Our Broader Context - The Changing Horizon

- Organisations
- Environment Issues
- The death of deference
- New employment patterns
- Globalisation
- Technology
If I had known I was going to live this long
I would have taken better care of myself
The Competitive Threat

“Today’s Peacock is tomorrow’s feather duster” –
Think about it……..
Sources of Competitiveness – Could they be sources of “Co-opetition”?

- Learning
- Information
- Creativity
- Risk
- Speed
- Reputation
- Cost
- Values
The Changing Face of Globalisation – Opportunity or Threat?

- Two fifths of the World's people live in the two fastest growing large economies – China and India – FACT
- Education, Wealth Creation and New Knowledge are at the heart of Economic Planning in Asia
- Growth in Asia is far ahead of Europe
- The desire to LEAD is strong in Asia
- CASH is in place in the Asian economies – as well as brainpower
- The Will to work together is strong
Some Economic Indicators – How are key Countries doing?

<table>
<thead>
<tr>
<th></th>
<th>GDP % Change</th>
<th>Ind. Prod. %</th>
<th>Trade Balance US $ Bn</th>
<th>Foreign Reserves US $ Bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>+ 9.5</td>
<td>+ 8.9</td>
<td>+60</td>
<td>1.65 Trillion And growing!</td>
</tr>
<tr>
<td>India</td>
<td>+ 8.6</td>
<td>+ 8.0</td>
<td>- 25</td>
<td>130</td>
</tr>
<tr>
<td>Britain</td>
<td>+ 2.9</td>
<td>+ 0.1</td>
<td>- 49</td>
<td></td>
</tr>
<tr>
<td>Euro Area</td>
<td>+ 2.1</td>
<td>+ 1.0</td>
<td>+ 86</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>+ 3.9</td>
<td>+ 3.5</td>
<td>- 679</td>
<td></td>
</tr>
</tbody>
</table>

- Economists can be wrong .......
- Resource and Environmental Factors and Challenges
- Some unprecedented trends are being seen....
- The Euro Area as a Block plus USA remain Economic Powerhouses
India/China Vs The G6

Overtaking the G6: When BRICs' US$GDP Would Exceed G6

*cars indicate when BRICs US$GDP exceeds US$GDP in the G6

GS BRCs Model Projections. See text for details and assumptions.
Exploration, Innovation, Education, Entrepreneurship and Enterprise - Reflections

- Learning from History – Great People, Great Deeds
- Contributions of China – and the West
- Present and Future Opportunities
- Education, Business and Industry and Public Policy
- Education and Business Without Borders
The subject of the first of the 2008 Reith Lectures on BBC Radio....
Confucius on Wealth

“Virtue is the root; Wealth is the consequence”

Confucius, 500 BC
The Book of History
允执厥中

‘To Impartially Adhere to the Middle Way’
The Phenomenon of Ancient China – Creativity and Inventiveness – some of the Inventions – just to remind us all

- The first lamps
- Magnetic Compass
- The Camera
- Gunpowder
- Paper for writing
- Printing
- Iron and Steel Smelting
- Copper and Bronze ware
- Oil Drilling and Production
- Coal Mining
- Pottery and Porcelain
- Wine making and tea and tea culture
- Early Astronomy
- Sericulture – gave us Silk
- Seismography
- Traditional Medicine and Anaesthetics
- Acupuncture
- Vaccination against Smallpox
- The Hot Air Balloon
- The Soushi Calendar
- Decimal and Binary Mathematics
The Impact of Technology - Traffic in one day in 2003:

1971 All international phone calls
1975 All airline passengers
1984 All mobile phones
1992 All emails
1998 All SMS

Source: Analysys, World Bank and ITU
“90% of all the scientists born in the human race are alive today”

Prof. John Story - INSEAD
Three Converging Revolutions
Three Pervasive Technology Platforms – Developments in the West and China

- **BIO TECH**
  - Pharmaceuticals
  - Diagnostics
  - Research/Info Tools
  - Industrial

- **INFO TECH**
  - Hardware
  - Software
  - Communications

- **NANO TECH**
  - Electrical
  - Structural
  - Biomedical
  - Energy & Environment

- **Genomics**
- **Bioinformatics**
- **Proteomics**

- **Biosensors**
- **Biochips**

- **Nanodevices**
- **Nanosensors**
- **Nanoelectronics**

- **Bioelectronics**
- **Microfluidics**
- **Nanobiotechnology**
- **Drug Delivery**
Characteristics of high technology regions - Catalysts for Growth

- Universities and centres of academic excellence
- Exploitable, converging Technologies
- Entrepreneurs with marketable ideas and products
- Business angels and established seed funds
- Sources of early stage venture capital
- Core of successful large companies
- Quality management teams and talent
- Supportive infrastructure
- Affordable space for growing businesses
- Access to capital markets
- Attractive living environment and accommodation

source :- Gibbons - Stanford University 1998
Overlapping Technologies support Overlapping Business Clusters

- HEALTH
  - Medical services
  - Bio-pharmaceuticals
  - Bio-informatics
  - Medical devices and scientific instruments

- INFORMATION and COMMUNICATIONS TECHNOLOGY
  - University/Research Institutes
  - Telecoms
  - Networking
  - Computing
  - Wireless
  - Inkjet printing
  - Sound & vision
  - In vitro diagnostics

- KNOWLEDGE CREATION
  - Medical research
  - Technology Consulting
  - Publishing
  - Basic Research
  - Education
  - Bio-pharmaceuticals
  - Medical devices and scientific instruments

- University of Cambridge
Converging Interests and Influences
Innovating in the Overlap and Adding Value – working together – across functions as well as across borders – wherever we are located

EDUCATION & RESEARCH including Universities

INDUSTRY & BUSINESS

GOVERNMENT National & Local
Prospects of working together on - IMAGINATION, CREATIVITY MINDSET ENTERPRISE and ENTREPRENEURSHIP – KNOWLEDGE AND LEARNING
“You look at things and ask - why? but I dream of things that never were and ask - why not?”

