

Potential future ideas – Are they ‘KIC-ABLE?’

Richard L. Hudson

CEO & Editor

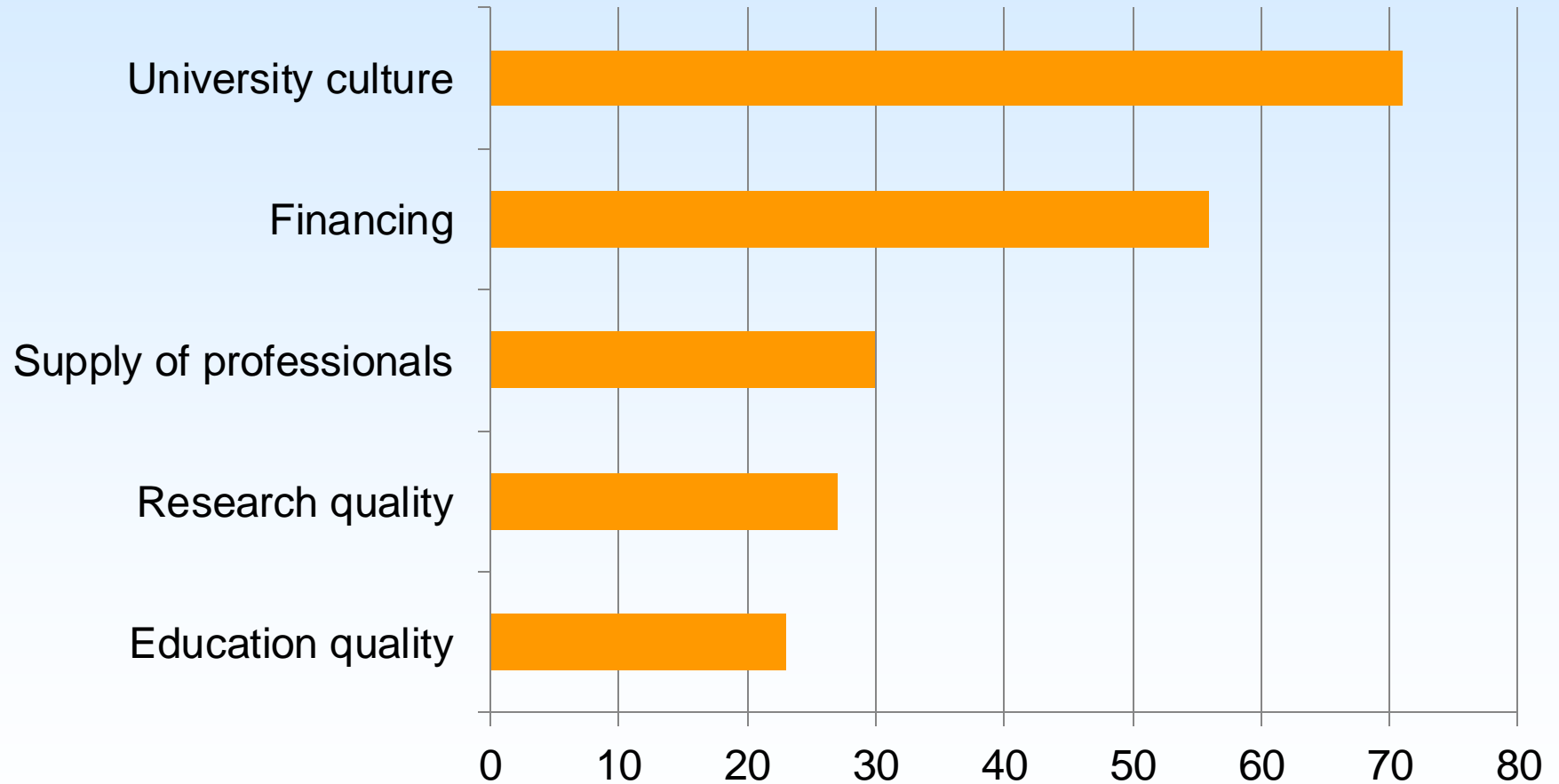
SCIENCE BUSINESS

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Obstacles to innovation

Percentage of respondents



Source: Science|Business conference survey for CEPT, Warsaw, 2010

Expanding the range of KICs

Year: 2010

2014

2020

1st lot: 3 KICs

InnoEnergy, Climate
Change, ICT

2nd lot: 3 KICs

New call to come

3rd lot: 6 KICs

To be decided

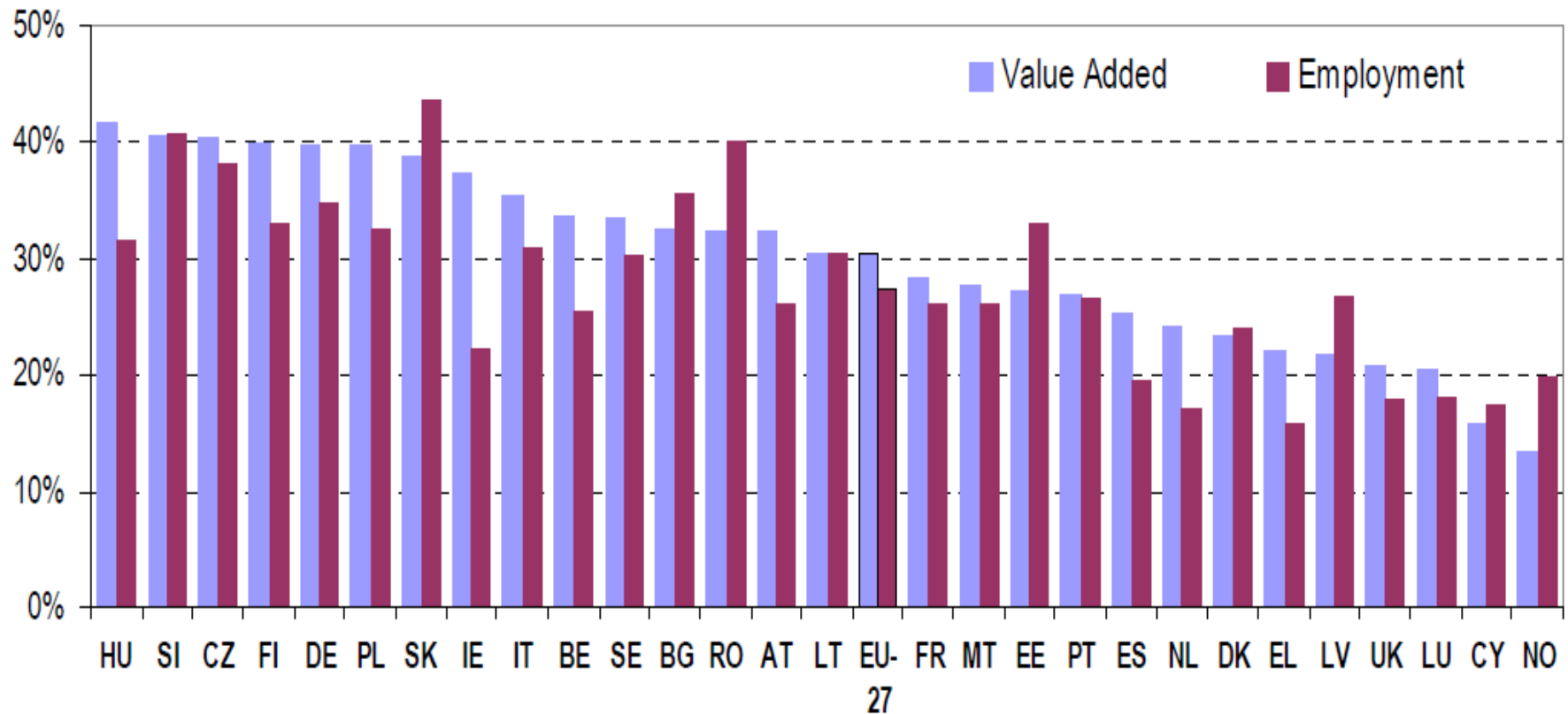
What makes a good KIC theme?

For discussion:

1. Scope - Broad enough for creativity, focused enough for results?
2. Social utility - Can it solve a real problem? A Grand Challenge?
3. Competitiveness - Does Europe have an edge, or can it gain one?
4. EIT relevance - Could a 'knowledge triangle' approach help?
 - a) What is the business case?
 - b) What are the educational benefits?
 - c) What are the research and technology challenges?
 - d) Would collaboration among the 3 sectors help?

