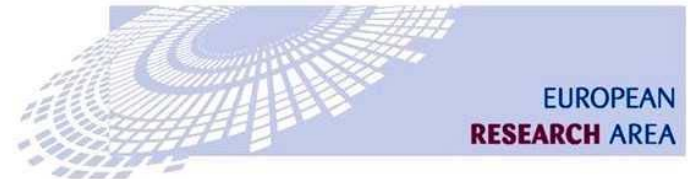


# Update on Regions of Knowledge: reaching for R&D intensive clusters



**REGIONS OF KNOWLEDGE**

Dr Dimitri Corpakis

*Head, Regional Aspects Sector*

*Directorate M - Investing in Research*

*European Commission DG Research*

[Dimitri.Corpakis@cec.eu.int](mailto:Dimitri.Corpakis@cec.eu.int)

# The recent past: the 2000 Lisbon roadmap

- By 2010 Europe should become the most competitive and dynamic knowledge society in the world
  - Sustainable development, employment, cohesion, better governance, life-long learning / people mobility
  - *Through an "Open method of co-ordination and benchmarking" (as a continuous, mutual learning process)*
- Barcelona European Council confirmed RTDI as a top priority for the EU (March 2002) /Ambitious goal of 3% of GDP average investment in RTD set. Action Plan adopted, April 2003
- The European Research Area project identified as one of the cornerstones of the Lisbon strategy

# February 2005: Lisbon relaunched



## Focused revision

- Establish a partnership for jobs and growth between the Union, the Member States and all economic operators, including business, academia and the European territories
- Revitalise the European economy by jointly implementing actions in three areas :
  - actions to **make Europe a more attractive place to invest and work**
  - actions directly targeted at **creating more and better jobs**
  - actions to **leverage knowledge and innovation for growth**

# R&D and the Knowledge economy

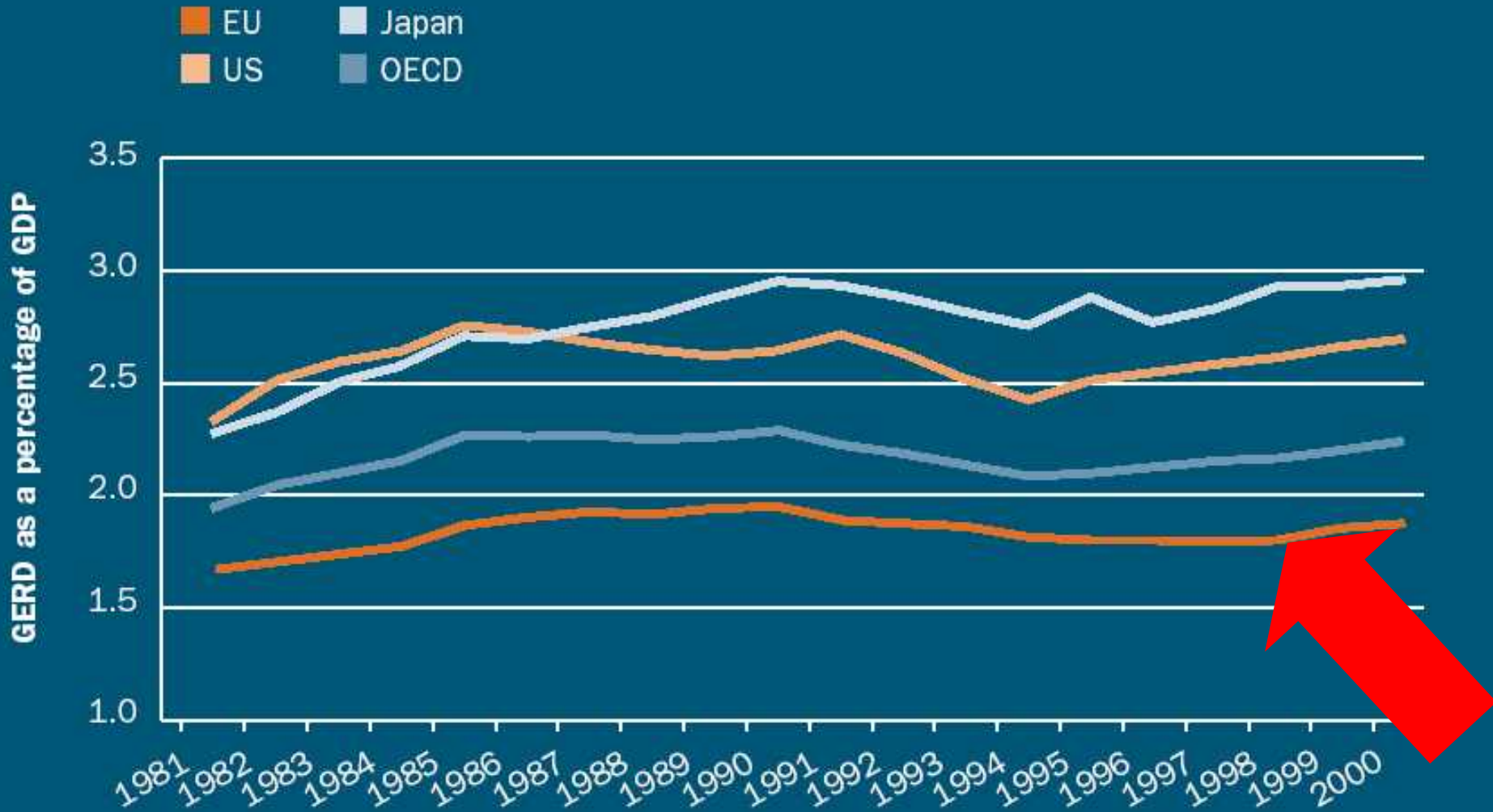
Today's advanced economies are "knowledge-based":

- Ever higher S&T content embedded in products and services
- Growing intensification of information and knowledge flows around the globe
- Increasing pace of trade liberalisation and flows of goods and services, pushing world economies to focus on more knowledge-intensive activities
- Growing concentration of knowledge flows in a small number of global knowledge networks and hubs. Risk for whole geographical areas to become redundant in this respect: globalisation tends to increase regional disparities
- However Europe still invests too little in R&D and this is more pronounced in the private sector with important implications for our positioning in the K-based economy

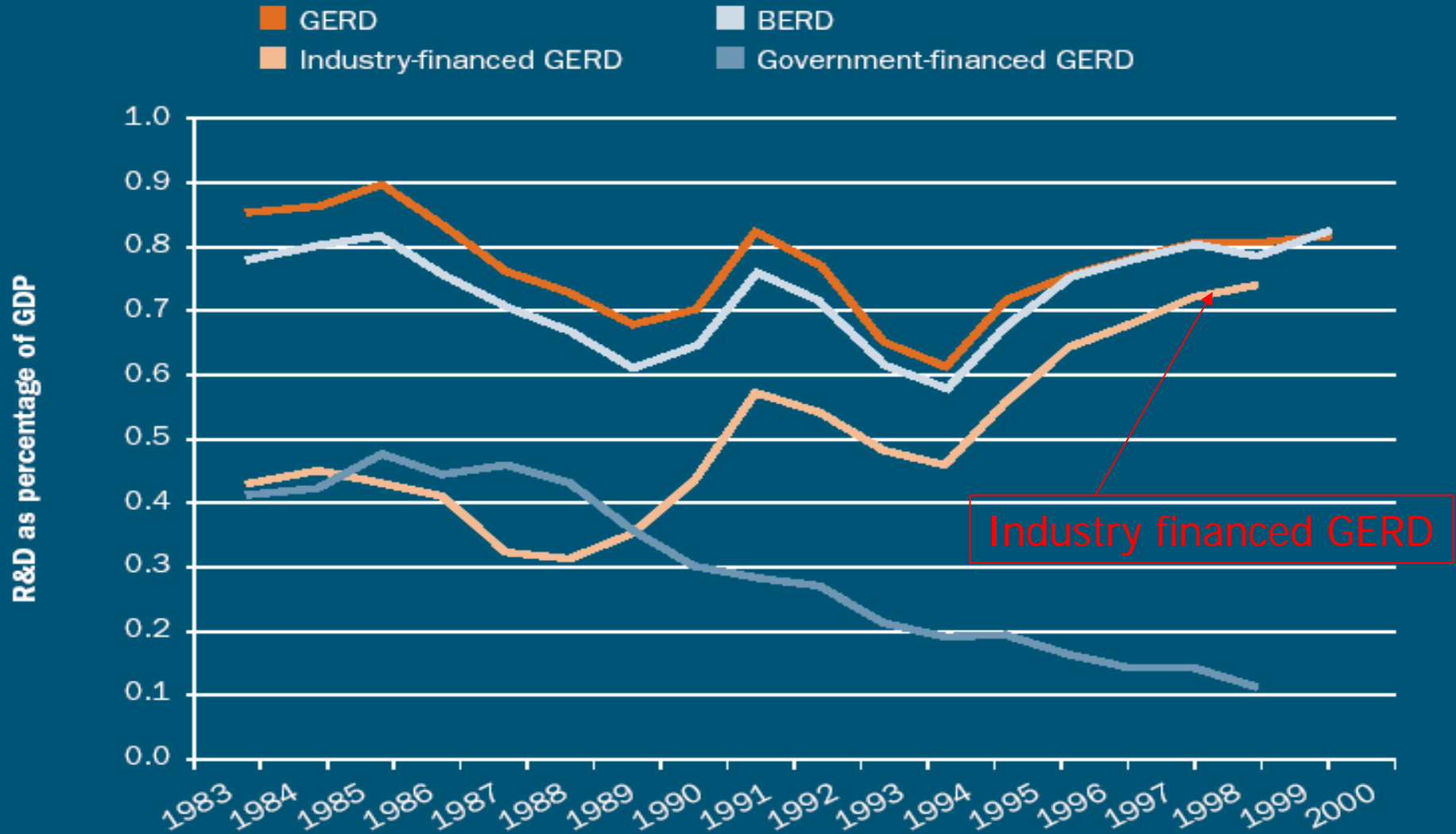
# Europe lacks attractiveness as a location for research with severe economic consequences for the whole continent

- ┆ R&D intensity in Europe lags behind
  - ┆ in 2001, 1.97% of GDP in the EU
  - ┆ 2.8 % in the US and 3.06 % in Japan
  
- ┆ More than 80 % is due to lower funding by the business sector
  - ┆ large European MNE spend 40% of their R&D abroad
  - ┆ new investments planned mostly in US and Asia
  
- ┆ The result is a massive and widening R&D investment gap vs the US
  - ┆ doubled between 1994 and 2000
  - ┆ € 120 billion in 2000
  - ┆ € 141 billion in 2001

