Competition for funding

Improving food supply chain efficiency

Deadline
26 November 2014

COLLABORATIVE R&D
Innovate UK, together with the Department for Environment, Food and Rural Affairs (Defra) and the Biotechnology and Biological Sciences Research Council (BBSRC) are to invest up to £11m in business projects to improve the resource efficiency and resilience of the food and drink supply chain.

The aim of this competition is to help companies develop innovative ways to:
- reduce the production of waste
- use resources such as energy, water and raw materials more efficiently
- improve the productivity of food manufacturing and processing operations
- improve the resilience of the food supply chain by making better use of resources on food systems.

Proposals must be collaborative and business-led. We expect to fund mainly industrial research projects in which a business partner will generally attract up to 50% public funding for their project costs (60% for SMEs).

We expect projects to range in size from total costs of £250k to £1m, although we may consider projects outside this range.

This is a two-stage competition that opens for applicants on 13 October 2014. The deadline for expressions of interest is at noon on 3 December 2014.

A webinar briefing for potential applicants will be held on 15 October 2014. Several consortium-building/networking events will be organised in support of this competition. For more information, go to https://agrifoodsupplychainevent.eventbrite.co.uk

Background
The agri-food supply chain, spanning primary production through to final retailing and catering, contributed £97.1bn or 7.4% to national gross value added (GVA) in 2012. Consumer expenditure on food and drink exceeds £196bn annually and UK exports of food, feed and drink were valued at £18.9bn in 2013. There are 3.6 million people employed across the whole food supply chain, including agriculture and fishing.

An increasing population, combined with greater economic development allowing higher levels of consumption, means that by the middle of this century global food demand is expected to increase by 50-70%. At the same time, the food supply chain will be subject to increasing environmental stresses through competition for limited resources, the impacts of climate change, water availability, soil degradation and biodiversity loss.

As well as improving primary production through sustainable intensification, we need to reduce the production of waste, use resources such as energy, water and raw materials more efficiently, improve the productivity of food manufacturing and processing operations, and improve the resilience of the food and drink supply chain by making better use of resources and reducing environmental stresses on food systems.

Businesses that develop technologies to address these issues can improve their competitiveness and export potential, which in turn will support a circular economy that is more resilient to supply chain risks.

Scope
We are inviting proposals that have the potential to significantly improve the resource efficiency or resilience of the food and drink supply chain (beyond primary production). Specifically, proposals should address one or more of the following high-level challenges:
- a reduction in the production of waste in the food and drink supply chain
- more efficient use of resources such as energy, water and raw materials
- improvement in the productivity of food and drink manufacturing and (re)processing operations
- improvement in the resilience of the food and drink supply chain by making better use of resources, reducing environmental stresses on food systems and assuring food quality.
We expect there will be a range of approaches to these challenges.

**Product and process design**
- development of novel formulations, additives and ingredients for lower impact processing (including of novel/underexploited raw materials), improved storage, longer shelf life or less waste in the home
- flexible processing systems able to adapt to variability in raw material supply to meet consumer demand without reducing product quality or nutritional content
- novel packaging systems or components to promote re-use or recycling, increase shelf life or help reduce consumer waste
- modelling of food processes, application of sensor technologies (optical, broader electromagnetic spectrum, ultrasound), multivariate data acquisition, flexible and efficient systems for process design and optimisation

**Novel manufacturing and (re)processing technologies**
- process and systems automation or robotics to increase efficiency, ensure quality and improve flexibility in food processing, manufacture, catering and distribution
- new and developing technologies to transform ingredients into food (for example, high-pressure processing, pulsed light, power ultrasound, cold plasma, pulsed electric field, non-mechanical refrigeration)
- fermentation or enzyme-based processing technologies; separation and extraction technologies that enable more efficient use of raw materials or reprocessing of by-products
- technologies for efficient use, recovery and re-use of water and energy (for example, capture of low-grade heat, use of non-potable water)
- hygienic design and management for efficient processing (for example, novel low-water cleaning technologies)
- process intensification (for example, processes that have a smaller footprint, or are portable, more flexible or agile and may allow late customisation of product or distributed manufacture)
- novel technology (for example, systems, engineering) that reduces the environmental impact and/or cost of processing, storage or distribution, reduces waste or increases shelf life
- new solutions to upgrade or derive added value from out-of-specification materials, co-products and waste streams; processes for the efficient recovery of nutrients from food waste-derived streams

