

UK HealthTech Conference 2016:

**Innovate UK: Health and Life Sciences
Sector**

6th December 2016

Dr Chris Rowe – Innovation Lead - Precision Medicine

Innovate UK

Innovate UK

Delivery Plan

Financial Year
2016 to 2017



5-point plan

1 Working with the research community and across Government to turn scientific excellence into economic impact

2 Accelerating UK economic growth, nurturing small, high-growth companies with strong productivity and export success

3 Building on innovation excellence throughout the UK, investing locally in areas of strength

4 Developing Catapults within a national innovation network

5 Evolving our funding models; helping public funding go further

Sector focus to accelerate growth

Emerging and Enabling Technologies

Identifying and investing in technologies and capabilities that will lead to the new products, processes and services of tomorrow

Health and Life Sciences

Focused on agriculture and food and healthcare, underpinned by bioscience and medical research and enabled by engineering and physical sciences

Infrastructure Systems

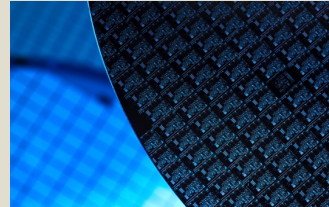
Optimising transport and energy systems and integrating them with other systems such as health and digital

Manufacturing and Materials

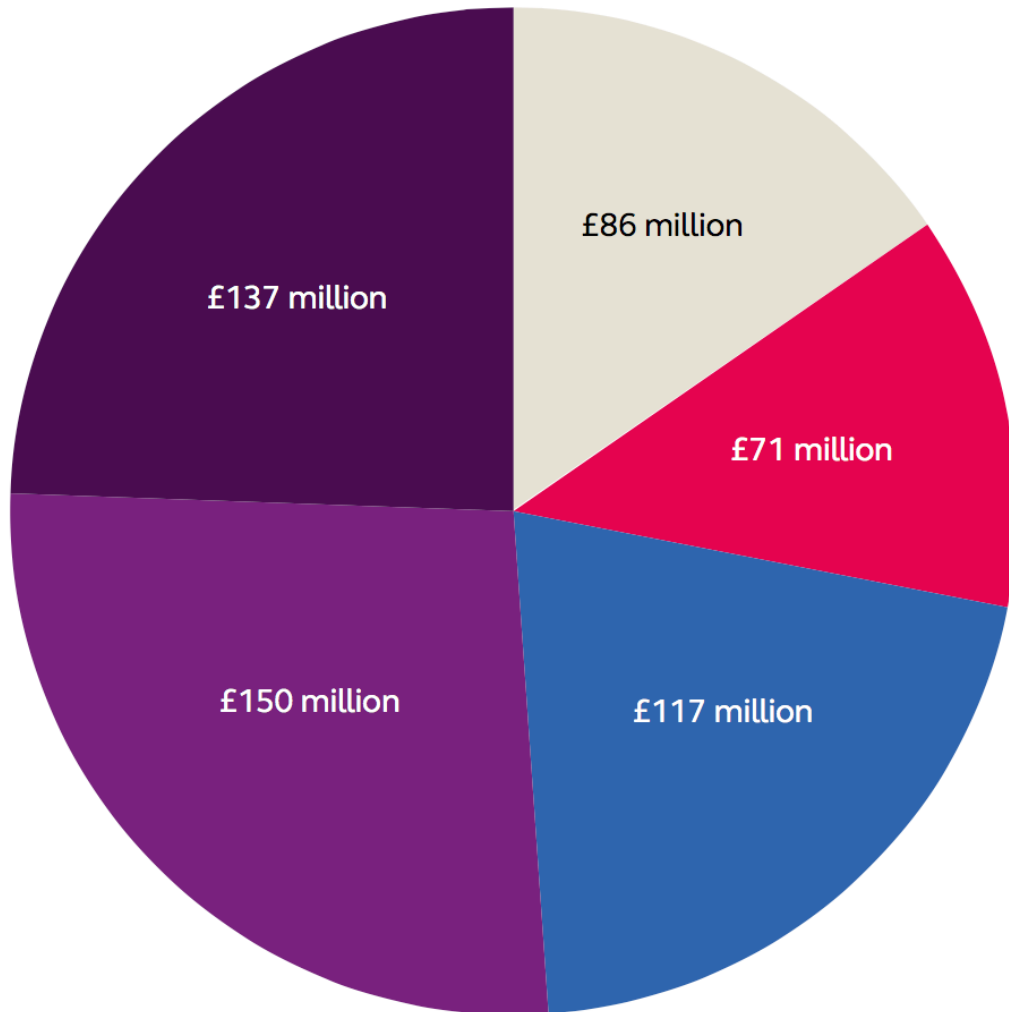
Advancing manufacturing readiness so R&D and technology developments increase productivity and capture value in the UK

