

UK and Brazil: Opportunities and Partnerships

Sir David King

Chief Scientific Adviser to UK Government

UK-Brazil Year of Science & Innovation



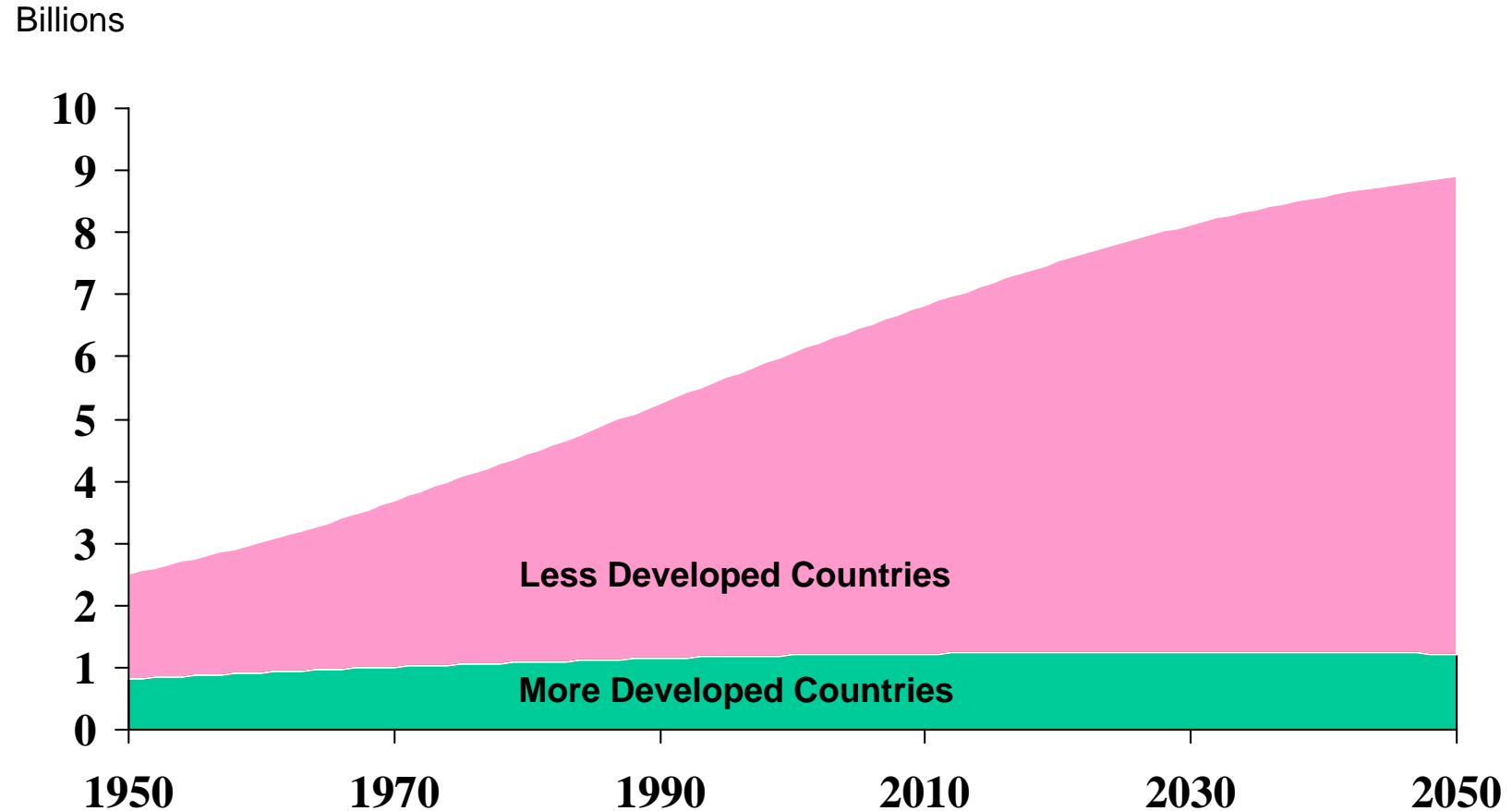
UK-Brazil Year of
SCIENCE & INNOVATION

São Paulo, 30 March 2007



Ano Brasileiro-Britânico da
CIÊNCIA & INOVAÇÃO

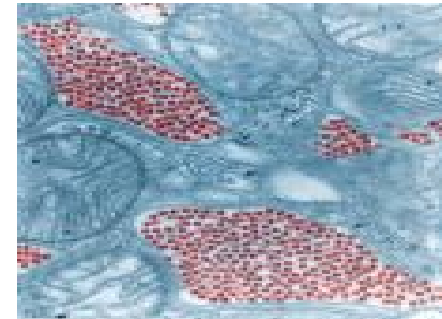
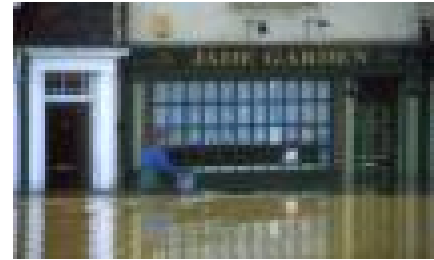
Population Growth: Growth in More, Less Developed Countries