**Distribution, storage and the supply chain**
- novel technologies for avoidance or early-detection of product contamination
- novel storage and packaging systems (including use of smart or intelligent systems)
- innovative methods of cooling, chilling, freezing, thermal processing, dehydration to increase efficiency of food distribution and extend product life
- supply chain modelling and management (including cold chain), including forecasting approaches such as vendor-controlled inventory to manage supply chain demand fluctuations
- system-based approaches – development of sustainable and resilient processes, systems and services that address critical control points in the supply chain
- technologies that facilitate the reduction of consumer food waste, for example personalisation of products through distributed manufacture.

The primary focus of this competition is to improve the resource efficiency and resilience of the food supply chain post-primary production. However, we recognise many innovations bring wider benefits such as improving product quality, retention and availability of nutrients. These benefits should be described in your application as they may help differentiate your proposal.

**Funding allocation and project details**

We have allocated up to £11m to fund collaborative R&D projects that address the technical challenges outlined in the scope.

Successful project participants can attract grant funding towards their eligible project costs. The percentage of costs that we pay varies, depending on the type of research being carried out and the type of organisation involved.

For this competition, projects must be business-led and collaborative. Projects may last up to three years. We are seeking primarily to fund industrial research with a business partner attracting up to 50% public funding for their project costs (60% for SMEs) but will also consider projects that include demonstration activities. For demonstration activities, businesses attract 25% funding for their project costs (35% for SMEs). The total proportion of all research partner costs should not exceed 30% of total project costs.

We expect total project costs to range in size from £250k to £1m. We may consider larger projects, in particular where there is a demonstration component, but applicants should contact us directly before making their application.

Each partner in a collaborative R&D project can receive funding towards their project costs - the funding is a percentage of the total eligible project costs and varies, depending on the type of organisation and the type of research. For general guidance on how projects are funded see: [www.innovateuk.org/-/funding-rules](http://www.innovateuk.org/-/funding-rules).

**Looking for partners to work on your project?** Go to: [connect](http://www.innovateuk.org/connect) to find collaborators and networks.

[www.innovateuk.org/agri-tech-catalyst](http://www.innovateuk.org/agri-tech-catalyst)
Application process

This is a two-stage competition that opens for applicants on 13 October 2014.

**Stage 1** - Applicants submit an expression of interest which is assessed.

**Stage 2** - We invite selected applicants to submit an application.

The deadline for expressions of interest is noon 3 December 2014.

The second stage deadline for invited applications is at noon on 5 January 2015.

Applications are assessed on individual merit by an independent panel of experts. We may apply a portfolio approach across the themes/areas, subject to applications meeting the required quality threshold.

Several consortium building/networking events will be organised by the Knowledge Transfer Network in support of this competition. For more information and to register, see [https://agrifoodsupplychainevent.eventbrite.co.uk](https://agrifoodsupplychainevent.eventbrite.co.uk)

A webinar briefing for potential applicants will be held on 15 October 2013 to highlight the main features of the competition and explain the application process. Applicants are strongly recommended to participate in this event.

**Note:** All deadlines are at noon

### Key dates

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<td>Competition opens</td>
<td>13 October 2014</td>
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<td>Competition briefing</td>
<td>15 October 2014</td>
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<td>Registration deadline</td>
<td>26 November 2014 noon</td>
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<td>Expressions of interest (EOI) deadline</td>
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<td>Stage 2 opens for invited applicants</td>
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<td>12 February 2015 noon</td>
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More information

For more information and all the documents you need to read before you apply, including the Guidance for Applicants, go to the web page for this competition at [www.innovateuk.org](http://www.innovateuk.org) under Funding & support > Funding competitions.

To apply you must first register with us through the competition page on the website. Registration opens when the competition opens and closes a week before the deadline for applications.

**Competition helpline 0300 321 4357**
**Email support@innovateuk.gov.uk**

Publicity

As part of the application process all applicants are asked to submit a public description of the project. This should adequately describe the project but not disclose any information that may impact on intellectual property, is confidential or commercially sensitive. The titles of successful projects, names of organisations, amounts awarded and the public description will be published once the decision to offer an award has been communicated to applicants by email. Information about unsuccessful project applications will remain confidential and will not be made public.

Email pressoffice@innovateuk.gov.uk with any queries.