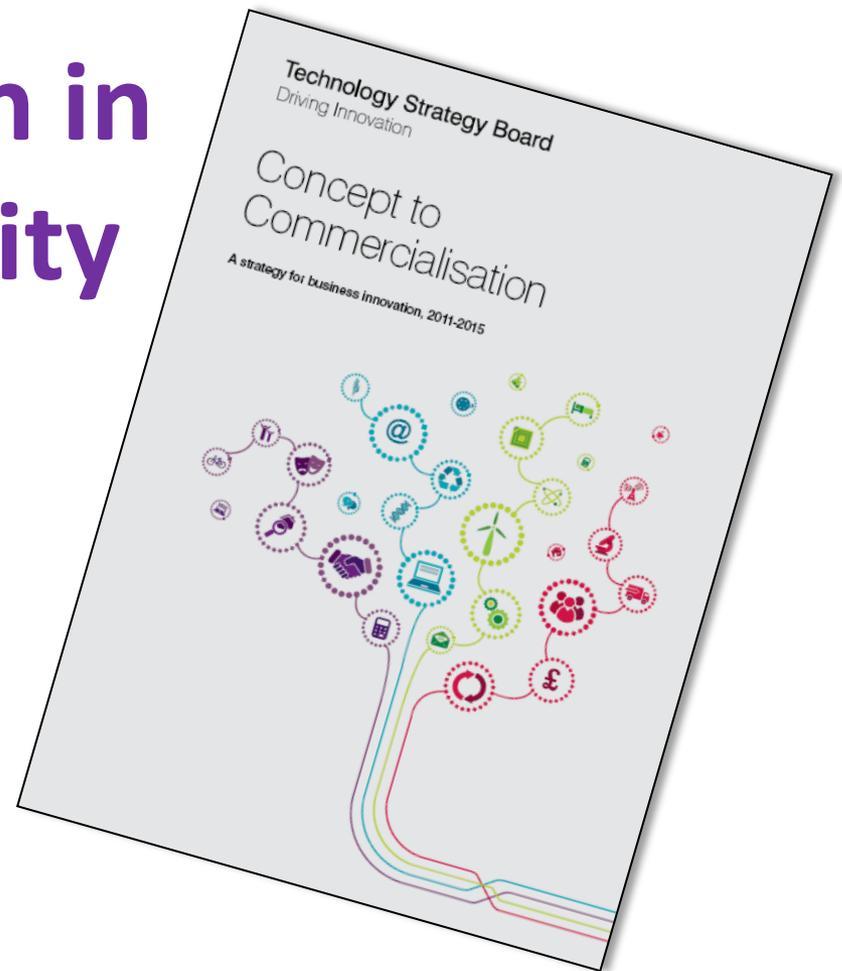


Driving innovation in the SME community and the role of academia

Dr Emily Nott

Research Base Liaison Manager
Technology Strategy Board

21 May 2014



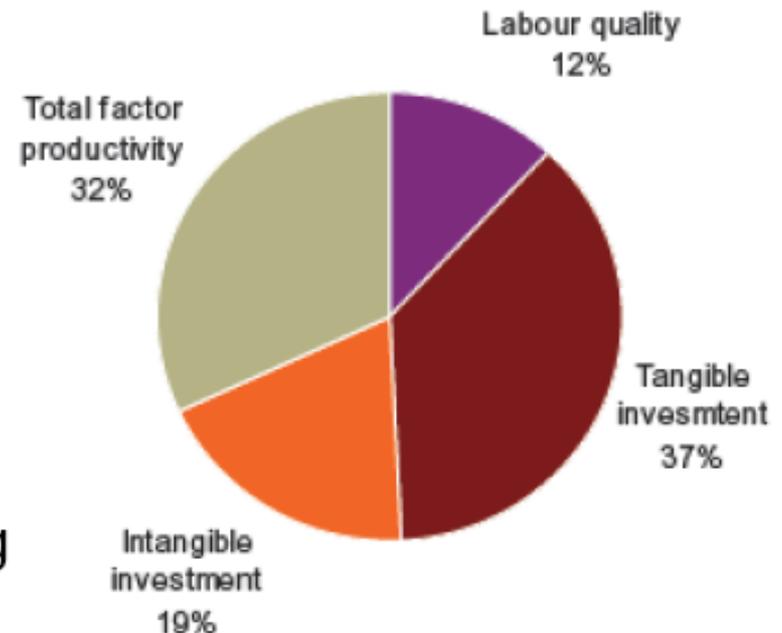
Introduction

- **Background to what we do**
- **How we work**
- **Research Base engagement**
- **Supporting SMEs**



Innovation matters to the economy

- Technological change accounted for 70% of UK economic growth between 1960 and 2000
- 51% of productivity growth between 2000 and 2008 was due to innovation (including the impact of technological change and intangible investment)
- ...with 32% attributable to changes in technology resulting from science and innovation



Department for Business, Innovation & Skills

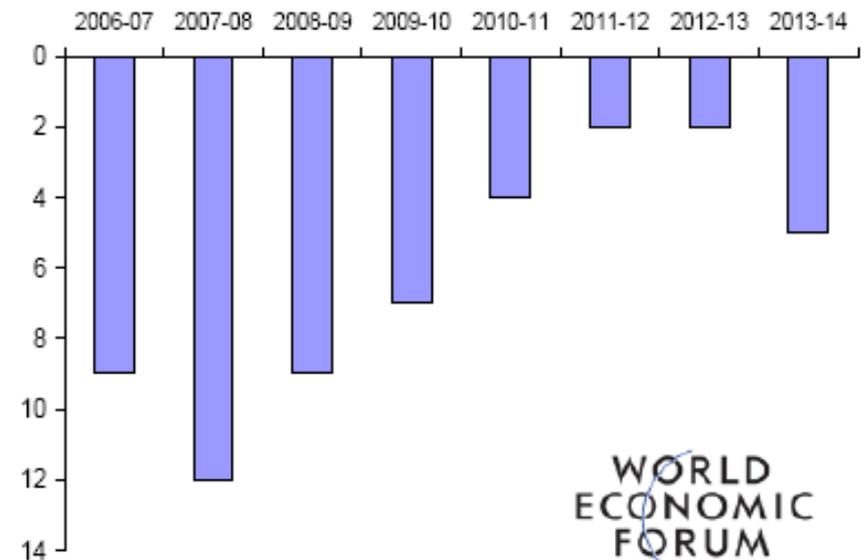
The UK compares well on innovation outcomes