Source: United Nations, *World Population Prospects: The 2002 Revision* (medium scenario), 2003. Downloaded from www.prb.org

21st Century Challenges

- Population growth
- Resources
- Environment
- Infectious diseases
- Climate Change

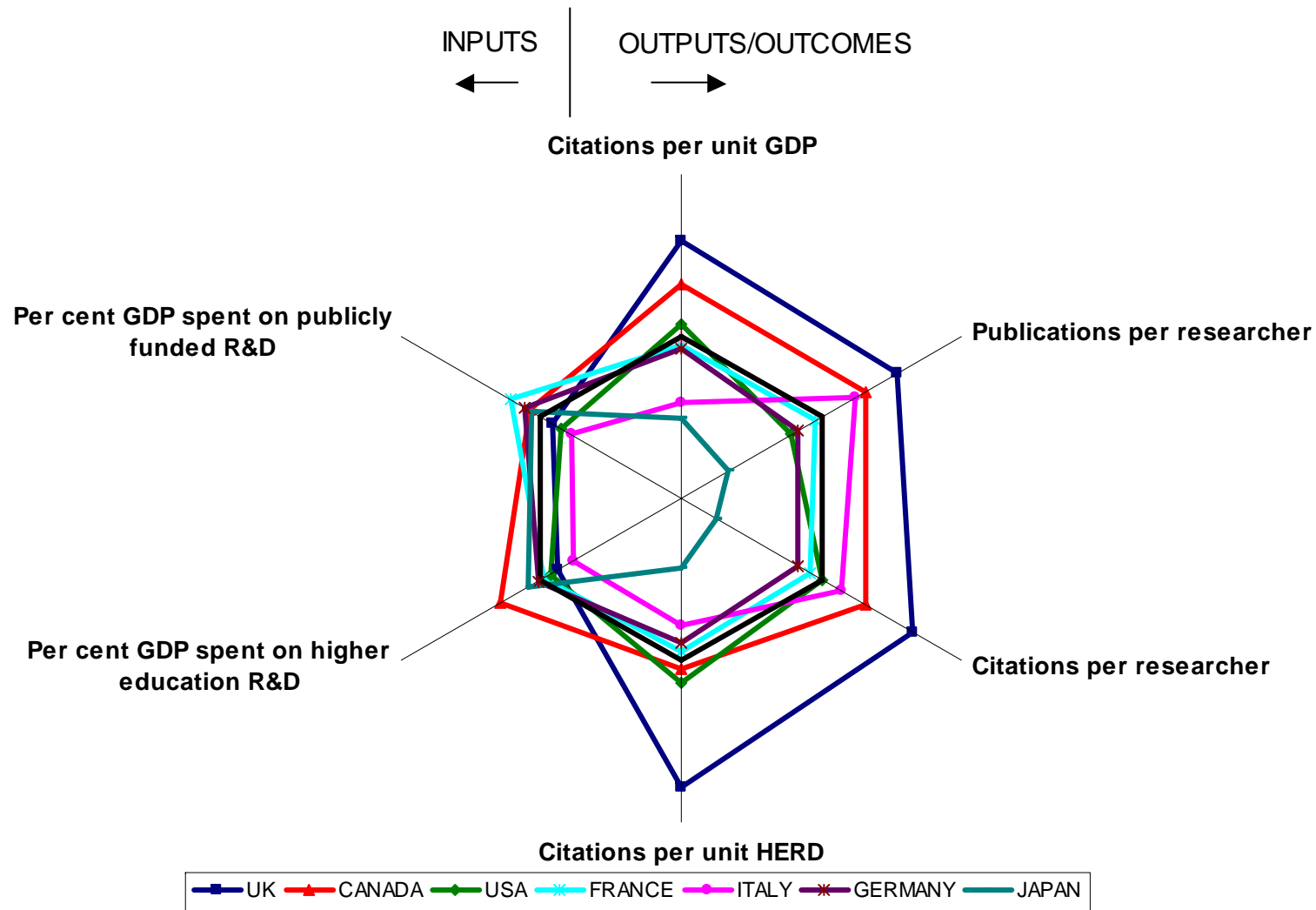


World Science Citations

