

# EU CHALLENGES for INNOVATION

## Financing Innovation

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## Aims of Innovation Policy

**“To make the UK the best place in the world to run an innovative business, public service or third sector organisation” – *Innovation Nation March 2008***

- UK needs innovation across economy to see a return to sustained economic growth.
- In a rapidly changing world, faced by large-scale challenges, innovation is a key imperative for business across all sectors, government and also the “third sector”.
- Substantial evidence on links between innovation and growth.
- Growth correlates with business R&D investment and with other forms of innovation expenditure
- A major role for the public sector in shaping private-sector innovation capability, and addressing the limitations of markets.

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## UK Innovation Policy: Key Features

### Sustained Investment

- Investment in science and innovation has increased (e.g. Science Budget £1.9bn 1997 – £3.9bn 2010-11)
- UK established the 10 Year Funding Framework for Science & Innovation in 2004; set principle of seeking to increase funding in line with GDP growth.
- Significant investment in innovation (> £1bn in the current spending review period)

### Independence and Excellence

- Funding for scientific research and innovation is allocated by independent, expert bodies, Research Councils and the Technology Strategy Board; with regional priorities identified and supported by Regional Development Agencies (RDAs)
- Technology and economic/business assessment of R&D projects
- Measurement infrastructure focused on priority areas

