Public private partnerships

*Oats 2020 Conference*
*Manor Hotel Meriden*
*23rd Nov 2015*

*Dr Tom Jenkins*
*Lead Technologist - AgriFood*

**Innovate UK**
UK’s innovation agency for business...

We accelerate **economic growth** by stimulating and supporting **business-led innovation**.

**A focus on business...**

How can we help UK business bring new ideas and technologies more quickly to market?
Adding an estimated £7.5bn to the UK economy and creating an average of 7 jobs per company we have worked with.
Sustainable Agriculture & Food Innovation Platform

A £90m+ programme of investment over 5 years from 2010–14

**Objective:** to help UK businesses develop innovative technologies, production systems and supply chain solutions that will sustainably increase the productivity of the UK Agri-food sector, whilst reducing its environmental impact.

co-funded by:
Challenge led calls... the last 5 years

- New Approaches to Crop protection (2010)
- Sustainable Protein Production (2011)
- Food Processing & Manufacturing Efficiency (2012)
- Nutrition For Life (2011 & 13)
- Trait Measurement Technologies (2013)
- Engineering Solutions (2013/14)
- Crop & Livestock Disease Control (2014)
- Agrifood Supply Chain KTP (2014/15)
- Improving Food Supply Chain Efficiency (2014/15)
Some examples of projects funded through SAF-IP

A novel and interactive sensor system for monitoring and predicting *Sclerotinia* stem rot (*Sclerotinia sclerotiorum*) outbreaks in Oilseed Rape (OSR)
Some examples of projects funded through SAF-IP

Enhancing aquaculture sustainability through development of novel fish-feed

Developing technologies to enable the replacement of fishmeal with plant protein sources that provide superior protein conversion, growth and meat quality in farmed fish
Some examples of projects funded through SAF-IP

Digital imaging for phenotyping root crops

Automated phenotyping to evaluate traits in root crops through 3D imaging and software design

High throughput phenotyping screens will inform Molecular Assisted Selection to fast-track plant breeding

Project initially targets parsnip and will ultimately be rolled-out to other root crops (swede, turnip) and leafy brassicas
Some examples of projects funded through SAF-IP

Measurement of plant growth & health for optimum yield in LED horticulture

Development of plant sensors to detect growth, photosynthesis, health and requirements for light

Sensors will feedback to ‘smart’ LED based energy system to control intensity and spectral quality in real time

Project will reduce waste through precision ‘just in time’ harvest to regulate pace of growth and quality of produce.
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)
The UK Strategy for Agricultural Technologies, published in July 2013, committed £90m to establish centres for agricultural innovation.

The aim of this agri-tech strategy is to encourage businesses to develop, adapt and exploit new technologies.

Government has already allocated £10m to set up the first centre for agricultural innovation in the area of agricultural informatics and sustainability metrics. We are now looking for prospective consortia to form other centres for agricultural innovation.

https://www.gov.uk/government/publications/centres-for-agricultural-innovation/centres-for-agricultural-innovation
Agri-Tech Catalyst
Helping to commercialise UK agricultural innovation

UPDATED FOR ROUND 5 ONWARDS
Agri-Tech Catalyst – award types

**EARLY-STAGE AWARDS**

These projects will explore the commercial potential of an early-stage scientific idea through feasibility studies.

**Key features**

Projects can be business-led or research-led

**Duration:** up to 18 months

**Total project costs:** £150k to £500k

**Total research base partner costs** must not exceed 50% of total project costs

**Business partner funding:** up to 55% of their total project costs for SMEs or 45% for larger companies

**INDUSTRIAL RESEARCH AWARDS**

These projects will aim to develop innovative solutions, e.g., through technology development, lab-based prototyping, product development planning, field trials and market testing.

