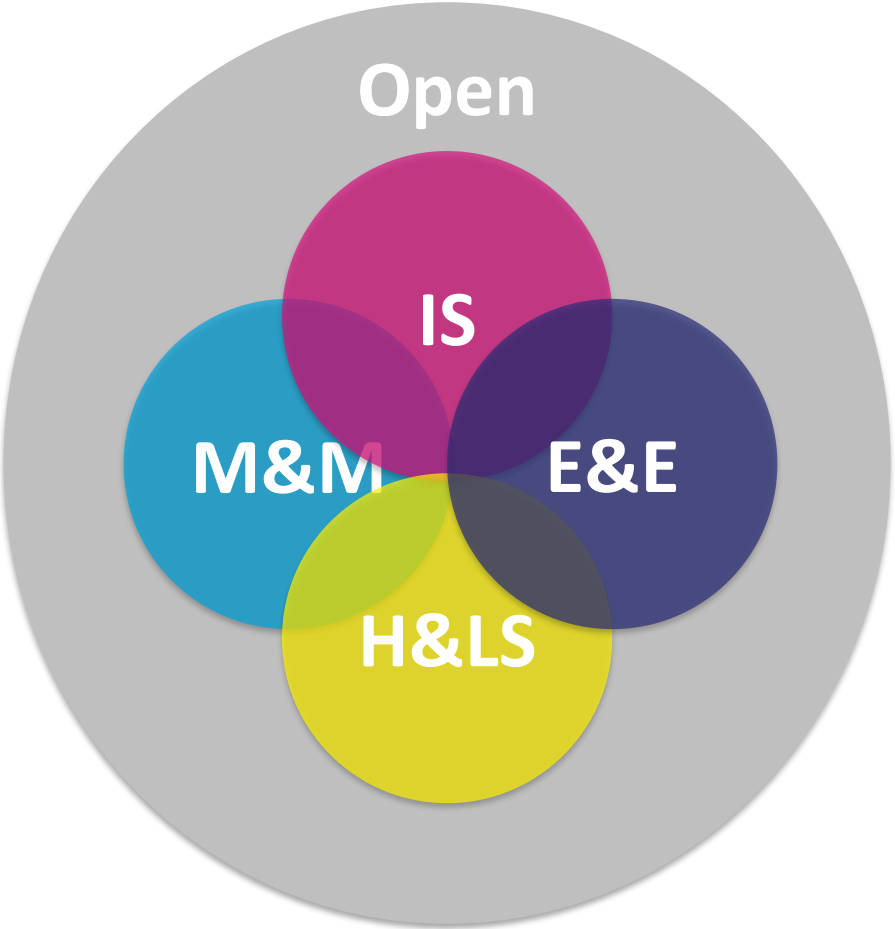
Health & Life Science

H&LS

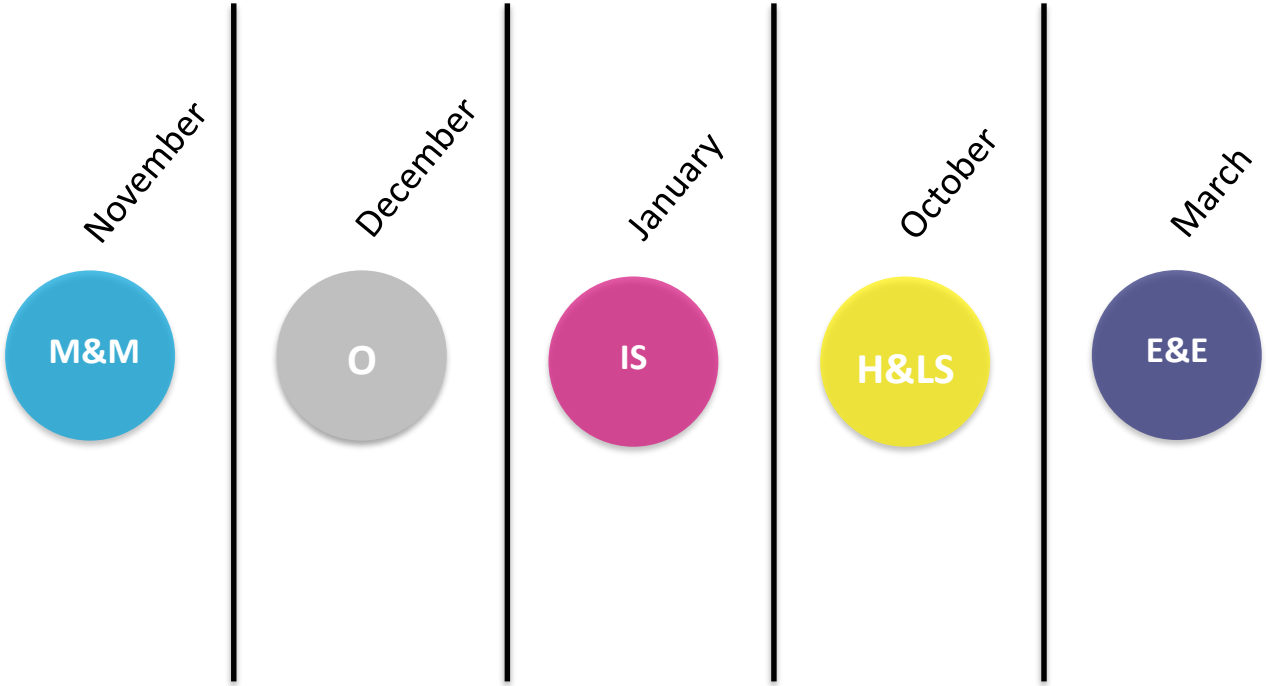
Emerging & Enabling Technologies

E&E

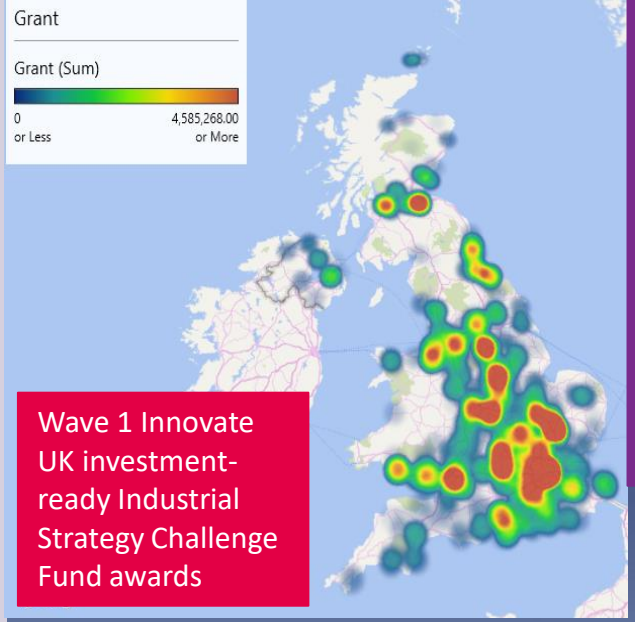

IS