3rd in the world (highest of the G20) in Global Innovation Index

Global Innovation Index (average)

Rank	Country	Score	Value	Percentage Rank	Score View
1	Switzerland	66.8	-	92.1	
2	Sweden	61.4	-	61.7	
3	United Kingdom	61.2	-	58.1	
4	Netherlands	61.1	-	62.2	
5	United States of America	60.3	-	59.7	
6	Finland	59.5	-	53.1	
7	Hong Kong (China)	59.4	-	23.4	
8	Singapore	59.4	-	14.8	
9	Denmark	58.3	-	45.3	
10	Ireland	57.9	-	60.2	
11	Canada	57.6	-	52.4	
12	Luxembourg	56.6	-	77.3	
13	Iceland	56.4	-	79.4	
14	Israel	56.0	-	73.7	
15	Germany	55.8	-	72.3	
16	Norway	55.6	-	43.2	
17	New Zealand	54.5	-	36.8	
18	Korea, Republic of	53.3	-	33.3	
19	Australia	53.1	-	18.4	

Top 5 in the world for university-industry collaboration



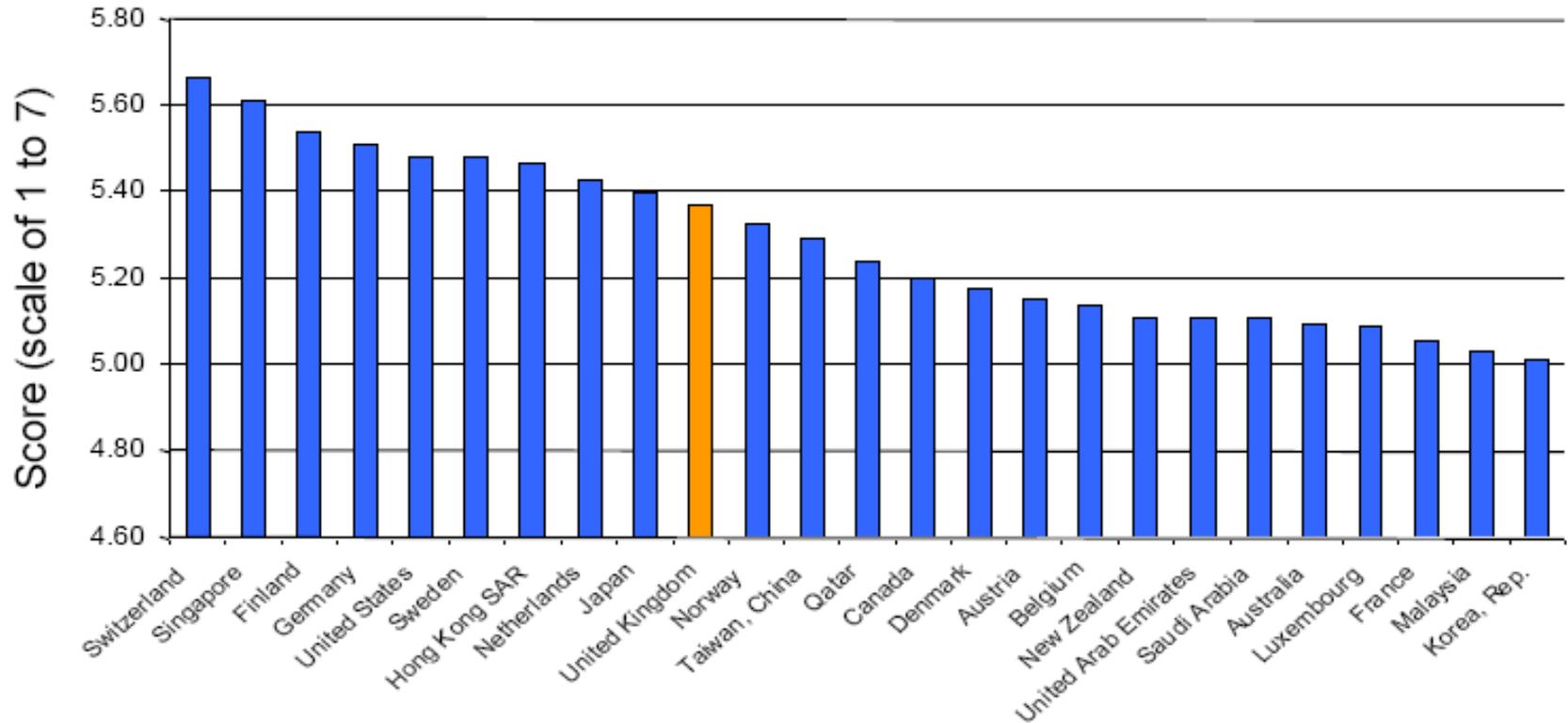
The Global Innovation Index 2013
The Local Dynamics of Innovation



Department for Business, Innovation & Skills

How do we make more of that strength?

World Economic Forum – Global Competitiveness Index 2013/14



Who we are

Our aim is simple...

...to accelerate economic growth by stimulating and supporting business-led innovation

- We are the UK's innovation agency - a national body set up by government
- We have about 230 staff – with a combined 2,000 years' business experience
- We are responsible for investing over £440m each year in UK innovation
- We are supporting 5,000 businesses and work with 150 research groups
- We work across business, universities and government

What we do...

- 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

We consider...

Can the UK do it?

Is the idea 'ready'?

