

Technology Strategy Board

Driving Innovation

Challenge Led Innovation

Success through collaboration - ATM event

4th June 2009, Farnborough

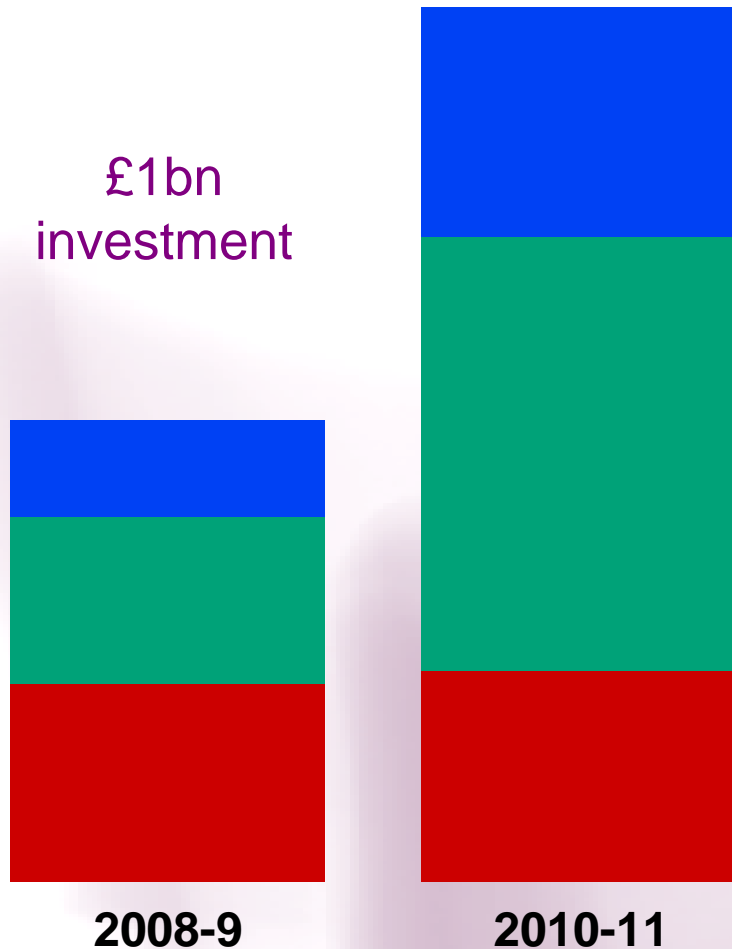
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About us

- ∅ Focused on business innovation and the application of technology
- ∅ An arm's length executive body
- ∅ Sponsored by the Department for Innovation, Universities and Skills (DIUS)
- ∅ Working across government
- ∅ In partnership with research councils, regional development agencies and the devolved administrations
 - “Aligned” Budget of £1bn (2008-11)

Our Strategy



The Innovation Climate

Challenge-led Innovation

Technology-Inspired Innovation



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How we Deliver

- ∅ Collaborative R&D Competitions (CR&D)
(Challenge-led and Technology Inspired)
- ∅ Innovation Platforms (IPs)
(Challenge-led)
- ∅ SBRI
(Challenge-led)
- ∅ Knowledge Transfer Partnerships (KTPs)
(Innovation Climate)
- ∅ Knowledge Transfer Networks (KTNs)
(Innovation Climate)

Working Across Government

- ∅ Government Departments
 - Innovation Platforms & SBRI
- ∅ RDAs/DAs
 - ∅ CR&D, Innovation Platforms & SBRI
- ∅ Research Councils
 - CR&D, Innovation Platforms
- ∅ Internationally
 - Europe: ERANET+, ARTEMIS...
 - Bilateral agreements may also be an option

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Criteria for Investment

- ∅ **UK capacity to develop and exploit the technology**
 - Capacity & Capability & Skills-base
 - Strategic Presence or UK centre of gravity
- ∅ **The right potential for impact in the right time frame**
 - Added value in the UK
 - Cross-sector appeal
- ∅ **The size of the global market opportunity**
 - Clear and timely opportunity
 - Science developed far enough
 - Commercial impact quickly enough
 - Seeds sustainable economic growth
- ∅ **A clear role for the Technology Strategy Board to add value**
 - Promote sustainability or quality of life
 - Partnerships and cross-government coordination
 - Spread risk, create challenges, address gaps and barriers
 - Inspire a culture of innovation

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Challenge Led

- ∅ Medicines & healthcare
- ∅ Energy generation & supply
- ∅ *Transport (July 09)*
- ∅ *Environmental sustainability*
- ∅ Built environment
- ∅ *Creative industries*
- ∅ *High value services*

Technology Inspired

- ∅ Advanced materials
- ∅ Bioscience
- ∅ Electronics, Photonics and Electrical Systems
- ∅ Information & Communication Technologies
- ∅ High value manufacturing
- ∅ Nanotechnology

Challenge-Led Innovation

Transport

- ∅ Reducing transport's emissions of carbon dioxide (CO₂) and other greenhouse gases, with the desired outcome of tackling climate change.
- ∅ Delivering reliable, efficient and safe transport networks and reducing congestion.
- ∅ Sustaining and growing a competitive and innovative transport manufacturing/service industry.

