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EU Conference Giving More for Research in Europe:  
the Role of Foundations

**Encouraging Change. The role of  
foundations in European research  
funding**



“Wo die Tat nicht spricht, da wird das Wort nicht viel helfen.”

(“If what we are doing does not speak for itself, then words won’t be of any help either.”)

Friedrich Schiller

## Political challenges



Since the late 1980s, Europe has witnessed dramatic changes in its political and economic map.

During the next 20 years, Europe's economic paradigm will change fundamentally.

While the manufacturing base will continuously shrink, future growth and social welfare will rely increasingly on knowledge-intensive products and services.

An ageing continent will have to innovate intensely.

**“Change is the only thing in the world which is unchanging.”** Heraclites

## Major changes and challenges in research and higher education (I)

- ▶ Electronic Impact on the creation, distribution, and absorption of new knowledge. – How are we to bridge the gap between the rapidity of change and the time-lag of institutional responses?
- ▶ The increased emphasis on transdisciplinary approaches. – How can we stimulate the implementation of transdisciplinary institutional structures, in particular in our universities?
- ▶ The move from bi-, or trilateral internationalisation towards network approaches and strategic alliances in higher education and research. – How can we meet the growing demand for interculturally competent people? What can we do to overcome the disparities between advanced and developing countries?

## Major changes and challenges in research and higher education (II)

- ▶ The changing public private interface and its consequences for the division of labour in our RTD systems. – How can we succeed in initiating a process of deregulation, mutual learning, and of gradually building trust in each other's intentions and capabilities?
- ▶ The need to integrate evaluation, foresight and priority-setting, and to increase public involvement – How are we to provide valid and coherent information for the decision-making processes?
- ▶ The growing public concern about recent scientific developments, particularly in the area of stem cell research and the use of the human genome. – How do we create a science policy that enables and encourages scientists to do their work while taking into account bioethical discourses and public concerns?

## The Lisbon agenda

The EU Commission has risen to some of these challenges in developing a comprehensive strategy.

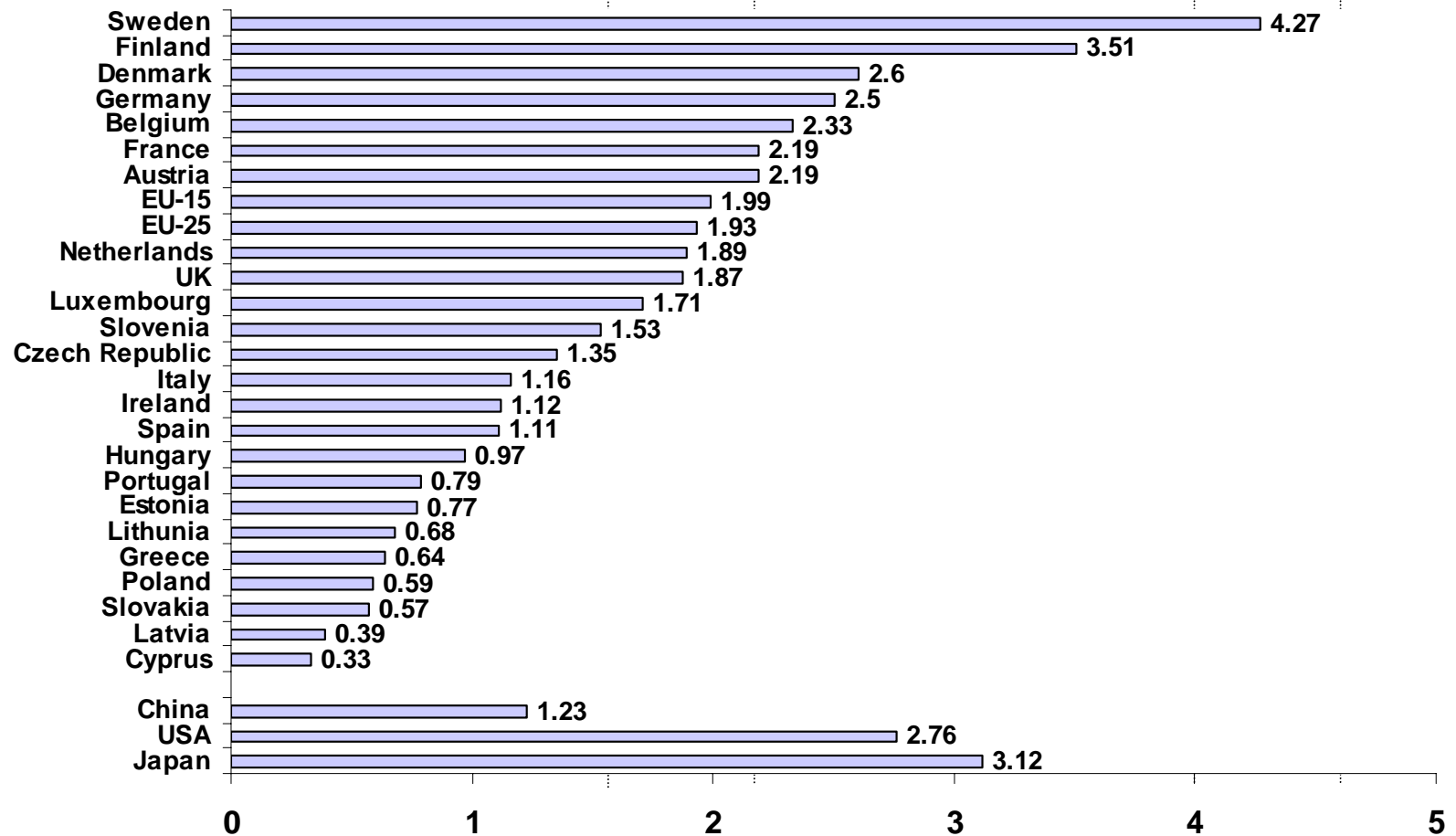
- ▶ The Lisbon declaration of March 2000 set the political goal of developing the EU into the “most competitive knowledge-based economy in the world by 2010”.
- ▶ In Barcelona the EU Council agreed to increase investments in research and development across the EU from 2% of gross domestic product to 3 % by 2010.