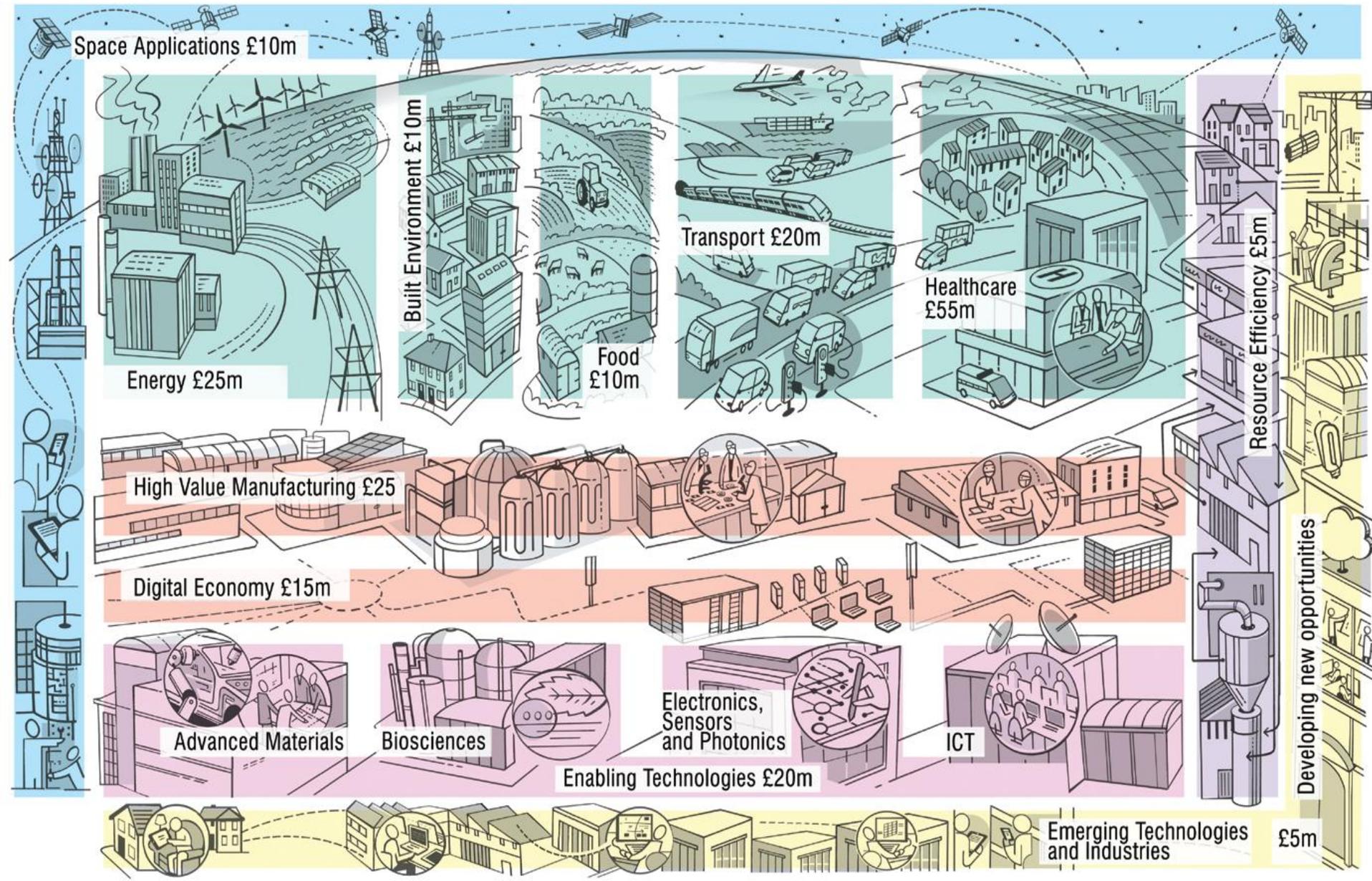
Is there a large market opportunity?

Can we make a difference?



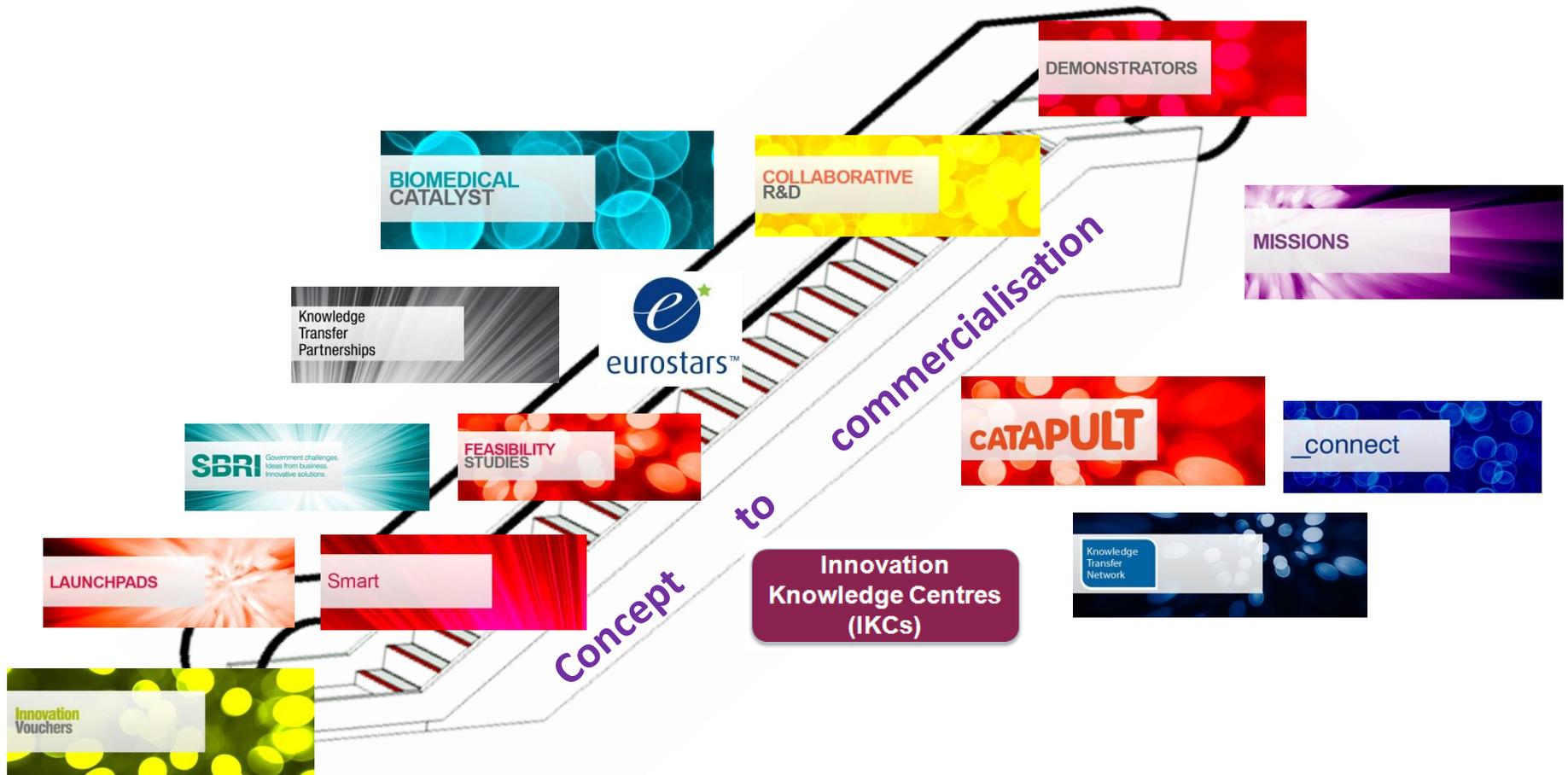
*Will it
bring new
ideas and
technologies
more quickly
to market?*