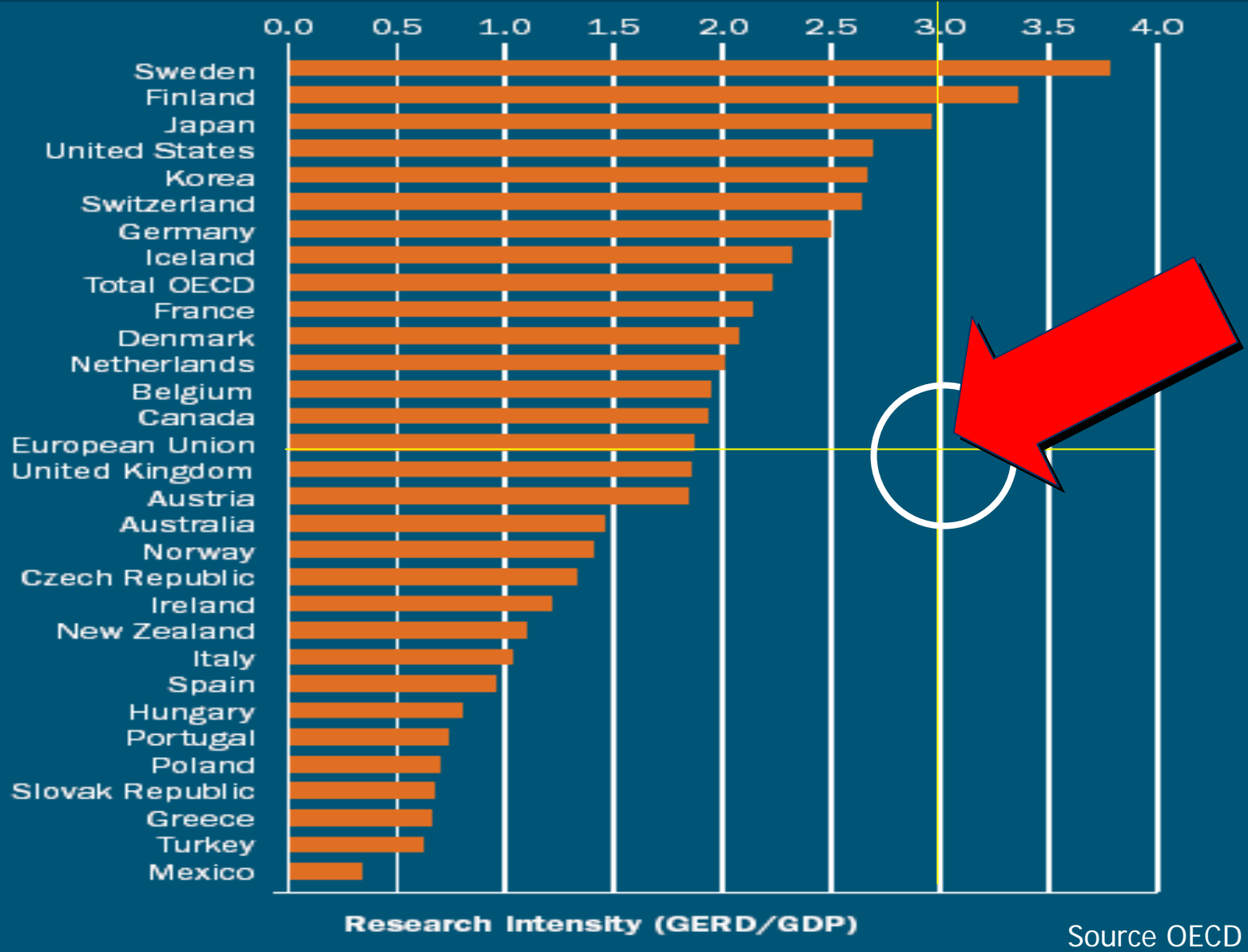
# R&D Intensity in Major OECD Countries and Regions



## Percentage Point Difference In R&D as % of GDP



## R&D Percentage of Gross Domestic Product 2000 (or most recent year)





# European competitors invest in knowledge: the case of China

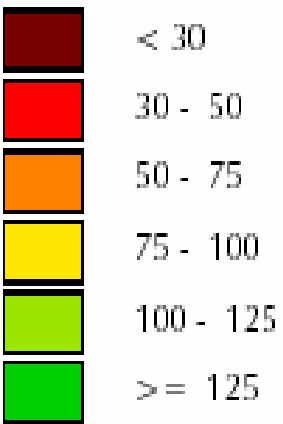
- China moves steadily from an exporter of labour-intensive products, to more technology-driven products (32% of China's exports to the EU (2002) , up from 19% in 1995).
- This trend is on the rise as the number of engineering and science graduates in China continues to grow rapidly and outperform that of Europe
- Import competition from China used to focus on labour-intensive goods and low-skill industries. At present, China's active industrial policy is turning the country into a low-cost competitor in high-skill industries
- China's industrial policy has selectively attracted foreign direct investment (FDI) in technology intensive industries in order to benefit from foreign technology and organisational know how.

# European Research Area (ERA) and its Regional Dimension: concepts

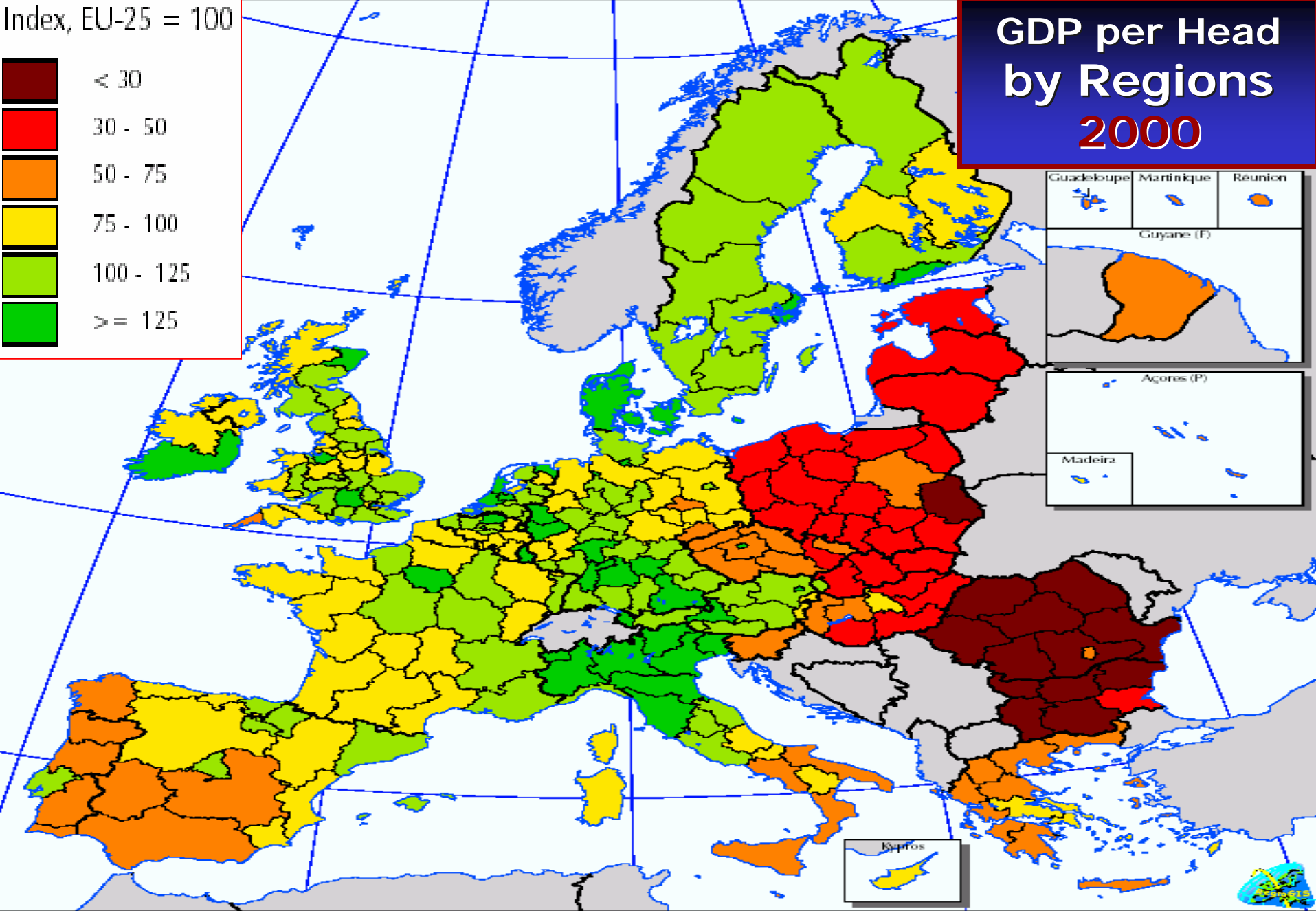


- The ERA, a new vision for European research: Re-invent the European research landscape through large scale integration of resources and overall organisational improvement
- Local and regional factors and operators are important for research policy - a message primarily addressed to the EU Member States and Regions
- Commission Communication on the Regional Dimension adopted 03/10/01 (COM(2001)549)

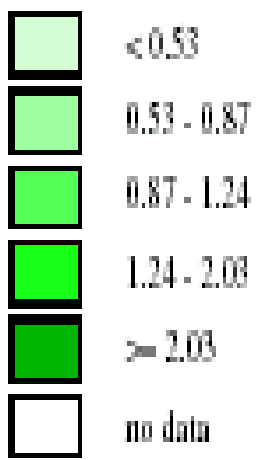
Index, EU-25 = 100



# GDP per Head by Regions 2000

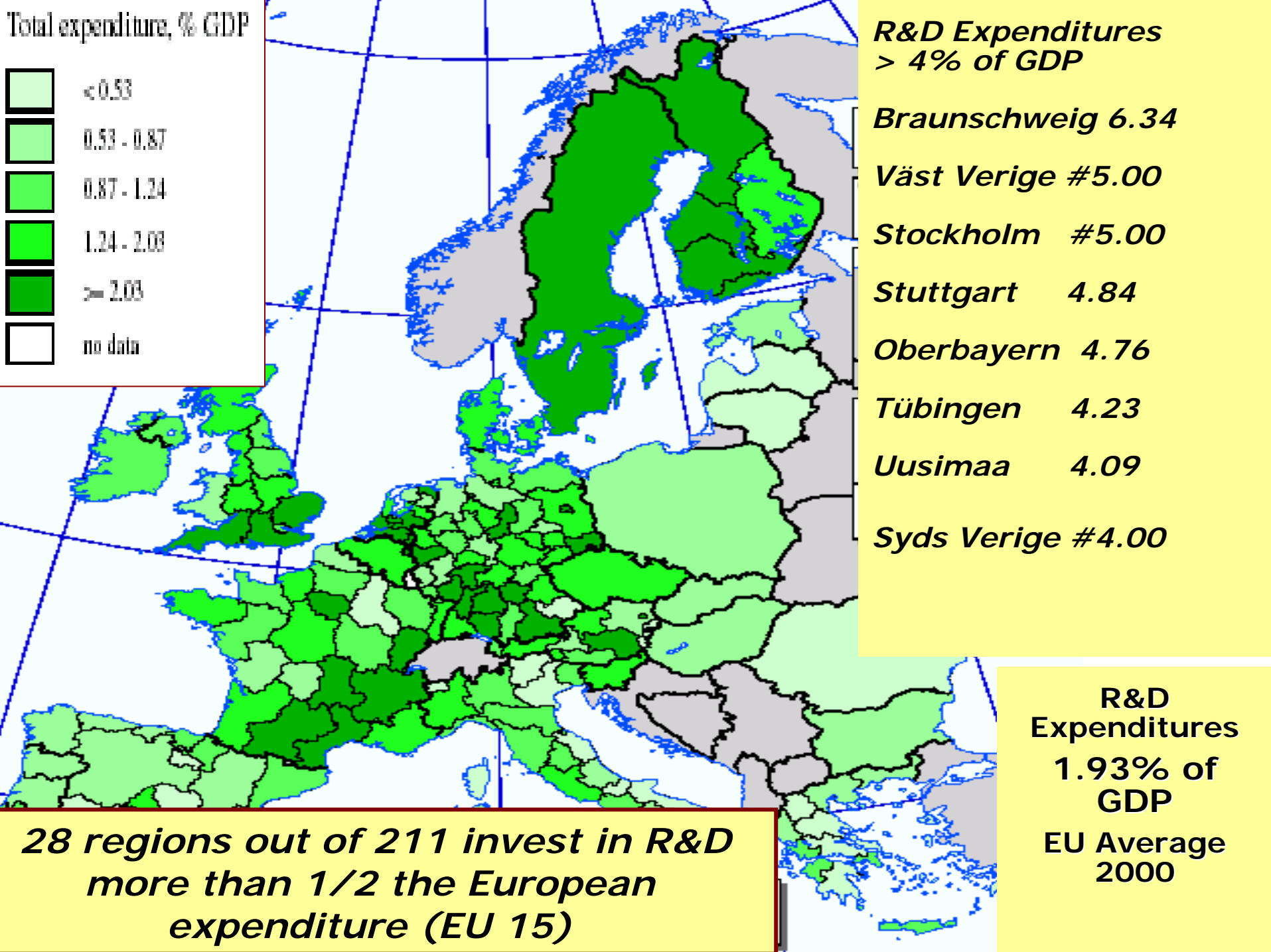


Total expenditure, % GDP



**R&D Expenditures  
> 4% of GDP**

- Braunschweig 6.34**
- Väst Verige #5.00**
- Stockholm #5.00**
- Stuttgart 4.84**
- Oberbayern 4.76**
- Tübingen 4.23**
- Uusimaa 4.09**
- Syds Verige #4.00**



