Agri-tech Catalyst Round 7: agriculture and food systems innovation

Briefing and networking event
London
27th September 2018
Welcome and Introductions

Liliya Serazetdinova – Knowledge Transfer Network (KTN)
Tom Jenkins – Senior Innovation Lead, Innovate UK
Kathryn Miller – Innovation Lead, Innovate UK
Duncan Barker – Livelihoods Advisor, Department for International Development (DFID)
InnovateUK – the UK’s innovation agency

Innovate UK drives **productivity and growth** by supporting businesses to realise the potential of new technologies, develop ideas and **make them a commercial success**.

To **stay competitive as an advanced economy**, we need to do things that others cannot do, or to do things in different and better ways.
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

Up to 8,000 unique organisations involved

For every £1 we’ve invested, up to £7.30

8 jobs for each organisation involved

70,000 jobs created in total

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

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

Innovate UK funding portfolio by postcode

Regional managers based across the UK
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
- Scotland
- South West
- South-East

Transport Systems
- Milton Keynes

Energy Systems
- Birmingham

High Value Manufacturing
- APRC - Strathclyde
- NCC - Bristol
- CFI - Wilton/Sedgefield/Darlington
- APRC and NAMRC - Rotherham
- HTC - Amey
- WMG - Coventry

Medicines Discovery
- Alderley Park

Compound Semiconductor Applications
- South Wales

Future Cities
- London

Cell and Gene Therapy
- Stevenage
- London

Digital
- London
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 – Wave 1**

- **Leading-Edge Healthcare Challenge (including Medicines Mfg)**
  - up to £188m

- **Next Gen. Affordable Lightweight Materials Mfg (ATI projects)**
  - up to £26m

- **Faraday Battery Challenge**
  - up to £246m

- **Autonomous Vehicles (CCAV projects)**
  - up to £38m

- **Robotics and AI in extreme environments Challenge**
  - up to £93m

- **National Satellite Test Facility**
  - up to £99m

*Innovate UK*
Industrial Strategy Challenge fund – Wave 2

- Audience of the future (up to £33m)
- Data to early diagnosis and precision medicine (up to £196m)
- Prospering from the energy revolution (up to £102.5m)
- Healthy ageing (up to £98m)
- Next generation services (up to £20m)
- Quantum technology (up to £20m)
- Transforming construction (up to £170m)
- Transforming food production (up to £90m)
Some relevant funding opportunities

**Productive and sustainable crop and ruminant agricultural systems**

UK businesses can apply for a share of up to £20 million to improve productivity and sustainability across UK crop and ruminant production systems.

- Competition open: Monday 20 August 2018
- Competition close: Wednesday 24 October 2018 12:00pm

**Open grant funding competition: round 3**

Opportunity to apply for a share of up to £20 million to deliver game changing or disruptive innovations with significant potential for impact on the UK economy.

- Competition open: 24 September 2018
- Competition close: 14 November 2018
Competition Scope
Agri-Tech Strategy

- Launched 22 July 2013

- Aims to improve the translation of research into practical application for agriculture and related industries in UK and overseas

- £160M government investment over 5yrs:
  - Agri-tech Catalyst (£70m)
  - Centres for Agricultural Innovation (£90m) – Agri-Tech Centres
Agri Tech Centres

- CHAP – Centre for Crop Health and Protection
- Agri-EPI – Agricultural Engineering Precision Innovation Centre
- Agrimetrics
- CIEL – Centre for Innovation Excellence in Livestock
To date

- £70m investment to support agricultural innovations
- Across 6 rounds
- The Catalyst offers funding for collaborative projects, taking innovative ideas from any sector or discipline with the potential to provide an economic boost to the UK Agri-Tech industry, by tackling challenges in agriculture
- £60m has been invested through Innovate UK and BBSRC
- The Department for International Development contributed £10m to the Catalyst to support the transfer of technology and new products to developing countries
Latest funding available

£10m investment to support three further rounds

Draft timeline for three rounds:

- **Round 7** – 28 August 2018 – 28 November 2018 (open now)
- **Round 8** – 11 February 2019 – 5 June 2019
- **Round 9** – 5 August 2019 – 20 November 2019
Agri-Tech Catalyst and DFID
DFID is investing in the Catalyst to test whether it can increase the pace and scale of uptake of agriculture and food systems innovation by farmers and food systems actors (such as manufacturers, processors, retailers, distributors or wholesalers) in Africa.