Anticipated in-year expenditure in 2014-15, by priority area



How we provide support

Range of tools with different objectives/characteristics



Our vision: for the UK to be a global leader in innovation

How can we help UK business bring new ideas and technologies faster to market?

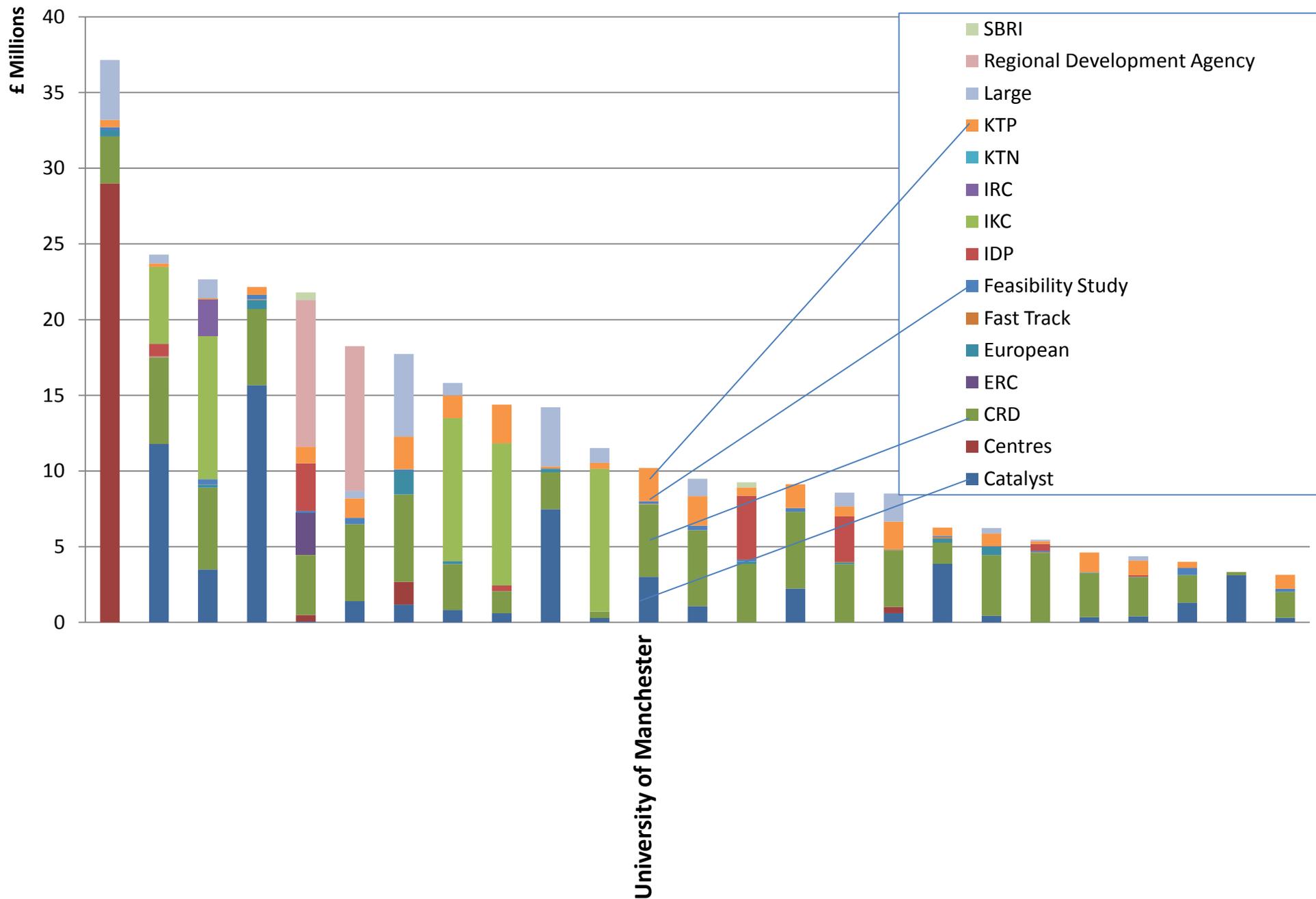
How can we help UK business get maximum benefit from research base