**28 regions out of 211 invest in R&D more than 1/2 the European expenditure (EU 15)**

**R&D Expenditures  
1.93% of GDP  
EU Average 2000**

# Investing in Research: maximising the synergies between the Structural Funds and the RTD FP:

## *(Building RTDI Capacity)*

- Unique experience makes the EU a world leader in the field: combined efforts by the Structural Funds and the RTD Framework Programme
- EUR 17,5 Billion earmarked for collaborative research in Europe by FP6 (2002-2006) on a competitive basis, geared to S&T excellence, without geographic restrictions
- **5,9 % of the total amount allocated for all regions under the current programming period of the STRF, effectively allocated to RTDI actions (2000-2006). About 10% of the ERDF total budget spent on RTDI**
- The 3 new Objectives for the New Structural Funds (2007-2013) put a high emphasis on R&D and Innovation, as they are backing the Lisbon and Göteborg agendas
- New Commission orientation for earmarking STRF money to Lisbon objectives

# Critical components in territorial knowledge development



Knowledge  
Infrastructure

Knowledge  
Governance

Local Business  
Profile

Knowledge  
Multiplication  
Activities (Links  
between Science and  
Industry)



# The Pilot Action on Regions of Knowledge (2003)

---

Testing knowledge as a driver for  
regional development

# The Regions of Knowledge Pilot Action (KnowREG)

---

- introduced in the 2003 Community Budget by the European Parliament (heading B5-513) but fully conceived and developed by the European Commission (DG Research)
- Independent from the 6th FP for RTD (2002-2006) or the Structural Funds
- budget of EUR 2,5 million
- Experimental activities involving networks of European regions (with the active involvement of universities, research centres, and the business community) to create "Knowledge regions", able to provide model regional implementations of the Lisbon strategy, that is, demonstrate the central role of knowledge in driving regional development



# Regions of Knowledge Pilot Action (2003)

---

- Covered two (2) basic strands: (1) Integrated Regional Technology Initiatives (IRTI) and (2) Supporting activities (workshops and conferences)
  - IRTI sub-divided in three (3) parts:
    - (a) Technology audits and Regional Foresight
    - (b) University Driven Actions for Regional Development
    - (c) Mentoring Initiatives, where technologically advanced regions would co-operate with less advanced regions (Objective 1) in a kind of "mentoring" partnership, for a more efficient innovation and technology transfer process.
  - Projects had to have at least 3 partners coming from 3 different Member States.



# KnowREG (2003) statistics

---

- The 2003 call for proposals indicated a total budget of 2.5 million euro, to fund approximately 10-12 proposals, with a maximum Commission contribution of 50% of eligible costs and in the range of 200 to 300 thousand euro.
- The 53 proposals received represented a total grant request of 13 million euro. The average grant request was 250 thousand euro.

# **KnowREG 2003 Projects**

- **Mentoring European Knowledge of the Chemical Regions**
- **Strategic Mentoring Initiative for the Region of North Aegean**
- **Demand Knowledge**

- **European Regions Research and innovation Network in Brussels (ERRIN)**
- **Network, Knowledge Sharing and Cluster Development**

- **META Foresight, integrating foresight, R&D , Benchmarking, market watch and technological skills**
- **Building Regional Integration Knowledge Strategies- BRIDGES**
- **Insular Regions Knowledge TRACKer (IN.TRACK)**
- **MAREDFlow**
- **ReKnoMa - Regional Knowledge Management**

- **Conversion of Traditionally Structured Maritime Regions into European Knowledge Regions for Applied Biotechnology (BluBioNet)**
- **Pilot Action to develop a baltic Sea oriented Knowledge Region commencing with the incorporation of Helsinki, the Oresund Region, and Hamburg (Baltic Sea-KR)**
- **SPIDER Project. Increasing regional competitiveness through futures research methods**
- **COHERA-A cohesive ERA: Universities as knowledge Drivers in LFRs**

# Why Integrated Regional Technology Initiatives



- Focus on integrated action at regional level, involving co-operation of local actors that are affected by creation, uptake or diffusion of knowledge to stimulate local or regional development.
- **Structured around institutions at regional level (public or private) that can be identified as knowledge creators or knowledge users, working in partnership.**

# Technology Audits and Regional Foresight

- Focus on analysis of the regional economy and technology fabric and identification of future development scenarios based on the knowledge based society and economy
- The involvement of several regions in a project was expected to provide a broad view of the diverse development situations across the EU.

# University Driven Actions for Regional Development (UDARD)

- Focus on demonstrating how universities (and assimilated higher education institutions) can play significant roles in local and regional economies by:
  - providing expertise and advanced training
  - performing an advisory role for local companies or public institutions
  - stimulating technology creation and uptake by creating spin-off companies, and incubators, in a transregional, transnational mode.



# Mentoring Initiatives

---

- Focus on networking between technologically advanced and less favoured regions (*LFR, Objective 1 regions*)
- Provide knowledge and experience sharing for technology based regional development.
- Appropriation of a structured regional innovation strategy, a critical factor for development
- Technologically advanced regions expected to provide models and advice to LFRs, by "walking them through" for technology based regional development.

# KnowREG: patterns coming out of the 2003 Call for proposals

- Sectoral projects
- Advocacy approach, i.e. mobilisation of all actors around some knowledge-driven regional development objectives
- production of tools for Knowledge Management at regional level.





# Current and future activities

---

# KnowREG-2: Continuity and Change

- KnowREG-2 built on the success of the Pilot Action on "***Regions of Knowledge***"
- "***Regions of Knowledge 2***" "hosted" in FP6 Specific Programme 1 (*Integrating and Strengthening the ERA - Coherent Development of Policies*) and focused on achieving the Barcelona targets at regional level.
- Support given to trans-national, trans-regional collaborative projects focusing on RTD policy-making and investment strategy at regional level. *Regions of Knowledge 2* also focused on ways of further spreading and increasing outreach of existing regional RTD initiatives.
- Greater importance given to exchange of experience among supported projects and, for this interaction is foreseen with DG Enterprise's IRE network as a basis for mutual learning

# KnowREG 2

## Call Facts

- Call Opened: *31 December 2004*
- Call Closed: *19 May 2005 at 17:00 Brussels time*
- Call Indicative Budget: *EUR 8,95 Million*
- Community financial contribution up to *100% of eligible costs*
- Project duration *up to 24 months*
- Electronic Submission *Only* (EPSS system on the Web)
- 117 proposals received out of which 115 were evaluated / 18 selected for funding
- Currently 16 contracts finalised

# What the future holds (2007-2013)

- New financial framework for 2007-2013 (financial perspective) / December 2005 European Council compromise / much less than Commission 's proposal
- New Structural Funds (2007-2013) based on Lisbon and Göteborg processes
- New Community (7th) RTD Framework Programme expected to be launched in 2007 (2007-2013)
- Towards increased coordination between Regional and Research Policies of the Union

# Specific Programmes

***Cooperation* – Collaborative research**

***Ideas* – Frontier Research**

***People* – Human Potential**

***Capacities* – Research Capacity**



**JRC (non-nuclear)**

**JRC (nuclear)**

**Euratom**

# ***Capacities – Research Capacity***

1. **Research Infrastructures**
2. Research for the benefit of SMEs
3. **Regions of Knowledge**
4. **Research Potential**
5. Science in Society
6. Activities of International Cooperation

# Towards a new regional component in FP7: "Regions of Knowledge 2007-2013"

- Maintaining and developing new regional research intensive clusters
  - reinforce regional potential for investment in R&D
  - through an integrated methodology using analysis and foresight, transnational partnerships and activities focusing on integration of R&D institutions to the local economy

### 3. Regions of Knowledge

Development of regional “research-driven clusters”

*Two main objectives for European regions:*

**Strengthen their capacity for investing in RTD and carrying out research activities**

**Maximising their potential for a successful involvement of their operators in European research projects**



# FP7-Regions of Knowledge

## Activities:

- **bring together regional research actors:**  
universities, research centres, industry, public authorities  
(regional councils or regional development agencies)
- **encourage the joint analysis of research agendas**  
of regional clusters and the elaboration of further  
deployment strategies, including through Mentoring *of*  
*regions with a less developed research profile by*  
*highly developed ones*

# FP7-Regions of Knowledge

## Expected outcomes:

- improve research networking and access to national and Community funding sources for R&D
- better integration of research actors and institutions in regional economies, in close relationship with other related EU policies (*Regional policy, Competitiveness and Innovation, Education and Training*)
- synergies with regional policy

# Building synergies between FP7 and the Structural Funds

- **FP7** activities will develop an increased **regional dimension** in particular under the “Capacities” specific programme
  - *Regions of Knowledge*
  - *Unlocking Research Potential*
  - *Research Infrastructure*
- **The Structural Funds** will reinforce **R&D investment** in all EU regions, in particular Convergence ones and have the capacity to **improve the overall framework conditions for research, innovation and the knowledge economy**

# Future Cohesion policy: a more strategic approach



- **Definition of Union priorities** in a **Strategic Guidelines document** to be established by the **Council on the basis of Commission proposals**
- **Translation by the Member States** of these Community priorities in **National Strategic Reference Frameworks** to be decided by the **Commission**
- **Implementation** by means of **regional and thematic Operational Programmes**

# How to ensure complementarity between FP7 and the New Structural Funds

- **Need for fine tuning of national and regional priorities** at short, medium and long term in the future SF **Operational Programmes** regarding R&D, Innovation and the Knowledge Economy in the light of the 7th FP and the ERA development process / including the Barcelona target
- **Regional component in FP7 and more FP7 actions providing opportunities to partners from Convergence regions**
- **BUT Main responsibility with the authorities**

# Breaking with the provincialism of Europe's knowledge "islands"

- Enhance Territorial attractiveness in physical and intellectual terms to attract creative people (develop physical but also knowledge infrastructure - universities, technology parks, R&D Centres)
- Connect local academic and business communities through smart intermediaries (knowledge brokers)
- Create the appropriate framework conditions to attract innovative businesses
- Develop territorial connectivity with global knowledge networks and hubs
- Develop the territorial knowledge base investing where appropriate in R&D

# Net links

- <http://cordis.europa.eu.int/guidance/services.htm>  
All useful links for European Research Policy
- <http://cordis.europa.eu.int/era/regions.htm>  
(Regional Dimension of the ERA)
- <http://www.innovating-regions.org/>  
(The IRE Network, Innovating regions in Europe)
- [http://europa.eu.int/comm/regional\\_policy/themes/research\\_en.htm](http://europa.eu.int/comm/regional_policy/themes/research_en.htm)  
(Structural Funds and Research / Innovation)

A historical map of the Americas, showing the continent divided into various regions. The map features a grid of latitude and longitude lines. In the bottom left corner, there is a decorative vignette with a central figure and text. The text in the vignette includes "NOVI ORBIS AMERICAE TABULA" and "A. W. V. G. 1696".

RETHINKING  
REGIONS:  
Towards  
Spontaneity?