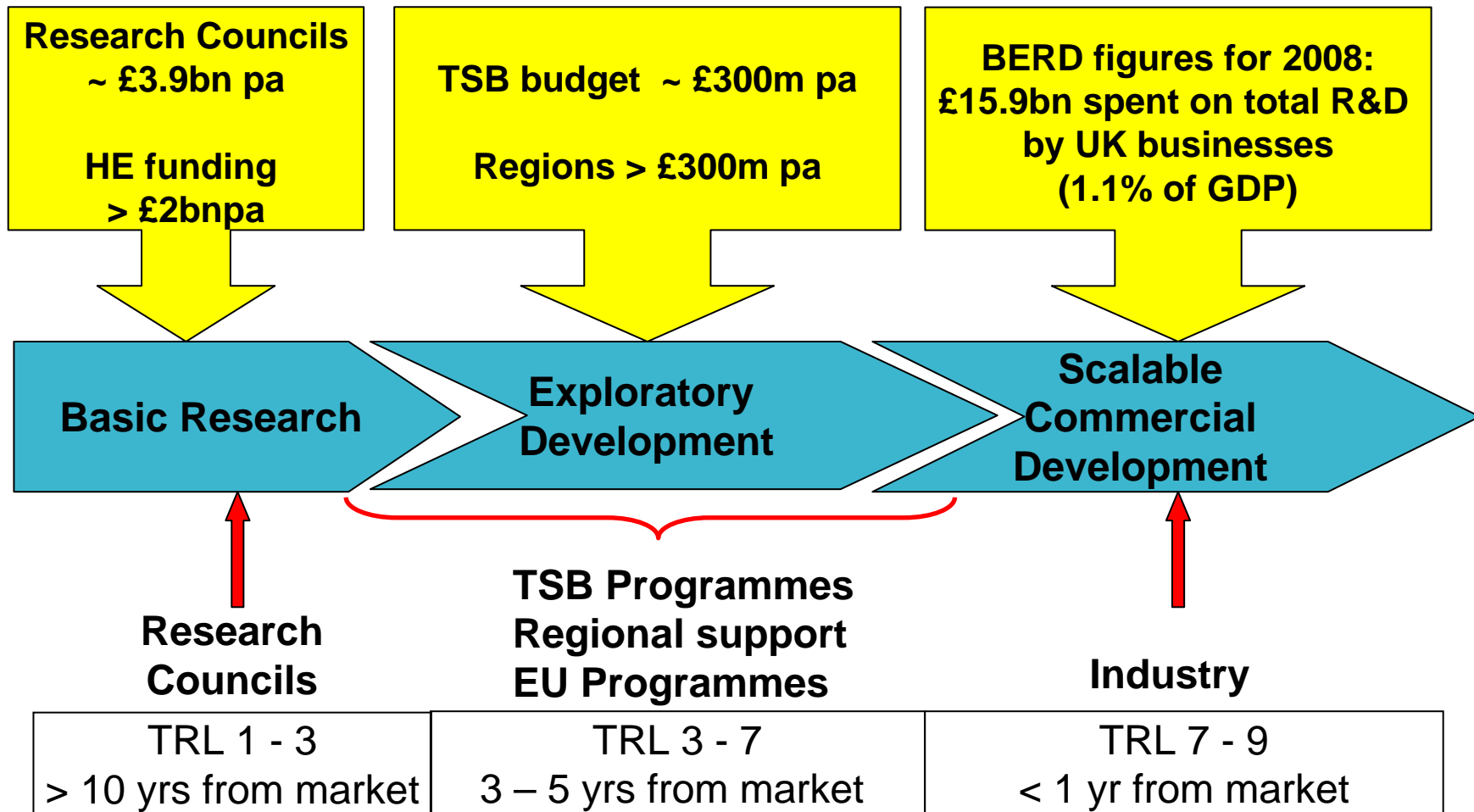
## UK Innovation Policy: Key Features

### Support for Knowledge Transfer

- Creation of Higher Education Innovation Fund (£150m by 2010-11), supporting Technology Transfer Offices and other KT activities
- Support for seven focussed innovation products (including Collaborative R&D, Knowledge Transfer Partnerships, Knowledge Transfer Networks).

### Fiscal Incentives

- R&D Tax Credit - £3 billion of support for 36,000 claims by March 2007 (> 30,000 claims worth over £1bn under SME schemes and > 5000 claims worth ~ £2bn under large company scheme)
- Publicly funded Venture Capital programmes have committed £400m since 2000. Government has also launched UKIIF with £150m investment in May 2009.

**Total UK investment in R&D (for 2007), £25.4bn - 1.79% of GDP**
**Government Expenditure on R&D > £9bn pa**


## Technology Strategy Board

- Business led, business focused, body operating across all important sectors
- Stimulates innovation in areas which offer the greatest scope for boosting UK growth and productivity.
- Creates critical mass and coherence by working with RDAs, DAs, Government and Research Councils to invest over £1 billion between 2008/9 and 2010/11
- Make choices - picks sectors where UK businesses can thrive; considers the size of the markets; the capability of the UK to address them; and difference its support would make.



## Hauser Review of Technology and Innovation Centres

- UK has a science capability second only to the US but falls short on translating scientific leads into leading positions in new industries.
- Review recognised that Technology and Innovation Centres can play a vital role in bridging the gap between research and the market, by supporting the commercialisation of new technologies.
- These are mission driven organisations that develop their own in-house knowledge and capability to enable companies to share the costs of R&D; access skills and equipment which might not otherwise be within their reach; reduce risk; shorten time to market; and help develop value/supply chains.
- Recommended UK focus investments on an elite group of business focused centres that exploit platform technologies such as Regenerative Medicine, Composites and Plastic Electronics
- Process for implementing the recommendations in the Hauser review now in train – Technology Strategy Board to report back by the Pre-Budget Report on the process, priority areas, scale of investment required and governance structure

**REGIONAL DEVELOPMENT AGENCIES: ENGLAND**



Regional Development Agencies: England (MSU 07999)

- 9 English Regions and RDAs (Scotland, Wales, and Northern Ireland have devolved administrations)
- Regional Economic Strategies focus on regional economic development and growth
- Prioritise innovation and the knowledge economy
- Business-led Science and Industry Councils oversee regional innovation strategies.
- Regional science / innovation investment priorities funded primarily by RDAs and ERDF

## Regional Development Agencies (RDAs)

### Investment in Innovation

- RDAs own innovation investment around £300m annually.
- Lead deliverer or contributor to the main BIS innovation support products:
  - Networking for Innovation
  - Knowledge Transfer Partnerships
  - Collaborative Research and Development
  - Grant for Research and Development
  - Innovation Advice and Guidance
  - Designing Demand
  - Innovation Vouchers
- Innovation Infrastructure (50% of innovation spend is capital investment)

### Delivery Through Partnership

- Collaboration with the Technology Strategy Board and each other
- Over £180m aligned over three years: direct co-investment; active engagement; joint planning for delivery
- Strategic Advisory Group to the TSB
- Influence agendas of key actors including universities, Local Authorities and businesses e.g. 6 Science Cities
- Identify common challenges and priorities and develop shared investment programmes