## Objectives of the 7<sup>th</sup> European Research Framework Programme

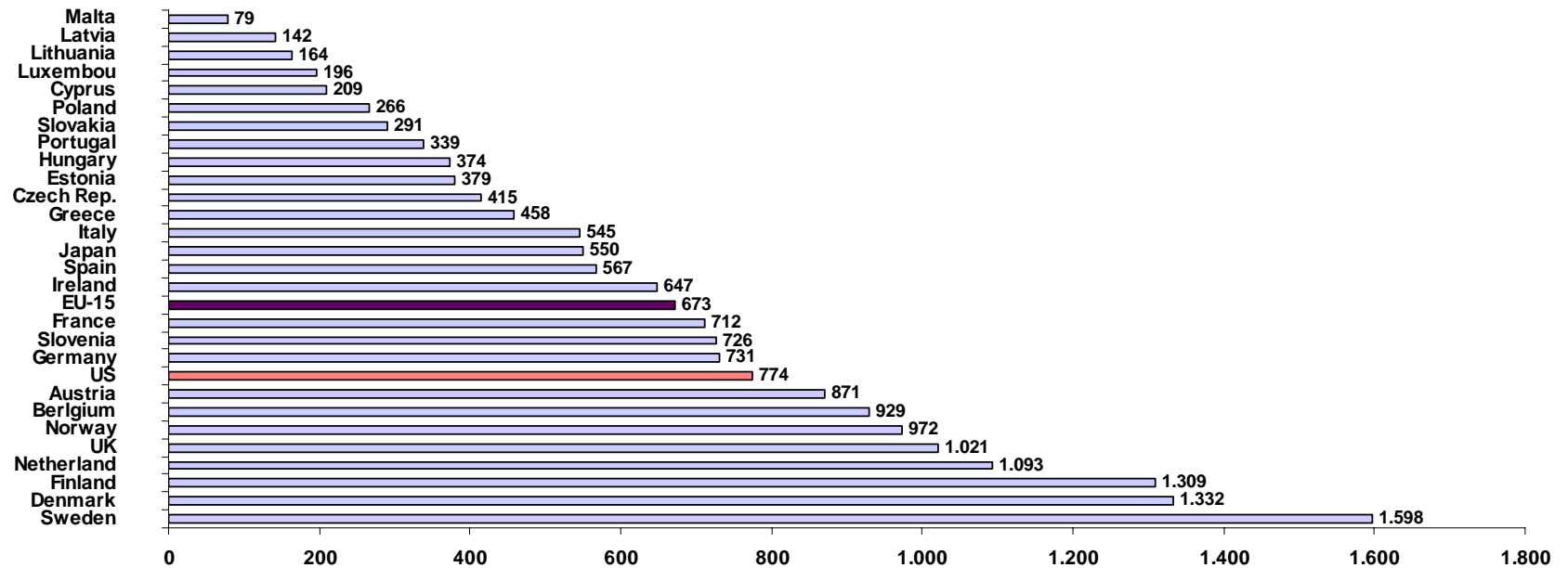
At EU level the 7<sup>th</sup> research framework will aim to strengthen the European Research Area by:

- ▶ Pooling and strengthening research and funding efforts across the EU
- ▶ Improving the coordination of national research programs
- ▶ Creating centers of excellence through pan-European collaboration
- ▶ Establishing an autonomous European Research Council
- ▶ Supporting basic and frontier research
- ▶ Stimulating research through competition between teams at European level
- ▶ Increasing human resources: Attracting young people and placing emphasis on the role of women in science and research

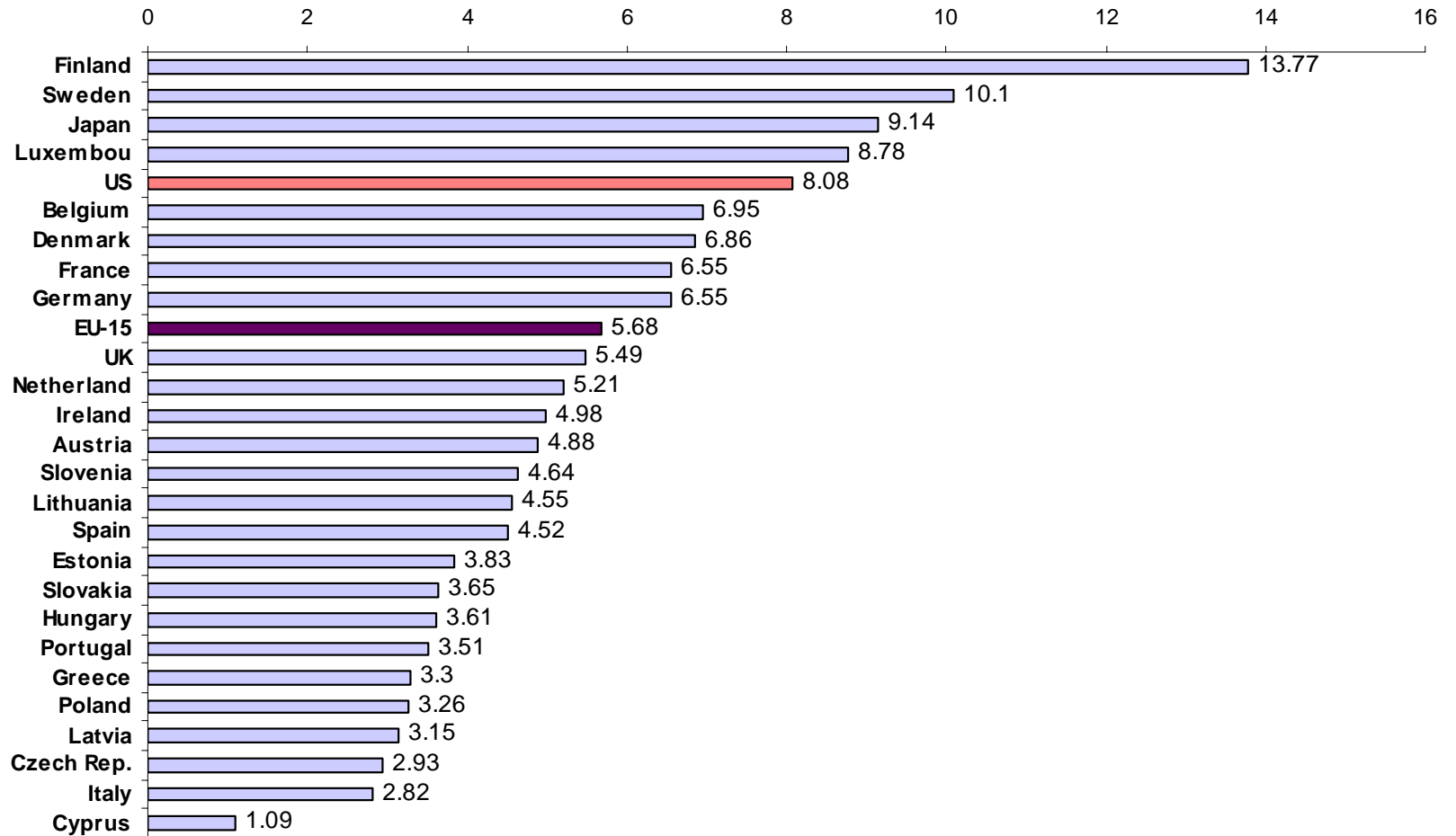
## R&D expenditure as a percentage of GDP in the EU, China, Japan and the USA in 2003