Riel Miller

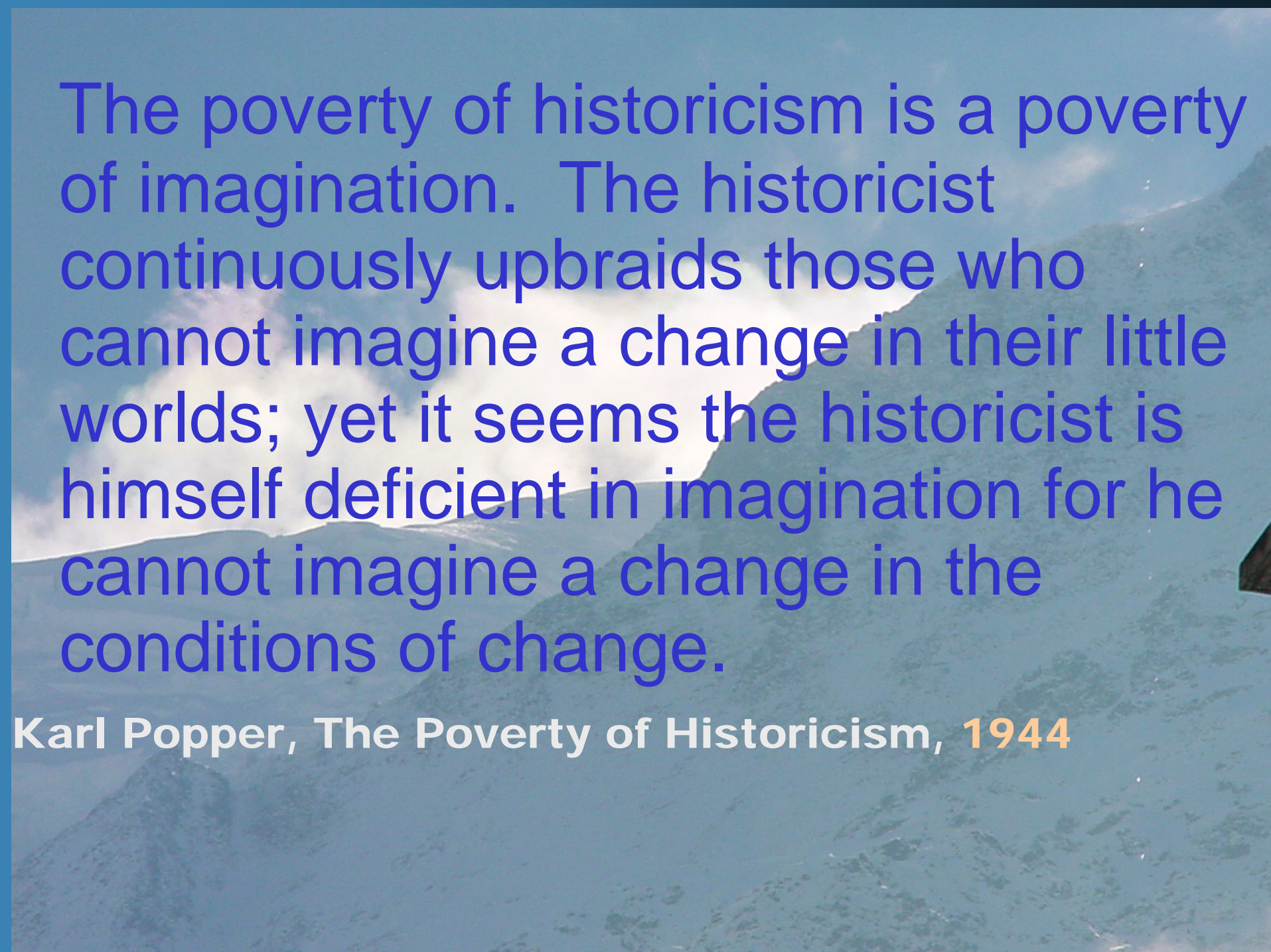
SPIDER Project Closing Conference  
Brussels, March 13th 2006



# Increasing regional competitiveness through future research methods

Can we make it?

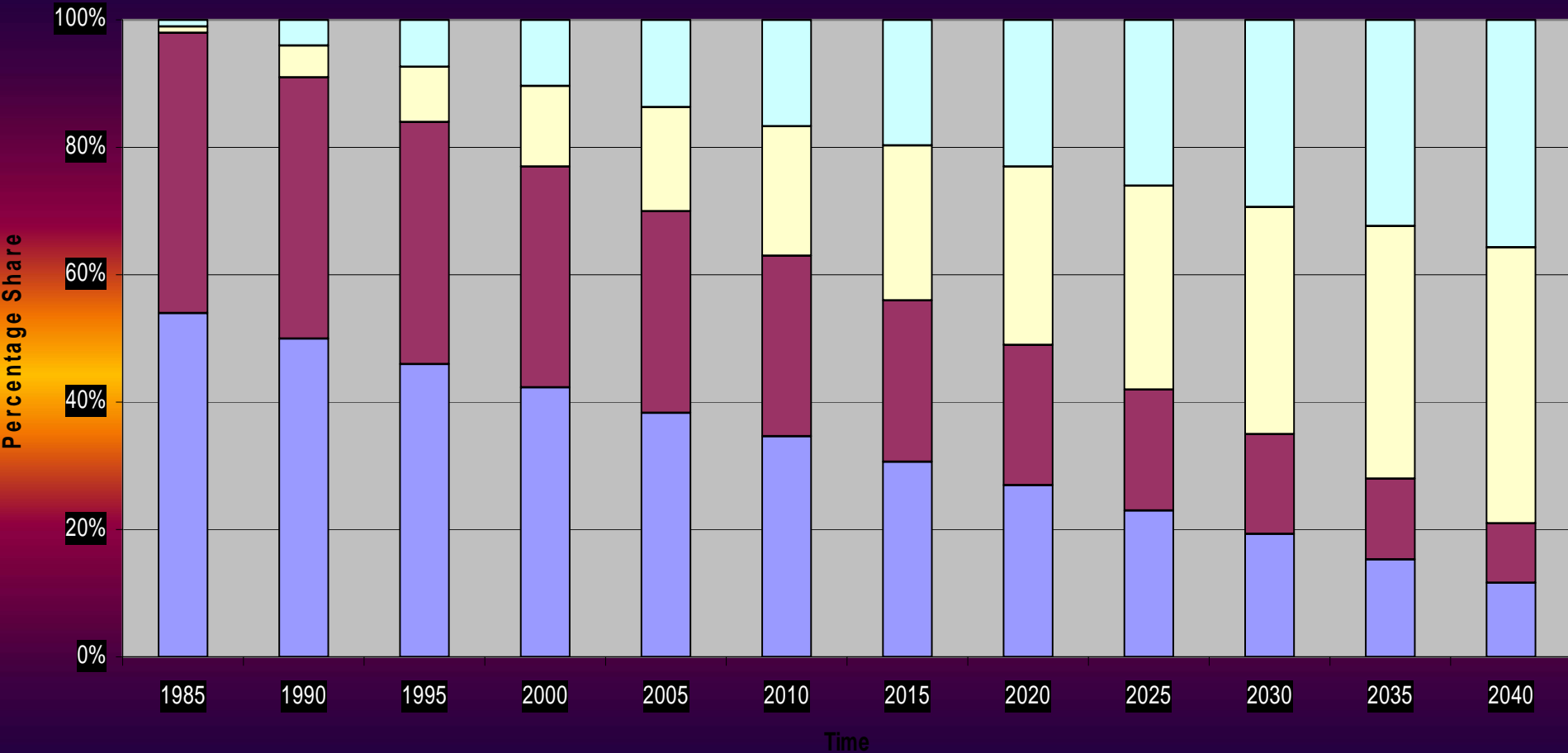
Everyone else is doing the same thing!



The poverty of historicism is a poverty of imagination. The historicist continuously upbraids those who cannot imagine a change in their little worlds; yet it seems the historicist is himself deficient in imagination for he cannot imagine a change in the conditions of change.

Karl Popper, *The Poverty of Historicism*, 1944

# Changing Composition of Wealth Creation



Industrial products

Innovation (S&T/R&D)

Personal products

Creativity (Refinement of taste)

# Two questions for policy

- Making sure that industrial related policies are the best possible
- Looking to the non-industrial dimensions of knowledge and “research”

# New meanings beyond the industrial?

- **Region**... city, nexus of cities, axes of travel, pattern of flows... or a community that is based on interest, practice – work for life: values not time... ?
- **Competition**... for existing firms, for inward investment, profit reinvested... or not at all as unique creation and QofL become predominant... ?
- **Future research**... data, polling, forecasts... or ambient, complex, spontaneous, networked invention... ?
- **Future methods**... polling, analysis, process, epistemology... planning, contingency, sense of security, possible, probable, desirable... “futures literacy”: resolutely, strictly about the present – anti-planning... ?



d

g:

exity,  
geneity,  
k

y and  
capacity

ntaneity

# Innovation and R&D spending

...global R&D budget numbers are an exercise in accurate rubbish. They simultaneously deceive and mislead. Any policymaker, chief executive or innovation champion who relies on R&D intensity and R&D budgets as a meaningful or usable metric to assess global competitiveness virtually guarantees shoddy analysis and distorted decisions. Few things reveal less about a company's ability to innovate cost effectively than its R&D budget."

Michael Schrage, Financial Times, Nov. 8, 2005

# Method does matter using “futures literacy”

Futures literacy is the capacity to question the assumptions used to make decisions today and to systematically explore the possibilities of the world around us through a mastery of rigorous imagining techniques.



# Towards spontaneity?

“In an uncertain, changing world, most decisions are wrong, and success comes not from inspired visions of exceptional leaders, or prescience achieved through sophisticated analysis, but through small-scale experimentation that rapidly imitates success and acknowledges failure. This disciplined pluralism is the true genius of the market economy”

John Kay, Financial Times, Tuesday, February 28, 2006 (p.17)

*“The human condition can almost be summed up in the observation that, whereas all experiences are of the past, all decisions are about the future. The image of the future, therefore, is the key to all choice-oriented behavior. The character and quality of the images of the future which prevail in a society are therefore the most important clue to its overall dynamics.”*

*Kenneth Boulding*

Thank you  
Riel Miller



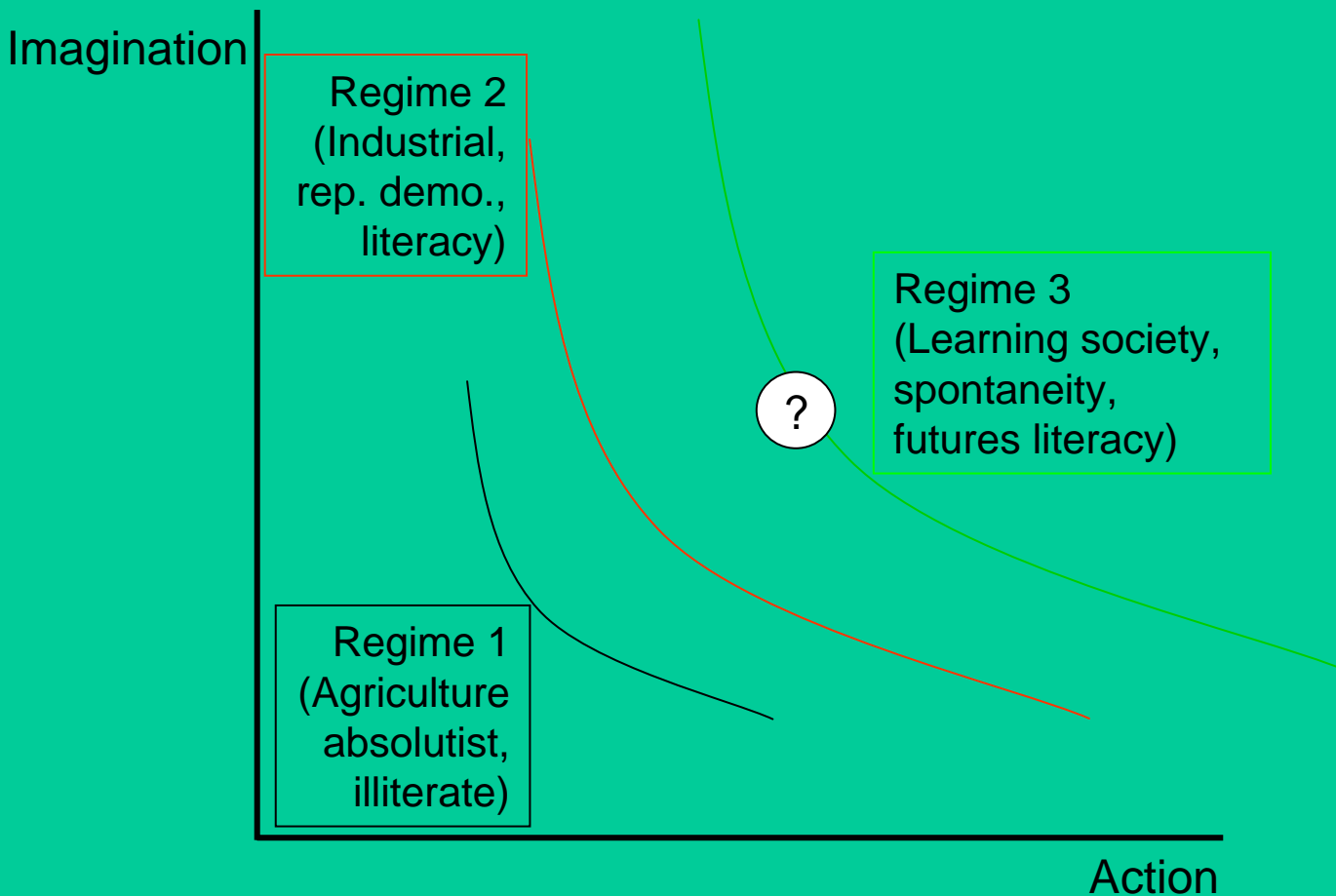
DANISH  
TECHNOLOGICAL  
INSTITUTE

XperidoX Futures Consulting

rielm@yahoo.com

D

## SPIDER's aim is to achieve high imagination-high action



If getting to the goal depends on a regime change (change in the conditions of change) what are the policy implications?