M&M
E&E
H&LS


Open
IS
M&M
E&E
H&LS

Delivery Plan 2017-18

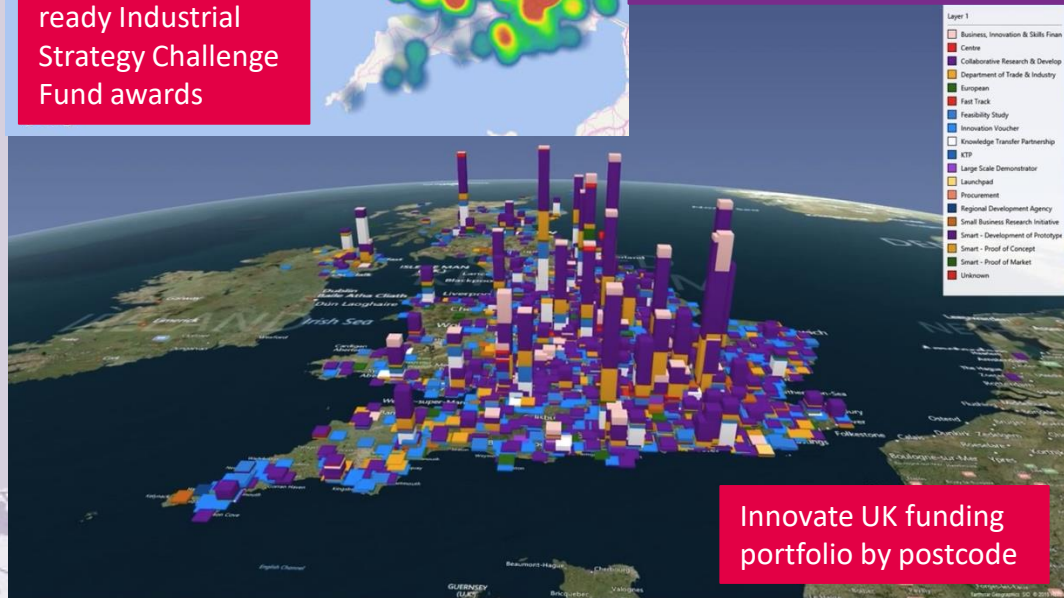


Regional managers based across the UK



Wave 1 Innovate UK investment-ready Industrial Strategy Challenge Fund awards