TSB interaction with the research base

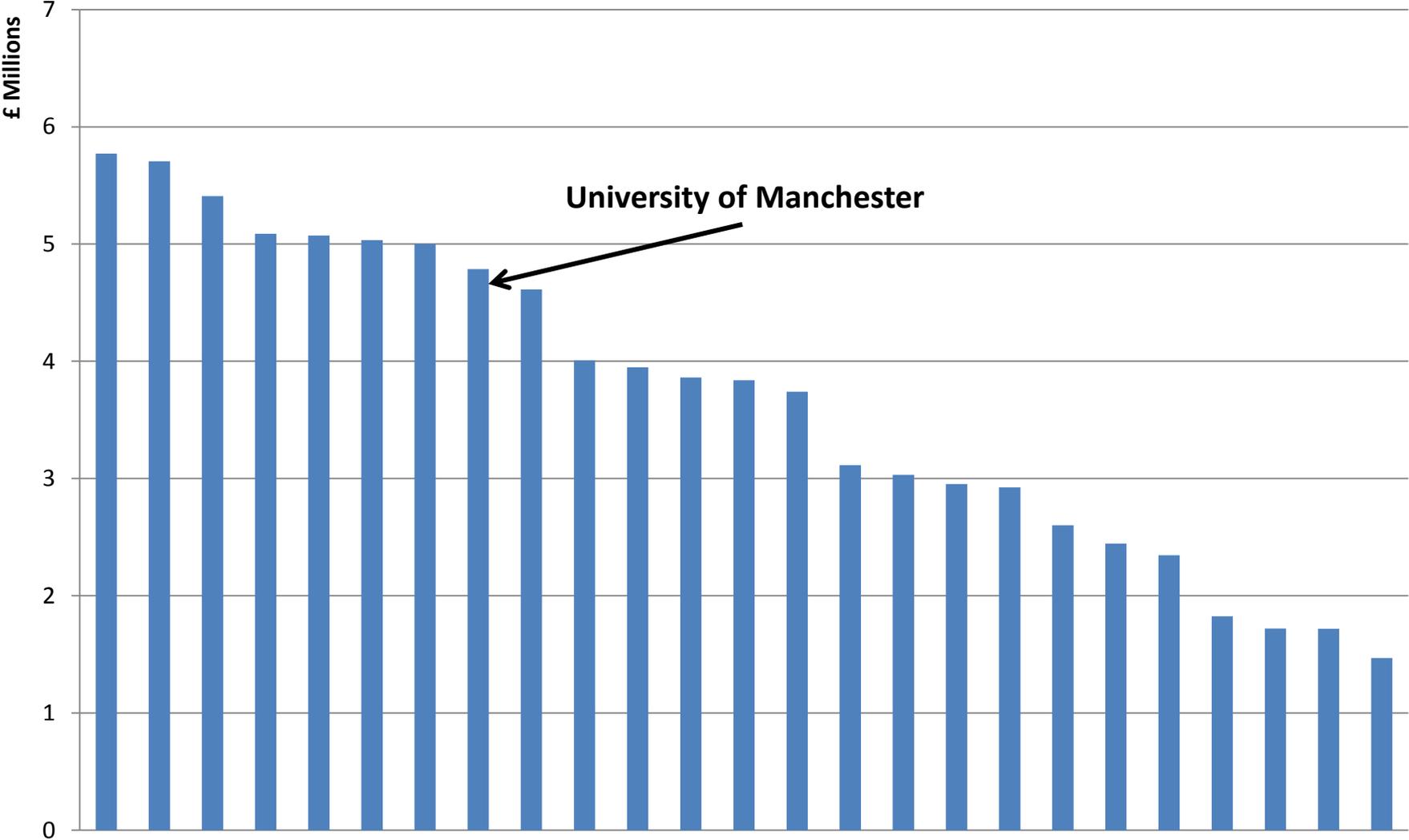


- 56% of the money we invest is with projects involving the research base
- 36% of our total investment goes to the research base (this includes RC co-funding) - 30% of TSB investment is with the research base
- 15-20% KTN members are from the research base
- PACEC review of CR&D identified '*the overall business impacts in projects with two or more academic partners (£9.67 per £1 invested) are more than double those in projects with no academics (£4.22)*'

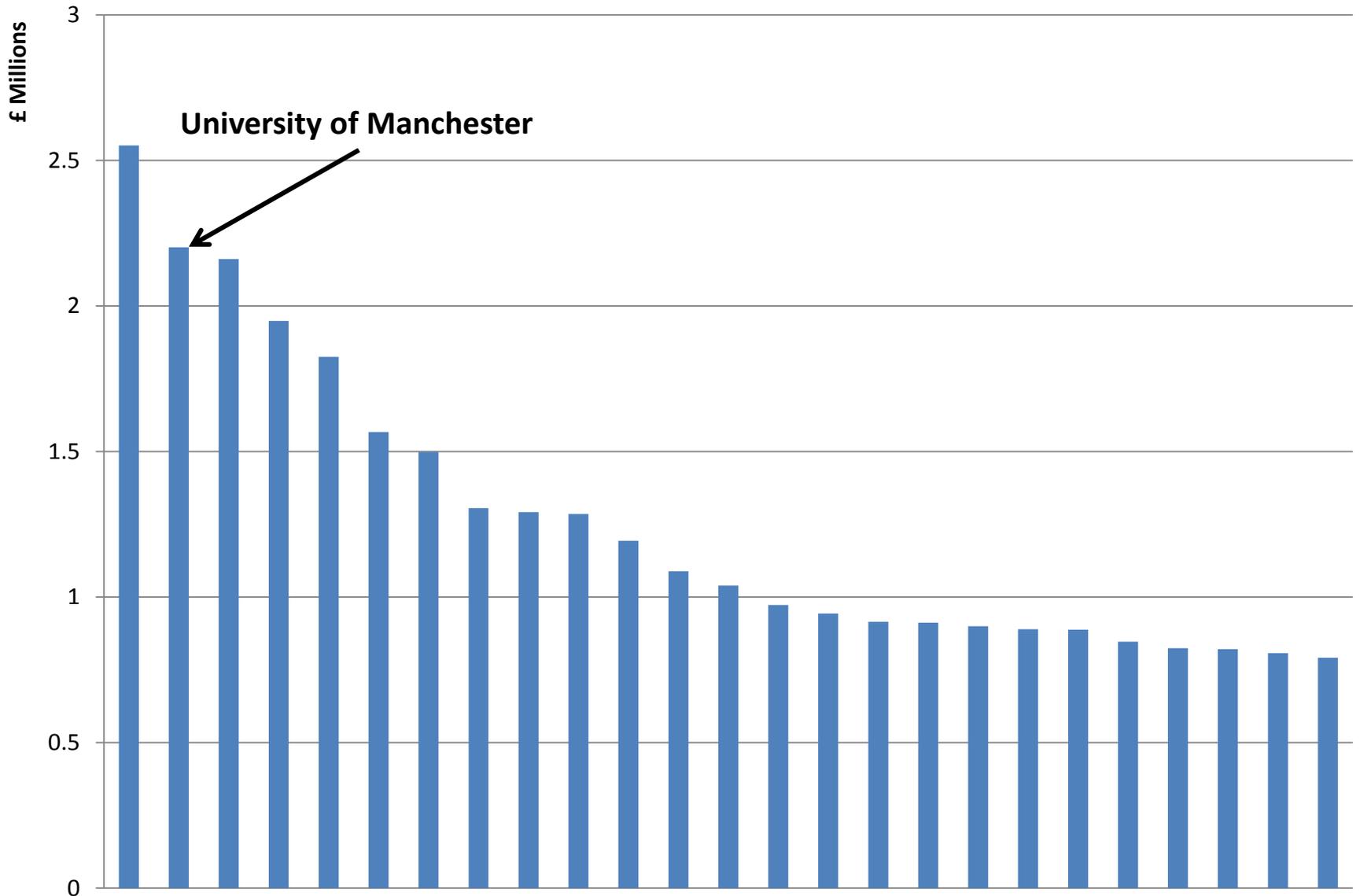
Total TSB portfolio – Top 25 Research Base partners by grant value – March 2014