- 75% of the poorest people are rural; depend on agriculture, livestock, forestry and fisheries for their livelihoods

- Innovation in developing country agriculture, particularly in Africa is low.

- The share of land area planted with modern varieties in Africa is only 28% compared with 65% globally

- To improve nutrition for all, we need to make changes not only in how food is produced, but also how it is processed, transported, marketed and consumed.
Official Development Assistance and Research

- Official Development Assistance (ODA) is defined as flows to countries and territories on the DAC List of ODA Recipients.

- Only research directly and primarily relevant to the problems of developing countries may be counted as ODA.

- This includes research into tropical diseases and crops for developing country conditions.

- The costs may still be counted as ODA if the research is carried out in a developed country.

www.oecd.org/investment/stats/34086975.pdf
Agricultural Research Priorities

Development of new technology
eg work with BBSRC

Testing interventions and delivery mechanisms
eg Catalyst

A deeper understanding of the complex political, social and economic context that influences success of investments in agriculture development
To improve nutrition for all, we need to make changes in the food we **produce**, and how it is **processed, transported, marketed** and **consumed**.

The food environment from which consumers should be able to create healthy diets is influenced by four domains of economic activity:

- Agricultural production
- Markets and trade systems
- Consumer purchasing power
- Food transformation and consumer demand
Food Systems Conceptual Framework

Taken from the [Global Panel on Agriculture and Food Systems for Nutrition](https://www.globalpanel.org/)

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**FOOD TRANFORMATION AND CONSUMER DEMAND**
Food processing, retail and demand
- Policy options include:
  - Labelling regulations
  - Advertising Regulation
  - Fortification Policy

**MARKET AND TRADE SYSTEMS**
Exchange and movement of food
- Policy options include:
  - Trade Policy
  - Infrastructure
  - Investment
  - Agrifood Business Policy

**FOOD ENVIRONMENT**
Diet quality
- Diversity
- Adequacy
- Safety

**CONSUMER PURCHASING POWER**
Income from farm or non-farm sources
- Policy options include:
  - Work Guarantee Schemes
  - Cash Transfers
  - School Feeding
  - Consumer Subsidies

**AGRICULTURAL PRODUCTION**
Production for own consumption and sale
- Policy options include:
  - Agriculture Research Policies
  - Input Subsidies, Extension Investments
  - Land and Water Access
AgriTech Catalyst Round 7

Ideas must show the potential to deliver impact for poor people through the uptake of agricultural and food systems technology and innovation

Scope of the Catalyst includes:

- primary crop and livestock production including aquaculture
- non-food uses of crops, excluding ornamentals
- challenges in downstream food processing, distribution or storage and value addition
- Improving availability and accessibility of safe, healthy and nutritious foods
Scope

• Your project proposal must aim to benefit African country agriculture and food systems in order to contribute to healthy, safe and nutritious diets.

• Your project’s innovations must:
  - be sustainable in the context of environmental challenges such as climate change and resource scarcity
  - minimise negative effects such as pollution, food losses and waste
  - promote safe, healthy, nutritious diets
Specific themes of interest

The following are priorities for DFID funding. You could consider focusing on one or more themes:

- integrating smallholders into global and local supply chains
- meeting quality standards and improving productivity
- increasing the value of production to smallholders
- innovation that supports food systems to deliver nutritious, healthy and safe food
- control of crop pests, weeds and diseases
- reducing food losses ‘post-farm gate’ and through the value chain
- addressing food safety issues through the value chain
- addressing challenges in downstream food processing, distribution or storage and value addition
- new food technologies and data-driven food systems, including for urban areas
Eligible countries

Angola  Gambia, The
Benin  Ghana
Burkina Faso  Guinea
Burundi  Guinea-Bissau
Cameroon  Kenya
Central African Republic  Lesotho
Chad  Liberia
Congo (Brazzaville)  Madagascar
Congo, Democratic Republic of  Malawi
Côte d'Ivoire  Mali
Eritrea  Mozambique
Ethiopia  Niger

Rwanda  Sao Tome and Principe
Senegal  Sierra Leone
Somalia  South Africa
South Sudan  Sudan
Tanzania  Togo
Uganda  Zambia
Zimbabwe
Further information

To find out more about the Agri-Tech Catalyst, including the competition brief and Guidance for Applicants documents follow this link: https://apply-for-innovation-funding.service.gov.uk/competition/229/overview

DFID’s Conceptual Framework on Agriculture:
Types of project

Innovate UK

- Market readiness
- Commercialisation
- Prod. Prototype
- System Qual.
- System Dev.
- Technology Demo
- Technology Development
- Feasibility
- Knowledge
- Fundamental Research
- Early Stage Feasibility Studies
- Industrial Research
- Experimental Development
- Market Ready Product
Project example – early stage feasibility

Developing rice resistance to two major diseases to help food security in Asia.
Project example – mid stage industrial research

Wheat research and breeding project to **improve food security** in India and Pakistan and benefit UK wheat growers by developing new wheat varieties using an innovative approach to hybridisation.

