Final Conference

Mentoring European Knowledge of the Chemical Regions

15. June 2005
Representation
of the Principality of Asturias in Brussels

Conference Material

MentorChem

EUROPEAN RESEARCH AREA
REGIONS OF KNOWLEDGE

Gobierno del Principado de Asturias
IDEPA
Instituto de Desarrollo Económico del Principado de Asturias

Cestec

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

Table of contents

Table of contents

Agenda

Agenda

10.00 – 11.30	**Welcome and Introduction**
	Innovation Policy in Asturias: White Paper on Innovation System at the Principality of Asturias **Victor Manuel Gonzales Marroquin** General Manager IDEPA
	Regions of Knowledge: Strengthening the regional dimension in the research policy **Dimitri Corparkis** DG Research, European Commission
	The development of the chemical cluster in Saxony-Anhalt: successful approaches for the cooperation between politics and industry for the support of innovation and competitiveness **Dr. Gunthard Bratzke** isw Institute for Structural Policy and Economic Promotion (Saxony-Anhalt), Managing Director
	Conclusions of the MentorChem Project from Lombardy perspective **Giorgio Lampugnani** CESTEC, Managing Director
	Presentation of final results of the MentorChem Project **Andreas Fiedler** isw GmbH, MentorChem Project Coordinator
11.45 - 13.00	**Mentoring European Knowledge I**
	The new Voucher system: strengthening the innovation capacity in Lombardia **Giampaolo Amadori** Regione Lombardia
	Exchange of experience CeChemNet and AIQPA
	CeChemNet – successful examples of chemical site initiatives in central Germany **Peggy Padur** Coordinator CeChemNet
	AIQPA – Cooperation of chemical enterprises in Asturias **Jose Ramon Fernandez**, Coordinator AIQPA

12.30 – 13.30	**Lunch Break and Press Conference**

14.00 – 15.00	**Mentoring European Knowledge II**
	Research competencies Chemistry ***Strengthening European cooperation in the Chemistry Research*** **Dr. Rinaldo Psaro** CNR-National Research Council Lombardia
	IPR Helpdesk : Supporting EU R&D Cooperation **Agnieszka Krochmal-Wegrzyn** IPR Helpdesk Project
	Regional Strategies on Reach
	Go Reach – Presentation of strategies to react on the challenge of REACH **Giampaolo Amadori** Regione Lombardia
	Regional impact of Reach in Asturias **Maria Jose Suarez** IDEPA Asturias
15.15 – 16.30	**Round Table: The European Technology Platform "Sustainable Chemistry" perspectives of European Research Policy for the chemical sector and challenges for the regions** Moderation: **Thomas Wobben** Head of Liaison Office Saxony-Anhalt
	European Technology Platform "Sustainable Chemistry" -Introduction **Dr. Marian Mours** European Chemical Industry Council, CEFIC
	Dr. Andrea Tilche European Commission Head of Unit, DG Research **Jose Ramon Fernandez** AIQPA Asturias **Dr. Gunthard Bratzke** isw Institute for Structural Policy and Economic Promotion (Saxony-Anhalt) Managing Director **Dr. Rinaldo Psaro** CNR-National Research Council Lombardia