## Number of scientific publications per million population, 2002



## Number of reserachers per 1000 labour force, 1996-2001



## Performance indicators

Region	Tertiary graduates 2001	Growth per year in 2001-03 (%)	PhD graduates 2001	Researchers per 1000 labour force 2003
EU-25	2.956.000	4.2	85.000	5.5
USA	2.174.000	6.5	44.200	9.0
Japan	1.068.000	-0.6	13.600	9.7
China	1.948.000	32.1	12.900	1.0

In the 2004 Shanghai University ranking of the best universities, only two of the top 20 were European, while 17 were American.

**The Lisbon agenda was meant to unlock the Union's potential but not enough progress has been made.**

The need for urgent action is confirmed by the report from the High Level Group chaired by Wim Kok in **November 2004**:

„The Lisbon strategy is even more urgent today as the growth gap with North America and Asia has widened, while Europe must meet the combined challenges of low population growth and ageing. Time is running and there can be no room for complacency. Better implementation is needed to make up for lost time.“

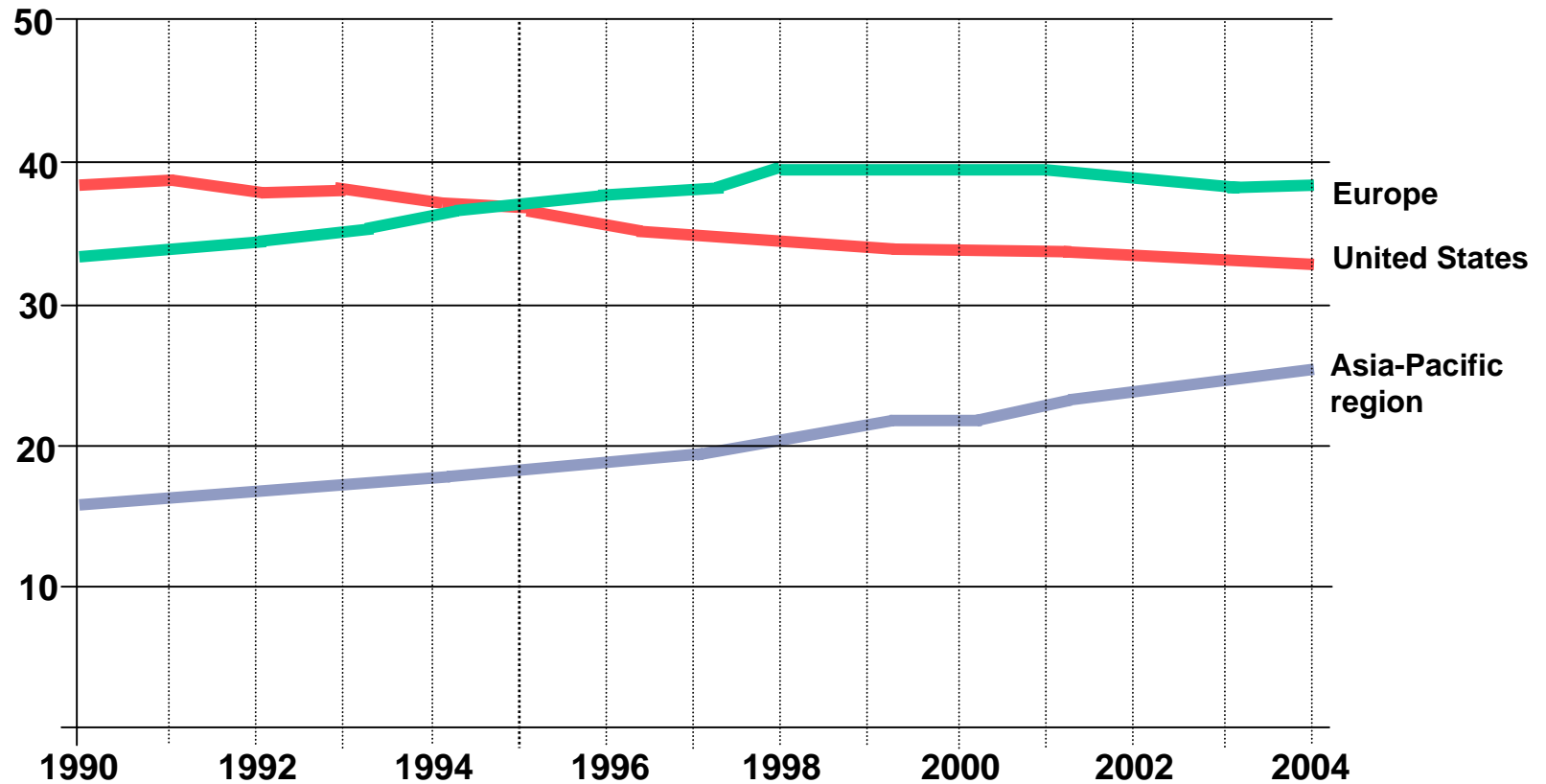
Wim Kok

## Challenges for European research and higher education

- ▶ Europe faces increased global competition – particularly in the field of research and technological development
- ▶ The rapid growth of scientific output in Asia-Pacific nation is an stark contrast to slow growth in Europe and stagnation in the US. Within six or seven years the Asia Pacific region will exceed the US.
- ▶ In a number of relative indicators – such as publications per inhabitant, per scientist or publications per million Euros spent in our universities – the EU also leads the US and Japan.
- ▶ In ‘triad patents’ per million spent in business R&D, some European countries – Germany, Sweden, and the Netherlands – clearly outperform Japan and the US.