Theme: Added value manufacturing

Fig.1 Value added and employment in manufacturing (NACE D), 2005
% of the non-financial business economy (NACE C to I and K)

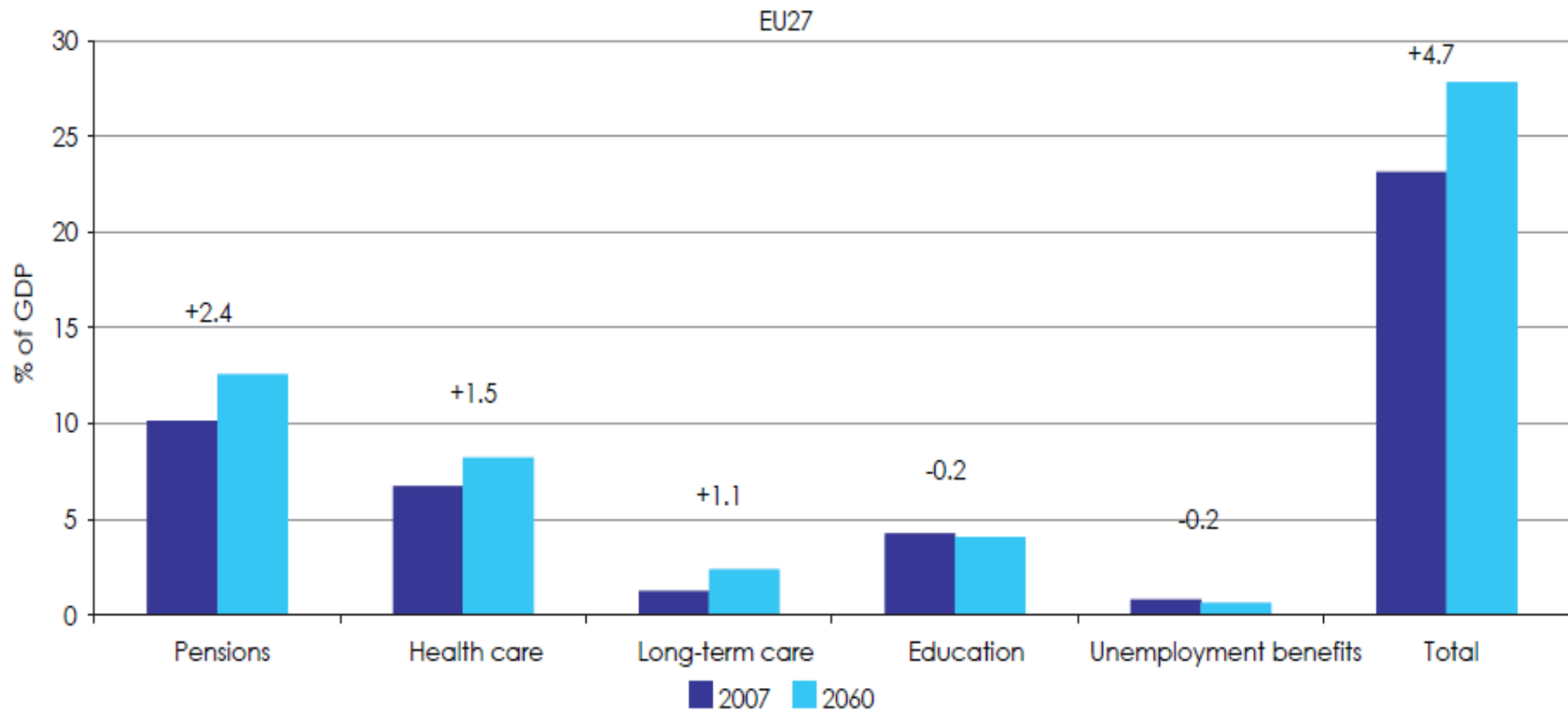


2004: CZ; NL; 2002: MT

Source: Eurostat, SBS

Theme: Ageing population

Graph 86 – Cost of Ageing in EU27, % point change of GDP