# Niccolo Machiavelli

It ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. This coolness arises partly from fear of the opponents who have the laws on their side, and partly from the incredulity of men, who do not readily believe in new things until

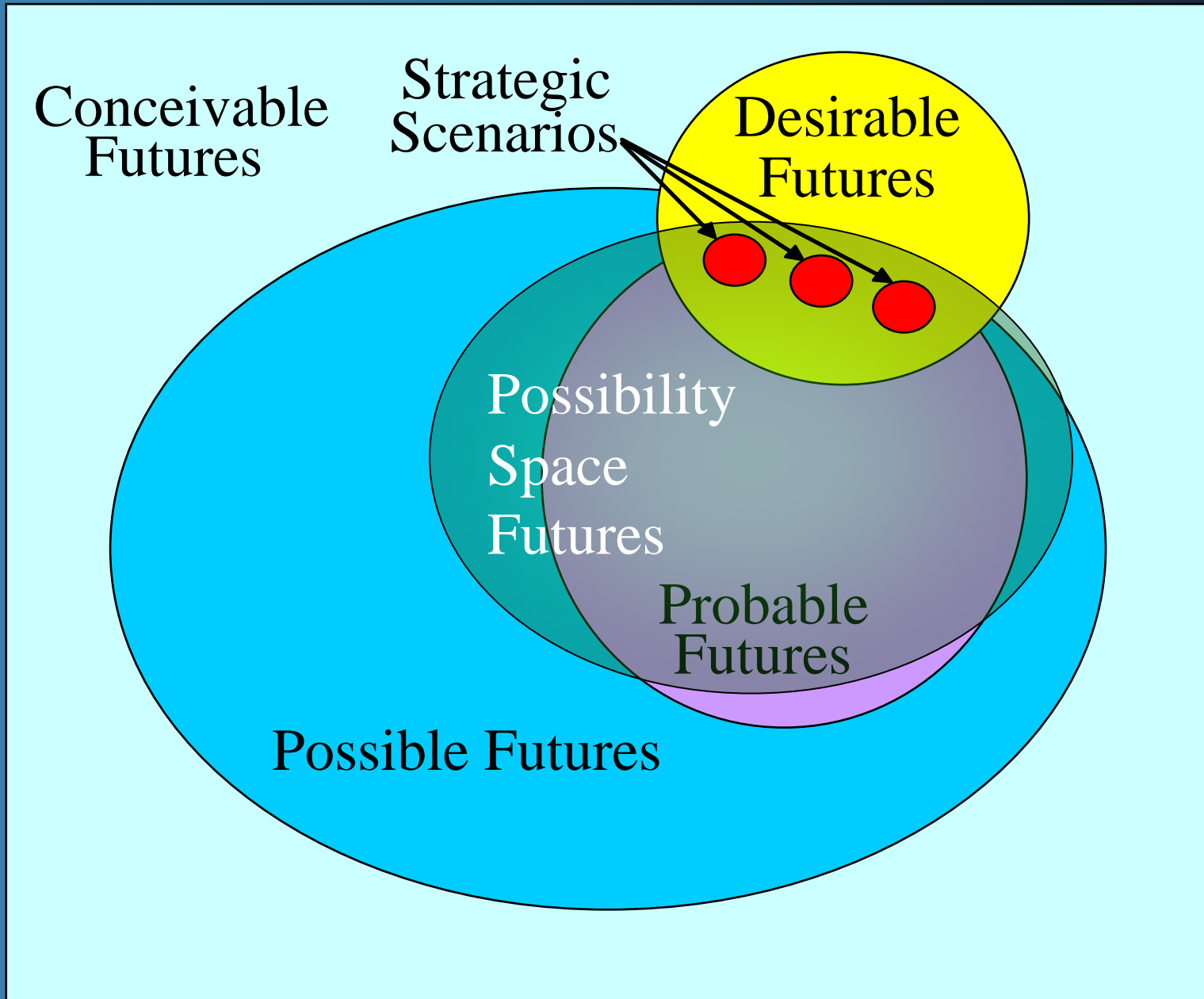
# Definition

Futures literacy is the capacity to question the assumptions used to make decisions today and to systematically explore the possibilities of the world around us through a mastery of rigorous imagining techniques.

# Futures Literacy

- Level 1 futures literacy
  - Temporal awareness, values, expectations
- Level 2 futures literacy
  - Rigorous imagining
- Level 3 futures literacy
  - Strategic scenarios

# Possible, probable, desirable





**TURUN KAUPPAKORKEAKOULU**  
Turku School of Economics and Business Administration

# **SPIDER: Region of Knowledge in 2020 Innovation & Entrepreneurship Perspective**

**Professor Pasi Malinen**  
**D.Sc. (Econ. & Bus. Admn.)**

**Turku School of Economics  
and Business Administration**

**[pasi.malinen@tukkk.fi](mailto:pasi.malinen@tukkk.fi)**







## Current "trends"

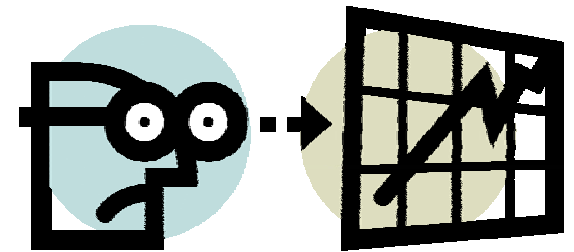
- Knowledge flow of various sectors (out-sourcing, off-shoring,...)
- New is beautiful, only!
- Technology driven development & support
- What you measure is what you get!





# What should R of K look like in 15 years' time?

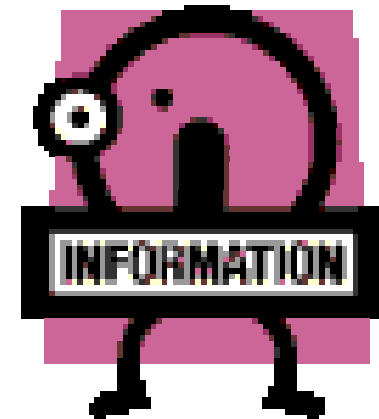
- Many flourishing sectors based on previous knowledge and expertise
- New innovation culture and activity
- Complementing old and new innovations
- Business competence in great form and shape





# What competences are needed?

- Consensus on regional strategies
- Networking of decision makers
- Business & technology competence
- Co-operative approach (convergence etc.)
- Flexibility
- Flexibility to change





## Tools needed?

- Understanding the history of each individual region and sector
- Business competence together with technology/science
- Flexible supporting tools (+more risk taking)
- Mixing various fields of expertise (beyond Bologna)

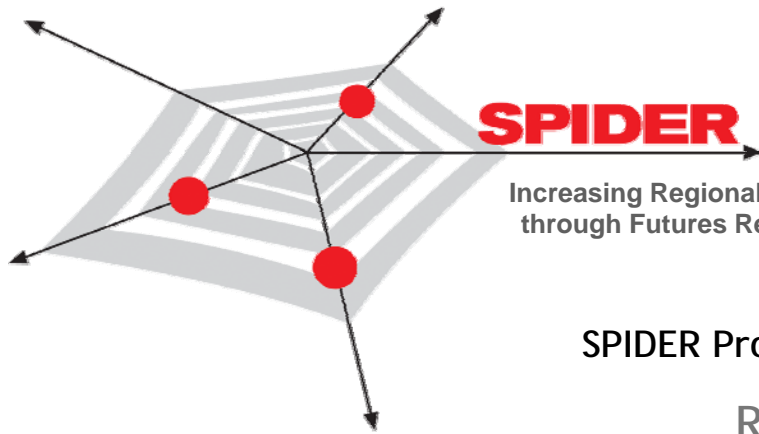




## How to manage future's R of K?

- Understanding the fact that a lot of innovations come from existing companies and R&D
- Continuous R&D for existing knowledge-base
- Virtual networking of key players on each individual new innovation (case-by-case) => no new agencies!





Increasing Regional Competitiveness  
through Futures Research Methods

## SPIDER Project Closing Conference

# RETHINKING REGIONS - IMPROVING REGIONAL PERFORMANCE IN THE KNOWLEDGE SOCIETY

Brussels, March 13<sup>th</sup> 2006

## Transition from the information society towards a knowledge society

### Marie-Anne Delahaut

director of research, head of the Information Unit, The Destree Institute  
president of the Belgium - Wallonia Chapter of the Internet Society (ISOC Wallonia)

delahaut.marie-anne@destree.org - www.wallonie-en-ligne.net  
[http://www.destree.org/IJD\\_Equipe\\_Marie-Anne\\_Delahaut.htm](http://www.destree.org/IJD_Equipe_Marie-Anne_Delahaut.htm)

### Introduction: Foresight & governance of the Internet

In March 2005, the Destree Institute has organized an international conference "**Foresight of the Internet**", considering "**Digital networks as structuring tools for the Knowledge Regions**". The debates were structured in three sessions: Technologies for the Information society, Human resources towards the Knowledge-based society, and Transversal issues of Internet governance.

The results of the debates constituted a contribution to the **World summit on the information society (WSIS)** and to the **Working group on Internet governance (WGIG)**. After the WSIS second phase in Tunis, we now participate in the **Internet Governance Forum (IGF)**, all this process organized under the auspice of the Secretary general of the **United Nations**.

A **book** has been published by the Destree Institute, honoured by a preface by Mrs Viviane Reding, Commissioner for Information Society and Media, and a postface by Mr. Markus Kummer, Executive Coordinator of the Working Group on Internet Governance. Special contributions are also presented about technologies "IPv6 Roadmap" by Latif Ladid (IPv6 Task Force) as well as about content, "Culture, Creativity and the Internet, Continuity and Change" by Kim Veltman (System for Universal Media Searching).

A **DVD-book** published in collaboration with ISI-Ingénium in Caen proposes, in French and in English, a structured summary of the conference and a booklet with three contributions about "**Internet governance and the WSIS**" (Marie-Anne Delahaut, The Destree Institute, Namur), "**30 years of Internet**" (Philippe Lequesne, Centre des Technologies nouvelles - CTN, Caen) and "**Which technologies for tomorrow**" (Jean-Michel Cornu, Next Generation Internet - FING, Paris).