- ▶ Research is not supported sufficiently in Europe, particularly with respect to risky, open-ended research.

## Publication of scientific papers Proportion of total papers published in %

The EU represents the largest source of scientific publications



## The rapidity of change and the slowness of institutional response

- ▶ Europe is loosing ground in the field of basic breakthroughs. Thirty years ago, European scientists dominated the Nobel Price lists. Today, Nobel prices and similarly prestigious awards are won mainly by scientists in the USA.
- ▶ Apart from a few research areas such as astrophysics, space research, nuclear physics and molecular biology, Europe suffers from an almost total lack of transnational support of basic and strategic research.
- ▶ The gap in R&D-Investments between the EU and the US is steadily increasing.

## The bottlenecks

### ▶ **Insularity**

- 1) European universities and research facilities remain fragmented between and even within countries.
- 2) European higher education is still largely insulated from industry.
- 3) Most universities are ill prepared for a worldwide competition over talents, prestige, and resources.

### ▶ **Lack of attractiveness**

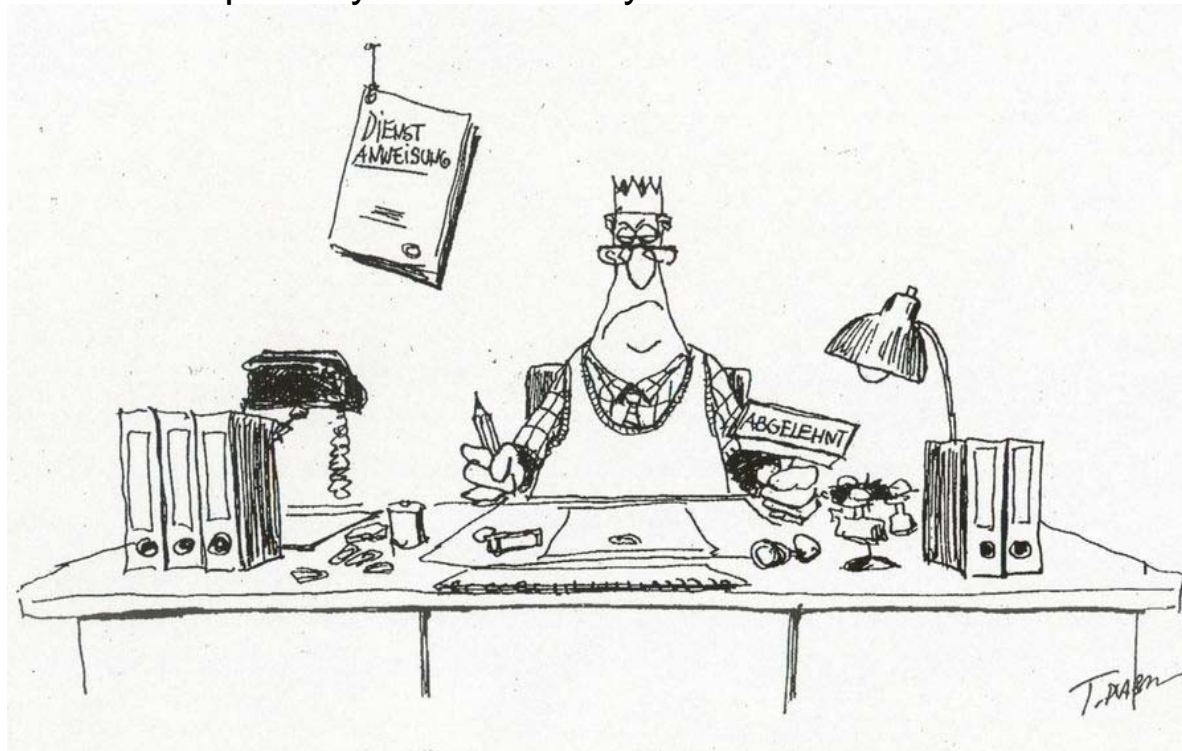
- 1) Unattractive career patterns encourage young talents to seek independence and rewarding salaries outside the EU countries.

### ▶ **Under-funding**

- 1) EU countries spent only 1.9% of GDP on research. There is a low rate of research investment from industry.
- 2) EU countries spent on average just 1.1% of GDP on higher education. If Europe were to match the US figure (2.7%), it would need to spend an additional 150 billion € each year.

## The bottlenecks

- ▶ **Legal framework and bureaucracy**
  - 1) Over-regulation of university life hinders curricular reform, interdisciplinarity and efficiency.