* Open

Remaining 'STEM' projects



Our budget



£561m
Core budget
for 2016/17

- Emerging and Enabling Technologies
15%
- Infrastructure Systems
27%
- Open Programme
13%
- Manufacturing and Materials
24%
- Health and Life Sciences
21%

Funding: simpler competitions

- Two broad competitions for funding in each **sector group** this year; each open to a much wider range of applications than previously
- An '**open**' funding programme – with two rounds per year - for applications from any technology area or sector
- Competitions and programmes run in **partnership** with other public sector organisations

Health & Life Sciences Competition - Aims

- 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). The H&LS sector focuses on agriculture, food and healthcare.
- It is supported by bioscience technology, medical research and engineering and physical sciences expertise.

Health & Life Sciences Competition - Streams

Eligibility - All UK businesses

- **Stream 1:** Projects with total eligible project costs of up to £100k and 12 months or less in duration: Up to £5m available in total
- **Stream 2:** Projects with total eligible project costs of up to £2 million or between 12 and 36 months in duration. Up to £10m available in total (£5m up to 2 yrs, £5m up to 3 yrs)

Projects of over £100k must be collaborative. Single SME under £100k

Research Organisations cannot receive a total >30% of funding (*>50% clinical trials)

A company may be involved in up to 3 applications but can only lead in one

Funding levels vary by company category – see **funding rules**

* **All projects must involve an SME**

Health & Life Sciences Competition

Project size and duration

- The innovation project must last between 6 months and 3 years
- We expect projects to range in size from £50,000 to £2 million
- If you wish to apply for a project outside this range but you should contact us at least 10 days before the registration deadline to discuss further
- Project size and duration will depend on the project aims and type of expected outcomes...

Health & Life Sciences Competition Scope

The aim of this competition is to stimulate innovation in H&LS.

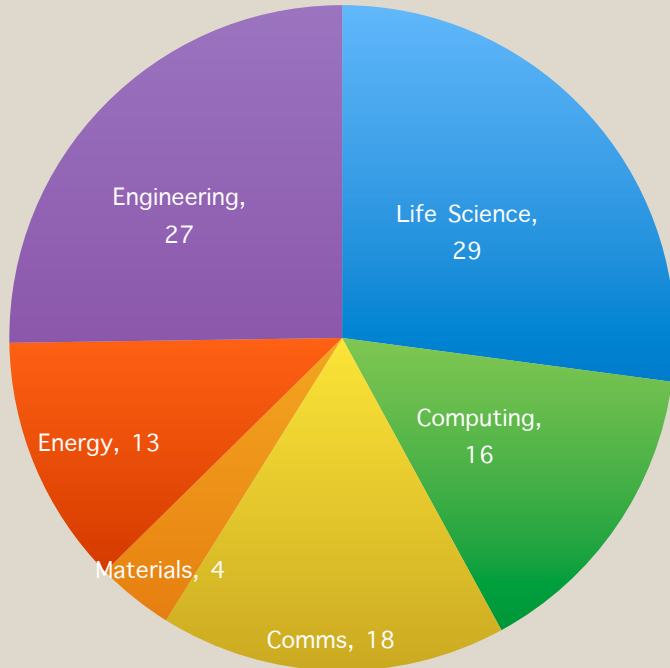
Projects must cover at least one of the following Innovate UK priority areas:

- Increase yield, quality and sustainability in agricultural food production
- Improve precision medicine, advanced therapies, preclinical technologies and biosciences in healthcare

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

Strategy - Agri-food

MOST DISRUPTIVE TECHNOLOGIES FOR AGRICULTURE FROM OUR SURVEY:



AGRI PRODUCTIVITY

- Novel genetics / breeding
- Combating agro-chemical and anti-microbial resistance
- Enhanced resilience to biotic and abiotic stress
- Individualised livestock/aquaculture nutrition & healthcare
- Advanced & Precision Engineering



FOOD QUALITY

- Reducing Sugar, Salt & Fat
- Enhanced nutritional value
- New/smarter ingredients
- Protein development
- Authenticity and Traceability
- Food Safety
- Smarter Packaging
- Modern methods of food manufacturing



