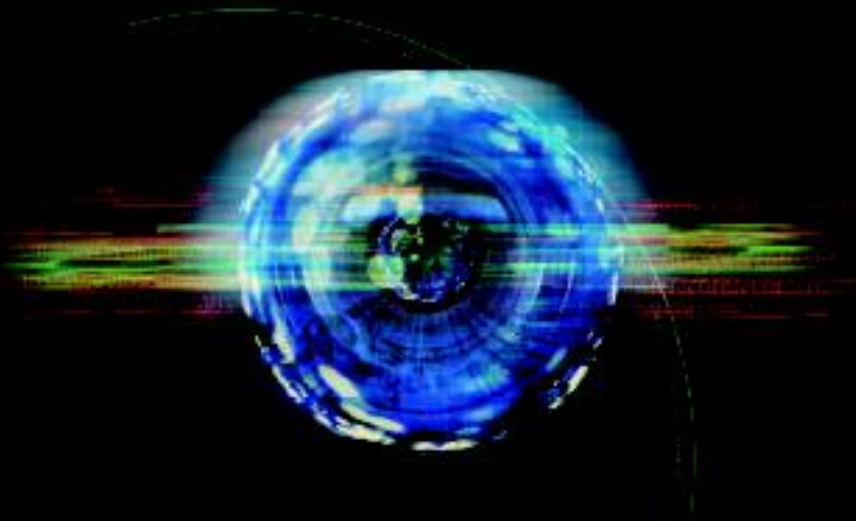


Technology Strategy Board – Driving  
Innovation



**Engineering  
Professors' Council  
Congress 2008**

**David Way  
Director of Operations**



# A new start



# **The Technology Strategy Board:**

**A national body supporting business innovation**

**for business benefit**

**for economic growth**

**for quality of life**

# The Technology Strategy Board

## *Our Vision*

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

# The Technology Strategy Board

## *Our Vision*

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

## Some history

- **2004:** Technology Strategy Board established by Government as an advisory body
- **March 2006:** plans to give it a wider remit announced
- **November 2006:** Alistair Darling announced to Parliament that the Technology Strategy Board would become an executive non-Departmental Public Body
- **July 2007:** the new body became operational
  - Sponsored by Department for Innovation, Universities and Skills
  - Business-led Governing Board
  - Current staff ~75, based in Swindon



# Business-led Governing Board



**Dr. Graham Spittle**  
Chair of the Board, Director and  
Vice President, IBM Hursley Ltd



**Dr. John Brown**  
Chair, Scottish Biomedical



**Eur Ing Nick Buckland**  
Deputy Chair,  
South West RDA



**Dr. Joseph Feczko**  
Chief Medical Officer,  
Pfizer



**Anne Glover**  
Chief Executive, Amadeus  
Capital Partners Limited



**Professor Julia King**  
Vice Chancellor,  
Aston University



**Dr. Graeme Armstrong**  
Senior Vice President,  
Technology with ICI plc

NEW



**Dr. David Grant**  
Vice Chancellor of Cardiff  
University

NEW



**Jonathan Kestenbaum**  
Chief Executive, NESTA

NEW



**Andrew Milligan**  
Head of Global Strategy,  
Standard Life

NEW



**Dr. Peter Ringrose**  
Chair, BBSRC

NEW



**Dr. Jeremy Watson**  
Director of Global Research  
at Ove Arup & Partners

NEW

## Technology Strategy Board

- Deliver support to encourage business investment in technology and innovation across all sectors
- Provide leadership to Government organisations on technology and innovation of importance to UK business
- Advise Government on barriers to innovation and recommendations for removing them
- Invest over £1bn over next three years in partnership with Government Departments, Research Councils, Regional Development Agencies, and Devolved Administrations to support business innovation



## A balanced approach

- We help **Maintain** the competitive position of our leading businesses against global competition
- We identify and **Grow** sectors and businesses with the capacity to be among the best in the world and stimulate them to fulfil that potential
- We **Nurture** today's emerging markets and technologies into the growth sectors of tomorrow

# Technology Strategy Board outcome based criteria for support

- **Can the UK do it?**
  - Does the UK have the capacity to develop and exploit the technology?
- **Is the idea “ready”?**
  - Is the science developed enough to underpin the technology and its implementation in the market,
- **Will it sell enough?**
  - What is the size of the global market opportunity?
- **Can we make a difference?**
  - Is there a clear Technology Strategy Board role?