Collaborative R&D portfolio – Top 25 Research Base partners by grant value – March 2014



KTP portfolio – Top 25 Research Base partners by grant value – March 2014



Working with the research base through RCUK

- ~ £69.3m was spent on collaborative activity between RCUK and TSB in 12/13.
- 15 new CR&D programmes were jointly launched in 2013
- 50 new CR&D projects were supported (overall value of £36m, £15m from industry)
- RCUK currently supports 35% of the total of all Knowledge Transfer Partnerships with contributions valuing approximately £15m
- Brokerage – National Centre for Universities and Business, Gateway to Research, Events etc

AHRC	Design, Rapid Prototype Processing, Long Term Healthcare Revolution
BBSRC	Biosciences, Industrial Biotech, Agritech
EPSRC	Digital Economy, Energy, Advanced Materials, High Value Manufacturing
ESRC	Innovation Research, New Business Models, User Behaviour
MRC	Biomedical Catalyst, Stratified Medicine, Regenerative Medicine
NERC	Marine Renewables, Algal Bioenergy, Climate Services
STFC	Space, Use of Facilities



Gateway to Research

Technology Strategy Board
Driving Innovation

Welcome to the RCUK gateway to publicly funded research

Search for and analyse information on the latest innovative research in the UK

Search

Help

Data

The data on this website provides information about publications, people, organisations and outcomes relating to research projects

APIs

The data is accessible programmatically using one of three application programming interfaces [GtR](#), [GtR-2](#) and [CERIF](#)

OGL

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Research base engagement – state of play

- Research base is engaged across our thematic priorities and toolkit in business-led activities
- Business tells us they want to work with the research base
- Still more to be done
 - More effective funding landscape
 - Effective relationship brokering
 - Identification of promising areas of research for commercialisation
 - Addressing IP barriers, academic motivation and culture
 - Improving access to highly skilled students and early career researchers

SMEs – why work with the research base?



The best selling android app of 2012
Links with Cambridge University

Networks... links with high quality academic institutes is a great way to build a business



Technology for animal health monitoring
Links with Roslin Institute & Glasgow Caledonian

Research base is essential... Provides essential resources and fantastic opportunities...and we need the animals



Advanced engineering materials
Links with Liverpool University

Working with UK research base, why would you not? UK has incredibly fertile institutes putting resources in solving problems...gives us first pick of interns and graduate employees



Objective

Encourages the first contact between an SME and an external knowledge provider, stimulating companies to access knowledge from sources they may not have previously used

Applications selected on a random basis and then checked for eligibility

Target users

Start-up, Micro, SMEs

Support provided

£5k



Smart

- Launched in April 2011, building on earlier schemes run by RDAs
- Single-company grants for proof of market projects, proof of concept or development of prototypes
- UP to a maximum of £250,000 with matched funding
- Purely for SMEs: around 90% are small or micro companies and 80% are less than 5 years old
- Evaluation of previous schemes showed a return to the economy of £9 per £1 spent



- A competition process which uses public sector challenges to stimulate innovation
- Helps the public sector to access novel ideas and work with innovative companies
- Provides an easy way for SMEs to engage with the public sector
- Gives companies a lead customer and a route to market
- Used by many Government departments and other bodies

Objective

To support the collaboration between businesses and between businesses and academia

Target users

Start-up, Micro, SMEs, Large companies, RTOs, academia

Support available

- Provided through competitions in thematic priority areas
- Funding from £25k with no upper level (competition dependent)
- Up to 5 years in duration
- Funded at 60% SME – 50% large business

Knowledge Transfer Partnerships

Builds sustainable capacity and capability in businesses that:

- need a step-change in capability to transform the business for new growth opportunities, or
- are new to open innovation, have the potential to innovate but currently lack the necessary managerial skills and expertise, or
- lack the technical knowledge to exploit external resources from the knowledge base



a new force for innovation & growth

- Business-focused technology and innovation centres that make world-leading technical capability available to businesses to solve their technical challenges
- Provide:
 - Access to world-leading technology & expertise
 - Reach into the knowledge base for world-class science
 - Capability to undertake collaborative R&D projects with business
 - Capability to undertake contract research for business
 - Strongly business-focused with a professional delivery ethos
 - Create a critical mass of activity
 - Skills development at all levels

