

Smart Materials and the Materials KTN

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Smart Materials and
Emerging Technologies
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Materials KTN

Vision:

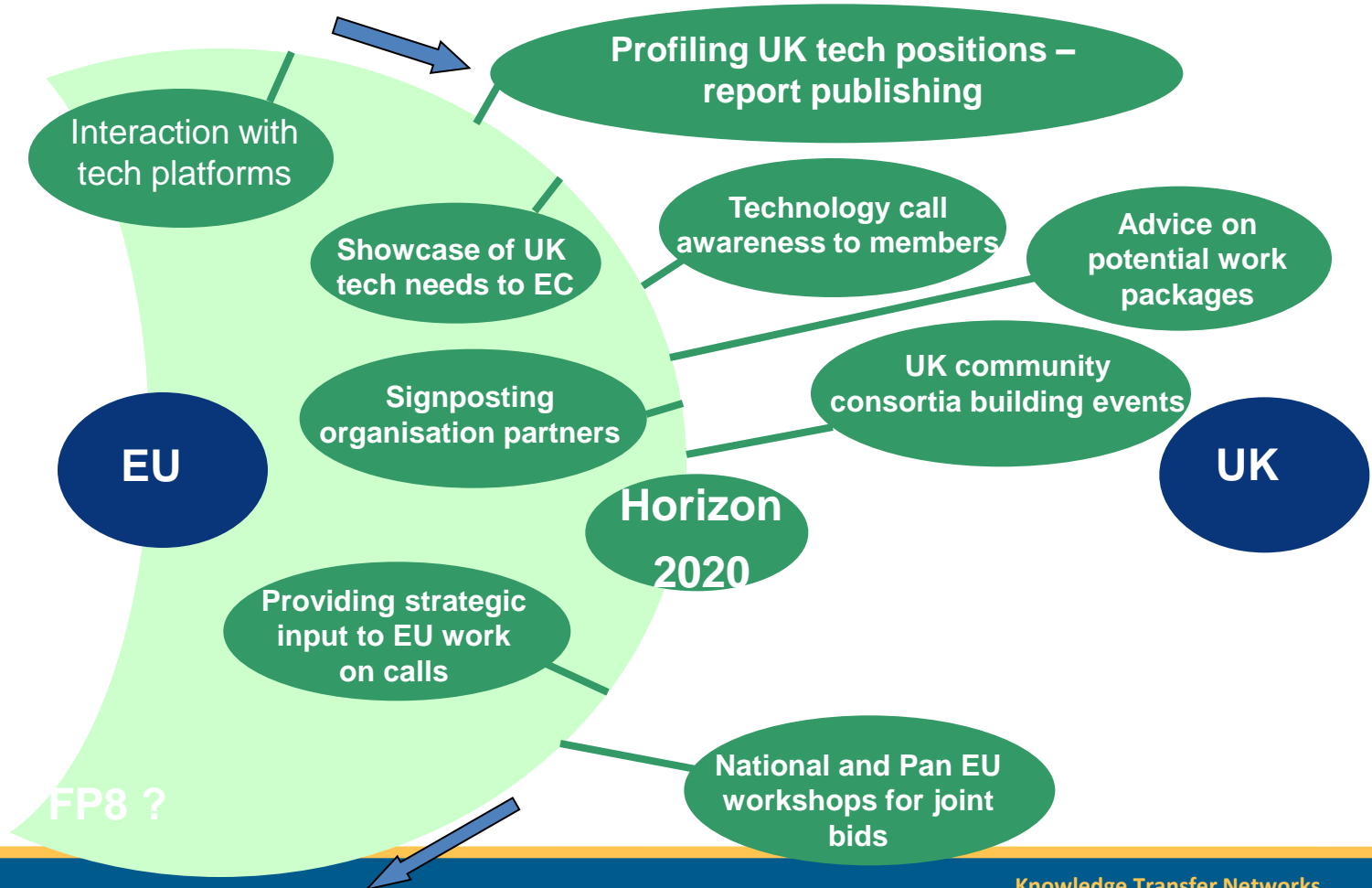
To bring together the materials supply chain to improve industrial innovation and global competitiveness of UK business

.... helping the materials community to make connections by providing a link between industry, research and investment.