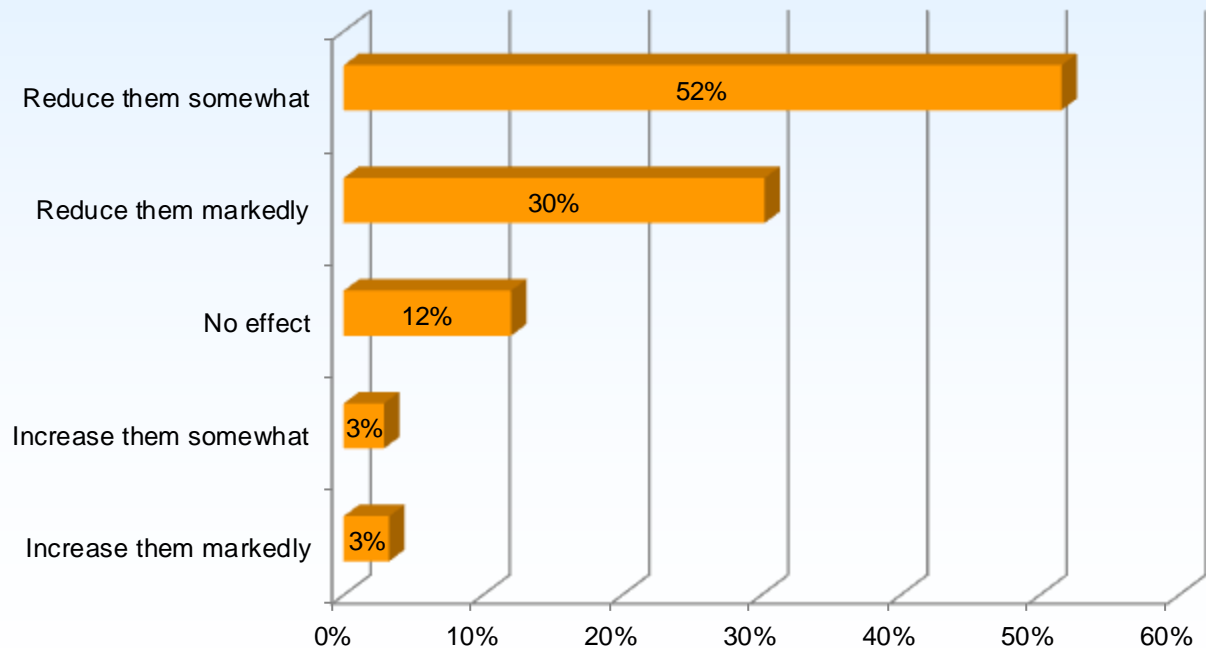


Source: Commission services, EPC.

Theme: Biotechnology

1. Scope: >100K workers in Europe, 1.4% to 1.7% of 'Economic Value Added' in Europe
 - Diverse: Biopharmaceuticals, Agro-Bio, industrial bio
2. Social utility: Better healthcare and food supplies; solving the 'Healthy Ageing' challenge