The King of Europe ... a Bureaucrat

## Action points

- ▶ **Differentiation in quality and excellence**
  - 1) Additional funding should provide incentives to those universities that are willing and able to innovate, initiate reforms and deliver high quality teaching and research. Higher funding should be bound to institutional changes necessary for the future.
  - 2) Concentration of funding not just on centres that are already excellent, but also on those who have the potential to become excellent.
  - 3) Funding should be competitive and out-put related.
  
- ▶ **Organization at European level**
  - 1) European research needs institutional reforms at all levels.
  - 2) It is necessary to establish pan-European funding structures.
  - 3) A multiplicity of research funding institutions must be maintained, and new sources developed.

## Action points

### ▶ **Developing attractive career structures**

- 1) Young researchers should pursue their own ideas much earlier and more independently
- 2) The continual flow of highly qualified researchers between countries and between the private and the public sectors requires more flexibility and permeability.
- 3) Qualifications gained in national institutions must be valid throughout Europe.

### ▶ **Unleashing universities' potentials**

- 1) Universities have to identify their priorities and strengths and focus on those.
- 2) Autonomy is a pre-condition for universities to be able to respond to society's changing needs.
- 3) European universities need quality seals with international credibility.

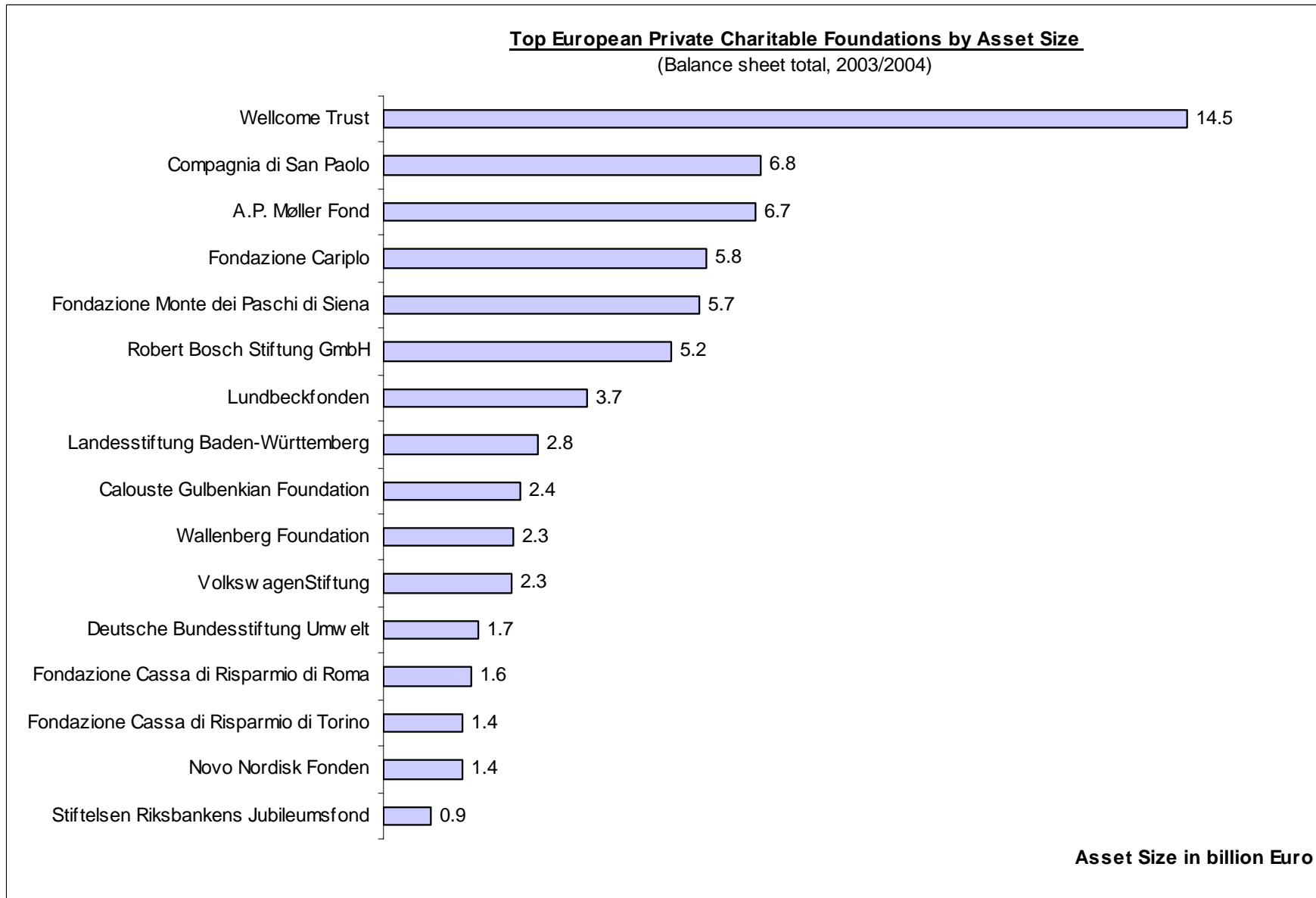
## What is a foundation?

