A Beginners Guide to the Technology Strategy Board

Andrew Tyrer
19th September 2011
Why is Innovation a good thing?

"Innovation . . . is generally understood as the successful introduction of a new thing or method . . . Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services.

"Innovation is the multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace."
What’s the problem?

- Business Investment is too low and too late
  - Technical and financial risks need to be mitigated
  - The time for financial return is too long for many players
- Innovation disrupts value chains and business models
  - New partnerships are required to build new supply chains
  - Investment and innovation is required at multiple points
- Longer term Trends not visible to all players
  - Impact and opportunities from emerging technologies & policies
- Innovation infrastructure complex and inefficient
  - Fragmented and difficult to navigate
- Government does not make best use of its levers
  - Procurement, regulation, standardisation, fiscal incentives
So what do we need to do?

- Create a more effective innovation environment in the UK
- Encourage business innovation by reducing financial and technical risk
- Enable business to exploit emerging markets and disruptive change
- Enable business to access, collaborate with and exploit the knowledge base
- Help government to use its available levers to drive innovation
What is the Technology Strategy Board?

• We are a national body set up in 2007 to invest in business innovation

• We work across business, universities and government

• We mostly come from business
  – 130 people with over 1700 years of business experience

• We were responsible for investing £250m a year over our first 3 years
We support the full range of business

• We help **strengthen** the global competitive position of our leading businesses

• We identify and **grow** sectors and businesses with the capacity to become the best in the world

• We **nurture** the businesses that can succeed in the growth sectors of tomorrow
And we make choices

- We don’t pick winners.
- We do pick areas of activity where UK businesses can thrive and support innovative companies in them.
- We consider
  - the size of the markets,
  - the capability of the UK to address them,
  - the timing
- …and the difference our support would make
Government Levers

- Standards
  - Give lead to market specifications

- Regulation
  - Forces market specifications

- Taxes
  - Changes the cost/benefit balance of the market

- Procurement
  - Sets market specifications and builds market
  - SBRI
  - Forward Procurement Specification
Concept to Commercialisation
Focus Areas and Themes

Innovation programmes: focus areas and themes

Energy
- Energy security, environment, sustainability and economic growth, especially the opportunities created by the 2030 and 2050 low carbon energy targets.
- Focus areas:
  - Fuel cells & hydrogen
  - Carbon capture
  - Offshore wind
  - Nuclear (under evaluation)

Built Environment
- Enabling the development and adoption of new technologies to help improve the productivity of the UK food and farming industries, while decreasing their impact on the environment.
- Focus area: Sustainable agriculture and food.

Food
- Stimulating the development and adoption of new technologies to help improve the productivity of the UK food and farming industries, while decreasing their impact on the environment.
- Focus area: Livestock and buildings.

Sustainability
- Helping the UK industry to secure marine opportunities driven by sustainability challenges across the economy.

Transport
- Developing vehicles and systems for an integrated, sustainable and economically efficient transport system.
- Focus areas:
  - Aerospace
  - Road - low carbon vehicles
  - Marine (under evaluation)
  - Integrated transport
  - Rail (under evaluation)

Healthcare
- Creative solutions and proactive health management, earlier and better diagnosis and treatment of chronic and acute disease and theoretically tailored to patients' needs.
- Focus areas:
  - Assistive living
  - Detection and identification of infectious agents
  - Stratified medicine
  - Regenerative medicine

High Value Manufacturing
- Maintaining and enhancing the international competitiveness of UK-based manufacturing industries, including aerospace, automotive, chemicals, pharmaceuticals and food, through the development and application of innovative manufacturing technologies in product and process areas within and across sectors.

Digital Services
- Enabling UK businesses to benefit from rapidly growing availability of fixed and mobile communications infrastructure, data and computing capabilities.

