

Technology Strategy Board

Driving Innovation



Technology-inspired innovation

**COMPETITION FOR FEASIBILITY FUNDING
MARCH 2012**



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Summary

The Technology Strategy Board is to invest up to £2m in feasibility studies to stimulate innovation across our core technology areas and to help ensure that small and micro businesses in the UK are well-equipped to respond to society's current and future challenges.

We are seeking projects in the fields of advanced materials and nanoscale technologies; biosciences; electronics, photonics and electrical systems; and information and communications technology. Innovation in these key enabling technology areas can be a significant driver of economic growth and enhance quality of life.

The competition is open to small and micro companies only, working either singly or in collaboration with one partner. Projects can last up to four months and are eligible for grants of up to £25,000. Total project costs must not exceed £33,000.

This is a single-stage competition. It opens on **12 March 2012** and the deadline for receipt of applications is at noon on **11 April 2012**. Successful projects must start on **1 August 2012**. A briefing event for potential applicants will be held in London on **20 March 2012**.

Background

The Technology Strategy Board aims to support business-orientated innovation across a broad range of technologies that fall within the four key areas of advanced materials; biosciences; electronics, photonics and electrical systems; and information and communications technology. These key enabling technologies often underpin successful innovations and each can have an impact across several market sectors. They can lead to the development of new products and processes and can be a significant driver of economic growth.

They will keep the UK at the forefront of modern technology and enhance quality of life. Together, these technologies underpin a large part of the UK economy.

Feasibility studies funded by this competition will be presented at a Collaboration Nation event. This public event will join successful feasibility projects with open innovators and investors to encourage collaboration and to help bring the feasibility projects to market. Further news about Collaboration Nation will be announced nearer the time.

The feasibility studies supported under this competition may also develop into submissions to a follow-on competition planned for later in 2012. More details will be available nearer the time.

Scope

This competition will focus on feasibility studies:

- in technologies closely aligned with our four core technology areas
- that contain an element of technology innovation
- that are both led and undertaken by small and micro companies individually or in partnership
- where the single company or collaborative partners spend most of the funding in-house.

The feasibility studies need to match one or more of the technology areas below and must align closely with the Technology Strategy Board's strategies in the respective areas. Where a proposal cuts across more than one technology area, the application will need to indicate which one of the four technology areas it predominantly involves. The current strategies can be found at www.innovateuk.org under Publications.

Each project will culminate in a short report and, where relevant, a demonstrator. Projects will also present their achievements at a public 'Collaboration Nation' event to be held on **10 December 2012**.

Proposals must fall into one of the four areas below.

Advanced materials and nanoscale technologies

Advanced materials is a multidisciplinary technology platform. There are many crossovers into other technical areas and the platform has the potential to address challenges across a broad range of applications and market sectors.

We are seeking proposals within four broad classifications – structural materials, functional materials, multifunctional materials and biomaterials – with supporting cross-cutting areas including, but not limited to, nanomaterials, materials modelling, metrology and standards (including enhanced measurement and characterisation methods for nanoscale materials), process technologies and materials manufacturing.

Preference will be given to proposals that deliver demonstrator or prototype materials/technologies (and/or their associated process technologies) with the potential to be exploited in appropriate high-value products or processes via strong UK market sectors.

Areas for potential study include:

- lightweight materials and structures (including composites and hybrid materials)
- electronic, magnetic and optical functional materials and metamaterials
- smart and multifunctional materials, devices and structures (including integrating and exploiting functionality from nanoscale materials and effects)
- coating technologies, surface engineering, particulate engineering, fibre and textile-based technologies
- natural and bio-based materials – bioresorbable, bioactive and biocompatible materials including joining technologies
- new materials for enhanced targeted delivery systems in healthcare



- materials with reduced environmental impact through life, including associated multi-scale modelling, non-destructive evaluation and predictive modelling through the full life cycle, including lifetime prediction.

Biosciences

Bioscience technologies have a truly underpinning role in the development of products in such areas as diverse as healthcare and medicine, agriculture, energy, food and personal care. We are specifically looking to encourage proposals that are biologically inspired and where the resultant technologies will enable multiple applications or the development of a variety of products. Proposals should be focused on one of the four following themes:

- 'omics – development of novel tools and techniques to better access, understand and enable the exploitation of genomic, transcriptomic, proteomic and metabolomic information. This includes novel technologies or approaches to gathering, organising, filtering and interpreting biological data, including bioinformatics, biological system modelling and data visualisation
- industrial biotechnology – development of renewable feedstocks (not resulting in the diversion of food away from the animal or human food chain) and biological processes for the production of materials, chemicals or energy. We specifically wish to encourage developments that enable the chemicals industry to replace petrochemical methods with bioscience-inspired processes and to advance second and third-generation biofuels
- medical biotechnology – novel technologies or approaches to enable improvements in discovery, characterisation and bioprocessing; and technologies to enhance the complex formulation of biologically-derived products

- agriculture and food – development of technologies that enable improvements in food quality, nutritional content, safety, authenticity or traceability or the production of novel or functional foods.