Anheier and Daly (2005) suggest the following characteristics for a Foundation:

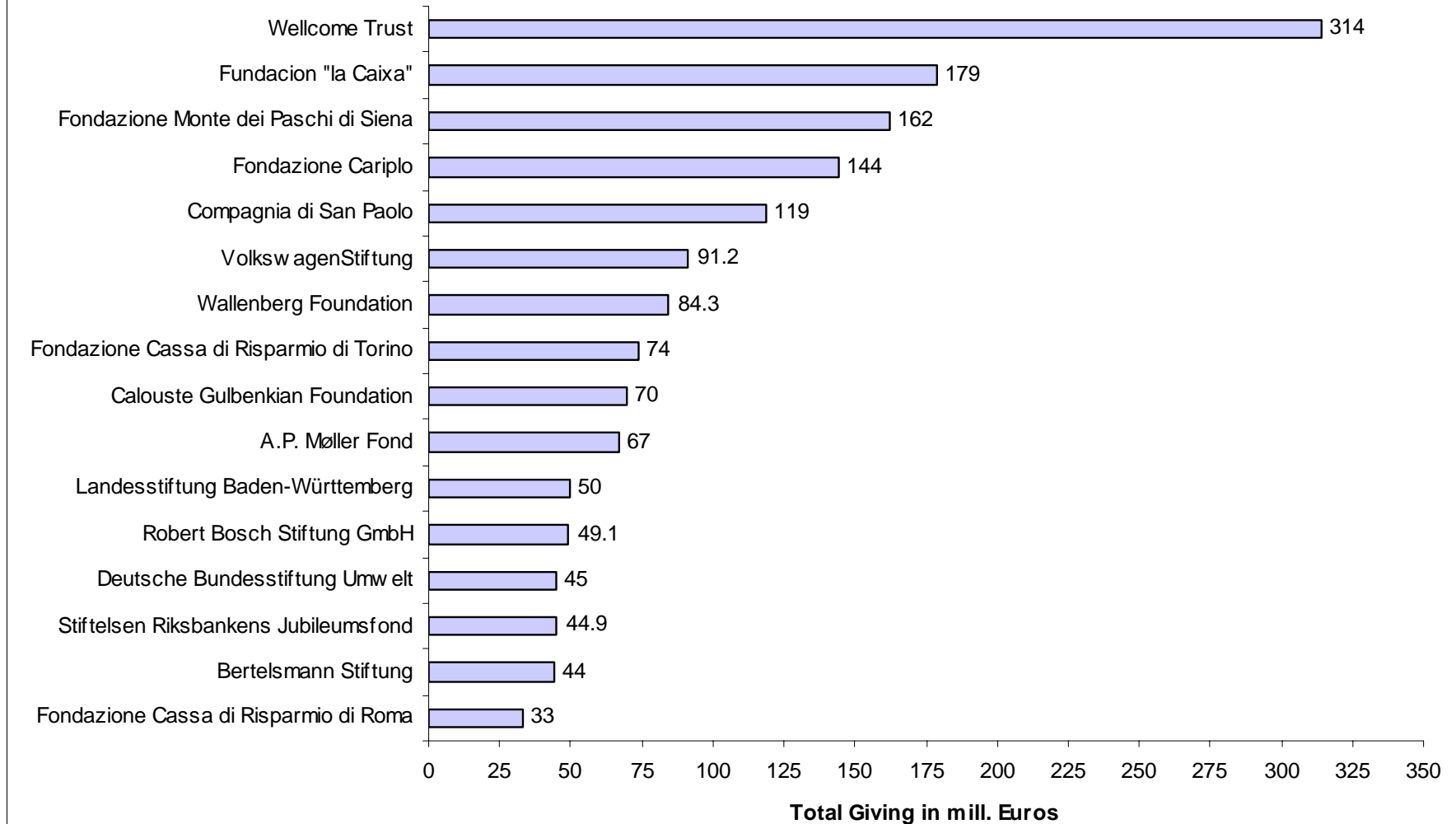
- ▶ It must be an asset-based entity, financial or otherwise.
- ▶ It must be a non-governmental entity.
- ▶ It must be a self-governing entity.
- ▶ It must be a non-profit-distributing entity.
- ▶ It must serve a public purpose.

## Foundations in Europe

- ▶ European foundations are a very heterogeneous pool of institutions whose defining characteristics often depend on local factors and the regulatory environment.
- ▶ In comparison to the US, foundations in Europe have played a less prominent role until now.
- ▶ In recent years the importance of foundations has significantly grown. According to the latest comparative statistics in Italy and Germany, around 50 percent of registered foundations have emerged since 1990, while other countries such as Belgium, Finland, France and Sweden report between 19 and 29 per cent increases in the number of foundations.



**Top European Private Charitable Foundations by Total Giving p.a. (2003/2004)**



## The role of foundations

Given the billions of Euros spent by public authorities and enterprises it is indeed not the overall amount of money spent, but rather the approach taken by foundations that makes the difference.

Research foundations add value to research efforts in a variety of ways by:

- ▶ Stimulating private means and initiatives to the benefit of the public at large.
- ▶ Identifying relevant topics or infrastructural demands for priority-setting.
- ▶ Stimulating new developments, redress imbalances, and create role models for an effective change of research strategies or institutional structures.
- ▶ Assisting in implementing topical or structural innovation on a wider scale.
- ▶ Fostering public appreciation of science.
- ▶ Contributing to the creation of a research-friendly society.

## Harvard Business Review

“If foundations serve only as passive middlemen, as mere conduits for giving, then they fall short of their potential and of society’s high expectations. Foundations can and should lead social progress. They have the potential to make more effective use of scarce resources than either individual donors or the government. Free from political pressures, foundations can explore new solutions to social problems with an independence that governments can never have.”

Michael E. Porter and Mark R. Kramer:  
*Philanthropy’s New Agenda: Creating Value*,  
Harvard Business Review, Nov/Dec 1999, pp.  
121-122.

## The role of foundations in facilitating change (I)

- ▶ Unlike publicly financed agencies which have to provide equal opportunities for all institutions, private foundations
  - can act much more freely, flexibly, and quickly;
  - can put objectives on top of rules and regulations;
  - do not have to wait for political consensus.
  
- ▶ They can act autonomously
  - in supporting the first experiments in new areas;
  - in taking risks;
  - in being front runners in institutional reform.

Foundations have the flexibility to quickly respond to the needs of the research community, to pilot projects, and trigger spending on research by bigger funders.