Notes:
- Curran Innovation Platforms.
- Nanotechnology is a previously identified area of nanoscale technologies to form embedded in all themes whereas these are such opportunities.
- Space technology innovation in space applications involves a range of other sectors and areas; see box on page 20.
Delivery mechanisms - Competitions

• Consortium Investment
  – “normal” 2-stage
  – “fast track” 1-stage
  – feasibility first stage
  – 2-stage with consortium building workshop/Grand Challenge
  – sandpit first stage

• Single Company Investment
  – Knowledge Transfer Partnership
  – Grant for Research and Development
  – Feasibility studies leading to Collaboration Nation
  – LaunchPad
  – SBRI
Feasibility Studies for Digital Britain
SEPTEMBER 2009 COMPETITION FOR FUNDING

Integrating smart meters in systems for smart homes
COMPETITION FOR COLLABORATIVE R&D AND DEMONSTRATION FUNDING
MAY 2010

Trusted Services
COMPETITION FOR COLLABORATIVE R&D AND FAST-TRACK FUNDING
MAY 2010

Digital Testbed: Network Services Demonstrators
MAY 2010 COMPETITION FOR FUNDING

Harnessing Large and Diverse Sources of Data
COMPETITION FOR COLLABORATIVE R&D FUNDING
SEPTEMBER 2010

Metadata: increasing the value of digital content
COMPETITION FOR COLLABORATIVE R&D FUNDING
SEPTEMBER 2010

Disruptive solutions for energy, digital, healthcare, & sustainability problems
COMPETITION FOR FUNDING
SEPTEMBER 2010

Feasibility Studies in Digital Services
COMPETITION FOR FUNDING
JANUARY 2011
Working with Government (e.g. 1)

• Trusted Services
  – speed up the deployment of secure and trustworthy information systems
  – Opened May 2010
  – Directgov major stakeholder

• Funded 28 projects investing £8.6m
  – 10 Mainstream projects TSB £6m EPSRC £1.35m
  – 18 Fast Track projects TSB £1.25m
Working with Government (e.g. 2)

• SBRI Project - Have I got ‘views’ for you?
  – Co-sponsored by INSTINCT and the Technology Strategy Board £600k
  – to stimulate development of innovative tools to collect and analyse live data streams in real time; identify trends; build a common picture
  – monitor, manage and influence events as they occur

• INSTINCT is particularly interested in applying these tools to the analysis and management of terrorist incidents
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Top Tips

• Answer the question fully and use all the space available
• Speak in plain English, no jargon, acronyms, etc
• Number your sections & questions
• Use capitals when correct to do so but not to draw attention to your case – reviewers do not like it.
• Quantified means put some numbers in i.e.
  – Avoid clichés – “Holy Grail” or “Market is massive”.

Technology Strategy Board
Driving Innovation
Total Funding Limits

• Up to 75% for Basic Research projects
• Up to 50% for Applied Research projects
• Up to 25% for Experimental development projects
• Business to Business projects (50%, 50%, 25%)

• Projects can span more than one type, calculate the grant on a work package by work package basis.
Eligible Costs (Industry Partners)

- Labour Costs
- Overheads
- Materials
- New Capital Equipment
- Existing Capital Equipment Depreciation
- Sub-Contracts
- Travel & Subsistence
- Other Costs
  - Other eligible direct costs not included in the above headings,
    - cash transfers
    - Contributions in Kind
  - IP filing costs up to £5,000 (SME only)
Delivery mechanisms - Activities

• Knowledge Transfer Networks
  – Networks within communities with similar skills or goals, where knowledge about needs and capabilities can be exchanged

• Missions
  – Opportunities for fast-growing technology companies in the UK to explore opportunities for growth with key investors, potential partners and customers, media and other overseas stakeholders

• Centres
  – Provide a single point of access to world leading research capability
    • a critical mass of knowledge and skilled personnel
    • access to expensive or fast evolving capital equipment
Knowledge Transfer Networks

- Aerospace and Defence
- Biosciences
- Chemistry Innovation
- Creative Industries
- Electronics, Sensors and Photonics
- Energy Generation and Supply
- Environmental Sustainability
- Financial Services
- HealthTech and Medicines
- ICT
- Industrial Mathematics
- Materials
- Modern Built Environment
- Nanotechnology
- Transport
http://www.innovateuk.org

e: andrew.tyrer@tsb.gov.uk
m: +44 7824 599702
tw: tsb_andrewtyrer