Survey: Over 80% believe that personalised healthcare will reduce medical errors

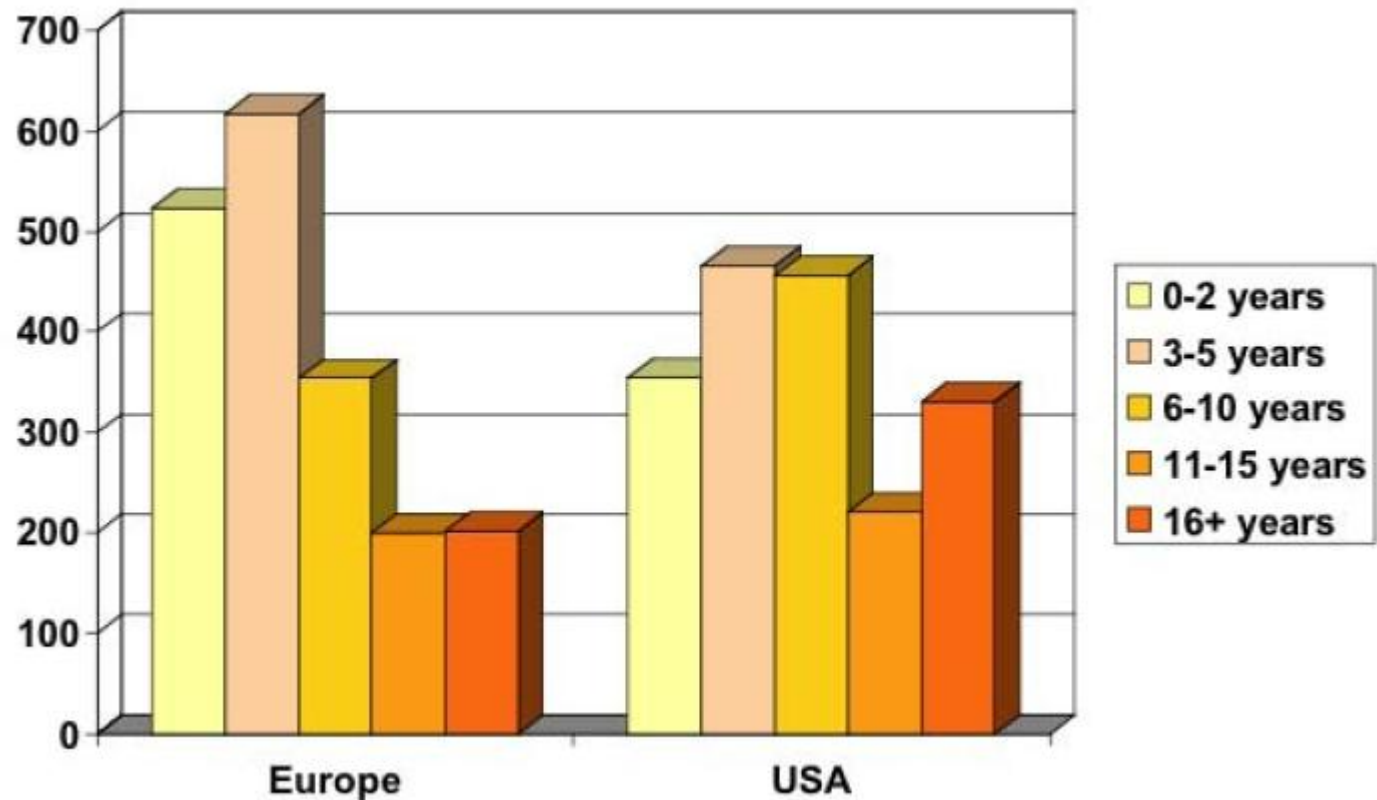


Source:
Karolinska-Science|Business
survey of EU doctors, regulators,
researchers, industry 2010

Theme: Biotechnology (cont.)