Interaction with the UK and EU Community to develop framework funding

**SUPPORT
FOR**

**FRAMEWORK
FUNDING**



Materials KTN - Technical Textiles Sector

- Transport textiles
- Natural fibres
- Performance textiles
- Smart textiles
- Geo-textiles
- Sportswear
- Medical textiles



Activities of the Technical Textiles Sector

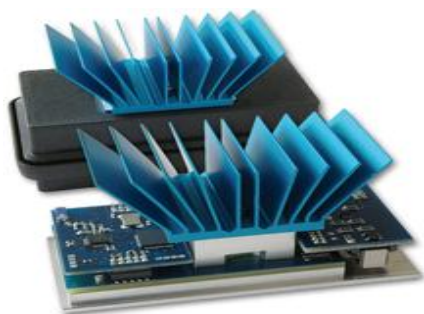
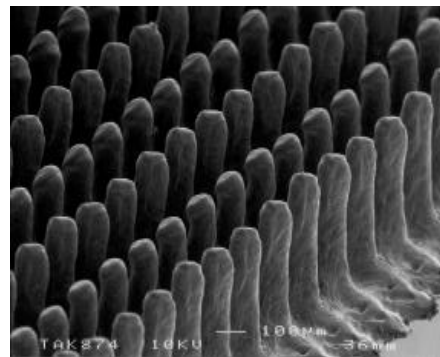
- Consortium Building
 - 2BFUNTEX EU FP7 Project
- New Company Support
 - Ruk-bug Limited, Covec Limited
- Events
 - Transport Textiles
 - Materials for Health
 - Post-Olympic Technology Review
- US\$200 billion sector by 2020



Materials KTN - Smart Materials Sector

- Piezoelectrics
- Antimicrobials
- Auxetics
- Electroactive Polymers
- Thermoelectrics

- Energy Harvesting
- Structural Health Monitoring
- Healthcare



Auxetics in Healthcare

<p>Need</p> <ul style="list-style-type: none"> • Raise awareness of auxetic technology in healthcare • Identify potential applications • Funding for demonstrator of technology 	<p>Outcome</p> <ul style="list-style-type: none"> • Article written for leading healthcare journal • Funding secured for CASE Studentship • Collaboration with leading NHS healthcare innovator • Project to develop an alternative medical device based on auxetics
<p>Approach</p> <ul style="list-style-type: none"> • Demonstrate technology in action • Provide an event to showcase technology in relevant applications • Provide a forum for collaborations/projects to develop • Disseminate the information widely through healthcare-related websites 	<p>Benefits</p> <ul style="list-style-type: none"> • KTN provided the forum for a collaboration to form • KTN facilitated a collaboration that led to a a project • KTN helped to secure CASE Studentship funding for the project

Standards for Antimicrobial Hard Surfaces

<p>Need</p> <p>In order to bring innovative new materials to antimicrobial surfaces for the healthcare and food sectors there is a need to prove their efficacy to a standard that can be measured and currently no standard exists.</p>	<p>Outcome</p> <p>By bringing together the relevant quality people and the appropriate standards body it has been possible to agree a route to the standard through an existing committee at the BSI</p>
<p>Approach</p> <ul style="list-style-type: none"> • Arrange and run a workshop to facilitate the discussion between key players as to what standard is required • Develop a website to allow exchange of views and information related to hard surface standards • Arrange and run a telephone workshop to finalise a route to development of a standard 	<p>Benefits</p> <p>The development of a standard for antimicrobial hard surfaces will allow the NHS and the Food Industry to compare and evaluate new technology in hard surfaces and well as to compare and contrast current different technologies for the benefit and safety of the public</p>

Recent Activities of Smart Materials Sector

- **Smart Materials Landscape**
- Applications and common challenges

- **Smart Coatings**
- Introduction to focused events

- **Metamaterials**
- Focusing on world beating technology

- **Smart Materials and Design**
- Showcasing smart technology

- **Self healing**
- Is there a commercial application?

Future Activities of Smart Materials Sector

- **Modelling and Simulation of Smart Material Systems**
- The desire to increase the functionality of systems

- **Adding nanofunctionality to Smart Material Systems**
- Adding further value to smart systems

- **Metamaterials- adding activity to an emerging technology**
- Instilling an active nature in the systems

- **Combining Magneto and Electrical effects in smart material systems**
- Engineering design of a combination of different properties into a composite

- **Additive Manufacturing of smart and functional materials**
- Printing of smart and functional material systems

KTN Ltd

- Single Company to run all KTNs – Operational from 1st April 2014
- Single vehicle to promote innovation across all of UK business.
- Chairman: David Lockwood
- CEO: Chris Warkup
- Staff: Starting with 110 staff from current KTNs signed up as employees of new company
- Hub offices will be located in London, Edinburgh, Oxford, Cambridge, Runcorn and Horsham.
- KTN Ltd will use _connect as the focal point for all KTN activity

Future of Materials KTN and Smart Materials Board

- Materials KTN will become the Materials Group within KTN Ltd
- Materials KTN Community will be retained and so will the priority themes
- Materials KTN Steering Board will be retained
- Materials KTN Advisory Groups will be retained, including that for Smart Materials

Get in touch

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