Country	% share of world publications	% share of world citations	Rank order
USA	34.9 ↓	49.4 ↓	1
EU15	37.1 ↑	39.3 ↑	
UK	9.4 ↑	11.4 ↑	2
JAPAN	9.3 ↑	8.4 ↑	4
CANADA	4.6 ↓	5.3 ↓	6
CHINA	3.2 ↑	1.6 ↑	18
INDIA	2.1 ↓	0.9 ↑	21
BRAZIL	1.2 ↑	0.7 ↑	22
SOUTH AFRICA	0.5	0.3	25
IRAN	0.13 ↑	0.06 ↑	26

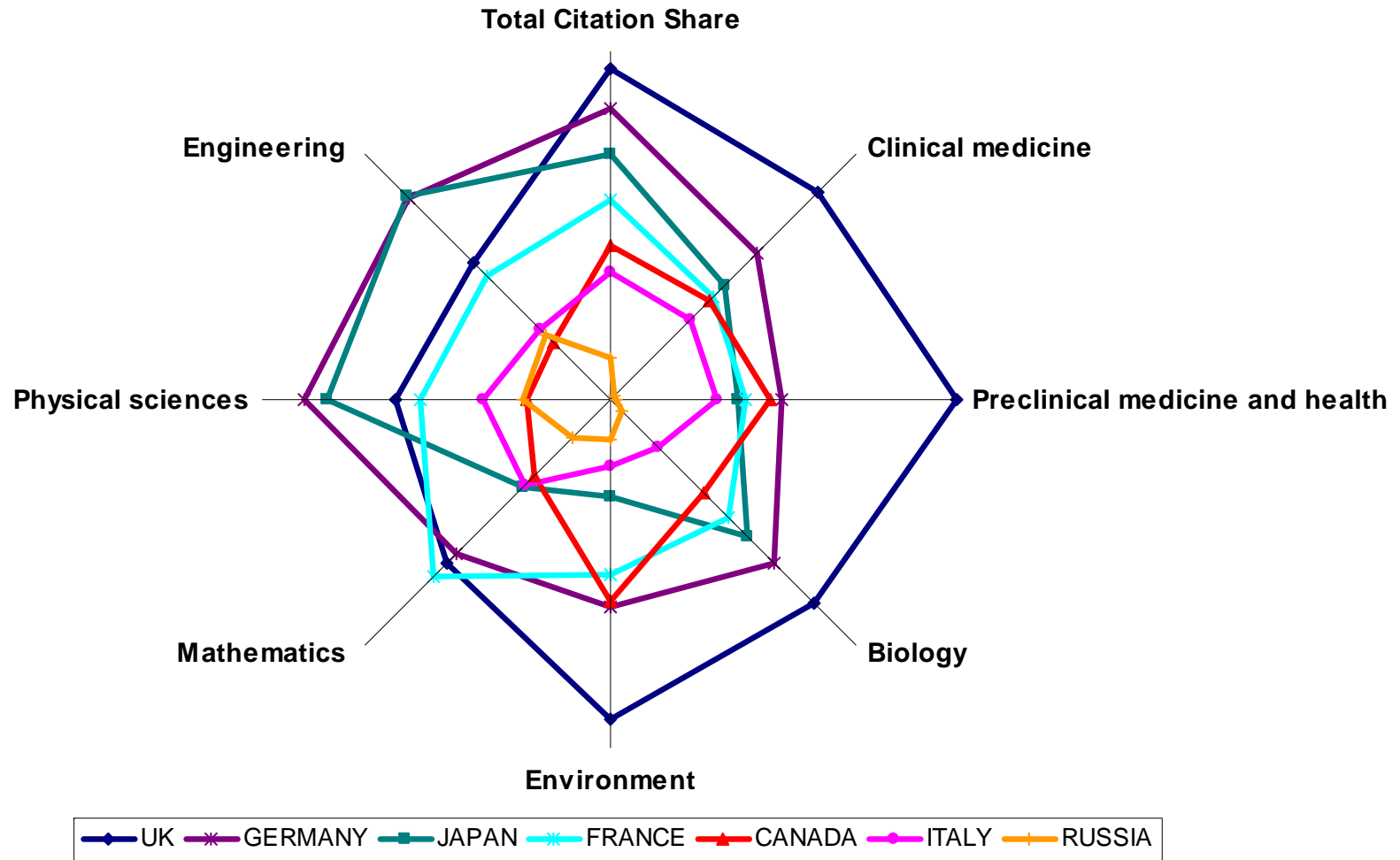
Source: Adapted from D A King, Nature **430** (2004)