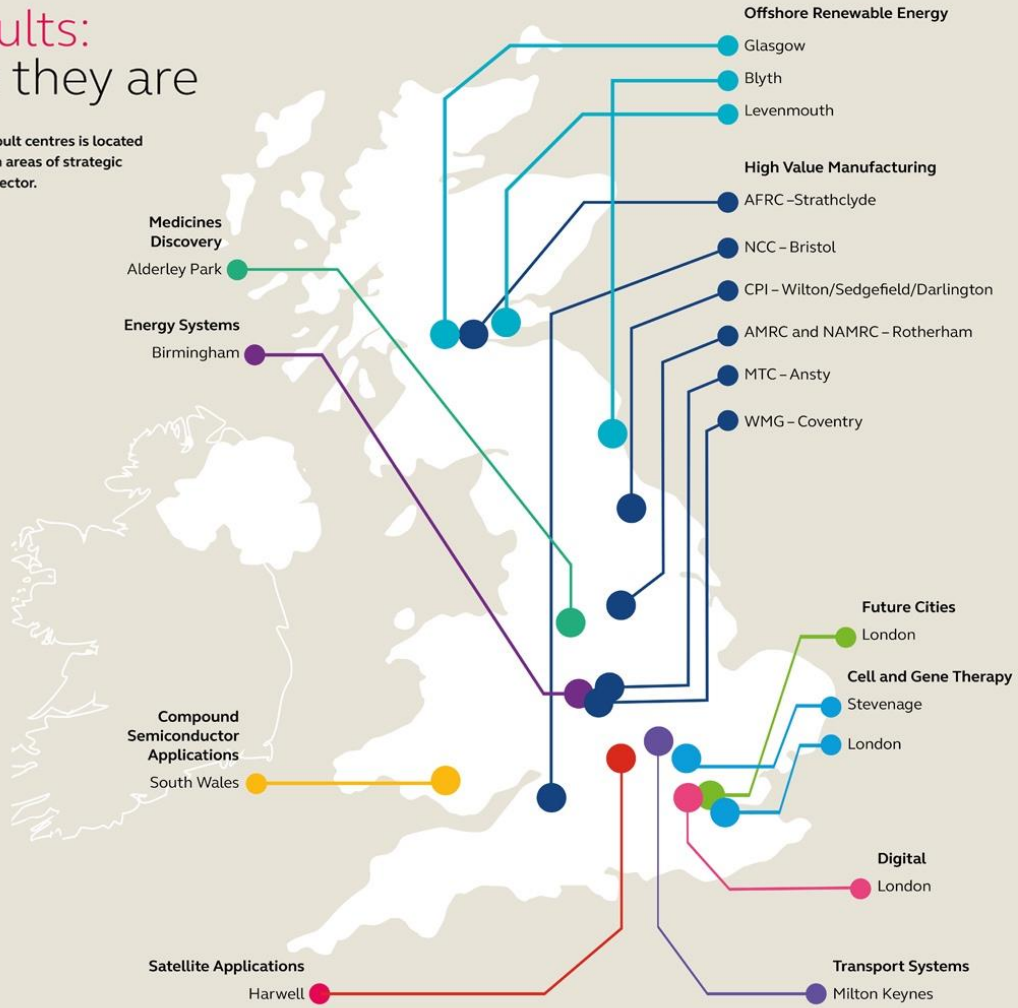
Place is key to innovation. We fund businesses throughout the UK and work closely with stakeholders in the regions and nations.



