



# Feasibility Studies for Responsible Development of Nanoscale Technologies

**COMPETITION FOR FUNDING  
JANUARY 2011**

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## COMPETITION FOR FUNDING

### Summary

The Technology Strategy Board and the Engineering and Physical Sciences Research Council (EPSRC) have jointly allocated up to £400k to stimulate business-led innovation with technologies that can address the potential environmental, health and safety (EHS) aspects of development of nanoscale technologies. These may be in the form of an innovative EHS product or a solution to EHS issues with nanotechnology-enabled products and processes. Up to £250k will be invested by the Technology Strategy Board and up to £150k by the Engineering and Physical Sciences Research Council to support feasibility studies lasting up to three months and each costing no more than £33,000 in total. We will jointly fund up to 75% of the project cost (up to £25,000). Projects may be collaborative with industry or academia, or carried out by a single company.

The purpose of this competition is to seed business-led collaboration feeding into potential future European programmes in EHS-related applications. It also focuses on UK business priorities in EHS-related issues, and aims to deliver early stage novel solutions that will put the UK in a strong position to develop globally competitive technologies.

Each project will culminate in a short report, an initial business plan to take the project forward identifying UK/EU partners where necessary and, where relevant, a practical demonstration. Projects will also present their achievements at a public 'Collaboration Nation' event to be held in autumn 2011.

This competition activity complements three feasibility studies competitions being run concurrently in the areas of technology inspired innovation, digital services and space technologies.

### Background

Nanoscale technologies are regarded by the Technology Strategy Board as a combination of enabling technologies, rather than as a specific field. These technologies exploit the added functionality found at the nanoscale through new materials, manufacturing, measurement and integration technologies. Nanoscale technologies can enable a range of novel products and processes in a wide variety of end-user markets that will positively affect our economic growth and quality of life. Over the coming years we will see increased global growth in the uptake of novel applications, with high levels of public and private sector investment.

One of the major technical and commercial barriers to the uptake of new nanoscale technologies is the potential risks and unknown factors and how they are handled. Issues surrounding the environmental fate of nanoparticles, toxicology and occupational risk have all been highlighted in public debate scenarios. These are global issues as we will all be users of products, regardless of the materials origin and their disposal after use. This opens up a significant opportunity for UK businesses to develop novel technology solutions to help address some of these concerns.

The Technology Strategy Board has been working closely with industry, government departments, Research Councils, European partners, and others to develop a co-ordinated approach to the responsible development of nanoscale technology-enabled products and processes. If nanoscale technologies are to be successfully and sustainably translated into added value products, it is critical that the global community works together to address EHS issues.

With this in mind a call was made in the 2010 EU Seventh Framework Programme in Nanosciences, Nanotechnologies, Materials and new Production Technologies (NMP) for an ERA-NET project in the area of responsible development. Whilst this activity is being considered at a European level, we want to seed UK-based companies to take the lead in connecting with the global community, where appropriate, to develop new ideas and solutions.

### Scope

This competition targets projects that can address challenges in the development of nanoscale technologies through novel EHS products and solutions that stimulate business and academia in the UK to work together on commercially viable technologies.





This competition will focus on feasibility studies that:

- are closely aligned with our core areas for nanoscale technologies: materials, manufacture, measurement and integration
- contain an element of technology innovation
- stimulate UK business and institutions to work together on commercially viable technologies resulting in EHS products or solutions
- are inclusive of the supply chain, and are company led individually or in partnership
- where the single company or collaborative partners spend most of the funding in-house
- aim to identify future collaborators within the European Research Area (ERA)
- can provide generic solutions which can reduce the EHS barriers to innovation
- give appropriate consideration to societal and ethical aspects of the development of nanoscale technologies.

Specifically, we are looking for projects that focus on the development of innovative products or processes which can have applications for EHS aspects of nanoscale technologies that also address EHS-specific lifecycle issues, such as:

- Development of human and/or environmental exposure models through novel modelling techniques
- Enhanced measurement and characterisation methods for nanoscale materials eg, new imaging or nanoscale spectroscopy instrumentation for detection in air, soil, water or other media
- Novel approaches to measurement, monitoring and control of exposure to nanoscale materials in the workplace or environment
- Development of nanoscale materials that are safer by design

- Development of novel techniques for grouping nanoscale materials by their physico-chemical properties to predict and design-out toxicity eg, improved *in vitro* systems, or improved quantified structure activity relationship (QSAR) models.

Out of scope for this competition? See the nanotechnology section of our general 'Technology-inspired feasibility studies' competition which may suit your proposal better, at [www.innovateuk.org](http://www.innovateuk.org)

If you have any specific queries about the scope of this competition please email your questions to: [competitions@tsb.gov.uk](mailto:competitions@tsb.gov.uk)

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

## Funding allocation and application process

The Technology Strategy Board has allocated up to £250k and the Engineering and Physical Sciences Research Council has allocated up to £150k to fund R&D feasibility projects that address the

technical challenges and align with the scope described above. The competition is open to either single companies or in collaboration with other companies or academic institutions where a business need exists. We will consider any size of company, inclusive of SMEs, micro and large companies. Projects must be led by the industry partner. In the case where a collaboration consists of a large company and SME/micro company in collaboration, we would expect that a significant proportion of the funding should be directed to the smaller companies within the consortium. The total project costs can be no more than £33,000 and the Technology Strategy Board will award grants at up to 75% of project costs (up to £25,000) to suitable projects.

The competition is a single-stage process that will open on **10 January 2011** and close at midday on **10 February 2011**. Applicants will be informed of the outcome of their application by **28 February 2011**. A competition briefing will be held in London on **19 January 2011** to explain the process and we strongly recommend that applicants attend.

Further details can be found in the *Guidance for Applicants* for this competition (available from our website after you have registered for this competition).

**Note that ALL deadlines are at 12 noon.**

## Key dates

Competition opens	<b>10 January 2011</b>
Competition briefing	<b>19 January 2011</b>
Competition closes	<b>10 February 2011</b>
Successful candidates informed	<b>28 February 2011</b>
Deadline for delivery of reports	<b>17 August 2011</b>
Collaboration Nation event	<b>Autumn 2011</b>



## Further information

To apply for funding through this competition and to get further details you will need to register your interest via the Competitions section of our website at **[www.innovateuk.org](http://www.innovateuk.org)**.

It is important to allow enough time to register, to read the 70-page *Guidance for Applicants* and prepare your application. Note that registration can take 48 hours.

Uploading your application form at least 24 hours before the deadline will give the Business Support Team time to resolve any problems. See the FAQs at [www.innovateuk.org](http://www.innovateuk.org) under Competitions for more information.

**Competition helpline:**  
**0300 321 4357**

**Email:**  
**[competitions@tsb.gov.uk](mailto:competitions@tsb.gov.uk)**

## Publicity

The Technology Strategy Board frequently publicises the results of competitions and this includes engagement with the media. All applicants will be given a chance during the competition process to opt out of any publicity. Willing applicants will be asked to provide an agreed form of words for use in publicity material. E-mail [pressoffice@tsb.gov.uk](mailto: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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