# UK Innovation Investment Fund (UKIIF)

UKIIF announced

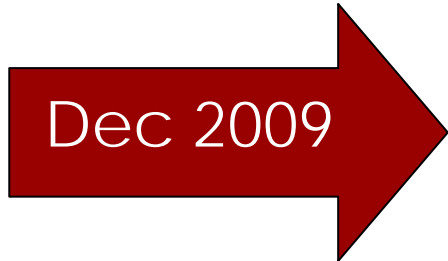
June 2009

Building   
Britain's Future

Fund managers  
appointed



Building   
Britain's Future



June 2009

Building   
Britain's Future

Dec 2009



Jan 2010

| Hermes Private Equity

Environmental  
Innovation Fund

June 2009

Building   
Britain's Future

Dec 2009



Jan 2010

| Hermes Private Equity

UK Future  
Technologies  
Fund

Feb 2010



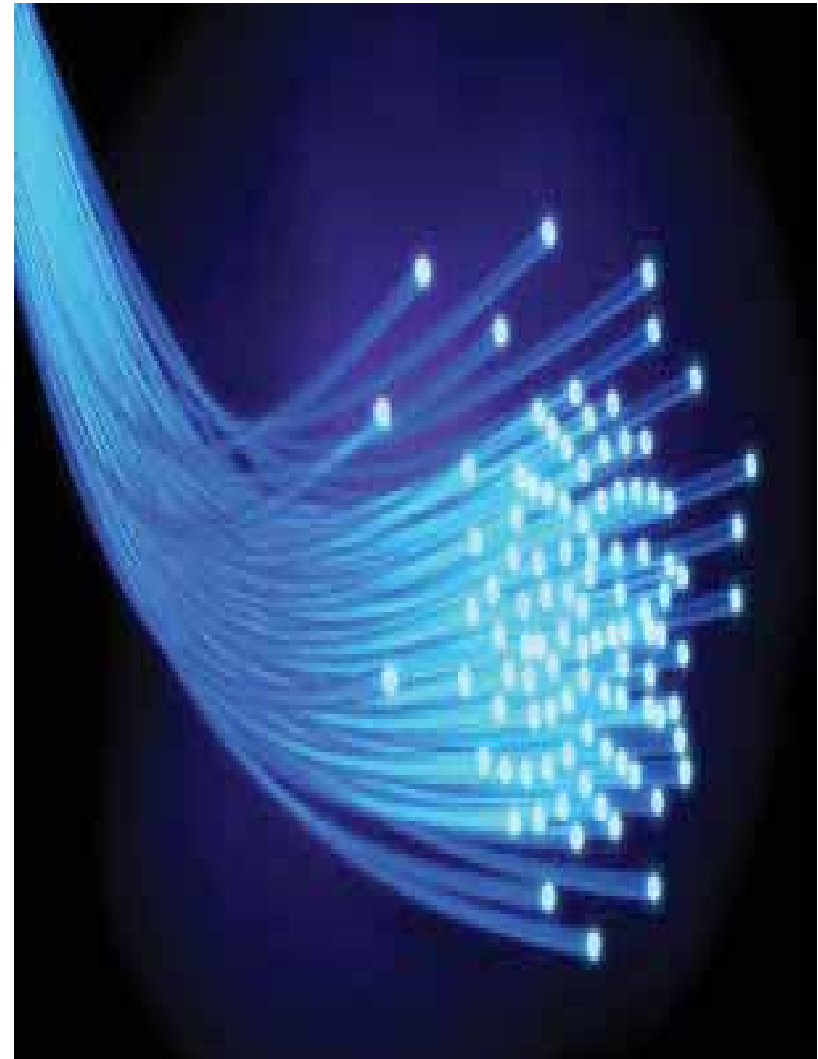
# Why does the UK need UKIIF?