Innovate UK funding portfolio by postcode

Catapults: where they are

Our network of Catapult centres is located throughout the UK in areas of strategic importance to each sector.



"To innovate, we need open centres where academia and business can get together and drive forward great ideas into manufactured products. And that's what the Catapults are delivering for us."

Juergen Maier, Chief Executive,
Siemens UK

Regional Centres

Digital
North East and Tees Valley
Yorkshire
Brighton
Northern Ireland

Satellite Applications
North East
Scotland
South West
East Midlands
South Coast

Investing in science, research and innovation

We must become a more innovative economy and do more to commercialise our world leading science base to drive growth across the UK

Industrial Strategy Challenge Fund

- Industry-led and powered by multi-disciplinary research and business academic collaboration
- Develop UK industries that are fit for the future, driving progress in technologies where the UK can become a world-leader in research and commercialisation

Industrial Strategy Challenge Fund

Medicines manufacturing technologies

Robots for a safer world

Batteries for clean and flexible energy storage

Self-driving vehicles

Manufacturing and materials of the future

Satellites and space technology

Industrial Strategy Challenge Fund Wave 1 Challenges

£197M to develop first-of-a-kind technologies for the manufacture of medicines to accelerate patient access to new drugs and treatments

£93M to develop AI and Robotic systems that can be deployed in extreme environments such as occur in off-shore energy, nuclear energy, space and deep mining

£252M to develop world leading batteries, designed and manufactured in the UK, to fully exploit the industrial opportunity of vehicle electrification

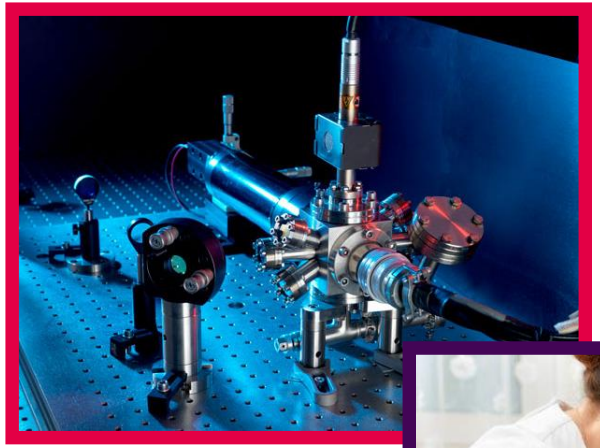
ISCF Wave 1 Challenges

£38M to develop the AI and control systems need to drive vehicles autonomously through complex environments

£26M to develop the next generation of affordable light-weight composite materials for use in aerospace applications

£99M to develop next generation launch technologies and manufacturing and testing capabilities that will allow the UK to construct satellites and deliver payloads into orbit

Next steps for the Challenge Fund…



These are exciting times for UK innovation…

Digital Health Technology Catalyst

Innovate UK

Introduction

- The Digital Health Technology Catalyst (**DHTC**) is a new £35 million funding programme being funded through the Industrial Strategy Challenge Fund over the next 4 years.