## The role of foundations in facilitating change (II)

- ▶ Due to the perpetuity of their funds, foundations have the capacity to be reliable partners, willing to foster risky projects, and to help researchers to break new grounds
- ▶ They are independent from election periods, but also independent from shareholders' views
- ▶ They can strive to give insights, to develop new ideas, and to find solutions where politicians, or industry cannot or do not want to embark upon such endeavours
- ▶ Their independence contributes to the inspiring effect that private funding has on the development of research and higher education, but also to the willingness of citizens and enterprises to spend their money on these purposes.

## The increasing need for independent advice and priority setting

- ▶ It is one of the main and most important tasks of foundations active in the field of research and higher education to enable and foster academic freedom on the one hand and scientific responsibilities on the other:
  - ▶ maintain the excellent capabilities of academic professions
  - ▶ ensure responsibility, freedom, and autonomy of research institutions and the individual researcher respectively,
  - ▶ keep the funding of research and higher education independent
  
- ▶ Privately funded research has been found to be more successful than research conducted with public funds (Terence Kealey).

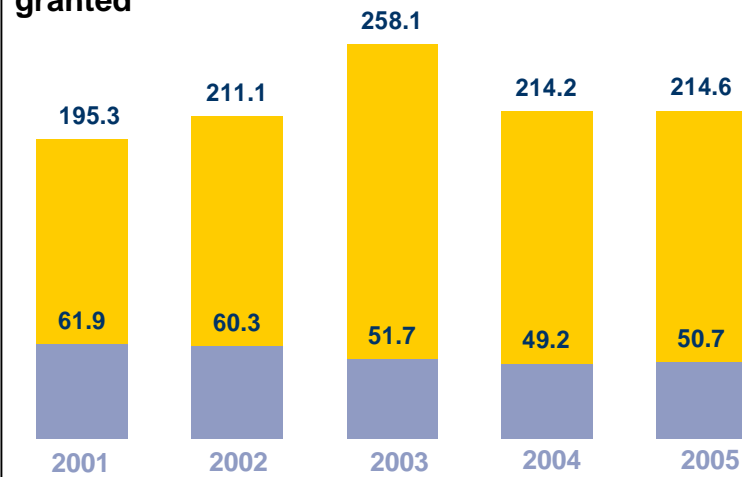
## Encouraging change

- ▶ Within their freedom, foundations can and should provide incentives for research in certain fields and stimulate new developments
- ▶ They should use their independence to
  - ▶ make offers to researchers in fields that are underdeveloped, or appear to be particularly promising
  - ▶ support high-risk projects which will not receive public support
  - ▶ foster research in and on regions and countries that are not on national political agendas

## Key Figures 2005

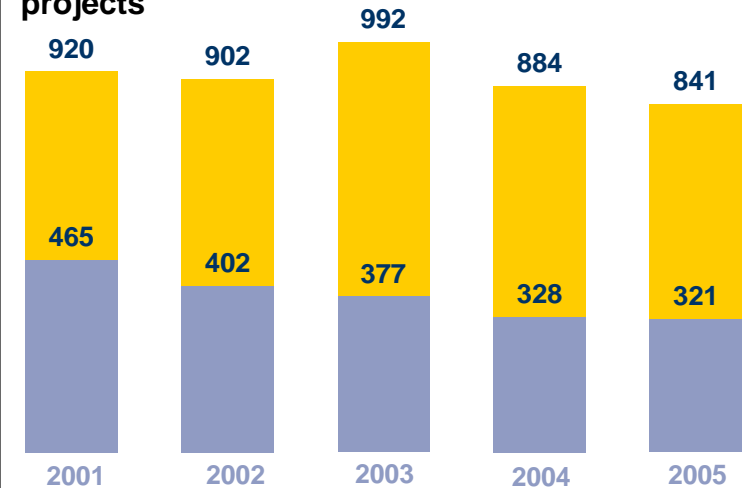
Initial Capital stock	562 million Euros
Capital stock in 2005	2.4 billion Euros
Total amount granted in 2005	91.8 million Euros
44 years of funding	3 billion Euros
Projects funded	28.000

**Million Euros applied for and million Euros granted**



 Million Euros applied for  
 Million Euros granted

**Number of applications and number of funded projects**



 Number of applications  
 Number of funded projects

## The importance of foundations in the process of European integration

Foundations can facilitate the process of European integration by supporting cross border research projects.

<b>Funding Initiatives</b>	<b>in mill. EUR</b>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
The Transformation of Economic Systems	24.4																	
Dictatorships in 20th Century Europe	29.6																	
Cooperation with Natural and Engineering Scientists in Central and Eastern Europe	29.6																	
Common Roads to Europe	17.7																	
Foundations and Requirements for an Enlarged Europe	16.2																	
$\Sigma$	117.5																	

Latest Example: “European Platform for Life Sciences, Mind Sciences, and the Humanities”

## Small things matter – three examples

Encouraging new ways of independent thinking in Central and Eastern Europe by setting up new Institutes of Advanced Study:

- ▶ The Collegium Budapest, the New Europe College in Bukarest, and the Sofia Nexus Institute of Advanced Study in Bulgaria.
- ▶ The Central European University (CEU) in Budapest.
- ▶ The Compagnia di San Paolo's, the Riksbankens Jubileumsfond's and the VolkswagenStiftung's funding initiative on European Foreign and Security Policy Studies.

## 1. Institutes of Advanced Studies

Encouraging new ways of independent thinking by setting up Institutes of Advanced Studies:

- ▶ Wissenschaftskolleg zu Berlin
  - ▶ 1981, first Institute of Advanced Study in Germany
- ▶ Hanse – Wissenschaftskolleg Delmenhorst
- ▶ Collegium Budapest
  - ▶ 1991, first Institute of Advanced Study in Eastern Europe
- ▶ New Europe College Bukarest
  - ▶ a private, independent foundation under Rumanian law
- ▶ Sofia Nexus Institute of Advanced Study in Bulgaria
- ▶ Frankfurt Institute for Advanced Study (FIAS)
- ▶ Shanghai Institute for Advanced Studies (SIAS)

## 2. The Central European University (CEU) in Budapest.

Thanks to the generosity of the Hungarian born, American philanthropist George Soros, Budapest is hosting the first foundation-based, fully endowed private university in Europe.

