European Research Partnerships

Contribution to the Debate
at the
The Foundation for Science and Technology
by
Seán O'Reagain, Directorate General for Research and Innovation,
European Commission

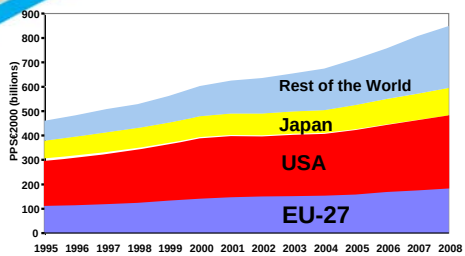
London, 17 November, 2010

European Research Partnerships - Why?

Need to Respond to Critical Current Trends

- Globalisation of Knowledge
- Economic and Financial Crisis Impacting on Public and Private Finances
- Fragmented European Research Efforts

Globalisation of Knowledge



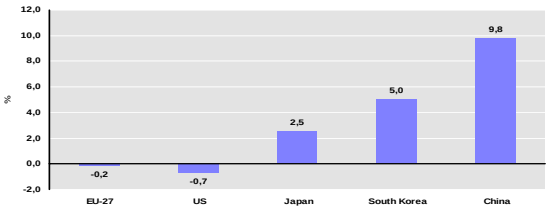
Declining EU share of knowledge production

Evolution of World R&D expenditure in real terms, PPS€ at 2000 prices and exchange rates, 1995-2008

Stagnating business R&D

Average annual growth as % of GDP, EU-27, US, Japan, South Korea & China, 2000-2007

Figure Private Expenditure on R&D as % of GDP [1] - average annual growth (%) in the major economies, 2000-2007 [2]



Globalisation of Knowledge

- Develop **world-class excellence**
- **Attract investment** through better support and framework conditions
- Establish **strategic cooperation with world partners**

Economic and Financial Crisis

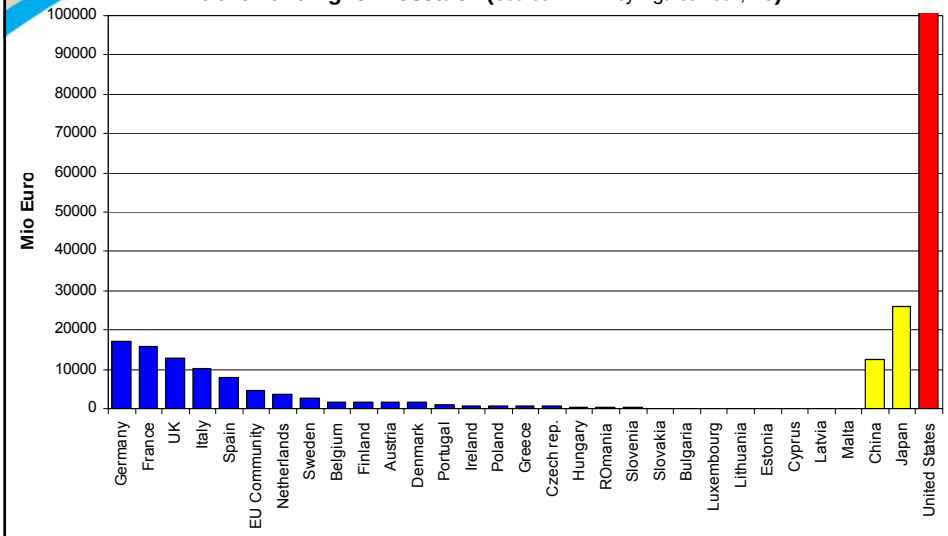
- EU lost **six million jobs, €1000 Bn annual GDP** due to crisis
  - **Invest in future growth**
    EU target of **3% of GDP for R&D** in 2020 could create a net **3.7 million jobs** and close to **€800 Bn annual GDP** by 2025
  - **Make the most of available resources**
    through leverage effects, integration and cooperation

Fragmented European Research Efforts

- Science and Technology must contribute to solving major societal challenges
- Public Research Programmes have solved societal challenges in the past:
  - Quality of Life (Green revolution stopped famine in India)
  - Quality of Health (Penicillin cured syphilis & osteomyelitis)
- Opportunities not optimised due to compartmentalised public research funding in the EU (27+1 Research Areas)