**Partners**
- KWS UK Ltd
- Indian Agricultural Research Institute
- University of Sydney and Global Crop Innovations PTY Ltd
Project example – late stage

International Partners
1. Dahl Trading Concern, Nepal
2. AGI Formulations Limited, Bangladesh
3. Elgoa Kenya Ltd
4. Byrtrade Tanzania Ltd
5. Bangladesh Agricultural Research Institute (BARI)
6. National Agricultural Research Centre, Pakistan
7. ICIPE, Kenya
8. Association of Mango growers Tanzania
9. CEAPRED, (NGO, Nepal)
10. EPRC, (NGO, Bangladesh)

Decreasing food waste through the control of fruit flies in Asia and Africa.

#agritech @AgriTechGov
Eligibility Criteria
<table>
<thead>
<tr>
<th>Eligibility criteria</th>
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<tbody>
<tr>
<td><strong>Project Eligibility</strong></td>
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<tr>
<td>• must be collaborative</td>
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<td>• must include a UK-based administrative lead</td>
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<td>• must include a partner from an eligible African country, who can be the technical lead</td>
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<td>• must be carried out in the UK or an eligible African country or both</td>
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<tr>
<th><strong>Project costs</strong></th>
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<tbody>
<tr>
<td><strong>Early stage feasibility studies</strong>: £100,000 to £500,000, 12 to 18 months.</td>
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<tr>
<td><strong>Mid stage industrial research</strong>: £250,000 to £1 million, up to 3 years.</td>
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<tr>
<td><strong>Late stage experimental development</strong>: £150,000 to £800,000, up to 18 months.</td>
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Projects must start by 1 April 2019
Early stage and mid stage projects

<table>
<thead>
<tr>
<th>UK</th>
<th>Developing Country</th>
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<tbody>
<tr>
<td></td>
<td>Research</td>
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<tr>
<td>Eligible:</td>
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<tr>
<td>Option 1</td>
<td>x</td>
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<td>Option 2</td>
<td>x</td>
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<td>Option 3</td>
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<td>Option 4</td>
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<td>Option 8</td>
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<td>Not eligible:</td>
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<td>Option 9</td>
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<td>Option 10</td>
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<td>Option 11</td>
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Late stage experimental development

<table>
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<th>UK</th>
<th>Developing Country</th>
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<tr>
<td>Business</td>
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<td>Eligible:</td>
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<tr>
<td>Option 1</td>
<td>X</td>
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<tr>
<td>Not eligible:</td>
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<tr>
<td>Option 2</td>
<td>X</td>
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<tr>
<td>Option 3</td>
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For Early Stage feasibility studies and industrial research awards, you could get up to:

- 70% of eligible project costs for micro or small business
- 60% for medium-sized business
- 50% for large business

For experimental development projects which are nearer to market, you could get up to:

- 45% of eligible project costs for micro or small business
- 35% for medium-sized business
- 25% for large business
Research partner participation rules

- For early-stage feasibility studies and mid stage industrial research projects the total costs for your research partners must not exceed 50% of the total project costs.
- If your consortium contains more than one research organisation, this maximum will be shared between them.
- For late stage experimental development projects: research base partners cannot claim funding but can participate as subcontractors.
- Universities can claim 100% (80% of Full Economic Costs).
- Other research organisations can claim 100% of their project costs.
- Public Sector Organisation or Charity can claim 100% of their project costs.
<table>
<thead>
<tr>
<th>Timeline</th>
<th>Dates</th>
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<tr>
<td>Competition Open date</td>
<td>28&lt;sup&gt;th&lt;/sup&gt; August 2018</td>
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<tr>
<td>Online Briefing Event</td>
<td>10&lt;sup&gt;th&lt;/sup&gt; September 2018</td>
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<tr>
<td>Briefing Event</td>
<td>27&lt;sup&gt;th&lt;/sup&gt; September 2018</td>
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<tr>
<td>Brokerage event – Edinburgh</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; October 2018</td>
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<td>Registration deadline</td>
<td>21&lt;sup&gt;st&lt;/sup&gt; November 2018</td>
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<td><strong>Submission Deadline</strong></td>
<td><strong>28&lt;sup&gt;th&lt;/sup&gt; November 2018 Noon</strong></td>
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<td>Applicants informed</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; March 2019</td>
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Application process
Application process

Register for the competition
Via competition website – application form will be emailed

Download finance form
Finance Form – for all non-academic partners claiming grant

Complete and submit documents
Use all of the space provided. Upload documents to the FTP site. Don’t leave submission until the last minute!