Welcome and Introducation

1. Innovation Policy in Asturias: White Paper on Innovation System at the Prinicpality of Asturias

Victor Manuel Gonzales Marroquin
General Manager IDEPA

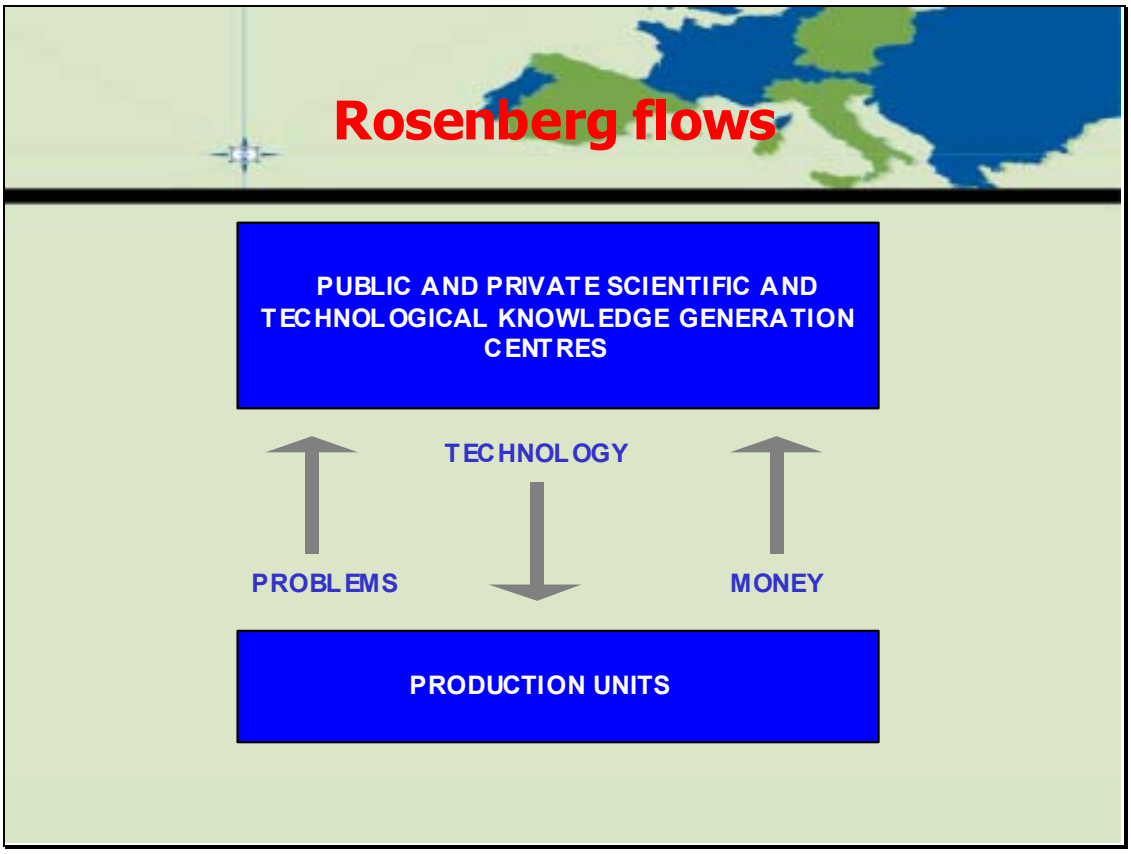
Goals

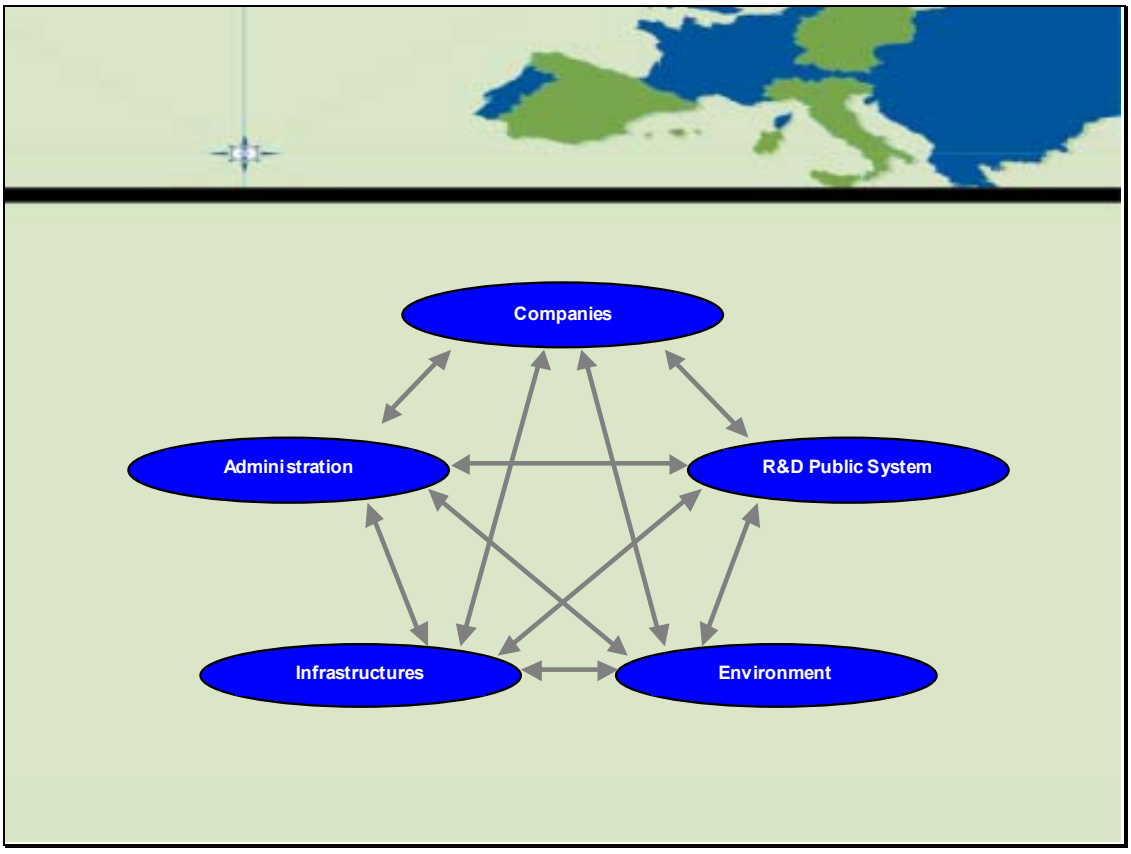
1. **Provide a vision for the situation of the Principality of Asturias Innovation System.**
   - From objective and contrasted data.
   - Interpreted an agents' point of view.
   - Resulting from a wide consensus between experts.

2. **Define basic recommendations to improve.**
   - Obtained by consensus.
   - Specific for each system agent.
   - Conceived as a basis for future business and administrative actions.

"Group of elements and relationships which act and interact for and against any creation, difussion or application process of an economically useful knowledge at national, regional or local levels".

Freeman, Nelson, Lundvall, 1993


Rosenberg flows
PUBLIC AND PRIVATE SCIENTIFIC AND TECHNOLOGICAL KNOWLEDGE GENERATION CENTRES
TECHNOLOGY
PROBLEMS
MONEY
PRODUCTION UNITS


Companies
Administration