Electronics, photonics and electrical systems

Preference will be given to proposals that have deliverables such as demonstrators, mock-ups or prototypes in the following key areas:

- control systems and power engineering – reducing electricity consumption in the built environment, or addressing electricity consumption in industrial processes or transport
- plastics and printed electronics – developing a sustainable base for wealth creation in the industry
- data and image acquisition – developing systems based on sensing and imaging capabilities
- communications – contributing to the cost-effective development and deployment of next-generation access, or the development of local high-frequency wireless networks
- systems design and integration – embedded systems; robotics and autonomous systems; specification, verification and testing of computing system designs, including industrial lasers.

Information and communications technology

Information and communications technologies are an essential technology enabler in almost any area of life so it is vital that we stimulate innovation in this area. Software also presents additional challenges when it comes to engineering high-quality integrated systems.

We are therefore looking for radically new software-based technologies or approaches to enable:

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

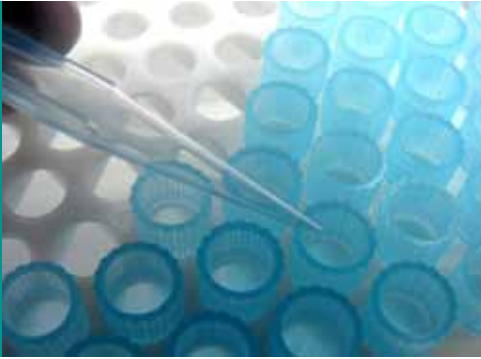
- reliable and continuous sensing in challenging physical environments, including how trust, provenance and other assurance of data can be maintained
- intelligent, autonomous or autonomic machine reasoning and behaviour
- computers to take account of user requirements, preferences, values and processes, including more immersive user experiences
- complex ICT systems to be engineered rapidly, cost-effectively and reliably to be fit-for-purpose, in other words safe, secure and resilient.

Not in scope for this competition? See our other competitions for feasibility funding at www.innovateuk.org under competitions.

Funding allocation and application process

The Technology Strategy Board has allocated up to £2m to fund feasibility studies that address the technical challenges and align with the technology areas described above. The competition is open only to small and micro companies (50 employees or fewer), either as single companies or in collaboration with a maximum of one other small or micro company. Projects can attract up to 75% public sector funding and the total public funding element will not exceed £25,000. The total project costs must not exceed £33,000.

The competition is a single-stage process that opens on **12 March 2012**. The deadline for registration is at noon on **4 April 2012** and the deadline for applications is at noon on **11 April 2012**.



Projects must start on **1 August 2012** and be completed within four months. A briefing will be held in London on **20 March 2012** to highlight the main features of the competition and to explain the application process. We strongly recommend that applicants attend.

On registering for the competition you will be asked to identify which of the four technology areas you are applying for. If your application is cross-cutting, you should identify the dominant technology area. **Please note that duplicate entries into the same or different technology areas will be disqualified.**

Further details can be found in the *Guidance for Applicants* for this competition available from our website (www.innovateuk.org under competitions) once you have registered for this competition.

Note that ALL deadlines are at noon.

Key dates

Competition opens	12 March 2012
Briefing event	20 March 2012
Registration deadline	4 April 2012 noon
Deadline for receipt of applications	11 April 2012 noon
Successful candidates informed	14 May 2012
Projects start	1 August 2012
Deadline for submission of final reports	30 November 2012
Collaboration Nation event	10 December 2012

More information

To apply for this competition you must first register with us. You can do this by going to our web page for this competition at www.innovateuk.org/competitions. When you register you will get access to all the supporting information you need to read before you apply, including the *Guidance for Applicants* and the application form.

Competition helpline:
0300 321 4357

Email:
competitions@tsb.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 award is confirmed as final. Information about unsuccessful project applications will remain confidential and will not be made public. E-mail pressoffice@tsb.gov.uk with any queries.

The Technology Strategy Board is a business-led executive non-departmental public body, established by the Government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve quality of life.

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