With an endowment of 420 million Euros the CEU is able to run its core operations on the basis of its own regular income resulting from the investments made.

Revenues for 2004/2005 in 1000 US \$	
Annual draw from CEU Endowment Fund	22 250
Tuition Income and Student Fees	322
Fundraising Income	504
Other Revenues	75
Use of Reserve	100
<b>Total Revenues</b>	<b>23 262</b>

### 3. Common foreign and security policy studies – a joint initiative by three European foundations

- ▶ The programme has been jointly developed by the foundations Compagnia di San Paolo, Italy, Riksbanken Jubileumsfond, Sweden, and VolkswagenStiftung, Germany. It aims at overcoming prevailing national perspectives as well as at analyzing and debating the preconditions and prospects of a much needed Common Foreign and Security Policy of the EU.
- ▶ With their joint initiative the three foundations want to strengthen the European dimension in the qualification of the next generation of intellectual leaders and security experts.
- ▶ The initiative will give European researchers and young professionals opportunities to conduct research at European institutions, and to build networks through workshops, summer schools, and other public events, thereby making an impact on the wider debate in the field of foreign and security policies.



„Scientists, social or natural, are not equipped to deal with these things [...] Foundations need to do this. They are the only independent bodies who can afford to ignore the fossilization of universities [...] to show the way, to think ahead about what it would mean to contextually study tacit knowledge about science, disciplines, solutions, diseases, dangers in different places in the world.“

Yehuda Elkana

(2002 Annual General Assembly of the EFC)

## Main challenges at the science-society interface

- ▶ Regaining the power of defining the public perception of science
  - ▶ from specialist and inter-specialist communication to broader audiences
  - ▶ reduce level of abstraction and focus on process rather than short-term results
  - ▶ the need for an actively shaped “co-evolution of science and society” (Arie Rip)
  
- ▶ Dealing with asymmetries and bridging the gap of uncertainty
  - ▶ breaking the silence between the disciplines
  - ▶ from interest via knowledge to trust
  - ▶ the need for new platforms and ideas
  - ▶ make social processes of research visible and understandable
  
- ▶ Attracting young people to science and technology
  - ▶ identifying the right audiences
  - ▶ creating enthusiasm
  - ▶ from information via interaction to involvement

## Traditional vs. new roles for researchers

### Traditional roles

Transfer of knowledge to selected target groups

Provide facts and results

One-way flow of communication: transmitter-receiver asymmetries

Support scientific literacy of interested audiences

Foster public *understanding* of science

### New roles

Actively shape broader public perception and participation

Offer compelling stories and guidance in action

Interactive, dialogical communication: achieving symmetric dialogue

Build trust and form research-friendly attitudes

Create public *appreciation* and opportunities for public *involvement* in science and technology

## Researchers have to be prepared for these new roles

- ▶ a more structured postgraduate education is necessary
- ▶ new curricula have to comprise non-disciplinary topics such as
  - ▶ intellectual property,
  - ▶ science ethics,
  - ▶ history of the discipline,
  - ▶ interpersonal communication,
  - ▶ media skills.
- ▶ the aim should be to enable the researcher to explain and communicate
  - ▶ what her or his research is about,
  - ▶ how she or he is conducting it,
  - ▶ and especially why she or he is doing it.

## The role of foundations to reconfigure the science-public interface

- ▶ Help to re-configure research activities to meet present challenges
- ▶ Create public debates on science and democracy
- ▶ Create independent networks to audit what happens in science
- ▶ Promote the idea of accountability
- ▶ Promote science journalism

## Europe and beyond – new approaches to international grant making

Where public institutions are reluctant to encourage new ideas, private foundations also have a special role to play.

It will be even more important for private foundations to support strategically relevant initiatives, including high-risk activities in politically sensitive regions for which it is difficult, if not impossible to gain public support.

## International funding: sustained focus on regions



1960ies/70ies: Support of Israeli-German Co-operations

1970ies/80ies: Support of Research in and about China



From the 1980ies to date: funding of research in and about the states of the former Eastern Bloc, from the late 1990ies with a particular focus on Central Asia/Caucasus

At the beginning of the new century: Focus on Sub-Saharan Africa



## The Volkswagen Foundation's funding initiative „Knowledge for Tomorrow. Cooperative Research Projects in Sub-Saharan Africa

The specific aims of the Volkswagen Foundation with respect to its funding initiative are to:

- ▶ improve symmetric partnerships in research between North and South,
- ▶ strengthen the South-South cooperation,
- ▶ develop the „African bench“ to improve responsiveness to African demands,
- ▶ create talent for the region and maintain it in its local environment,
- ▶ foster the interaction between African and European research centres and universities,
- ▶ strengthen integrated biomedical and clinical research between bench, patients and populations.

## Conclusion: Mutual risk-taking instead of individual risk avoidance

Foundations can help higher education and research to tackle the challenges of change by

- ▶ encouraging risk-taking,
- ▶ stimulating new developments,
- ▶ redressing imbalances,
- ▶ creating role models for an effective change of research strategies,
- ▶ helping to improve organisational structures,
- ▶ demonstrating that administrative and organisational change is possible,
- ▶ contributing to the creation of a more research-friendly environment.

## Future tasks

It is a suitable role and task for foundations to engage in a common effort to strengthen public and private investment in R&D. For the European Foundation Centre and its members it will be an opportunity and a challenge to take the lead in this endeavour by convening foundations engaged in research funding, by supporting research, and by engaging in collaborative actions with universities, research other organisations, governments, and business.

Many challenges can only be met, if we take a long view. We must be prepared to exercise judgement, and to make long term commitments whilst maintaining the flexibility to respond to new challenges.

“It’s not enough that we do our best; sometimes we have to do what’s required.”

Sir Winston Churchill