**Key features**

Projects must be business-led

**Duration:** up to three years

**Total project costs:** up to £3m

**Total research base partner costs** must not exceed 50% of total project costs

**Business partner funding:** up to 45% of their total project costs for SMEs or 35% for larger companies

**LATE-STAGE AWARDS**

These experimental development projects will evaluate or trial the commercial potential of an innovative concept in a real-life environment.

**Key features**

Business-led projects to support individual companies, or business partners working in collaboration*. These projects will test and validate innovative concepts in a commercial environment to demonstrate their economic and technical feasibility ahead of large-scale deployment.

**Duration:** up to 12 months

**Total project costs:** up to £1m

Research base partners may only participate as subcontractors to a business partner

**Business partner funding:** up to 35% of their total project costs for SMEs or 25% for larger companies

* Projects targeting international development must include UK and developing country business partners.
Types of Project

Market readiness

Innovate UK and its co-funders funding

Research Councils

Feasibility

Technology Development

Technology Demo

System Dev.

System Qual.

Prod. Prototype

Commercialisation

Investment/Venture Capital

Fundamental Research

Pre-industrial Research

Industrial Research

Experimental Development

Market Ready Product
Examples of Early Stage Awards

Developing a **robotic weed sprayer** for **hilly** and other **difficult terrain** farm land.

**Partners**

- Digital Concepts Engineering Ltd
- G32 Technologies Ltd
- Hunshelf Hall Farm
Examples of Early Stage Awards

Developing rice resistance to two major diseases to help food security in Asia.

Partners

Bangor University

International Partners
1. Anamoli, Nepal
2. Sher-e-Kashmir University of Agricultural Sciences and Technology, India
3. National Agricultural Research Centre, Pakistan
Examples of Industrial Research Awards

Developing antimicrobial technology to control disease in potato production, the commonest reason for failing quality inspections - reducing financial losses.

Partners

1. Agrico UK Ltd
2. Advanced Pest Solutions Ltd
3. Scottish Agronomy Ltd
4. Science and Advice
   Scottish Agriculture (SASA)
5. McCain Food (GB) Ltd
6. Branston Ltd
Examples of Industrial Research Awards

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
Examples of Late Stage Awards

This project will build the UK’s first aquaponic urban farm, to quantify the economic and environmental potential of sustainable urban farming.

Partners:
- Sterner AquaTech UK
- I + S Associates
- GrowUp Urban Farms
- Ove Arup & Partners Limited
Examples of Late Stage Awards

Partners

- Russell IPM Ltd

International Partners
1. Dahal Trading Concern, Nepal
2. ACI Formulations Limited, Bangladesh
3. Elgon Kenya Ltd
4. Bytrade 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
Round 5 Key dates:

<table>
<thead>
<tr>
<th>Time line</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Competition Opens</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; June 2015</td>
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<tr>
<td>Briefing Event</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; July 2015 – Slides online</td>
</tr>
<tr>
<td>Registration for EoI for Ind Research</td>
<td>Now Closed</td>
</tr>
<tr>
<td>IR Stage 2 opens for invited applicants</td>
<td>Noon 9&lt;sup&gt;th&lt;/sup&gt; November 2015</td>
</tr>
<tr>
<td>Registration deadline (Early and Late stage)</td>
<td>Noon on 13 Jan 2016</td>
</tr>
<tr>
<td>Submission of Full stage application – including Je-S submission, finance forms &amp; appendices</td>
<td>Noon 20&lt;sup&gt;th&lt;/sup&gt; Jan 2016</td>
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New £10m Competition
Now Open