## Venture capital is important to the UK and global economy...

- There are about **1,093 venture capital backed technology companies** in the UK, employing over 40,000 highly skilled people.
- Economic evidence tells us that **venture capital backed companies significantly out perform other companies** in terms of their ability to create wealth and generate the spillover benefits that are the objective of innovation policy:
  - UK **employment** increased by 6% compared to a national average of 1%;
  - **Sales** grew by 12% pa compared to 5% for FTSE Mid-250 companies;
  - Increased **R&D expenditure** of 12% compared to 1% pa; and
  - **Value of exports** from the UK increased by 14% compared with 4% national average.

## UKIIF objectives

- Drive economic growth and create highly skilled jobs in life sciences, clean tech, digital, advanced manufacturing
- Boost to the venture capital and syndication markets
- Support technology businesses
- Scale



## What is the UKIIF?

- £150m cornerstone investment from the UK Government (pari passu)
- £175m private sector investment at first closing
- Fund of funds structure
- Underlying funds will focus on investing in growing small businesses, start-ups and spin-outs
- Aim for top quartile returns
- Government will have no role in directing or influencing these decisions
- Can be invested outside UK

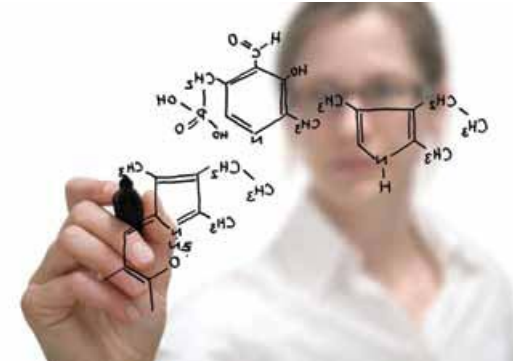
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## Fund I: Environmental Innovation Fund

- £125m at first closing
  - £75m BT Pension Fund
  - £50m UK Government
- Technology-based firms with high growth potential
- Expected to be fully invested over the next three years
- Mainly PE and VC funds and up to 30% co-invested in British growth companies
- Minimum 50% invested in environmental sector and a minimum 50% in UK

## Fund II: UK FTF

- £200m at first closing
  - £100m EIF raised
  - £100m UK Government
- Only in VC funds
- No direct investments in companies
- Life sciences, digital, advanced manufacturing
- Long-term and pro-active investor
- Support in structuring and improving the business proposition of VC teams



## The EU science base is world-class...

- In research terms the best EU universities are comparable with the world's top institutions.
- OECD reported in 2007 that EU invested \$220 bn (real terms) in science, research and innovation. While US \$311bn and Japan \$125bn.
- The number of publications per researcher in the EU is 1.32 times that in the US and 2.5 times the number in Japan<sup>1</sup>.

<sup>1</sup>Evidence Ltd, 2009

## ...and tops the league tables

- EU ranks 1<sup>st</sup> in the world on relative leading scientific indicators.
- EU ranks 2<sup>nd</sup> in some absolute indicators due to scale effects.
- Relative productivity league: Citations per unit spend in R&D is greater in the EU than in the USA and Japan.
- Large European countries, like Germany and the UK, have a greater proportion of PhDs per person than the US and Japan.