3. Competitiveness: Good science, difficult competition

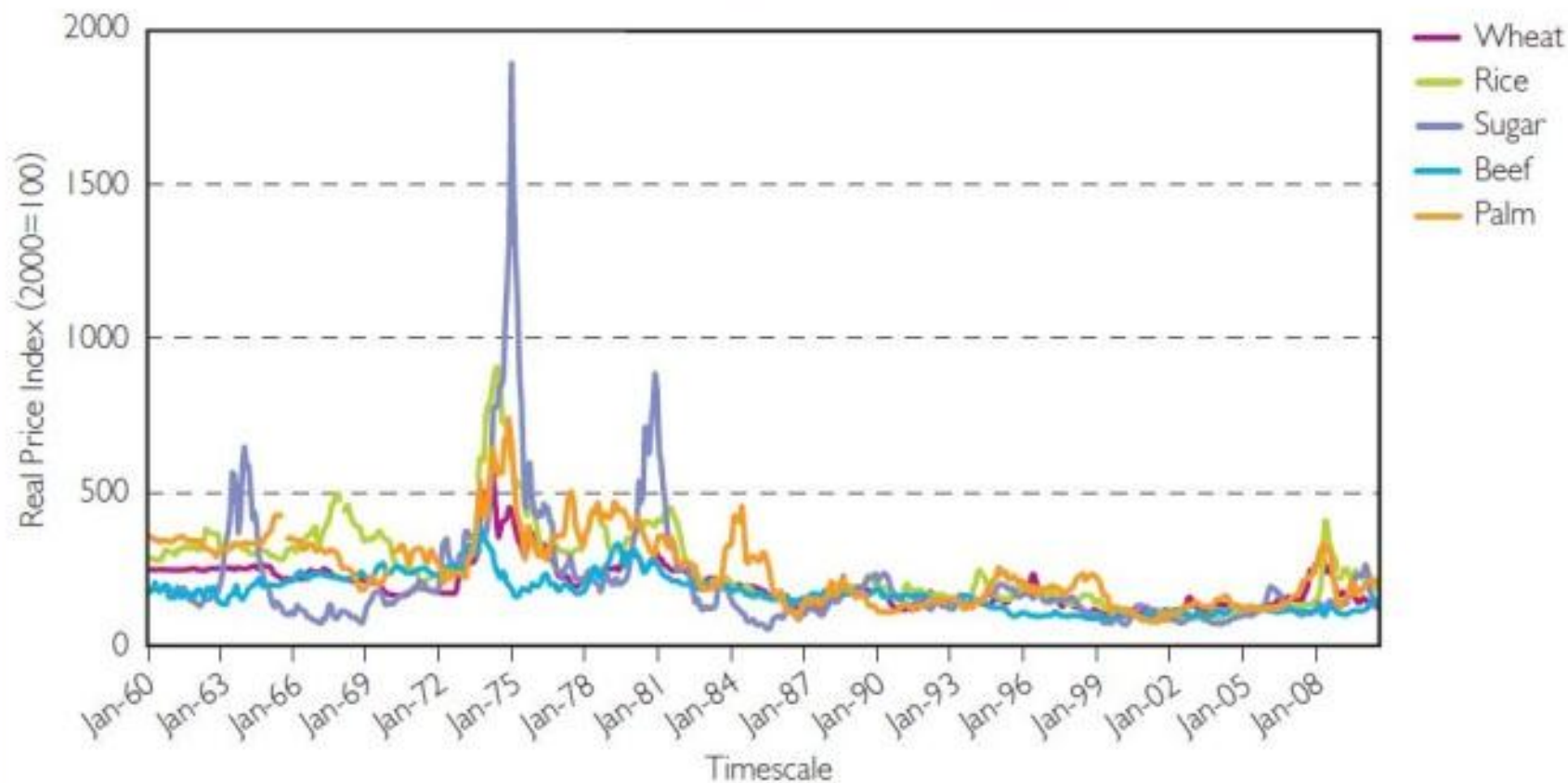
European biotechnology has more young companies



Source: Critical I Limited

Theme: Food4Future

Figure C10.1: Global real price indices for major agricultural products since 1960

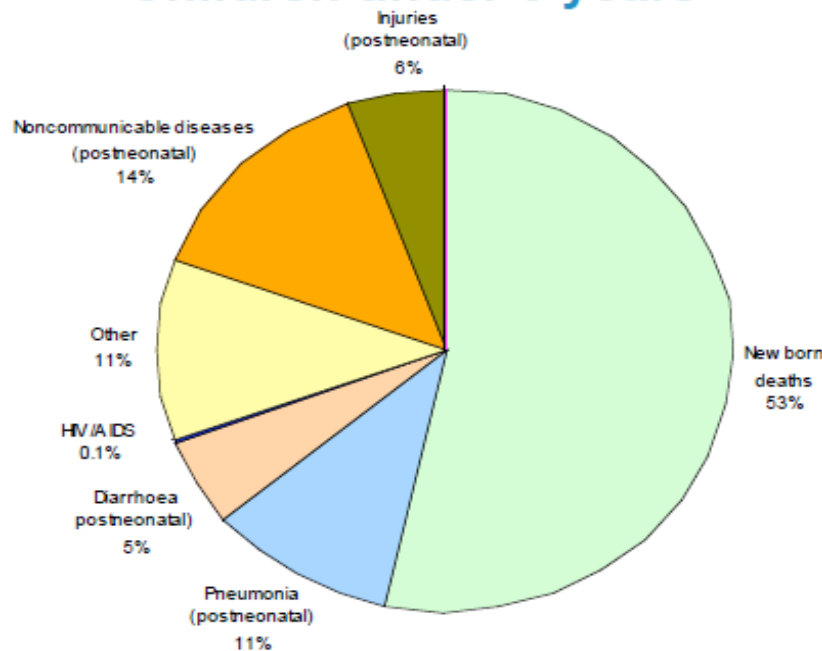


Source: HMG (2010) and Defra (2009).