CATAPULT

7

Catapults

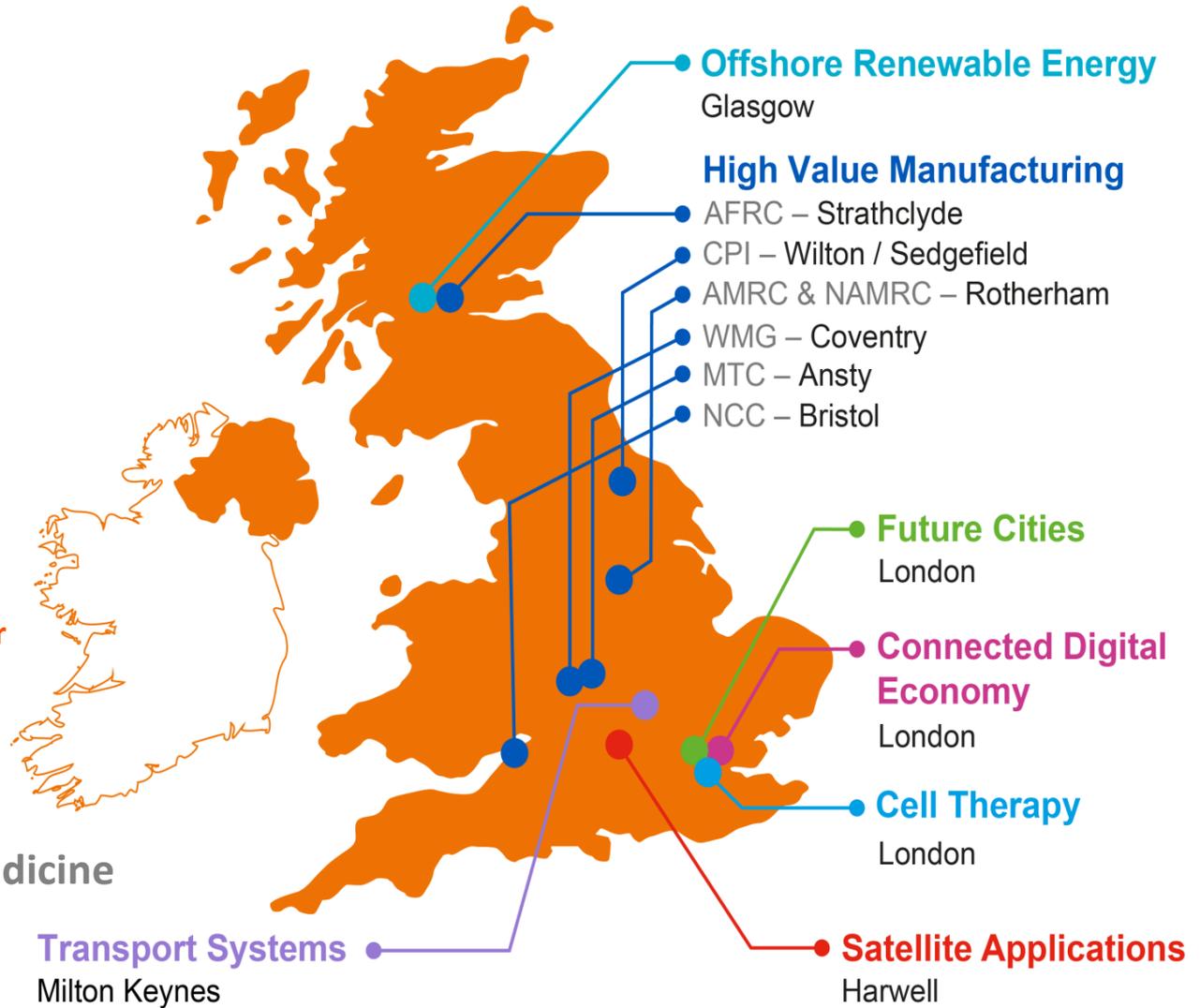
£1bn

Private & public sector investment

New Catapults:

Diagnostics for Stratified Medicine

Energy Systems



Technology Strategy Board

Driving Innovation



- National network in specific fields of technology or business application
- Aim: stimulation of innovation through knowledge sharing
- Knowledge Sharing:
 - Business to business
 - Research base to business
 - Between sectors
 - International
- Over 60000 members on [_connect](#)

A Single KTN

- 1 April KTN Ltd brings together all the separate networks and communities
- Chair David Lockwood
CEO Chris Warkup
110 staff from previous KTNs
- Hub offices will be located in London, Edinburgh, Oxford, Cambridge, Runcorn and Horsham
- Continue to use _connect as the focal point
- Setting up new advisory structures
- Continue to support networking whilst facilitating more efficient cross-sector connections
- Work more closely with The Technology Strategy Board and Catapults



Priority theme:

Advanced Materials

You can tap into the UK businesses that produce, process, fabricate and recycle materials, with an annual turnover of around £197bn, and become the next part of this lucrative supply chain.

Discover [materials on _connect](#) >

5 [networks](#)

39 [new articles](#)

53 [events this month](#)

Join networks, make connections; discover what effective knowledge transfer and open innovation can do for your business.

_connect is **free**, and always will be

[Learn more](#)

[Register](#)

Featured networks

Nanotechnology

One of the UK's primary



Popular events

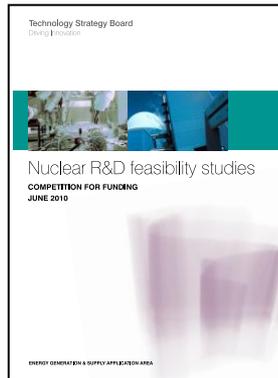
CASA Conference - Future

Most read articles

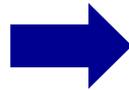


€619 million for 'Innovation in SMEs' under new Horizon 2020 funding mechanism

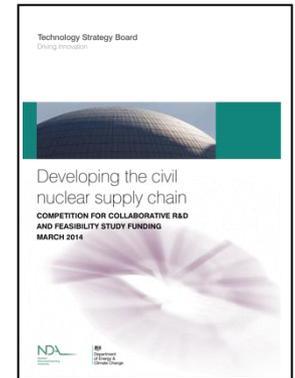
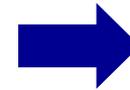
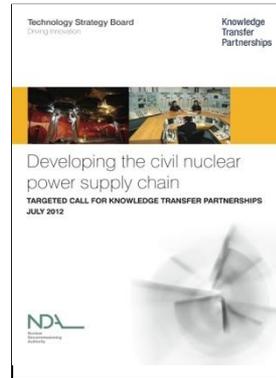
- Nuclear is a key part of our Energy Strategy
- We have been investing in nuclear innovation since 2011



2011 (£2m)



2012 (£15m)



2014 (£13m)
(just closed)

Aerospace – ATI projects and competitions

ATI funded activities are either “*strategic projects*” or “*CR&D projects*”

CR&D projects address specific technical topics and are administered as a competition



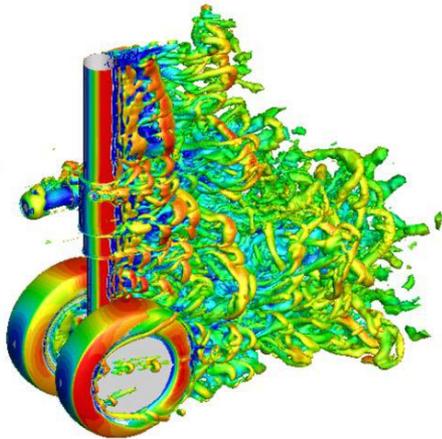
Technology Strategy Board
Driving Innovation



Technology Strategy Board competitions

Funded aerospace competitions complement ATI projects and allow targeted stimulation of key areas of the market.