Joining up value chains across borders & boundaries
Building on UK strengths & cross sector working
Nurturing disruptive technologies

Health & Life Sciences Competition

Agri-food Scope

We encourage applications featuring:

Increasing agricultural productivity:

- advanced and precision engineering , fighting agro-chemical and antimicrobial resistance, enhanced resilience to biotic and abiotic stress, individualised livestock/aquaculture nutrition and healthcare, novel genetics and breeding

Improved food quality and sustainability:

- authenticity and traceability, enhanced nutritional value, food safety, modern methods of food manufacturing, new and smarter ingredients, protein development , smarter packaging

Health & Life Sciences Competition

Agri-food Out of scope

Increasing agricultural productivity:

- projects on forestry, horses or wild fisheries

Improved food quality and sustainability:

- food processing or manufacturing applications that focus solely on improvements in production efficiency will not be considered. However, these areas may find potential opportunities in future manufacturing and materials competitions
- projects with a primary focus on a health claim (as opposed to a nutrition claim), that would require approval from the European Food Safety Authority

Strategy - Health

Precision Medicine

- capturing value in the UK in therapeutic, diagnostics, algorithm and data companies and demonstrators with the NHS

Advanced Therapies

- capturing value from therapeutics development and manufacturing

Preclinical Technologies

- addressing pharmaceutical preclinical productivity challenges, including capturing more value for UK contract research organisations by validation of potential technologies

Health & Life Sciences Competition

Health Scope

We encourage applications featuring:

Precision medicine:

- paediatrics and child health, stratification in primary care and the community, including direct-to-consumer products, companion diagnostics, antimicrobial resistance, precision medicine and advanced therapies

Advanced therapies:

- development of methods for preclinical evaluation of advanced therapies, preparation and execution of early clinical trials, developing tools and technologies that progress the development of new therapies

Preclinical technologies:

- developing and validating new *in silico*, *in vitro* and *in vivo* medicines testing before human trials, techniques to improve success and safety in drug discovery, approaches relevant to the agrichemical, chemical and personal care industries

Health & Life Sciences Competition

Health Out of scope

Precision medicine:

- diagnostic tests to select for treatments that are still in development, unless justified as a parallel development
- biomarker discovery experiments

Advanced therapies:

- discovery of a new advanced therapy
- large-scale manufacture of cell and gene therapies
- advanced therapies specifically for non-human use

Preclinical technologies:

- extensive validation studies for licensed regulatory bodies
- discovering or developing a new medicine

Strategy - Biosciences

Synthetic Biology

- Gene synthesis & assembly
- Chassis development and strain engineering
- “Parts” characterisation and standards
- Biochemical engineering and modelling
- *De novo* functional design and protein engineering

Computational Systems Biology

- Multilayered *in silico* systems for replicating and predicting biological activity
- Intuitive User Experience systems for complex biodata streams
- Modelling, design and workflow automation systems

Characterisation and Discovery

- Tools offering insight and delivery drivers e.g. speed & quantity to research professionals
- Precision Nutrition
- Research automation and productivity acceleration products & services
- Scalable Point of Use technologies
- Multiplexed or minimally invasive assay platforms

Bio-Based and Sustainable Solutions

- Cells, tissues and communities as bio-manufacturing platforms, e.g. mixed fermentations
- Replacement of unsustainable feedstock with bio-based materials
- Harnessing complex biological communities for industry

Health & Life Sciences Competition

Biosciences Scope

We encourage applications featuring:

- synthetic biology
- computational systems biology
- characterisation and discovery tools
- bio-based and sustainable solutions

Health & Life Sciences Competition

Biosciences Out of scope

Biosciences:

- a technology that could only be used for a single medical, agricultural or food production application – for example, production of a specific biopharmaceutical
- the management and use of biofilms (see Emerging & Enabling Technologies Competition in October)

Other Innovate UK Funding Options

Biomedical Catalyst (BMC):

- Provides a range of grant funding streams that allow a company to progress all the way from establishing feasibility through to a late stage where they will be more attractive to external investors as the product or services will have been derisked through the work carried out in the successive projects and with the endorsement of having been repeatedly successful in obtaining Biomedical Catalyst funding.

** Consider

**Open, Manufacturing & Materials, Infrastructure Systems,
Emerging & Enabling Technologies**

Contact us:

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We can't stop thinking
about the future

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