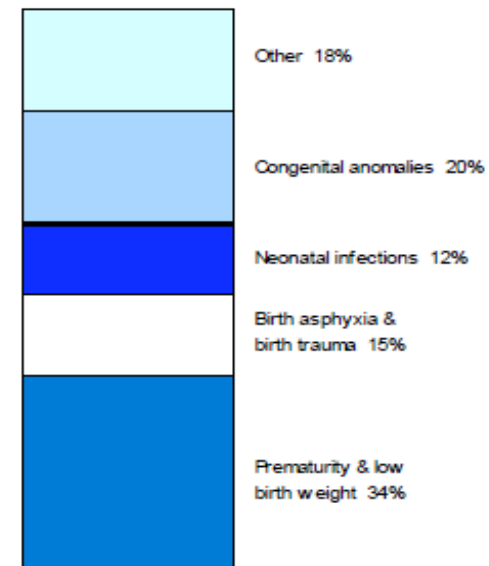
Theme: Healthy childhood

Major causes of death in newborns and children, EUROPEAN REGION - 2008

Children under 5 years



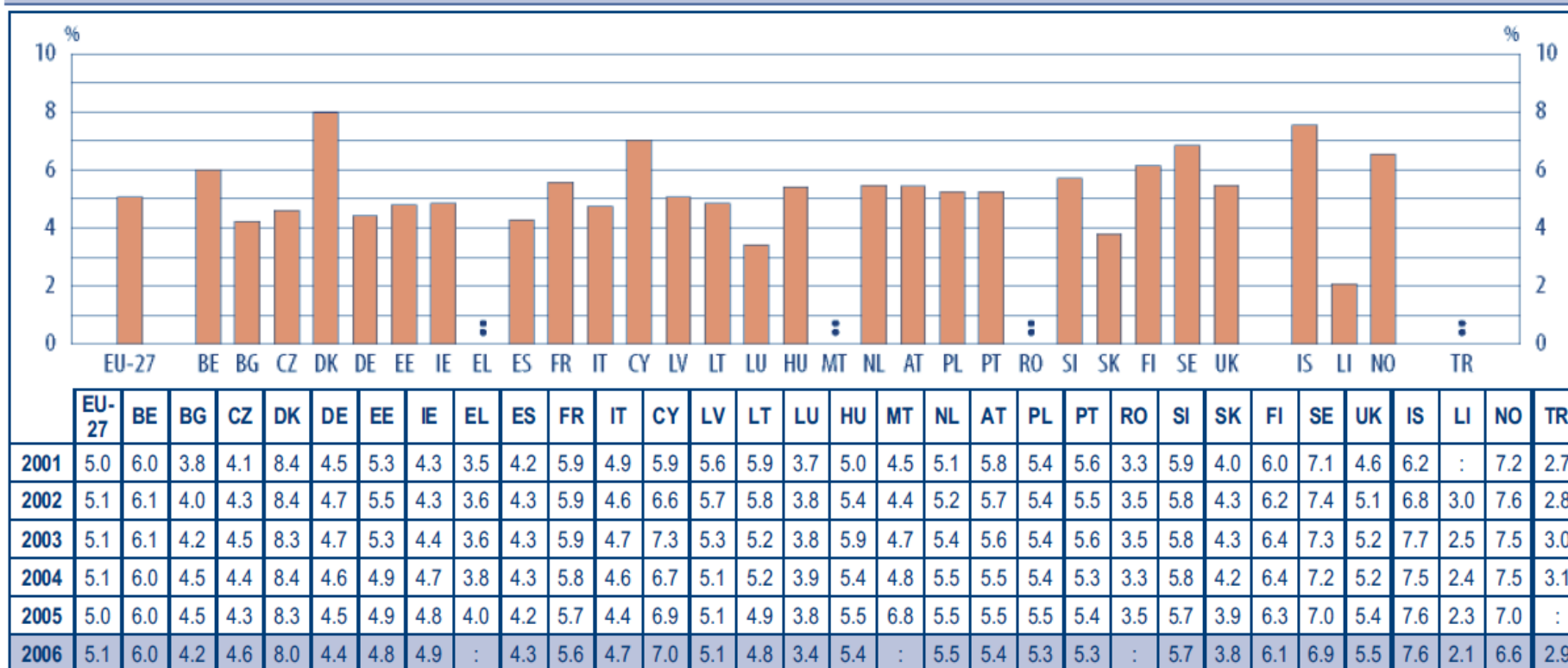
Newborns under 1 month



Source
World Health Statistics 2010, WHO.