R&D Public System
Infrastructures
Environment

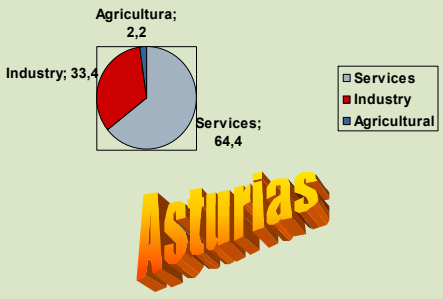
White Paper structure

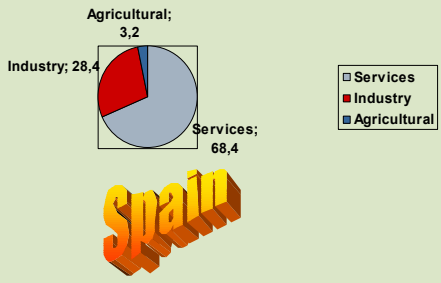
- **Group of 22 diagnostics and 20 recommendations.**
  - **Specific for each system agent.**
  - **With references to data and features mentioned in the descriptive part.**
  - **Expected effects pointed out.**

Descriptive part (I)

Productive framework

- Comparative terms: 2,2% of the national GDP in 2.003, 2,2% average anual growth between 1.995 and 2.003.
- Specialization:
  - Energy (+ +)
  - Building industry (+)
  - No market services (+)
  - Industry (+)
  - Agriculture (-)
  - Market services (-)





Descriptive part (II)

Innovation activities

- 1,5% of Spanish expenses in 2.003.
- Shared out into equal parts by industrial and no industrial sectors.
- From 2.002 to 2.003, smallest sized enterprises expenses triple, and those of largest sized enterprises diminish 40%. (The total expense ratio in 2.002 was 1/3 – 2/3 and becomes 3/4 - 1/4 in 2.003)
- New products marketing more effective than the national average.

