

Technology Strategy Board
Driving Innovation

Investing in the future

Welcome to the sixth newsletter in the current series. In October 2010, the Prime Minister announced that over £200m will be invested in a network of elite technology and innovation centres, to be established and overseen by the Technology Strategy Board. These centres will be an important part of the UK's innovation system. They will allow businesses to access equipment and expertise that would otherwise be out of reach.

They will also help businesses access new funding streams and point them towards the potential of emerging technologies. The new investment will further bridge the gap between universities and businesses, helping to commercialise the outputs of Britain's world-class research base. This newsletter keeps you informed about the development of the first of these centres and provides details of one of its constituent members. This issue profiles the Nuclear Advanced Manufacturing Research Centre, based in Sheffield.

Join us at Innovate 2011



Innovate is the annual celebration of business innovation organised by the Technology Strategy Board and this year's event will be on Tuesday 11th October in the Business Design Centre, London. The High Value Manufacturing technology & innovation centre will have a stand there so why not come and visit senior representatives of the centre? You will also be able to see the results of some recently completed innovation projects which TSB has funded in applications ranging from a bionic hand to an extendable antenna for the next Mars Rover.

The stand will be open from 08:30 to 16:00 in the Lower Gallery Hall.

There will also be a seminar at 10:25 in this area at which one of the centre directors will give an overview of the TIC's plans.

You can also listen to Herman Hauser who will make a keynote speech from the platform in the main hall at 16:00 – Dr Hauser published the report in March 2010 which forms the basis of the TIC programme.

To attend Innovate 11, register at <https://ktn.innovateuk.org/web/innovate-11>. The event runs from 08:30 to 17:30 at Business Design Centre, 52 Upper Street, Islington, London N1 0QH. The nearest tube station is Angel, on the Northern Line.

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11 October 2011,
Business Design Centre,
London

Conference • Exhibition • Networking • 1:1 Meetings

Register here

CONSORTIUM MEMBERS

In each issue we profile one member of the consortium

Partner Spotlight: The National Composites Centre

University of Bristol



Advanced Forming Research Centre
Location: Glasgow
Key Competencies: Billet Forging / Sheet Forming / Precision Forging
Contact: Bill Ion
w.i.ion@strath.ac.uk

Advanced Manufacturing Research Centre with Boeing
Location: Sheffield
Key Competencies: Machining / Materials and Component Testing / Hybrid & Metallic Composites / Assembly
Contact: Keith Ridgway
k.ridgway@sheffield.ac.uk

Centre for Process Innovation
Location: Wilton and Sedgfield
Key Competencies: Chemical Processing / Biotechnology / Printable Electronics
Contact: Nigel Perry
nigel.perry@uk-cpi.com

Manufacturing Technology Centre
Location: Coventry
Key Competencies: Automation & Tooling / Fabrication, Joining & Assembly / Additive & Net shape / Process Modelling
Contact: Clive Hickman
clive.hickman@the-mtc.org

National Composites Centre
Location: Bristol
Key Competencies: Design & Manufacture of Composites
Contact: Peter Chivers
peter.chivers@nccuk.com

Nuclear Advanced Manufacturing Research Centre
Location: Sheffield
Key Competencies: Fabrication of Civil Nuclear Components
Contact: Stephen Court
stephen.court@namrc.co.uk

Warwick Manufacturing Group
Location: Coventry
Key Competencies: Lightweight Product System Optimisation / Energy Storage and Management / Digital Verification and Validation
Contact: Dave Mullins
David.Mullins@warwick.ac.uk

A number of centres also offer competencies in: Measurement & Verification / Cost Modelling / Design & Manufacturing Systems / Materials Analysis

The National Composites Centre (NCC) was initiated in November 2009 as a key element in the UK Composites Strategy. The objective was to bring together UK composites industry & academia in an open innovation centre equipped with state of the art manufacturing facilities at an industrial scale and capable of building prototypes to validate design concepts.

The key objective of the NCC is to facilitate widespread exploitation of composites technology & hence assist all relevant sectors of UK industry to compete effectively in the rapidly growing global market. The new custom designed 8,500m² building was completed in June 2011, & onsite operations started in August 2011.

The NCC is hosted by the University of Bristol & strong links are in place with its research activities. Links are also being established with Composites research in other establishments, including Imperial College, Manchester, Sheffield, Nottingham & Cranfield Universities.

The setup of the NCC was funded by £12m from BIS/TSB, supplemented by £4m from SWRDA and £9m from ERDF. All of this £25m funding has been spent in setting up the centre. Ongoing Centre operations are funded through a mix of industrial membership subscriptions and commercial contract work. It is anticipated that some of this private revenue will be supplemented by public money through the HVM TIC, TSB collaborative programmes, and EU framework calls.

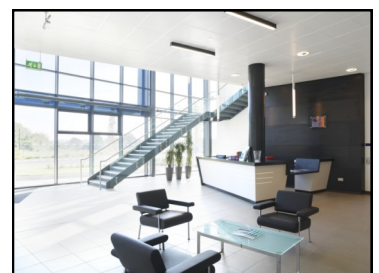
The NCC currently has 6 Tier 1 members (AgustaWestland, Airbus, GKN, Rolls Royce, Umeco, & Vestas), with a strong and growing cross-sectoral list of potential members.

The NCC has expertise in composites design and structural analysis, modelling and simulation, materials and process engineering, robotics and automation, manufacturing and tooling engineering, validation, material testing, and both manual and mechanical manufacturing skills. The NCC has a very broad range of technology capability in pre-preg & dry fibre solutions, and with thermoset and thermoplastic resin systems, using a wide range of manufacturing technology

gies including hand lay-up, robotic fibre placement, resin infusion, hot drape forming, press forming, with both in and out of autoclave curing, all at a true industrial scale (up to 10m x 3m). These manufacturing capabilities are supported by component finishing and quality validation capabilities, ultrasonic NDT and a fully equipped material laboratory. The NCC also has a large assembly and special project area. The NCC acts as the hub in a "hub and spoke" model that networks composites capability in regional centres throughout the UK.

Contact NCC:

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Enquiries on the High Value Manufacturing technology and innovation centre should be addressed to:

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For enquiries about the overall programme of technology and innovation centres please contact
centres@tsb.gov.uk