Those publications, presented online ([www.wallonie-en-ligne.net/2005\\_Pro prospective-Internet/index.htm](http://www.wallonie-en-ligne.net/2005_Pro prospective-Internet/index.htm)) are exactly **in phase with the subject of this SPIDER Project conference**. Work goes on about these important concerns of "**Foresight & governance of the Internet**", as the process of the WSIS and of the IGF invites the multi-stakeholders to implement their goals no later than **2015** (WSIS outcome documents: Declaration of principles; Plan of action; Commitment of Tunis; Agenda for the Information Society, [www.itu.int/wsis/index.html](http://www.itu.int/wsis/index.html) - Internet Governance Forum, [www.intgovforum.org/](http://www.intgovforum.org/)).

## **My vision of a region of knowledge in the information society**

The question is "**What should a region of knowledge ideally look like in 15 years from now?**". Let me answer to it with three points of view including the Information & communication technologies (ICT) tools, their management and the competencies they should provide to their users. The word "ideally" will eventually be applied to that analysis as a conclusion.

1. Technologies development
2. Governance of the internet: accessibility, transparency, democracy, multilateralism and legitimacy
3. The human being as centre of the networks

### **1. Technologies development**

Invented about thirty years ago, the concepts leading to the internet we use in 2006 continue to develop in many domains. New tools and applications are in preparation, some of them being commercialized in Asian countries as Japan, which has developed its own very broad band and futurist networks capacities. Some of those new tools were presented in Geneva and in Tunis during the WSIS. Nanotechnologies are used to develop miniature and very light servers, special glasses acting as screens to project data, connected to micro sized processors, commands activated by voice or by the special tools associated to the new generation watches, portable phones configured as real computers, tremendous storage capacities on a single chip,... Those new tools could than be virtually connected to any screen or keyboard available anywhere, for anybody happy enough to possess them. In the paper "Which technologies for tomorrow, Jean-Michel Cornu wonders if "tomorrow's supercomputers will simply consist of a stack of smart cards communicating together via high speed wireless networks?".

ICTs now allow the convergence of data, images and voice, as a new reality related to culture, movies, music, games and even books. They are developing through web-internet telephony, satellite connections, internet tools working on television, optical fibres and cable networks, high power Wireless networks (WiFi), but also peer-to-peer technologies and new "express toll lanes" alongside the internet's existing highways along the intercontinental backbones. The data rate transmission, that was around 60 kilo bits par second on our old modems is now of around 24 mega bits per second for a home ADSL connection and goes up to 160 Terabits (over one hundred thousand billion bits) per second through optical fibres.

Distance is not important anymore between the place we connect and the service provider. Anytime anywhere is the new rule of the ubiquitous Internet. The Telephone or Internet service providers tend to gather in large monopolistic societies to become powerful operators, leading our societies to become dependant of their architecture and putting the global network at risk of losing its neutrality.

## 2. Governance of the internet: accessibility, transparency, democracy, multilateralism and legitimacy

ICTs developments introduced in our daily life have changed the way we think and behave around the world. The interest in establishing Internet governance arose when e-commerce began to take flight, in order to regulate payments and electronic signatures, online administration and data protection.

However, the citizens of the world have a different view of Internet governance depending on where they live, the language they speak and the government that regulates their communication with the rest of the world.

- How should communication via ICTs take place?
- How should we handle freedom of expression?
- How should we make private data secure?
- How to assess intellectual property and authors' rights?
- How to protect users from spam and unsolicited messages?
- How can we help to bridge the gender divide in order to empower Women in Decision-Making: Meeting Challenges, Creating Change (Theme of the International Women's Day 2006, United Nations Headquarters)?
- How should we protect children from illicit or harmful content?
- How should we develop ICTs so as to promote education and democracy for the greatest possible number of people?
- How to take up and bridge the many digital divides?
- How can we ensure the futures of the digital network?

Reinforcing the solidarity of an open and sustainable information society should lead to a more humane and more inclusive knowledge society, based on the sharing of knowledge and upholding the Universal Declaration of Human Rights and the Charter of Fundamental Rights of the European Union. The application of these principles concerns all the stakeholders and will tend to narrow the digital, social, cultural and economic divides.

**The European Commissioner for Information Society and Media** Viviane Reding, presented an important contribution in Tunis about these questions. The programme **i2010** proposes new ideas to implement "the reality of convergence as a technological challenge, a regulatory test and source of growth", in order to create a **"single European information space"** (Viviane Reding, *Convergence and governance*, First Magazine, Tunis, November 2005). As everywhere in the world, ICTs in Europe are very important to improve **health care, education and learning, government and environmental quality**.

## 3. The human being as centre of the networks

The process of the WSIS has highlighted the power of mobilisation of citizens of the world over ICT : nearly 19.401 people gathered in Tunis in November 2005.

The official documents presented as results of the WSIS insist on many concerns in order to bridge the digital divides:

- **Gender**, to include Women in the ICT world and in decision-making at all levels;
- **Persons with disabilities**;
- **Education and life-long learning** in ICTs;
- **Universal primary education**;
- **Youth**, in order to find the means to eradicate war, poverty and unemployment, of which they are the first victims;
- The use of **open software, open source e-publishing and free access to libraries**;
- Legislation on **intellectual property**;
- **World peace**, to prevent the harmful contamination of the Internet by xenophobia;
- The **environment**, to ensuring a sustainable impact at all levels, including water, health, resources, etc.;



- **Ethical values**, in respect for human rights, family, privacy, religions, cultures and languages;
- **Life and health in the world**, with new partnerships made possible thanks to ICTs;
- **Freedom of opinion and expression**: should be strengthened and preserved without fail;
- **The media**: values and traditions should be respected; the media should contribute to social cohesion by identifying the issues of sustainable development for social cohesion, with respect for ethical rules and human rights.

Joan Dzenowagis, Project Manager in charge of e-Health for the **World Health Organization** (WHO), in Geneva participated to the Foresight of the Internet conference in Namur. She has just published the *Report for the WSIS, Connecting for Health, Global Vision, Local Insight*: it shows that many **Millennium Goals** are related to the harmonious development of ICT :

1. Eradicate extreme poverty and hunger;
2. Achieve universal primary education;
3. Promote gender equality and empower women;
4. Reduce child mortality;
5. Improve maternal health;
6. Combat HIV/AIDS, malaria and other diseases;
7. Ensure environmental sustainability;
8. Develop a global partnership for development.

#### 4. Conclusion

Introducing this panel, M. Corpakis, Head of Sector Regional Aspects of Research Policy at the DG Research, presented the European outcomes to create synergies, to enhance capacity building and to gather joint analysis of different research agendas. We fully agree with those guidelines.

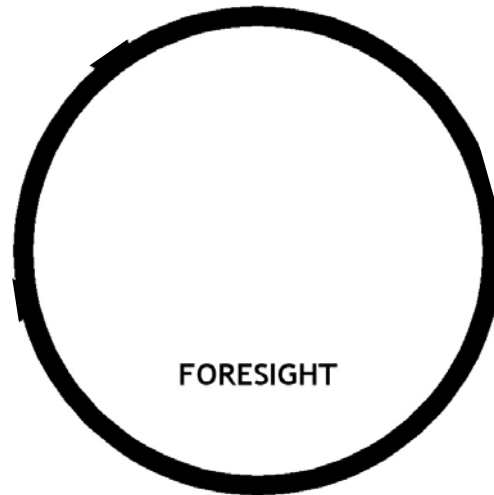
The society of information exists and should be accessible to every people of the world. What is illegal in the usual world is also illegal on the connected world: citizens expect measures to be taken in order to deal with spam, hacking, violation of data, fraud and all forms of cyber-crime. Governments should deal with those important problems and ensure the stability and the security of the communication networks at national, regional and local levels.

Cooperation should be organized between all the stakeholders in order to reach the goals of the Tunis Commitment and the Agenda for the Information society. Learning regions need to cooperate in the process, by mobilizing their possible collaborations between governments, civil society, private sector, universities and research centres:

- **Freedom of expression and ethics** must be preserved everywhere;
- **Coordination tools** should be developed to connect every partners of the society, with a particular attention for women, young people and disabled people, in order to inform them and to understand their real needs;
- **Linguistic and cultural diversity** should be an important goal to adapt the ICT tools towards an inclusive knowledge society;
- A **quality e-learning and training for young people** as well as **life-long learning** should be implemented at all levels of society to favour employment, in respect with democracy, human rights, opinions and competencies of every participants;
- A **dynamic promotion** of these actions should be organised in cooperation with all the partners;
- **The medias** should help to promote those projects by all traditional and digital ways, with a particular attention to children and young people.

The information society is not better than the industrial society. It is not a goal as such, but a tool that can help to build a knowledge society: it is our responsibility to develop a model, inclusive and democratic, in order to reach an information society for all in 2020.

# **‘Knowledge’ and the ‘Role of Knowledge’ in the Knowledge Society**



**Patrick.Crehan@cka.be**

# EFMN – The European Foresight Monitoring Network

[www.EFMN.info](http://www.EFMN.info)

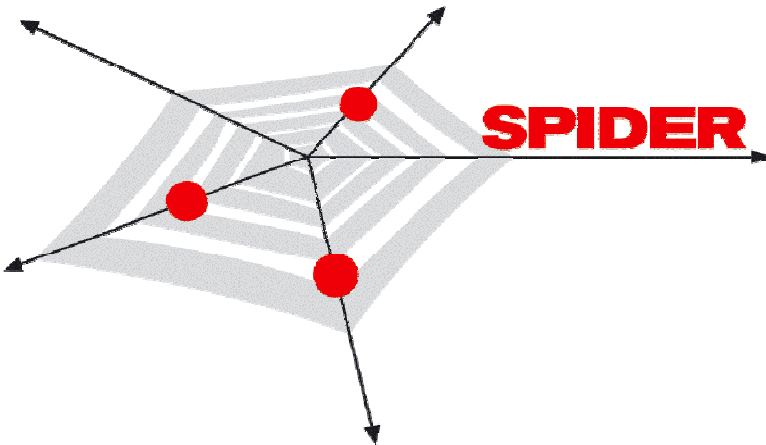
# 8000!

The screenshot shows the EFMN website in a Microsoft Internet Explorer browser window. The page features the EFMN logo, navigation menus, and a central 'MISSION' section. A diagram titled 'Elements of the EFMN initiative' shows a cycle of five components: 1. An international network of policy professionals, foresight experts & practitioners; 2. CORRESPONDENTS working with CONSORTIUM members; 3. An on the periodic production of CONTENT; 4. An annual ISSUES ANALYSIS workshop; 5. A WEBSITE with Search Engine, Events Calendar & MAILING LIST. The diagram also includes 'FORESIGHT BRIEFS' and 'COUNTRY HAPPENING reports & an annual ISSUES ANALYSIS report'. The website also displays a search bar, a map of Europe, and a 'Foresight Event Guide' for January 2006.

## TRENDS and Predictions

- **DECENTRALISATION** of decision making ...
- Awareness of the importance of **PROCESS** ...
- A need to move beyond **VISIONING** to **VISIONING + BARGAINING** ...
- Embedding in systems of **DELIBERATIVE DEMOCRACY** ...

Patrick.Crehan@cka.be



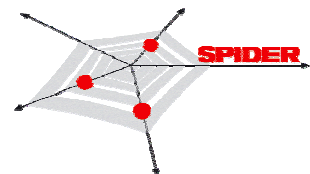
REGIONS OF KNOWLEDGE

# **SPIDER Project Closing Conference**

RETHINKING REGIONS  
- IMPROVING REGIONAL  
PERFORMANCE  
IN THE KNOWLEDGE SOCIETY  
Brussels, March 13th 2006

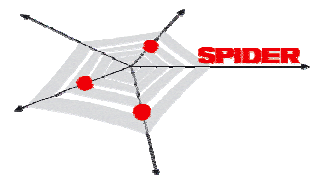
# What is SPIDER project?

- *SPIDER: Increasing regional competitiveness through futures research methods* is part of the Regions of Knowledge Pilot Action Programme funded by the European Commission.
- The regions that form the SPIDER are South-West Finland (Finland), Düsseldorf region (Germany) and Wallonia (Belgium).
- Project is based on the co-operation of the three organizations in above-mentioned organizations: Finland Futures Academy (Finland Futures Research Centre), Z\_punkt GmbH and Institut Jules-Destree.