Fragmented European Research Efforts

Public Funding for Research (Source : ERA Key Figures 2007, EC)



Fragmented European Research Efforts

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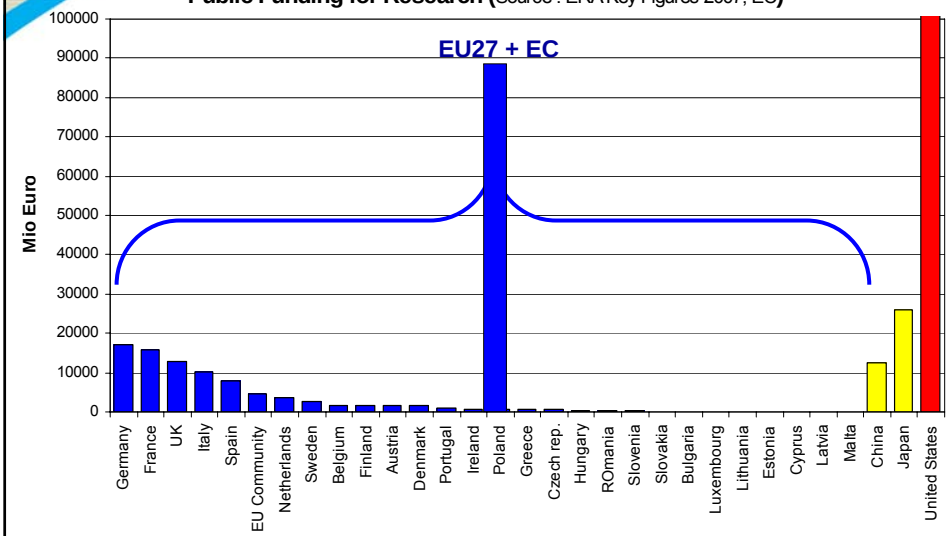
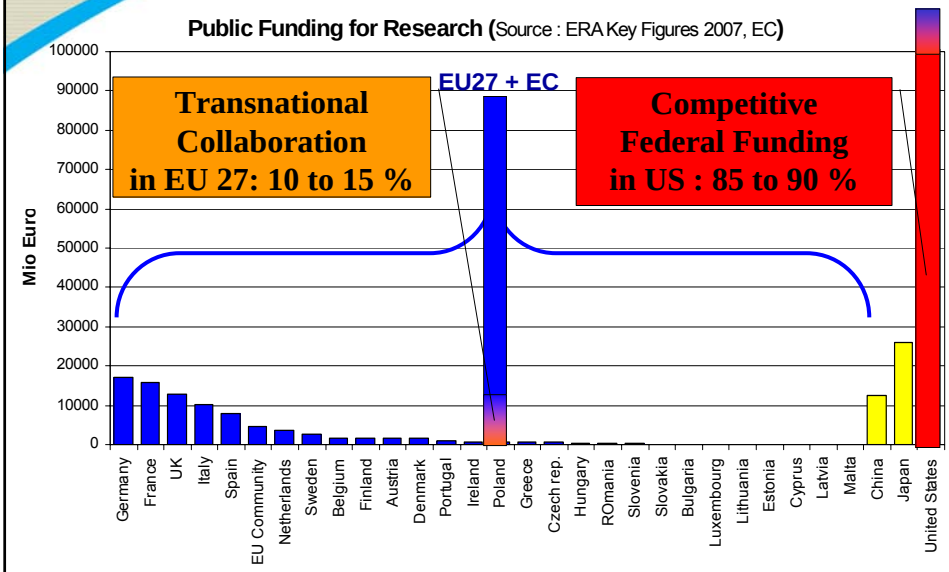


Fragmented European Research Efforts



The European Response?

- Is Europe able to face the challenge?
- Are Member States willing to think in a different way?
- A new approach to managing research is emerging - this is a major challenge, not scientific but mainly cultural and political

➔ Member States must reinforce co-ordination to meet the challenge

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The European Response?