Theme: Human learning and learning enhancements

Figure D1: Total public-sector expenditure on education (ISCED 0 to 6) as a percentage of GDP, 2006



Source: Eurostat, UOE and National Accounts (data extracted June 2009).

Theme: Security/Safety

Table 1 Relative market size of the global and European security industry markets (indicative € estimates by sector)

SECURITY INDUSTRY			
Sectors	<i>EU security market (low estimate)</i>	<i>EU security market (high estimate)</i>	<i>Global security market estimate</i>
Aviation security	€ 1.5 bn	€ 2.5 bn	€ 5.2 bn
Maritime security	€ 1.5 bn	€ 2.5 bn	€ 6.7 bn
Border security	€ 4.5 bn	€ 5.5 bn	€ 9.9 bn
Critical infrastructure protection	€ 2.5 bn	€ 3.5 bn	€ 12.6 bn
Counter-terror intelligence	€ 4.5 bn	€ 5 bn	€ 19.4 bn
Physical security protection*	€ 10 bn	€ 15 bn	€ 39.2 bn
Protective clothing (first responders)	€1.5 bn	€ 2.5 bn	€10 bn
TOTAL MARKET SIZE	€ 26bn	€ 36.5 bn	€ 103 bn
<i>* It includes CCTV, access control equipment, intrusion and detection systems, etc.</i>			

Source: ECORYS (2009)

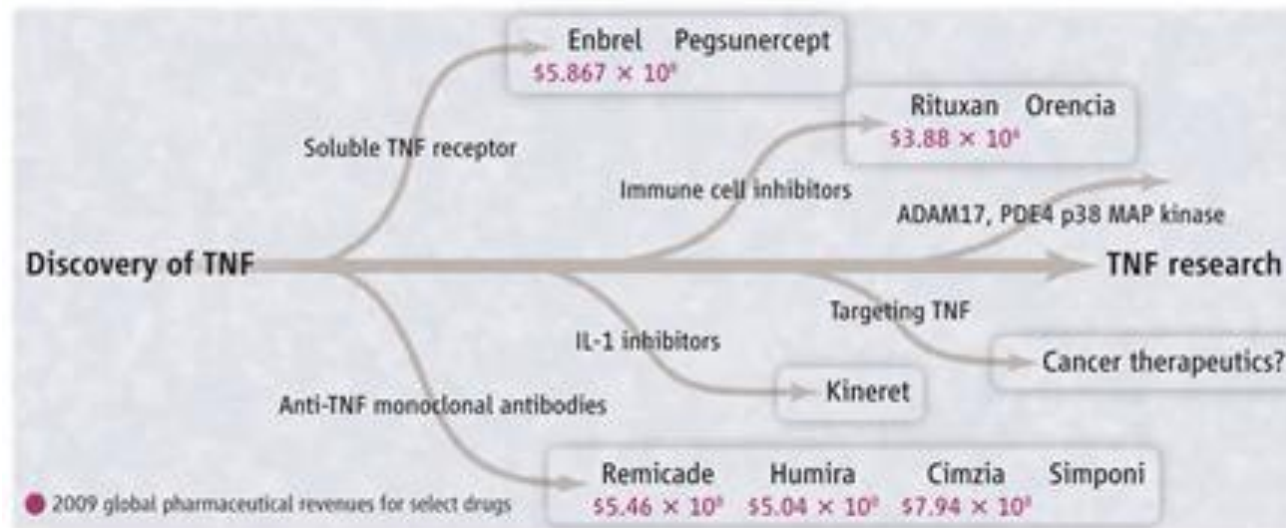
Theme: Territory & smart cities

'Smart City' Plans
in the EU



Required: Patience

An example of research investments.



J Lane, S Bertuzzi Science 2011;331:678-680



KIC themes: the line-up

- **InnoEnergy**
- **Climate Change**
- **ICT**
- **Added value manufacturing**
- **Ageing population**
- **Biotechnology**
- **Food4Future**
- **Healthy Childhood**
- **Human learning and learning enhancements**
- **Security/Safety**
- **Territory and smart cities**

The challenge: PICK 3

To consider:

- Scope
- Social utility
- Competitiveness
- Relevance of EIT model
 - To business
 - To research
 - To education
 - Collaboration helpful?