Comparing inputs and outputs/ outcomes



Source: D A King, Nature **430** (2004) 311 (15 July 2004)

National strengths in different disciplines (1997-2001)

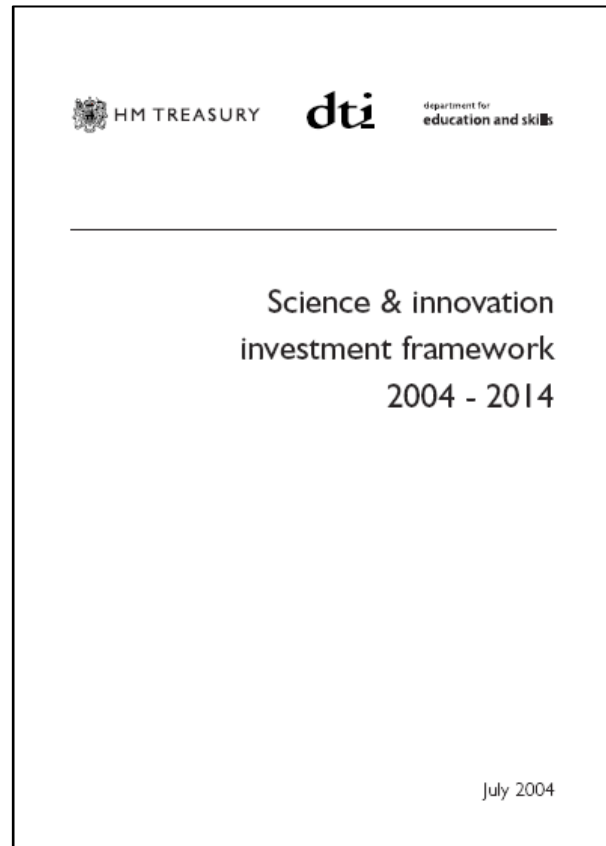


Source: D A King, Nature **430** (2004) 311 (15 July 2004)

Vision for UK science

- Best location globally for R&D and innovation
- New strategic interdisciplinary activities
 - Energy
 - Biomedical engineering
- Engage British industry in R&D opportunities
- North-South capacity building
 - Poverty eradication
 - Population growth
 - Global warming

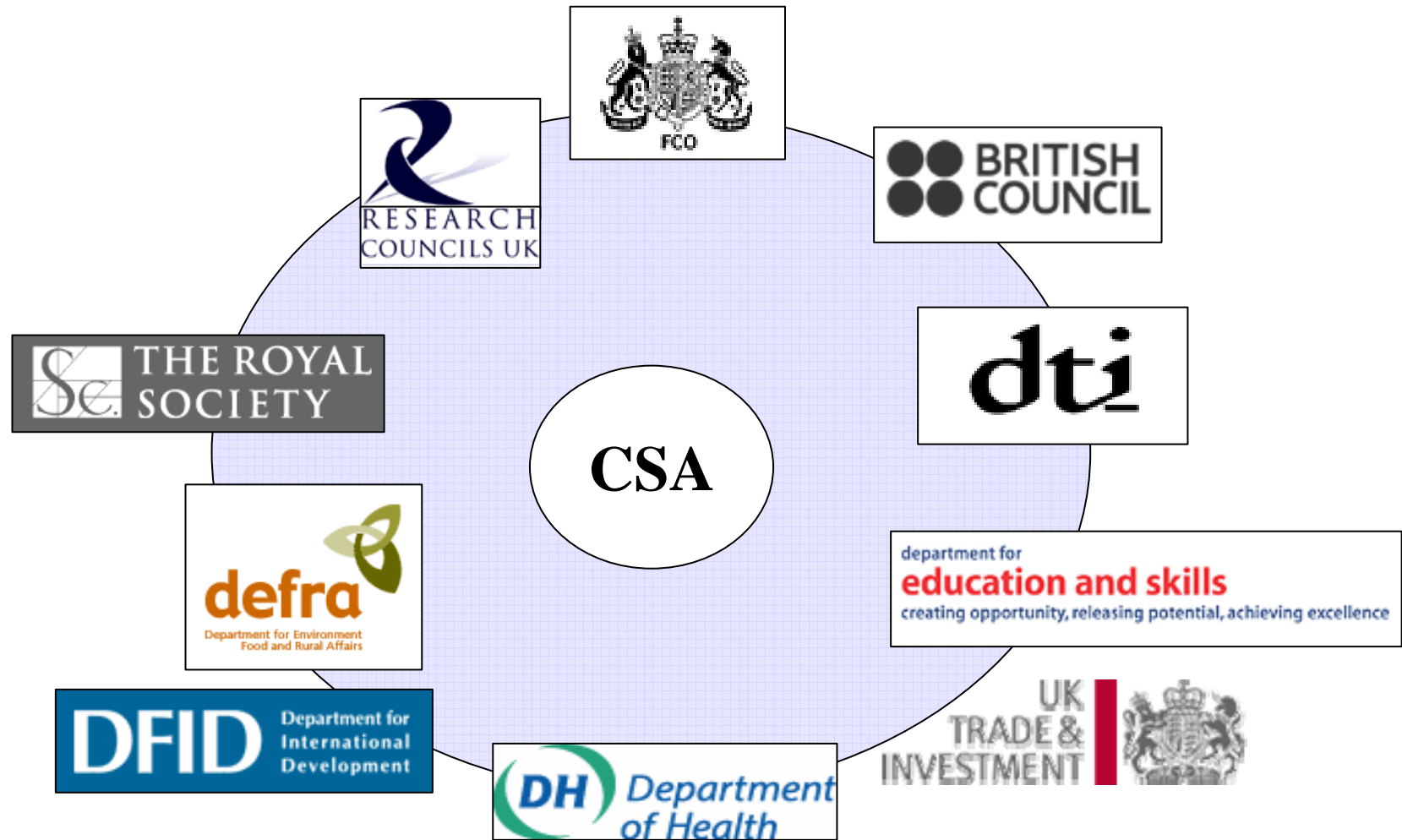
At the beginning.....