- **National research programmes** have their place… but are **not equipped** to tackle major European societal problems by themselves
- Increasing partnership between countries since the 1950s…
  - 1950s: Intergovernmental Research Organisations (CERN, ESA, ESO, EMBL)
  - 1970s-80s: Intergovernmental schemes (COST, EUREKA) European Framework Programmes
  - Since 2000: Coordination of national research programmes (ERA-NET scheme, "Article 169" Initiatives)

BUT Simple **expansion** of current activities is **insufficient**

➔ Need for a **combination of schemes,** in **partnership between Member States,** facilitated by the European Commission

☞ **Joint Programming of Research**

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Joint Programming: What?

Member States engaging

voluntarily and on the basis of **variable geometry**…

in the definition, development and implementation of **common strategic research agendas**…

based on a **common vision** on how to address **major societal challenges**

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Joint Programming: What?

What Joint Programming is not:

- it is not about asking for more money from Member States
- it is not about asking for more power at EU level
- it is not a new instrument for EU research
- it will not involve EU funding a priori

Joint Programming is a process:

- involves collaboration between existing national programmes or the setting up of entirely new ones
- includes putting together resources, selecting the most appropriate instruments (including, as appropriate, at European level), and collectively monitoring and reviewing progress

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Joint Programming: How?

Innovative Governance Model

- New partnership between Member States of the EU
- Top-level political endorsement

Council of Research Ministers nominates High-Level Representatives to identify suitable areas for Joint Programming

↓

Council endorses proposals for Joint Programming Initiatives

↓

Steering Group of Member States' experts oversee implementation of Joint Programming Initiatives

Joint Programming: How?

Three Stage Implementation Process

- Development of a **Common Vision** with long term objectives
- Translate it into a **Common Strategic Research Agenda** with SMART objectives, based on assessment of existing strengths and capabilities
- **Implementation** of the Strategic Research Agenda
  - Choose appropriate mix of instruments from the toolbox of public research instruments (regional, national, European)
  - Regular monitoring and evaluation against SMART objectives
  - Regular reporting of results to political level

Joint Programming Initiatives

Ten Initiatives Identified

- Neurodegenerative Diseases, including Alzheimer's
- Agriculture, Food Security and Climate Change
- Diet and Health
- Cultural Heritage and Global Change
- Urban Europe
- Antibiotic Resistance
- Water Challenges for a Changing World
- Healthy and Productive Seas and Oceans
- Healthy Ageing
- Connecting Climate Knowledge for Europe

No Further Initiatives until Lessons Learnt

Joint Programming: Benefits

National Authorities

- Development of Common Solutions
- Sharing the Burden of High Start-up and Operating Costs
- Eliminating Cross-European Duplication

Scientific Community

- Greater Mobility
- Potential for Increased Impacts
- Pooling of Data and Expertise Across Borders

Joint Programming: Benefits

Enterprises

- Open Innovation Strategies
- More Rapid Dissemination of Research Results
- Development of Common, Standardised Solutions
- Better Access to Public Research Support

Research Managers

- Critical Mass to Tackle Major Societal Challenges

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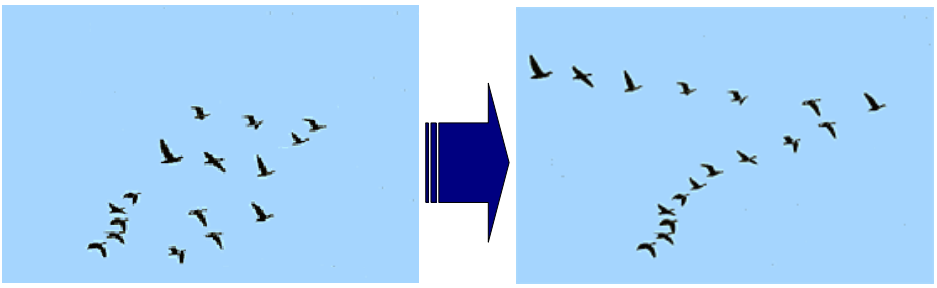
The Benefits of Partnership

Nature shows us the way: Birds coordinating their efforts



☞ 71 % gain of efficiency