

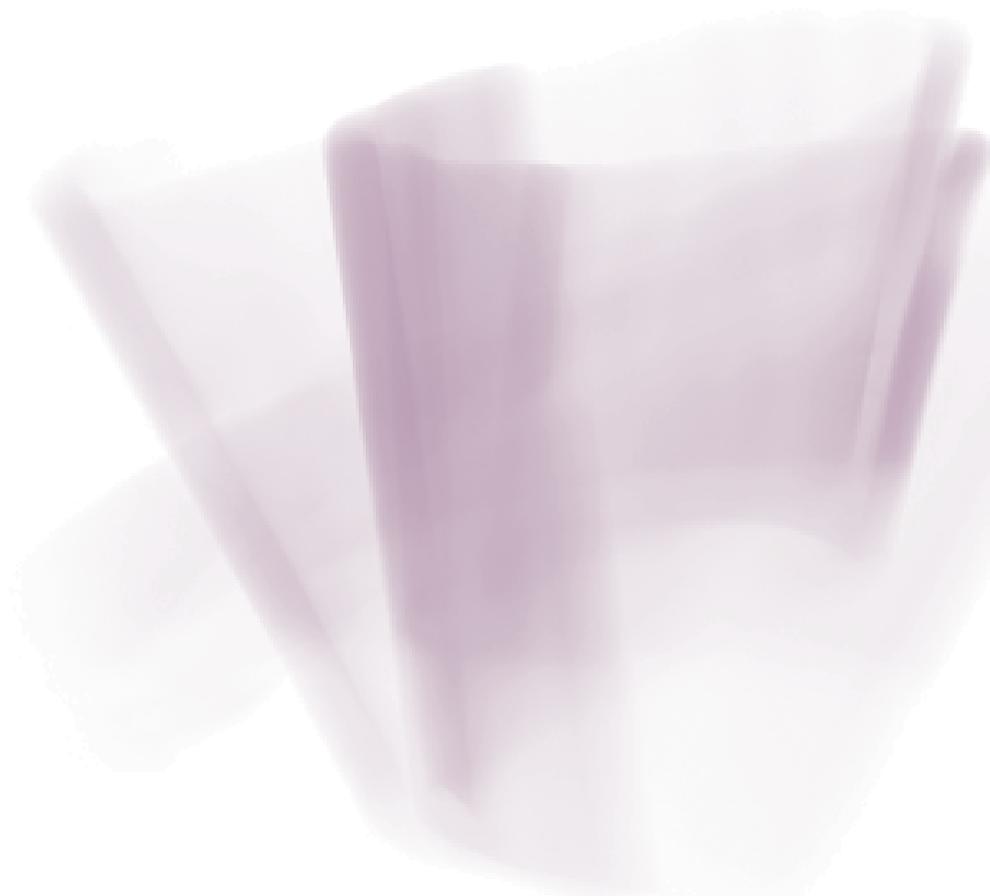
**Technology Strategy Board**

Driving Innovation



# Boosting innovation in manufacturing competencies

**COMPETITION FOR COLLABORATIVE R&D FUNDING  
JANUARY 2012**



# Boosting innovation in manufacturing competencies

## COMPETITION FOR COLLABORATIVE R&D FUNDING

### Summary

The Technology Strategy Board and the Engineering and Physical Sciences Research Council (EPSRC) are to invest up to £6m in collaborative research and development that stimulates innovation in manufacturing. We aim to support new technologies with strong potential to underpin new production processes for a wide range of industrial applications and market sectors.

Our focus is on recent technological discoveries or breakthroughs that have inspired people to innovate in a context of significant technology risk, or have led to ideas that are yet to find application in a recognised market or business sector. Innovation in manufacturing capability often builds on new-found technology and can be a significant driver of economic growth and enhance the quality of life.

Proposals must be collaborative and led by a business and involve at least one other non-academic partner. We expect to invest between £250k and £500k in each project, although projects outside this range will be considered. We are primarily looking to fund applied research projects attracting up to 50% public funding.

This is a two-stage competition. It opens on **16 January 2012** and the deadline for registration is at noon on **22 February 2012**. The second stage for invited applicants opens on **19 March 2012** and the deadline for completed applications is at noon on **25 April 2012**. A briefing event will be held in London on **25 January 2012**.

### Background

Global manufacturing is a key provider of economic growth and employment, accounting for US\$10tn of value added world-wide. The UK is the seventh largest manufacturer in the world and has an industry worth £140bn, representing 11% of GDP and around 50% of exports. Manufacturing employs 3m people in the UK across a broad range of industry sectors. We recognise manufacturing as a key competency area for the generation of wealth. By a competency, we mean a group of technology-related capabilities held by a number of companies/organisations in the UK enabling high value manufacture across several different market sectors. Our strategy *Concept to Commercialisation* (May 2011 [www.innovateuk.org](http://www.innovateuk.org)) identifies manufacturing and digital services as two areas with a broad range of competencies that are immensely influential in setting the rate of change. They have wide potential to transform enabling technologies into commercially attractive products and services in order to meet society's needs and challenges in a sustainable way.

Through collaborative R&D competitions and other activities, we are able to help businesses to accelerate the development of new equipment, processes and expertise brought about by technology innovation. However, successful manufacturing businesses almost always depend on an equally successful supplier

base and/or a strong pull from business customers. The development of new supply chain capabilities is actively encouraged in this competition in order to anchor novel and sustainable manufacturing competencies in the UK and enable businesses to respond to global trends and find new opportunities to capture value.

Our high value manufacturing (HVM) strategy embraces a wide range of innovation activities across the whole product lifecycle. This broad scope has been applied to our HVM competitions in recent years, often resulting in very high levels of interest and to them being oversubscribed.