“The Government recognises the need for an overarching national strategy for international engagement in R&D and access to large facilities, to bring together the main UK players in international R&D, including Government departments, the FCO network of S&T attachés, scientific societies and the Research Councils....

A cross-government group – the Global Science and Innovation Forum – led by the Government’s Chief Scientific Adviser, will develop this strategy.”

Global Science and Innovation Forum



Key elements and objectives of GSIF Strategy

The GSIF strategy is based on four distinct axes with associated objectives, that the UK should:

- be excellent in research
- be excellent in innovation
- use research and innovation to leverage global influence
- use research and innovation to meet international development goals

Science in Brazil

Year	% of world publications
1990	0.62
1995	0.80
2000	1.30
2004	1.80

Year	Total R&D Budget, % GNP
2000	0.99
2001	1.02
2002	0.98
2003	0.95
2004	0.93

Source: Adapted from Leta, J et al., Scientometrics, 2005

Brazil – priority partner country for the UK

- Brazil has world class excellence in key areas
 - e.g. bioethanol, agricultural research
- Brazil's leadership within the +5 at G8 Summits
- Brazil has an important role to play in South-South capacity building
- President Lula is an influential leader in driving the Millennium Development Goals and poverty reduction

UK-Brazil Year of Science & Innovation (1)

- to promote mutual awareness of excellence in science and innovation
- to strengthen and increase collaboration
- to share best practice in science-based policy-making
- to facilitate high-tech trade and investment links

UK-Brazil Year of Science & Innovation (2): the four pillars

- Planet Earth
- Human Life
- Reaching Beyond
- Creativity

UK S&T interaction with Brazil (1)

- UK/Brazil Joint Plan of Action on Science, Technology and Innovation, 2006
- R&D opportunities in clean/alternative energy technologies
- Various MOUs and currently being developed by UK-Brazil organisations

UK S&T interaction with Brazil (2)

- British Council/CAPES universities scheme
- British Council/FINEP/FAPESP collaboration on science partnerships and technology transfer
- Dorothy Hodgkin Postgraduate Awards Scheme
- Brazilian students in the UK
 - Approx. 1800 in higher/further education

BUT....

- we would like to do more!

Future challenges and opportunities

- To build positively and engage on UK-Brazilian bilateral relations in S&T and innovation
- To work together on issues such as climate change, energy and use of scientific advice in forming policy
- To promote participation in S&T funding opportunities for research collaboration, bilateral exchanges, graduate and postgraduate schemes using UK and EU funding opportunities

Sustainability in 21st Century

- Science, modern medicine and technology have, since the industrial revolution, provided us with societies in which we can live longer healthier lives than in the pre-industrial period....
- Now we need to use our wealth and technology not only to manage our economies within finite natural resources but also to adapt to a more populated and warming planet.



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