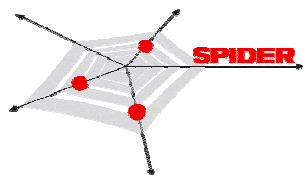
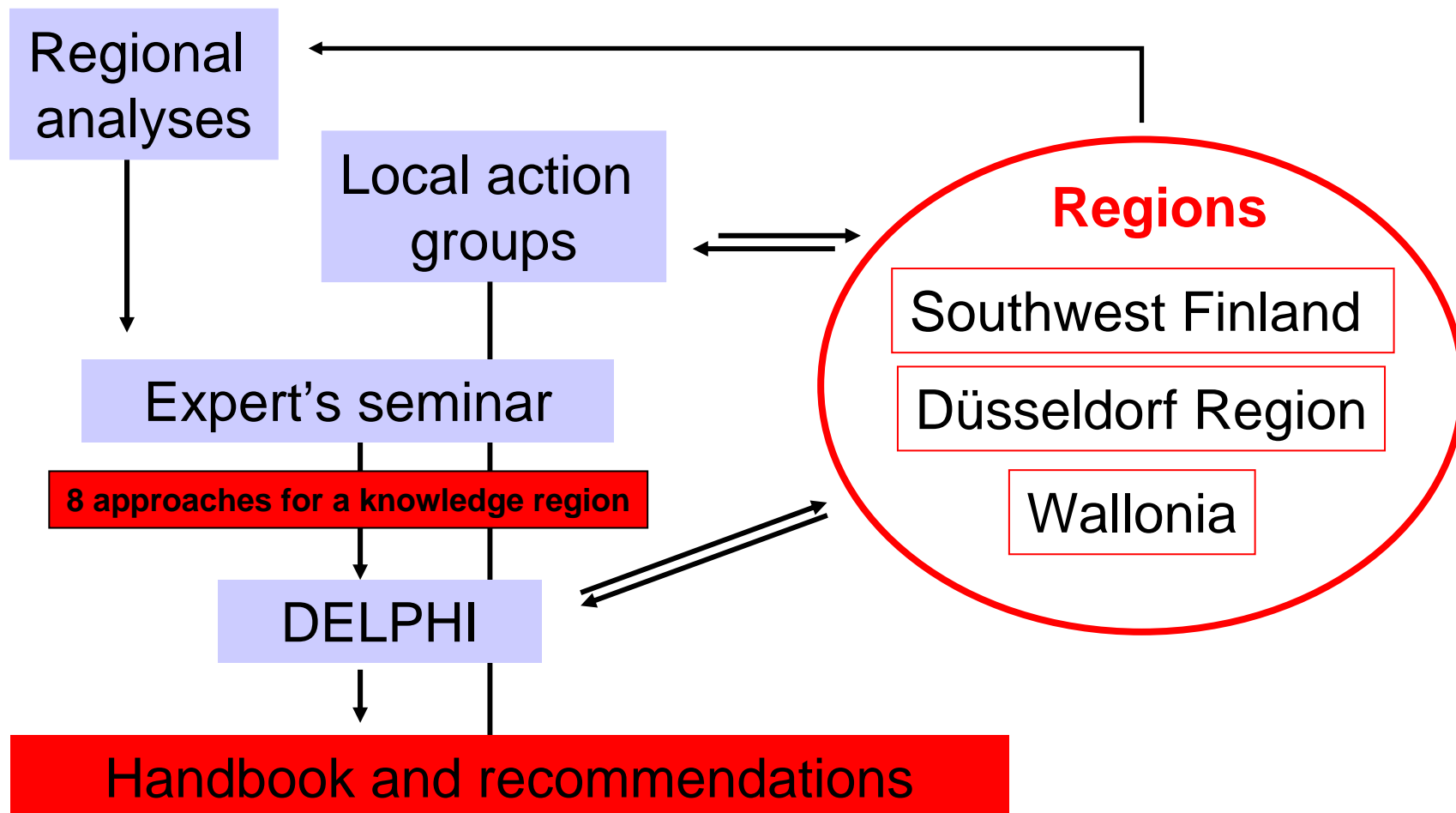


# The aims of the SPIDER

- The aim of the SPIDER project is to create connections between regional actors and reinforce their role as actors and creators of regional knowledge-based innovation systems.
- Development of foresight methodologies on the basis of good practices coming from the national foresight exercises and other examples.
- Implement futures studies methods as a central part of regional development and innovation systems.



# SPIDER : The programme of work



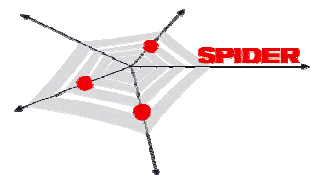
SPIDER conference – 13/03/06



# 8 approaches for a knowledge region

---

1. A region where all the citizens have the possibility to receive an education and to go on with **life-long learning**.
2. A region where we can generate and develop a **permanent creative tension** to build common knowledge.
3. A passionate region, a **region of passion**, with a real willingness to activate projects
4. A region that develops **science and technology through innovation**.
5. A region where **sustainable connections** have been developed between creators of innovative sectors, particularly intangible assets and capital riskers (importance of micro-banking).
6. An **attractive region**, with a clear image, with an improving quality of life (infrastructure, environment, culture, social climate)
7. A region where regional decision-makers and citizens – especially workers and students – have **a good understanding and ownership of what is a knowledge society**.
8. A region **promoting excellence in education and in research**.



SPIDER conference – 13/03/06





# SPIDER Results: A bird's eye view

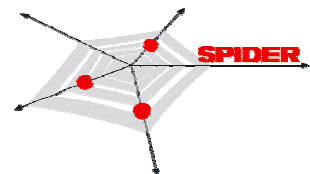
---

**Three factors turned out to be key factors when dealing with knowledge regions in the SPIDER Delphi.**

**Adaptivity to Change**

**Innovativeness**

**Interaction**

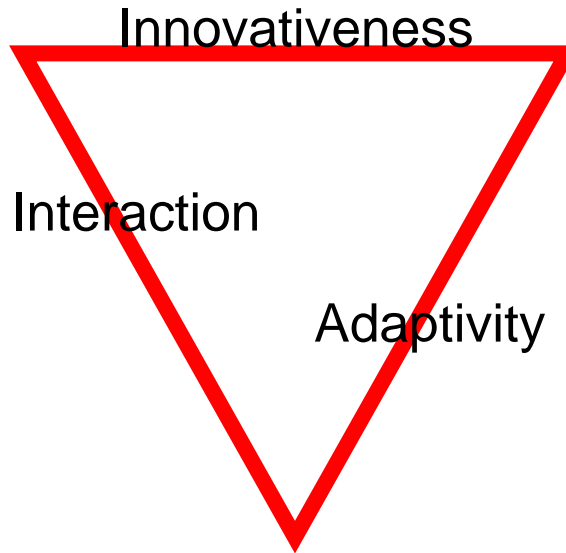


# Characteristics of knowledge regions

*A region that produces  
gathers and utilizes the  
latest knowledge in all  
its activities and  
policies*

## Southwest Finland

A region that involves and activates the interaction of the three spheres of governance: public sector, companies and civil society



## Duesseldorf Region

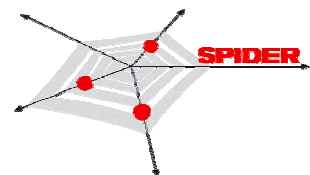
A region whose institutions are not just capable of learning and applying new efficient practices but also capable of unlearning those old practices that have proven to be inefficient

*A region that prepares  
for different possible  
developments in  
future (proactivity) and  
aspires for rapid  
actions when  
opportunity arrives  
(fast reactivity)*

## Wallonia

A region that organizes the life-long learning for the citizens

SPIDER conference – 13/03/06

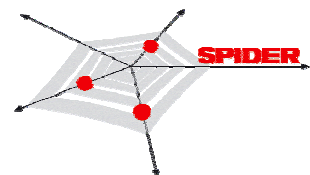


# The factors roughly correspond to different perspectives on knowledge regions

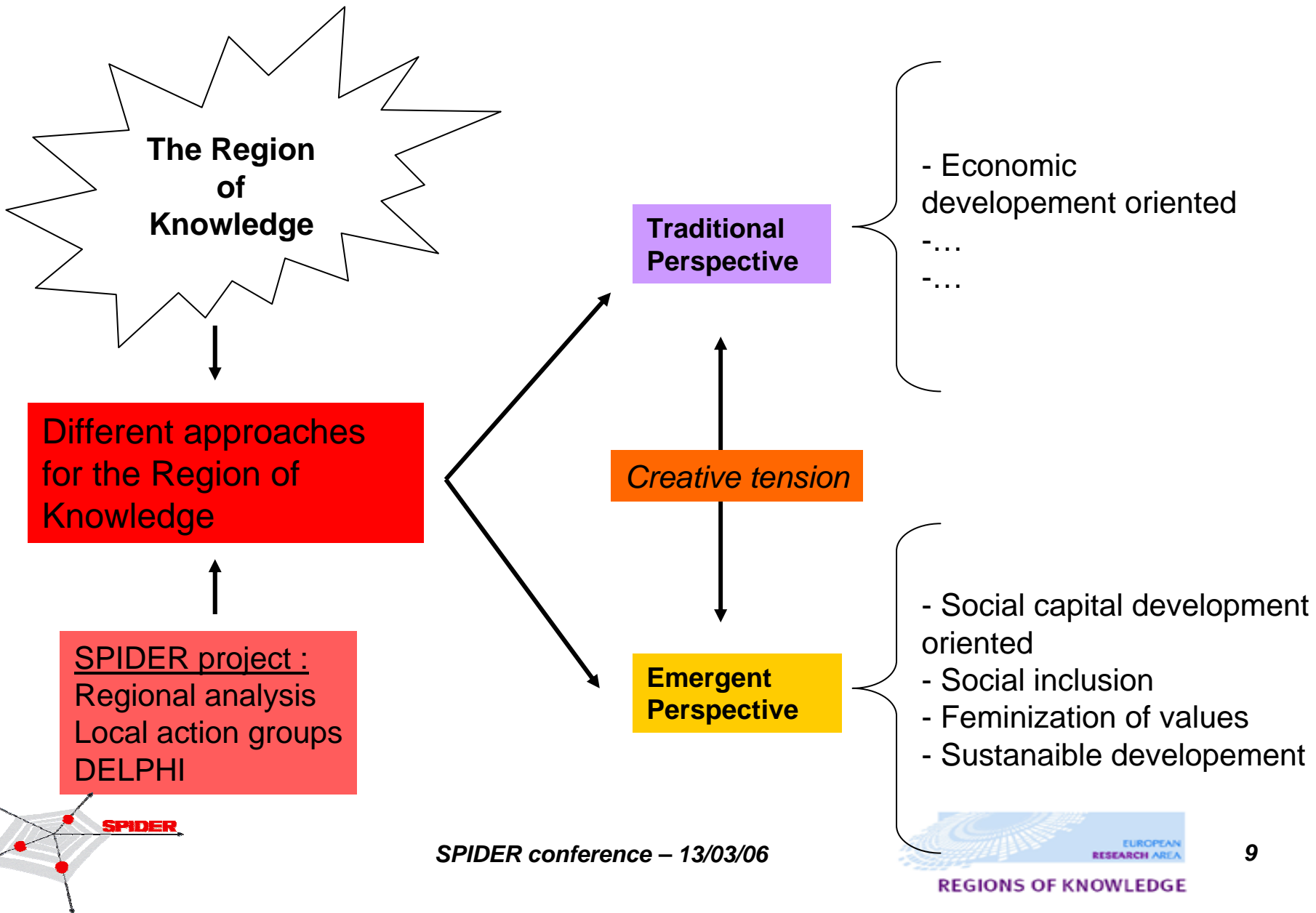
---

<b>Interaction</b>	Individual-centered approach	Emphasis on “regional wholeness”, soft factors etc
<b>Innovativeness</b>	System-centered approach	Emphasis on measurable hard factors and competencies
<b>Adaptivity to Change</b>	-The system’s adaptivity to change. -The individual’s adaptivity to change.	