We are now seeking to bring greater focus by introducing a series of HVM competitions that address specific manufacturing competencies within our HVM strategy. To achieve the required focus it will be necessary to exclude large parts of the HVM strategy and limit the scope in each competition. In some cases, additional areas will be identified as out of scope when those topics are covered in other earlier or future competitions.

### Scope

This competition aims to support business-orientated innovation in production processes. This is one of the four pillars of our current HVM strategy and the most important in terms of anchoring a sustainable manufacturing capability in the UK. The other three – products, service systems and value systems – are out of scope. This competition focuses on production technologies that, within a global marketplace, can create high value through novel processes, advanced product manufacture, resource efficiency and production techniques and thereby enable greater product customisation. It also encourages technologies that will facilitate greater environmental sustainability through efficient disposal, recycling or remanufacture of assets at the end of their useful life.





We are particularly keen to support projects that explore new innovations and approaches that could lead to step-change improvements in overall UK manufacturing competitiveness. They include:

- new approaches for improved correlation between and integration of process modelling and in-process monitoring
- innovative automation techniques and applications for adaptive learning in the precision control and metrology of tooling, machining, joining, fabrication and assembly systems
- intelligent processing of metals and net shape hybrid structures to increase speed and accuracy and reduce waste
- innovation in new manufacturing process 'competencies', by which we mean the methods, equipment and expertise that can be developed as a leading capability in one market sector or application AND have real potential to be applied successfully across other sectors or applications as well.

In order to ensure the required focus and avoid overlap with other competitions, the following HVM strategy and technology areas, including their associated

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.

production processes, are out of scope for this competition:

- design and development of products\*
- service solutions which complement a product offering\*
- value systems\*

*\* except when forming an essential part of the production process innovation project or its supply chain, in which case they remain in scope*

- additive manufacturing
- bulk and fine chemicals, coatings, pharmaceuticals and biotechnology
- ICT in manufacturing (where the innovation is in the ICT software itself)
- fibre-reinforced polymer composites
- printed/plastic electronics
- manufacturing technologies for producing nanoscale materials

## Funding allocation and project details

We have allocated up to £6m to fund collaborative R&D projects that are within the scope of this competition. Applications are expected in the area of applied research, which can attract up to 50% public sector funding of total eligible project costs.

Projects must be collaborative and can involve science-to-business or business-to-business interactions. The participation of supply chain partners and companies from different sectors in the consortium is encouraged as a way of accelerating innovation in manufacturing competencies able to deliver competitive advantage across several market sectors. Projects must involve at least two non-academic partners and be led by a business. University participation is encouraged where needed in the project, but academic funding is strictly limited to a maximum of 50% of the grant. Projects should last no longer than three years.

Further important information is in the *Guidance for Applicants* (see [www.innovateuk.org](http://www.innovateuk.org) under Competitions) available from our website once you have registered for this competition. An optional briefing event will be held in London on **25 January 2012**. We plan to hold additional briefings at various locations around the UK soon after this main event, but these will not be able to cover details on funding rules and application process to the same extent.

The Engineering and Physical Sciences Research Council (EPSRC) has expressed interest in supporting this competition (up to a total of £1m) and will consider funding those parts of projects (work-packages) focused on applied research by universities, where it aligns with EPSRC priorities as set out in their strategy *Manufacturing the Future* ([www.epsrc.ac.uk](http://www.epsrc.ac.uk)) and is in scope of this competition. Applicants invited to apply for stage 2 of this competition are advised to identify any potential such work-packages at that stage.

## Role of the High Value Manufacturing Catapult

Catapult is the new name for the UK's national network of technology and innovation centres. The High Value Manufacturing Catapult is the first to open for business and comprises seven centres, each specialising in providing research and innovation support to small, medium and large companies across a range of high value manufacturing technologies.

The scope of this competition includes technology themes in a number of production processes that fall within the capabilities of the High Value Manufacturing Catapult. Applicants whose innovation idea is perhaps not yet fully developed in terms of its technology plan, route to market or consortium partners, should consider contacting the HVM Catapult to see how it might help them to develop their approach. For more information, go to the Catapult website at [www.catapult.org.uk](http://www.catapult.org.uk) or telephone Margo Hutchison on 0141 534 5200





## Application process

This is a two-stage competition:

**Stage 1:** applicant registers and then submits an expression of interest (EOI)

**Stage 2:** we invite selected applicants to submit a full application.

The competition opens on **16 January 2012**, applicants must register by noon on **22 February 2012** and EOIs must be submitted by noon on **29 February 2012**.

These are assessed by an independent panel of experts. Selected applicants are invited to submit a full application. The second stage, for invited applications, will open on **19 March 2012** and closes at noon on **25 April 2012**. Results for this stage will be notified around **25 May** and successful applicants can expect to receive grant offer letters at the end of June.

**Note: All deadlines are at noon.**

## Key dates

Competition opens	<b>16 January 2012</b>
Main briefing day	<b>25 January 2012</b>
Registration deadline	<b>22 February 2012 noon</b>
Expressions of interest deadline	<b>29 February 2012 noon</b>
Stage 2 opens (for invited applications)	<b>19 March 2012</b>
Deadline for receipt of full applications	<b>25 April 2012 noon</b>

## 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](http://www.innovateuk.org)** under 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@innovateuk.org](mailto:competitions@innovateuk.org)**

## 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](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.*

The Technology Strategy Board  
North Star House  
North Star Avenue  
Swindon  
SN2 1UE

Telephone: 01793 442700

[www.innovateuk.org](http://www.innovateuk.org)