Innovation and Funding Priorities at the Technology Strategy Board

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The Technology Strategy Board is…

A national body supporting business innovation

for business benefit

for economic growth

for quality of life
Our aims

To **Invest** to help **innovative businesses** become and remain successful in the global marketplace.

To collaborate with business and our partners to **stimulate innovation**.

To promote a **culture of confidence** in and enthusiasm for innovation.

To **understand** and communicate the **drivers** of innovation.

To be a **high-performance**, innovative organisation that **gets things done**.
Our vision:

for the UK to be a global leader in innovation and a magnet for innovative businesses, where technology is applied rapidly, effectively and sustainably to create wealth and enhance quality of life.

To deliver, partnership is key.
Our strategy in 2 words
Three themes

Challenge-led innovation

Technology-inspired innovation

The innovation climate
£1 billion investment over 3 years

2008-9

2010-11

The innovation climate

Challenge-led innovation

Technology-inspired innovation
Technology Strategy Board

Driving Innovation

Challenge-led innovation
Challenge-led innovation

Key application areas

• Medicines & healthcare
• Energy generation & supply
• Transport
• Environmental sustainability
• Built environment
• Creative industries
• High value services
Innovation Platforms

- Assisted living
- Intelligent transport systems and services
- Low carbon vehicles
- Low impact buildings
- Network security
- Detection and identification of infectious agents
- Sustainable agriculture and food
Technology Strategy Board
Driving Innovation

Technology-inspired innovation
Technology Strategy Board
Driving Innovation

Technology-inspired innovation

Key technology areas

• Framework of areas to focus on
• Focus developed through consultation with business and government partners
• Each area prioritised by high value opportunities for resource investment
Key technology areas

• Advanced materials
• Bioscience
• Electronics, photonics and electrical systems
• Information and communication technologies
• High value manufacturing
• Nanotechnology
Criteria for investment

- UK capacity to develop and exploit the technology
- The right potential for impact in the right time frame
- The size of the global market opportunity
- A clear role for the Technology Strategy Board to add value
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Driving Innovation

The innovation climate
Knowledge Transfer Networks

- 15 networks
- 60,000 members; 75% from business
- Focused on Technology Strategy Board investment areas
- Cross-cutting special interest groups (SIGs)
- Sign up now! https://ktn.innovateuk.org
Knowledge Transfer Partnerships

- High calibre, recently-qualified individuals placed into businesses to work on innovation projects
- Exchanges knowledge; spreads technical and business skills
- Brings new expertise and real benefits to companies
- Provides business experience for graduates
- Stimulates business-focused education and research in institutions
Technology Strategy Board
Driving Innovation

Advanced Materials Strategy
[Key Technology Area]
Advanced Materials
Key Technology Area Strategy
2008-2011
Advanced Materials are defined here as materials, and their associated process technologies, with the potential to be exploited in high value products, and are considered within four broad major categories:

• Structural materials
• Functional materials
• Multi-functional materials
• Biomaterials

**together with important cross-cutting areas including:**

• Nanomaterials [also included within TSB Nanotechnology Strategy]
• Modelling
• Design
• Metrology & Standards
• Manufacturing
Priorities for 2008-2011

• Energy
  – secure, clean and affordable energy supply, distribution and usage

• Sustainability
  – focused on transport, construction and the ‘reduce, reuse and recycle’ agenda, including packaging

• High Value Markets
  – including technologies for Healthcare, Creative Industries and Defence & Security
A technology-inspired strategy focused through key challenge areas
# Technology Strategy Board

Driving Innovation

## Key technology thrust areas

<table>
<thead>
<tr>
<th></th>
<th>Energy</th>
<th>Sustainability</th>
<th>High Value Markets</th>
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<tbody>
<tr>
<td>Lightweight materials and structures, including composites and hybrids</td>
<td>x</td>
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<td>Materials to withstand more aggressive environments (e.g. high temperature, corrosive, erosive)</td>
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<tr>
<td>Electronic and optical functional materials</td>
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<td>Smart and multifunctional materials, devices and structures</td>
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<td>Surface engineering and coating technologies</td>
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<td>Particulate engineering; near-net shape manufacturing</td>
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<td>Fibre and textile-based technologies</td>
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<tr>
<td>Bioreabsorbable, bioactive and biocompatible materials</td>
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<tr>
<td>Natural and bio-based materials</td>
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<td>Joining technologies</td>
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<td>Materials for portable power sources (batteries/fuel cells)</td>
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<tr>
<td>Nanomaterials</td>
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<td>Materials with reduced environmental impact through life</td>
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<td>Materials designed for reuse/recycle/remanufacture</td>
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<td>NDE/SHM/condition monitoring</td>
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<tr>
<td>Predictive modelling through the full life cycle, including lifetime prediction</td>
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Technology Strategy Board
Driving Innovation

- Assisted Living
- Low Carbon Vehicles
- Low Impact Buildings
- Intelligent Transport Systems
- Energy Generation & Supply
- HVM Advanced Materials
- Biosciences
- EPES Emerging Technologies
- Environmental Sustainability
- Creative Industries

Advanced Materials
Collaborative R&D competitions

- Encourages business-led innovation
- Business and research communities work together
- Projects aim to deliver successful new products and services
Continuity of investment across the product development cycle