George Bernard Shaw
Exploring Creativity and Innovation – sources of New Knowledge – our many Opportunities

- CREATIVITY – The ability to develop new ideas and discover new ways of looking at problems and opportunities
- INNOVATION – The ability to apply creative solutions to problems and opportunities to enhance or enrich peoples lives
- Creativity is THINKING – Innovation is DOING –
- Consider the relationship between Creativity, Innovation and Vision as we work together and combine our strengths
So - What about IMAGINATION?
“Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world”

Albert Einstein 1879 - 1955
China’s recent years – Imaginative and Innovative International Policies that changed the World….

“To get rich is GLORIOUS”

Deng Xiaoping 1982
Some of China’s Achievements

- Compound growth of GDP at 9% since 1995, sixth in the world
- One of top 10 trading nations
- The most popular FDI destination
- The largest mobile phone market
- The second largest PC market
- The third largest advertising market
The World’s Factory – and much more….

China already produces:

• 50% of world’s toys
• 50% of world’s shoes
• 60% of world’s air-conditioners
• 51% of world’s microwave ovens

Now more cars, laptops, ICs, mobile phones…
China - The Market for Everything

- Urban population 450 m, 160 cities over 1m
- Emerging of middle class
- Privatisation of housing
- Increasing attention to well-being
- Availability of Internet

- Enormous market for FMCG
- Lifestyle products
- Home improvement
- Healthcare and fitness products
- E-learning services

Western type of consumerism is mainly driven by 15-25 years age group (70 m)
Some of the things China Offers….

- 750 m people live in the countryside
- Returning overseas students and local MBAs
- Science and Engineering students on the rise
- Increasing usage of ISO accredited process
- Easy access to other Asian markets

- Unlimited supply of low cost labour
- Local management talent more available
- R&D bases well established
- Quality of outsourced manufacturing
- Convenient re-export base
UK and **Yorkshire** Capabilities fit well with China's priority areas

- Telecoms, information technology
- Climate Control / Environment / Sustainability
- Transportation, power generation
- Chemicals and petrochemicals
- Bio-tech
- Agriculture/ food processing

Potential opportunities also with:
Consumer goods, healthcare, education and training, and financial services

And Creativity and Innovation are Strong Characteristics
Education Without Borders – Perceptions of Chinese Developments

- New Graduates in China 2006 – 2.5 million
- Excellence of Chinese University Teaching
- Increased activity & spending on R and D
- 1 million Chinese Students studying in West – 120,000 in UK Universities
- President Hu’s policy – “Liberate Minds”
- “Go Abroad” Policy
Building Across Borders - Partnerships for Education Innovation and Cross Cultural Understanding

- University Student and Teacher Exchanges
- Joint Curriculum Development
- Joint Educational Events - Conferences etc
- Industrial Placements and Internships
- Joint R and D and Technology Development – Universities and Companies
- Chinese Studies and Confucius Institutes
- Cultural Exchange activities
- Industry specific Education and Management Development – eg. Banking
University Education Without Borders – Case Study

Creativity and Innovation – Ideas Into Action!
Entrepreneurship and Enterprise in Tomorrow’s World

*International Forum – Beijing – December 8th 2007*

*UK – China, Student Initiative*

*1500 Students from 15 Universities – Practitioner Entrepreneurs from four Continents*
Yorkshire – Education and Innovation – A view from Cambridge….

- Outstanding Universities – including the White Rose Consortium (York, Leeds, Sheffield)
- World Leading Research in key areas
- Science Parks and Innovation Centres
- Strong technology Base – in Key areas – IT, Telcoms and Biotech and significantly in Clean Tech.
- Deep Industrial and Professional Experience
- Entrepreneurial and International Environment
- Developing Cultural Diversity
“Before marriage know your partners weaknesses; In marriage use your partners strengths”

Anon
Yorkshire and China Working Together – some thoughts on *Excellence*

“Excellence can be achieved, if we:
Care more than others think is wise,
Risk more than others think is safe,
Dream more than others think is practical,
Expect more than others think is possible.”

Deborah Johnson-Ross
Expecting Great Things from Collaboration in sustaining a Better World!

For more information......

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Competition is healthy, but not the only way…. 

- Beware the “Arrogance of Knowing Best”
- But Competition is **not** the only way….
- Knowledge, Innovation, Skills and Attitude and open minds….can find other ways…..
- Let’s try Co-Opetition, Complimentition and Partnership – how about **A WORLD WITHOUT BORDERS!**

- Beware Arrogance
- “Today’s Peacock is tomorrow’s feather duster”