Two competitions run under the **Highly Innovative Technologies Enablers for Aerospace (HITEA)** initiative targeting key technology areas

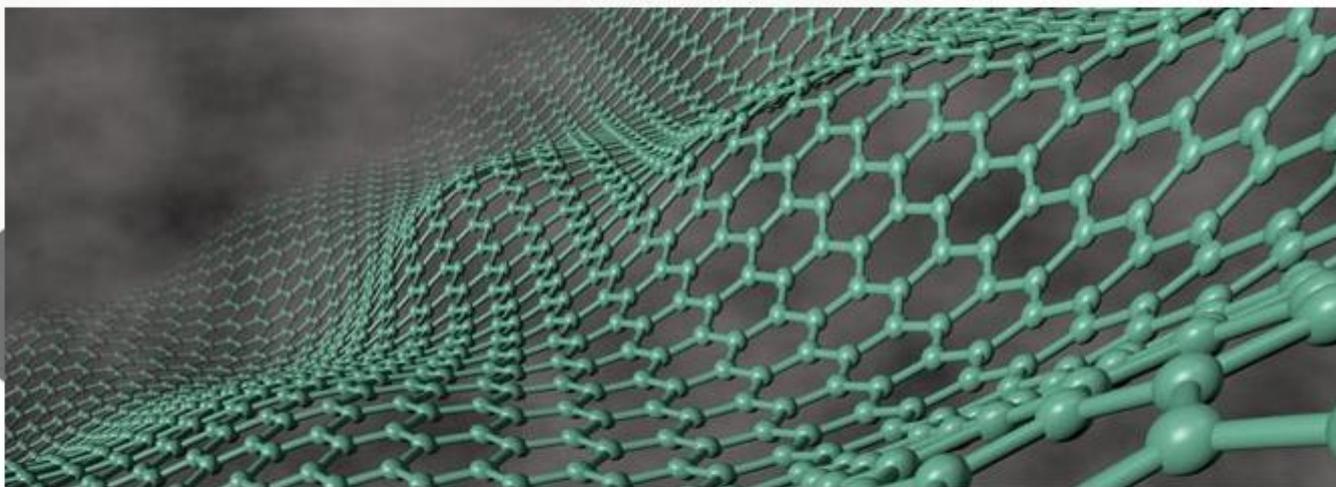


Top Image: Products manufactured by processes which depend on Hexavalent chrome technology at end of service life. (Image: Goodrich Actuation Systems Ltd)

Funding competition

Realising the graphene revolution

[Home](#) / [Funding & support](#) / [Funding competitions](#) / [Realising the graphene revolution](#)



Status: Forthcoming

Key features: Investment of up to £2.5m in feasibility studies to accelerate commercial applications in the novel material, graphene.

Programme: Feasibility studies

Award: Up to £2.5m

Opens: 07 Apr 2014

Registration closes: 28 May 2014

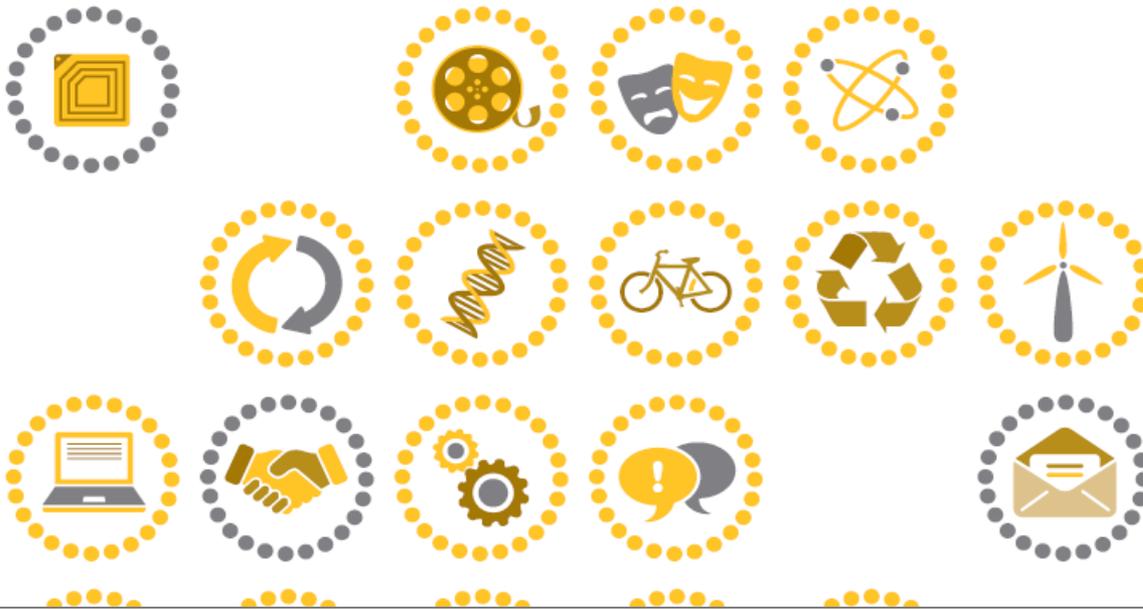
Closes: 04 Jun 2014

Support phone number: 0300 321 4357

Technology Strategy Board
Driving Innovation

Delivery Plan

Financial year 2013-14



Our single biggest event of the year is....



- The biggest multi-sector, multi-community innovation event in the UK
- Brings together 3000+ high growth UK businesses, international investors, government and academia
- Two days of networking opportunities, top class inspirational speakers from business, academia and the wider innovation ecosystem, with the very latest UK innovations on show

... which is aimed at meeting the business challenges faced by SMEs

A few things for you to consider

- Are you taking maximum advantage of the full range Technology Strategy Board initiatives?
- Are we telling our success stories?
- How can we better help:
 - Existing businesses work more effectively with academia
 - Turn research outputs into new businesses
 - Create new industries from emerging technologies
- How can we help business and academia to work together more effectively?

THANK YOU

Dr Emily Nott

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Technology Strategy Board

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