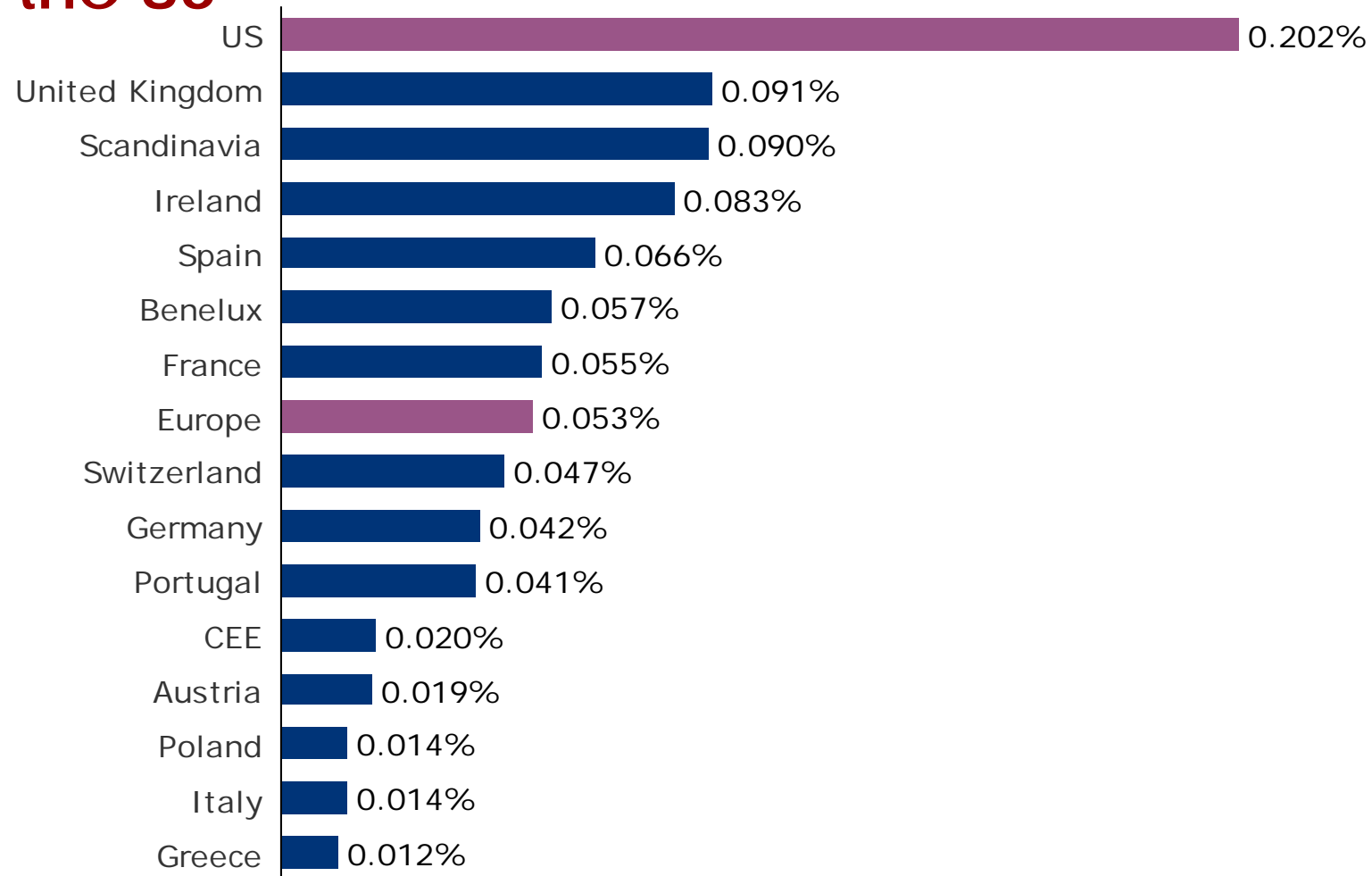
## Europe is home to many high-profile VC-backed technology companies...

- A number of European companies have achieved a value of more than \$1 billion post exit, including:
  - Iliad (France)
  - Ersol (Germany)
  - Cambridge Silicon Radio (UK)
  - VistaPrint (France/Netherlands)
- Many others have also generated significant returns for investors including:
  - QCells (Germany)
  - ZYB (Denmark)
  - MutuiOnline (Italy)
  - Intercell (Austria)
  - Terveystalo (Finland)

## ...but European venture capital lacks the scale of successful US Funds

- Of the €52bn invested in 2008:
  - €36 billion (70%) was allocated to buyouts €14 billion (27%) to venture and growth capital just €2 billion to technology VC
- Dow Jones Venture Source highlighted 2009 as the worst year for venture investment into European companies since it began tracking in 2000, over 40% down on 2008.
- US funds are at least \$1 billion in size
- EU funds are around \$50-100 million in size

## ...and Europe invests four times less in VC than the US



# Next steps

## UK proposal for increasing innovation funding

- Enable EIF to access capital markets to raise funds through bond issues, using its AAA rating to invest in key strategic sectors such as low carbon, life sciences, digital and advanced manufacturing
- It would invest in a number of specialist technology and growth capital funds over a 4-5 year period that have the expertise and track record to invest directly in innovative enterprises
- These funds would then invest in companies at all stages of development – not just “plugging the equity gap” – ability to invest large sums of up to €20 million if required

# Many thanks

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