Scope check
Applications that are in scope will be sent for assessment. We will assign appropriate assessors to each application

Assessment and portfolio selection
Applications will be assessed by independent assessors. Innovate UK and DFID will select a portfolio from the highest quality applications

Notify applicants
By date provided

Feedback
Within 4 weeks of receiving your notification
Project Details

• Application Details
  - Title, Timescales, Research Category, Innovation Area

• Project Summary
  - Short summary and objectives of the project including what is innovative about it

• Public Description
  - Description of your project which will be published if you are successful

• Scope
  - How does your project align with the scope of this competition?
  - If your project is not in scope, it will be ineligible for funding and not sent for assessment.
<table>
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<tr>
<th>Application form</th>
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<tbody>
<tr>
<td><strong>Application details</strong></td>
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<tr>
<td><strong>Summary of proposed project</strong></td>
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<tr>
<td><strong>Public description of the project</strong></td>
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<td><strong>Gateway Question</strong></td>
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<td><strong>Question 1</strong></td>
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<td><strong>Question 9</strong></td>
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<tr>
<td><strong>Question 10</strong></td>
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<tr>
<td><strong>Other funding from public sector bodies</strong></td>
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<tr>
<td><strong>Finance summary table</strong></td>
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Question 1:

What is the business opportunity that this project addresses?

Outline the business opportunity and what the project team needs to do to successfully address it within the preferred timeframe and cost.

Describe the nature of the problems or issues facing you and/or your potential customers. How will the intended outputs of the project respond to these problems and issues?
Question 2:

What is the size of the market opportunity that this project might open up?

Describe the size of the market opportunities that this project might open up, including details of:

- the current nature of the specific market or markets at which the project is targeted, including whether it is characterised by price competition among commoditised suppliers or dominated by a single leading firm
- the dynamics of the market, including measuring its current size, and actual and predicted growth rates
- the projected market share for the project outcome, with justification in the light of any potential competitors
- the potential to add value to the economy of the developing country partner and/or the UK or European Economic Area (EEA)

Describe and clearly measure the return on investment that the project could achieve. Provide relevant source data references.

Where possible provide evidence for your statements about the target market for project outcomes. Outline your strategy for developing market share.

For highly innovative projects (see question 6) where the market may be unexplored, explain:

- what the route to market could or might be
- what its size might be
- how the project will explore the market potential
Question 3: How will the results of the project be exploited and disseminated?

List or describe the potential exploitable outputs of the project such as:

- products or services
- processes
- applications

Then describe how these outputs will be exploited including, where applicable:

- the route to market
- protection of intellectual property rights
- reconfiguration of the value system
- changes to business models and business processes
- other methods of exploitation and protection
Question 4:

Why is the project eligible for Official Development Assistance (ODA) funding and how is it compliant with the International Development (Gender Equality) Act 2014?

To be eligible for DFID funding, applicants must clearly explain and give evidence for why and how their project fits within scope for Official Development Assistance (ODA) and the Gender Equality Act (GEA).

What outcome or impact is the project expected to deliver for members of the consortium and for poor people in the target country, and over what timescale?

Proposals will be considered out of scope if they do not:

• show how they aim to ensure sustainable development, and thereby contribute to a reduction in poverty, or

• have the potential to improve the welfare of people in a developing country, including considering the impact on gender issues

You must explain how the project will, or has the potential to, deliver outcomes and impact in agriculture and food systems in Africa. How will it particularly help the poorest members of society, including women, girls and other disadvantaged groups? Explain what those benefits are and who will benefit.

Describe the benefits to project partners and the target country, and make a clear distinction between the two.

You must upload an appendix (appendix Q4) to support this question. You should use a maximum of 2 sides of A4, in PDF format.
Question 5: What technical approach will be adopted and how will the project be managed?

Provide an overview of the technical approach including the main objectives of the work. Describe the main areas of work together with their resource and management requirements. State who will be the technical lead and why they are suitable.