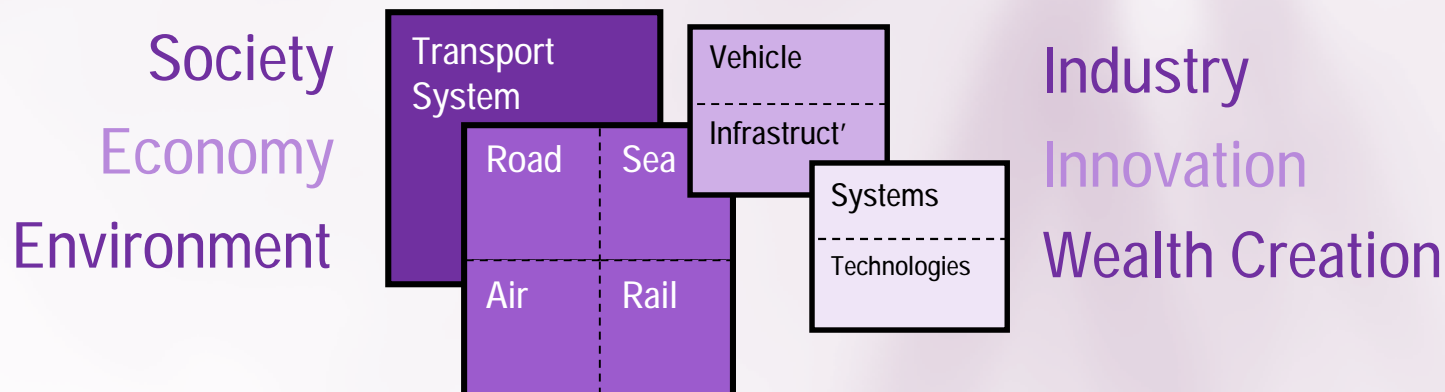
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Challenge-Led Innovation

Transport

- ∅ A “technology” alone does not deliver a capability
- ∅ Need to consider the technology as part of a system...
- ∅The system is part of a system of systems



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Innovation Platforms

- ∅ Delivering innovation with sharp focus on a specific issue - addressing major policy & societal challenges by...
 - understanding how Government may use regulation and procurement to address each challenge
 - engaging with business and the research community to identify responses - and the development needs
- ∅ Currently running:
 - **Low Carbon Vehicles**
 - **Intelligent Transport Systems & Services**
 - Assisted Living
 - Low Impact Buildings
 - Network security
 - Detection and Identification of Infectious Agents

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Where do they come from?

- ∅ Identify high level challenge from government policy
- ∅ Work with the government department that “owns” the challenge
 - Get them to define what success would look like
 - See what they are doing to address the challenge
- ∅ See what effect that could have on the “market”
- ∅ Work with business to identify the “answer” – use KTNs
 - Identify relevant capability in the knowledge base – use RCs
 - Identify relevant capability in the supply chain – use RDA/DAs
- ∅ But keep talking to the government department
- ∅ Build an inclusive business community
- ∅ Choose the most effective interventions from the “toolkit”

Roadmaps/NATS as a Tool

- ∅ Communicating an industry need to a range of stakeholders (inside and outside sector)
- ∅ Industry – awareness of where commercial opportunities will develop and being prepared for change
- ∅ Industry – common understanding of priorities and technology themes
- ∅ Industry – where's best for collaboration (UK, EU.....)
- ∅ National/Regional Government and Research Councils: awareness of priorities and timescales

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Making it work – adding value

- ∅ National Technical Committees/Special interest Groups provide “texture” makes roadmaps come alive
- ∅ Role of KTN is essential to sure this process happens and delivers required outputs
- ∅ Engagement of other KTNs is also key
- ∅ But... There is a risk in having such a high profile strategy
- ∅ Its integrity is threatened if prioritisation and scheduling change at short notice:
- ∅ KTN will continue to be essential in helping industry to manage this effectively

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www.innovateuk.org

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Small Business Research Initiative (SBRI)

- ∅ Enables Public sector bodies to engage with a broad spectrum of technology based industry
 - focus on SMEs
- ∅ Intended to result in a purchasable product
- ∅ Public sector body acts as lead customer (e.g. NHS, MoD)
- ∅ 100% funded development contract not a grant
- ∅ Single customer to single supplier contract
- ∅ IP owned by the company
- ∅ Accelerates technology introduction through risk managed process

www.innovateuk.org/deliveringinnovation/smallbusinessresearchinitiative.ashx

Knowledge Transfer Partnerships (KTPs)

- ∅ 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 institution

*On average, during 2006-7, each £1 million of government investment in KTP delivered: **43** new jobs created **190** company staff trained **£2.97m** increase in company annual pre-tax profits*

Knowledge Transfer Networks

- ∅ National networks in a field of technology or business application
- ∅ Funded by the Technology Strategy Board
- ∅ Bringing together business, research bodies and the finance community ...
- ∅ ... to stimulate innovation through exchange of knowledge and expertise.

Total KTN members: over 50,000



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Manufacturing

Through Life

- ∅ Not just production
- ∅ Interfaces forwards & backwards
- ∅ Recent “Value Systems” £4m call for proposals to assess whole picture