*“The **technology and innovation landscape in the UK is fragmented**, with a wide range of organisations aiming to improve the technology and innovation capability of UK business. This is inefficient and means that **industry is faced with a bewildering array of organisations and schemes**, many of which cover the same ground. In many cases these organisations do not have the resources or the skills to develop or assess technological projects”.*

*The Race to the Top*

**“The Technology Strategy Board has a key role to play in addressing the fragmented technology and innovation landscape in the UK”**



# Connected Innovation

- Providing leadership and coherence to the innovation landscape
- Joining up innovation and technology activities - providing business with clarity
- Acting as a catalyst for business innovation
- Overcoming barriers to innovation

## Three key thrusts

- **Challenge-led innovation**
- **Technology-inspired innovation**
- **Innovation climate**



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- **Challenge-led innovation**
- **Technology-inspired innovation**
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## Challenge-led innovation

- Addressing major societal and market challenges
- Focus on
  - Healthcare
  - Energy generation and supply
  - Transport
  - Environmental sustainability
  - Built environment
  - Creative industries
  - High value services



## Challenge-led innovation

- Procurement
  - Important role to stimulate markets
  - Support early stage SMEs
- Deliver through
  - Innovation Platforms
  - Challenge Competitions
  - Reformed SBRI



## Challenge-led innovation

### Innovation Platforms

- Intelligent Transport Systems and Services
- Low Carbon Vehicles
- Network Security
- Assisted Living
- Low Impact Buildings



## Challenge-led innovation

- **Standards and regulation** as drivers of innovation
  - stimulating innovation using targets



### Example

- Code for Sustainable Homes introduced end of 2006
- New national standard for sustainable design and construction of new homes
- Developers obtain a 'star rating' for any new home to demonstrate its environmental performance
- All new homes zero carbon by 2016 – stepped introduction
- Long term vision by Government - drives market - delivers Government policy



# Challenge-led innovation

- **Maintaining world leading businesses and sectors**



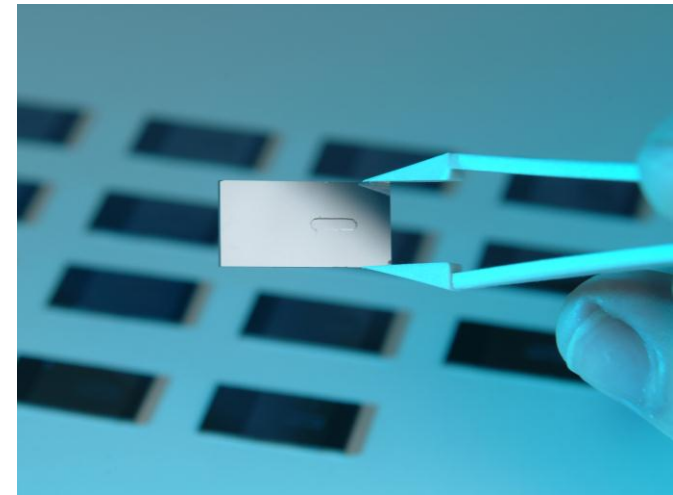
## Three key thrusts

- **Challenge-led innovation**
- **Technology-inspired innovation**
- **Innovation climate**



## Technology-inspired innovation

- Build on UK strengths – academia and business
- Maintain core capabilities and create future technologies and industries
- Focus on global market opportunities
- ..... in Key Technology Areas
  - **Advanced Materials**
  - **Bioscience**
  - **Electronics, Photonics & Electrical Systems**
  - **ICT (Software Applications, Systems and Services)**
  - **High Value manufacture**
  - **Nanotechnology**
- Emerging Technologies & Industries



## Technology-inspired innovation

- Strategy for each Key Technology Area developed and implemented in conjunction with business, RDAs, DAs, Research Councils and Government Departments
- Technology roadmaps
- Package of support using most appropriate mechanisms
- Longer term visibility of priorities
- Standards, regulations and metrology to drive innovation