Adaptivity to change may be seen on 2 levels

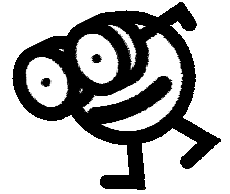


# The region of knowledge ground



# Two main perspectives – Two hypotheses concerning perspectives

---

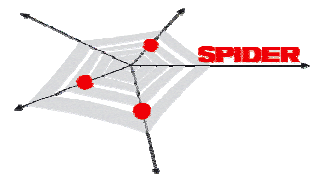


## Two hypotheses based on Delphi results and Local Action Group workshops:

1.) **“Problems are always outside”**: Those who are “using” traditional perspective see regional development obstacles on the level of individual performance but are putting stress on the system performance treatments. Individual-centered approach operates pretty much vice versa

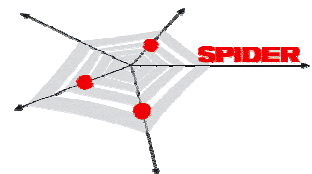
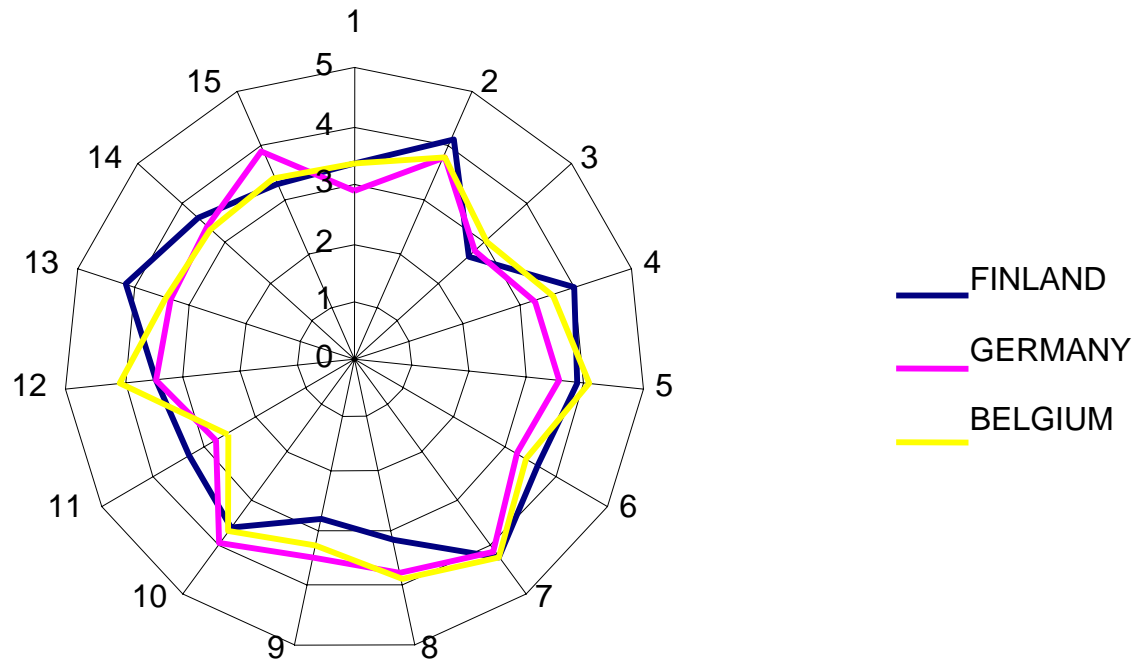
2.) **“The Mixing Effect”**: It’s hard to separate perspectives on the operational level; Perspectives are going to mix when we are landing from definitions (pre-stage visions) to the development goals and strategies.

- Regions are “multi-headed actors” - Regional perspective includes perspectives from regional interests groups
- On the practical level this means that priority of policies and action needed is getting more complex
- There might be a great deviation between single opinions what leads to equalization of development strategies
- “Collective future planning is a great challenge”



# The Mixing Effect in practice (importance assessment of different regional development strategies):

Significance of 15 development Strategies



# SPIDER Results: Specific Lessons Learned

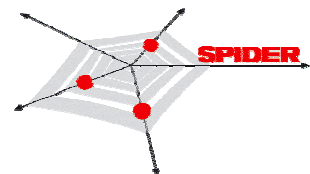
---

**For all three key factors, there are specific lessons from SPIDER.**

**Adaptivity to Change**

**Innovativeness**

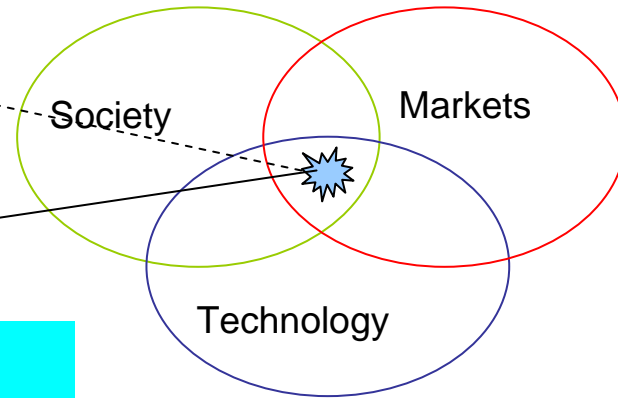
**Interaction**



# INNOVATIVENESS -

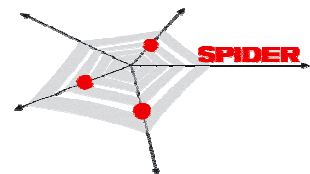
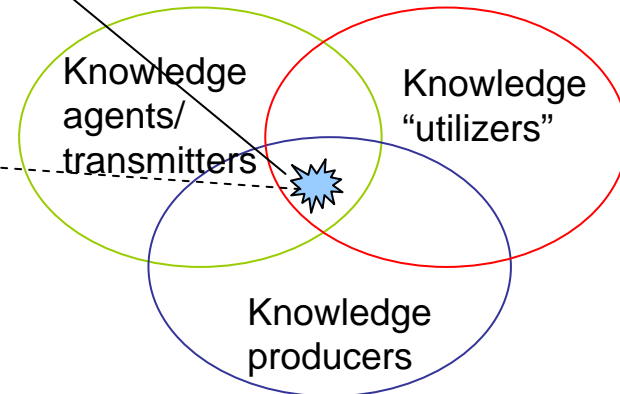
## A Basic Framework for the innovation system and the region of knowledge:

Innovation should have an acceptance from markets, technology and society



**Innovation system should be able to create and to empower valuable changes**

The region of knowledge is based on knowledge producers, knowledge agents and knowledge utilizers





# INNOVATIVENESS

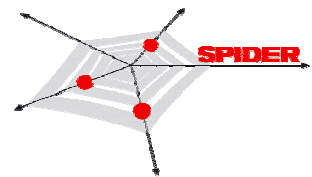
## WE NEED MORE HOLISTIC (THE EMERGENT) PERSPECTIVE TO THE REGIONAL INNOVATION SYSTEM DEVELOPMENT

The region's competitiveness is based on:

SOME POINTS (FOR EXAMPLE):

Creative capital, Holistic approach to learning and unlearning:

1. human capital → -organizational  
-individual
2. Innovativeness → Creativeness, proactivity, adaptability: innovations are happening on the surfaces of knowledge and are innovated from problems (obstacles) or via proactive identification of new possibilities and opportunities
3. focus → Regional "Know-How Clusters"
4. infrastructure → Well functional services and pleasant surroundings for people and business
5. enterprises → Economic competitiveness, how to combine local competition and local co-operation
6. Institutions → Institutional innovations are probably the most difficult ones
7. development networks → Regional partnership of actors, transfer and pairing of knowledge
8. quality of residential environment → Attractive place for citizens
9. image → Break ground for the strong regional identity, shared vision = common will
10. creative tension → How to avoid "bad friction" and conflicts

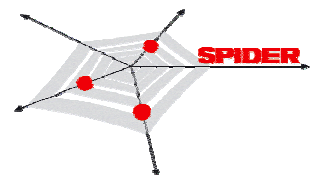


# INTERACTION

---

We don't need more networks, but different and better ones.

- a. Better networks are those that create new connections across actor groups, rather than reinforce existing ones. Thus, better networks are often networks of networks (SPIDER LAG).
- b. Better networks are also those that are connected to actual decision-making processes in meaningful ways (SPIDER Delphi).
- c. Better networks finally are those that are systematically linked to decision-making processes. “Getting to know each other” is good, but, in the long run, it is not enough.
- d. Finally, the state has to learn a new role as a “network facilitator” or “enabler” that brings a regional process of strategy-making into being (without dominating it too much).



# INTERACTION

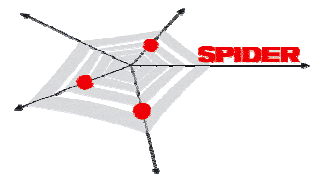
---

## Regions should only compete where necessary.

- a. The success of the cluster concept has led to the unfortunate result that every region has started to think of itself as an “xyz valley” -- often choosing the same specialization (e.g. biotech).

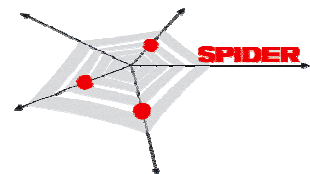
In order to find their niche, regions should analyze their own strenghtes. This helpfs forecome unnecessary competition (SPIDER LAG).

This is also true *within* regions. Subunits of regions should be complementary, rather than focussing on one and the same niche (SPIDER Delphi).



## Knowledge regions need new tools.

- We need to think about indicators that ‘measure’ also social and cultural aspects of regions (SPIDER Expert Seminar).
- Regions need to find marketing strategies beyond clichès (SPIDER LAG).
- No region is an island. The precise connection between regional and global interactions („global-local interplay“) needs to be studied in more depth (SPIDER Delphi).
- Foresight has a role to play here...

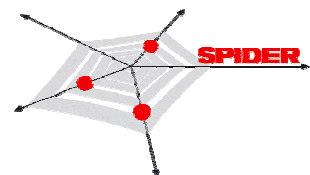


# ADAPTIVITY

---

The roles of regional foresight activities are:

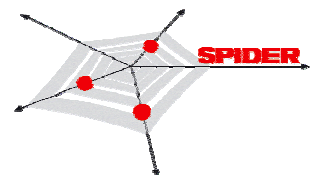
- to be a part of proactive decision-making or policymaking processes – **BRINGER OF DIFFERENT PERSPECTIVES**
- to produce future-oriented knowledge
- to be “a neutral networking agent” between regional actors



# Conclusion : Challenges for Regions

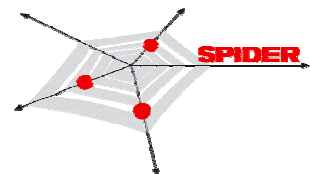
---

- The three key factors correspond to specific challenges regions are facing.
  - Adaptivity --> Develop new tools! But which ones?
  - Innovativeness --> How to inspire innovations?
  - Interaction --> Networking - but how and for what purpose?
- These questions will be jointly discussed in the afternoon sessions.



---

**Spider handbook with more detailed results and conclusions will be finished by the end of March!**

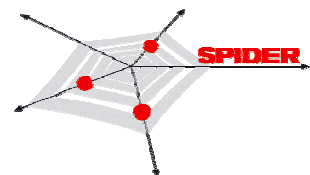


*SPIDER conference – 13/03/06*



# Comments and ideas

- Why do the networks exist?
  - Networking has been seen a solution of all problems; a lot of forced networks instead of spontaneous
    - New era of critical approach towards networks
- Two types of networks
  - One goal networks
  - Open-ended networks
- Networks as business
  - more valuable to some members of the network than some others





# Comments and ideas

- Network benefits: collective added value, subjective (private) added value
- Decision-making: a common core that keeps network working vs. individual tasks
- Common language and communication must be created in order to gain trust