Optimising Food Composition
Fat, Sugar, Salt & Fibre

5th October 2015
## Key Dates

<table>
<thead>
<tr>
<th>Time line</th>
<th>Dates</th>
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<tr>
<td>Competition Opens</td>
<td>5(^{th}) October 2015</td>
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<tr>
<td>Briefing Event</td>
<td>14(^{th}) October 2015</td>
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<tr>
<td><strong>Registration Closes</strong></td>
<td>Noon 18(^{th}) November 2015</td>
</tr>
<tr>
<td>Submission of Expression of Interest applications</td>
<td>Noon 25(^{th}) November 2015</td>
</tr>
<tr>
<td>Applicants informed</td>
<td>End of business 18(^{th}) December 2015</td>
</tr>
<tr>
<td>Stage 2 opens for invited applicants</td>
<td>8(^{th}) February 2016</td>
</tr>
<tr>
<td><strong>Submission of Full stage application – including Je-S</strong></td>
<td>Noon 10(^{th}) March 2016</td>
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<tr>
<td>submission, finance forms &amp; appendices</td>
<td>Date and location TBC</td>
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<tr>
<td>Decision to applicants</td>
<td>End of business 13(^{th}) May 2016</td>
</tr>
<tr>
<td>New projects workshop</td>
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New £3.75m Competition

Improving the productivity of Agri-Food systems using satellite technology

16th November 2015
Improving the productivity of Agri-Food systems using satellite technology

- AKA “Satellite Food”
- Aim is to stimulate innovation to improve the productivity of agri-food systems using satellite technology
  - Also to drive efficiency in and improve sustainability of the agri-food supply chain
- Up to £3.75m will be invested in business led, collaborative projects addressing the scope
  - Combination of technical feasibility and collaborative R&D activities.
  - Co-funded with NERC
Improving the productivity of Agri-Food systems using satellite technology

Key Dates:

<table>
<thead>
<tr>
<th>Event</th>
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<tbody>
<tr>
<td>Competition opens</td>
<td>16 November 2015</td>
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<tr>
<td>Consortia building</td>
<td>07 October 2015</td>
</tr>
<tr>
<td>Competition briefing</td>
<td>19 November 2015</td>
</tr>
<tr>
<td>Registration deadline</td>
<td>noon 17 February 2016</td>
</tr>
<tr>
<td>Deadline for receipt of applications</td>
<td>noon 24 February 2016</td>
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</table>
Where to go for further help...

Knowledge Transfer Network

Agriculture
David Telford:
tel: 07912 580613
e-mail: david.telford@ktn-uk.org

Tristan Eagling
tel: 07702 713805
Email: tristan.eagling@ktn-uk.org

Callum Harvey:
tel: 07875225715
e-mail: callum.harvey@ktn-uk.org

Liliya Serazetdinova:
tel: 07974 171845
Email: liliya.serazetdinova@ktn-uk.org

Food
Simon Baty
tel: 07931 511641
e-mail: simon.baty@ktn-uk.org

Serina Broadway
tel: 07826 505756
e-mail: serena.broadway@ktn-uk.org
Customer Support Services

Tel: 0300 321 4357 (Monday-Friday, 9am-5:30pm)

E-mail: support@innovateuk.gov.uk

Innovate UK

North Star House, North Star Avenue, Swindon SN2 1UE
Tel: +44 (0)1793 442 700
Email: support@innovateuk.gov.uk
www.innovateuk.gov.uk
## Improving Agricultural 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

## Enhancing 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

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**Resilience to Biosphere Impacts**

**Nurturing / Enhancing Natural Capital**

**Circular bio-economy**

**Joining up value chains across borders & boundaries**

**Building on UK strengths & cross sector working**

**Nurturing disruptive technologies**
Opportunities over next 5 years

• Capitalise on our expertise in Crop and Livestock sciences
  – Genetics/health and protection/nutrition etc
• Exploit reputation for quality Food & HVM
  – inc smart packaging, nutrient dense food, alt. protein etc
• Connect the family of AgriTech Centres – “Catapult-like”
• AgriFood data – inc. 8,000 DEFRA datasets
• The “Rural Powerhouse” – regional clustering
• Transform productivity with large Scale demonstrators
  – e.g. precision agriculture
• Leverage natural capital / de-risk the circular bio-economy
• Capitalising on Untapped Investor “follow on funding”
• Build bilateral international collaboration