## Emerging Technologies & Industries

- Identifying early stage research with real commercial potential
- Raising awareness of the research among those UK businesses with the capability to exploit it
- Providing investment to help de-risk early stage commercialisation

## Three key thrusts

- Challenge-led innovation
- Technology-inspired innovation
- **Innovation climate**

# Innovation climate

## Culture

- Create an environment which encourages innovation
- Invest in activities to increase the number of people engaging in business innovation
- Maximise the impact of our investments through communicating the successes being achieved
- Influence future generations to ensure a pipeline of skills and expertise to underpin future UK business success
- Create passion and excitement for technology and innovation in the UK



## Innovation climate

### Networks

- **Bringing people together to build communities, exchange ideas and create new opportunities**
- **Connect between large and small companies**
- **Importance of place and clusters**
- **Important role for Knowledge Transfer Networks**



# Innovation climate

## Knowledge Exchange

- Need to inspire to innovate
- Recognise importance of human capital investment for innovation, that business has a supply of people with relevant skills & expertise
- Increase number and flexibility of Knowledge Transfer Partnerships
- Other people exchanges, secondments, etc



## Currently delivering the strategy through:

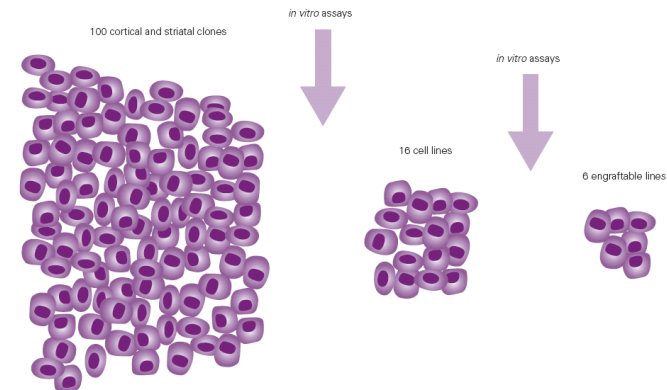
- Collaborative R&D Competitions
- Knowledge Transfer Networks
- Knowledge Transfer Partnerships
- Micro & Nanotechnology Centres
- EU Framework Programme, EUREKA & Eurostars

## Collaborative R&D competitions

- Key mechanism for supporting business R&D
  - Business and research communities work together on research and technology projects to deliver successful new products and services
  - Collaborative Research & Development projects must have two or more collaborators, at least one from business
  - Project areas derived from Key Technology and Application Areas, and Innovation Platforms
  - Since 2004 more than 700 Collaborative R&D projects approved for funding - over £1 billion of R&D activity

## Products from stem cell research

- Viable therapeutic stem cell treatments for serious diseases
- Supports UK expertise in bio manufacturing
- Key Benefits
  - develop treatments for patients with diseases such as Parkinson's disease and stroke
  - dramatically reduce the demand for and cost of long-term nursing care
  - the creation of generic processes will make future cell-based medicines easier to develop and more affordable across the industry



### Partners

ReNeuron Group PLC  
 Angel Biotechnology Ltd  
 Regen Tec Ltd

Kings College London  
 Institute of Psychiatry

### Project

3 years  
 £4.4m (50% business/50%  
 TSB)

# Knowledge Transfer Networks

- Aerospace and Defence
- bioProcessUK
- Bioscience for Business
- Chemistry Innovation
- Cyber Security
- Electronics
- Integrated Products Manufacturing
- Food Processing
- Grid Computing Now!
- Healthcare Technologies
- Industrial Mathematics
- Environmental
- Intelligent Transport Systems
- Location and Timing
- Low Carbon & Fuel Cell Technologies
- Materials
- Micro & Nano Technologies
- Modern Built Environment
- Photonics
- Resource Efficiency
- Sensors
- UK Displays and Lighting
- Digital Communications
- **Creative Industries**

## Knowledge Transfer Partnerships

- Facilitating the transfer of knowledge and spread of technical and business skills, through innovation projects undertaken by high calibre, recently qualified people. The Technology Strategy Board works with 17 other funding partners.
- Each partnership employs one or more high calibre Associates to work on a project, which is core to the strategic development of the business.
  - Increasing business interaction with knowledge base
  - Stimulating business relevant education and research in knowledge base
  - Associate gains high quality work experience and training







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