- This new Catalyst, created to provide a sustainable pipeline of digital health products designed to meet NHS needs and support the growth of UK companies, was one of the recommendations in the Accelerated Access Review. It aligns with the National Information Board's aims to:

  - address specific market failures so that the digital health sector can grow
  - deliver transformative, cost-effective technologies to patients more quickly

- **AIM**: to speed up the development of new digital solutions to healthcare challenges and grow the industry.
- Projects must focus on the feasibility or development of digital health or digitally-enabled medical technologies. These must have the potential to achieve one or more of the following:
  - improve patient outcomes
  - transform healthcare delivery
  - enable more efficient delivery of healthcare
- Technologies may be designed to be used in both clinical/ non-clinical everyday settings.
- Projects must be innovative and clearly demonstrate how they will address needs of the healthcare system.

Types of projects being funded (but not limited to)

- Informatics
- Data analytics and advanced visualisation
- Clinical decision-making support
- Machine learning
- Digitally enabled medical technologies
- Artificial intelligence
- Augmented reality
- Block chain
- IoT

must

- Improve patient outcomes
- Transform healthcare delivery
- Enable more efficient delivery of healthcare

The time is right!

- Investment
- Forecasted Business Growth
- Appetite
- Landscape
- Time is right

NHS

SME

3rd Sector

Business

Catapults

Research Base

UX Design
NHS Alignment
Adoption
Opportunity
Business Growth
Patient & System
Sustainabil ity
Scalability

Precision medicine: impacting through innovative technology

Innovate UK will invest up to £6 million in innovation projects to support the development of precision medicine (PM) technologies.

Feasibility – for analysis and evaluation of a concept's potential, identify the requirements and resources needed to develop the technology, and establish the prospects of success.

Research and development - for research and development applications, to develop and trial precision medicine technologies. Projects must look to advance precision medicine by guiding decision-making using one of the following approaches:

- Developing tools to better integrate informatics and data.
- Establishing precision medicine clinical trials.
- Developing rapid diagnostics to inform better treatment decisions.

Feasibility projects :

- can last up to 12 months and have total project costs of up to £100,000.
- can be from a single SME or an SME working with other businesses or research organisations collaborative projects led by an SME

Collaborative research and development projects :

- can last up to 24 months and have total project costs of between £1 million to £2 million.
- be collaborative and include at least 2 grant-claiming organisations
- be led by a UK based company or RTO of any size

In this competition we are not funding projects that:

- do not inform treatment decisions
- focus on drug discovery, biomarker discover, diagnostic tests for treatments that are still in development, unless justified as a parallel development, such as a companion diagnostic

Health & Life Sciences Competition 2017 Round 3

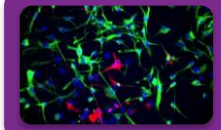
Innovate UK is investing up to £15 million in projects addressing technical or commercial challenges in health and life sciences (H&LS). The aim is to increase competitiveness for UK small and medium-sized enterprises (SMEs).

Competition opened	2nd October 2017
Briefing event for applicants https://tinyurl.com/HLSrnd3	12th October 2017
Application deadline	6th December 2017

Health and Life Sciences – Priority themes

Bioeconomy

Precision and Discovery Medicine



Advanced Therapies

Improving agricultural productivity

Enhancing food quality

Health & Life Sciences Competition Scope

This competition aims to stimulate innovation in H&LS.
Projects must show significant innovation in one of our priority areas:

- increasing agricultural productivity
- improve food quality and sustainability
- advanced therapies (cell and gene therapies),
- precision medicine
- medicines discovery
- preclinical technologies
- advanced biosciences

Proposals must show how projects will enable a step change in competitiveness and productivity for at least one UK SME involved in the project.

Current Competitions

Competition	Amount	Deadline
Precision medicine: impacting through innovative technology	£6m	25th Oct '17
Medicine manufacturing round 1: challenge fund	£15m	1st Nov '17
Establishing UK treatment centres for advanced therapies	£30m	1st Nov '17
Establishing UK medicine manufacturing Innovation centre	£13m	8th Nov '17
Establishing UK vaccine development & manufacturing centre	£66m	22nd Nov '17
Innovation in Health and Life Sciences: Round 3	£15m	6th Dec'17