In evaluating this the assessors will consider whether:

• the technical approach and methodology are appropriate to the needs of the project
• the innovative steps are achievable through the proposed approach
• the project plan is sufficient for the complexity of the project, including whether there is detail to understand the tasks involved and the resources required
• the main milestones are realistic
• it demonstrates sufficient resource commitment and capability to undertake the project
• clear management reporting lines are identified
What is innovative about this project?

Identify the extent to which the project is innovative, both commercially and technically.

In evaluating this section, assessors will consider whether:

• it pushes boundaries over and beyond current leading-edge world science and technology
• it is looking to apply existing technologies in new areas

Highlight and explain the timeliness and novelty of the research aspects of the project in an industrial and/or academic context.

Describe any evidence you have to back up your belief that the intended work is innovative. This could include the results of patent searches, competitor analyses, literature surveys and so on. If applicable, you should also outline your own background intellectual property rights, as related to the project.
Question 7: What are the risks (technical, commercial and environmental) to project success? What is the project’s risk management strategy?

Innovate UK recognises that projects of this type are inherently risky, but we look for assurance that the projects we fund have adequate arrangements for managing this risk. Focus, therefore, on the arrangements for managing and mitigating risk by:

• identifying the main risks and uncertainties of the project and providing a detailed risk analysis for the project content and approach. Include the technical, commercial, managerial and environmental risks as well as other uncertainties (for example ethical issues) associated with the project. The main risks should then be rated as high, medium or low (H/M/L)

• stating how the project would avoid these main risks. You should tackle all significant and relevant risks and their mitigation

• identifying vital project management tools and mechanisms that will be used to help minimise operational risk and promote a successful project outcome. This should include arrangements for managing the project team and its partners

You may submit a risk register as an appendix (Appendix Q7) in PDF format up to 2 A4 pages long to support your answer.
Question 8:

Do the project team have the right skills, experience and access to facilities to deliver the identified benefits?

Describe the track record of the project team members in undertaking and exploiting the results of R&D projects. This should highlight your capability to develop and exploit the technology.

Describe or explain:

• the track record of the project team members in undertaking and exploiting the results of R&D projects. This should highlight your capability to develop and exploit the technology.

• the roles, skills and experience of all members of the project that will enable you to deliver the project successfully

• your formation objectives

• whether the team would have been formed without Innovate UK investment

• the additional benefits that will come from the collaboration, such as increased knowledge transfer

• the details of any vital external parties, including sub-contractors, who you will need to work with to successfully carry out the project

You may submit a single appendix (Appendix Q8) in PDF format up to 2 A4 pages long to support your answer to this question.
What is the financial commitment required for the project?

Detail the estimated project cost, making clear the level of contribution from any project participants and the level of funding required. This information should be provided in the financial summary table in the application form.

Provide supporting information and an explanation of project costs. These must be consistent with the category of R&D being undertaken within each work package. Please see the guidance section of our website for further details on our funding rules.

Important: If the project spans more than one type of funding (for example because significant work packages are in both feasibility studies and experimental development), you must describe and justify the breakdown of costs between them within the answer to this question.
Question 10:

How does financial support from Innovate UK and its funding collaborators add value?

Provide evidence that successful delivery of your project will increase the total amount of money the project team spends on R&D in the UK. And either:

• why the funding is required for the project to be able to proceed or

• how funding through this competition would allow you to undertake the project differently, such as faster to market, more partners and reduced risk and why this would be beneficial to the UK
Applicant briefing webinar

- Information about the competition brief, Guidance for Applicants documents and recording of the Applicant Briefing from 10 September are available at:

https://apply-for-innovation-funding.service.gov.uk/competition/229/overview

- Includes a recording providing detailed information about the competition process and funding rules from our Competitions team
Assessment
Application Assessment

All applications are assessed by independent assessors drawn from industry and academia.

What do they look for?

- **Clear and concise** answers
- **The right amount of information**
  - not too much detail
  - no assumptions
- **Quantification and justification**
- A proposal that presents a **viable opportunity for growth**, a **level of innovation** that necessitates **public sector investment** and has the right **team and approach** to be successful.

Keep your assessors engaged and interested in your proposal. You want them to be fascinated and excited by your idea!
Contact us:

Customer Support Services: 0300 321 4357 (Mon-Fri, 9am-5:30pm)
support@innovateuk.gov.uk

Knowledge Transfer Network:
https://ktn.innovateuk.org

Innovate UK:
https://www.gov.uk/government/organisations/innovate-uk
Thank You