Specific R&D Activities

- 1,4% of the Spanish expenses in 2003, (0,7% of the GDP). (3% in Lisbon Commitments)
- Private investments are 41% of the regional R&D expenses.
- Very effective in publications (in decreasing), but few patents.

Diagnostics and recommendations

- **Medium- high technology manufacturing industry growth (41% between 2.000 and 2.002) much greater than the national average (3%).**
- **But the influence of the most advanced regional industries and services is lower than their influence in the whole of Spain.**
- **The innovation expenses increases more quickly than the national average (up to 1,05% of GDP in 2.003, but stiil far away of 1,5% of national average).**
- **The innovation expenses is greater in different activities from R&D.**
- **Greater tendency to participate in the innovation and public grants programmes.**

Companies - Recommendations

- Greater efforts in innovation, including R&D, to be competitive using owned technology.
- Cooperation in innovation among the SMES, individually or through their consortia.
- Recognizing and seizing technological opportunities and available public grant programmes.
- Increase the importance of the more technological sectors.

- Sizing and growing similar to the Spanish average.
- The greatest source of public R&D resources in the Principality of Asturias is the University.
- The R&D public system is specialized in Engineering, Technology and Agroalimentation, with an Technologic Center specilized in ICT.
- Good connection with the productive framework: more contracts with companies and more tendency of the Asturian industry to cooperate with the University.

The R&D public system - Recommendations

- Consider the innovation cooperation with companies and technological centres as an important contribution to the regional wealth.
- Consolidate effective mechanisms for transfering their technology, fostering new powerful groups and cooperation in multidisciplinary instead of individual groups.
- Apreciate and manage the new knowledge as assets, approaching the public technological supply from a more commercial point of view.

- One regional technological centre specialized in materials and manufactured since 1.990. We have up to 4 RRTO's (Steal materials, Non Steal materials, Industrial Designing and ICT). In a next time, a new center related with Mining and Civil Engeenering will be opened.
- RRTO's are the main mediators from the supply side but with insufficient resources, as in the rest of Spain.
- Asturian companies show a greater tendency to create their mediators from the demand side through their associations than the national average.
- There's a range of scientific and technological parks (one in Gijón specialiced in ICT and the PCA, innovation specilized) that fosters new technology based companies

Innovation support infrastructure - Recomendations

- Technological centers will have to be able to offer complete on stream solutions, having to complement their resources with an effective cooperation with external technology suppliers.
- RRTOs must increase their commercial activity, keeping their administrative support function.
- Scientific and technological parks will take account on enough resources and technical support to back up new companies in different stages.

- Asturian Regional Administration an a few Local Administrations of Asturias (Gijón) are pioneers in considering RDI as one of their strategic goals.
- Funds appointing to RDI (Function 54) were 0,4% of the regional budget in 2.003, below the Autonomous Regions average.
- Grants for public R&D in the context of the regional RDI Plan are more important than those for companies.
- Individual grants for the companies are very limited.
- Captation of the national and European grants by the Principality of Asturias entities is lower than the regional corresponding weight.

La Administration - Recommendations

- The main criterion of efficiency of the RDI regional support programmes must be their capacity to catalyse the management innovation.
- Regional and local grants must be coordinated, complementig but not competing with national and European programmes.
- Innovation policy must be considered in other policies and in the whole activities of the Regional Administration.
- Public investigators must be encouraged to transfer technology to the companies.

- Students in the Principality manifest a greater tendency to continue their formation in the not obligatory education.
- They also show greater preference to the vocational training and technical careers.
- Regional budget for education is the highest of the Autonomous Communities of Spain (only below of Regions with spetial lows as CAPV or Navarre).
- In the region there are mutual guarantee and Private Equity Capital societies with majority of Goverment of the Principality specificaly which are completed by the national offer of this kind of products.

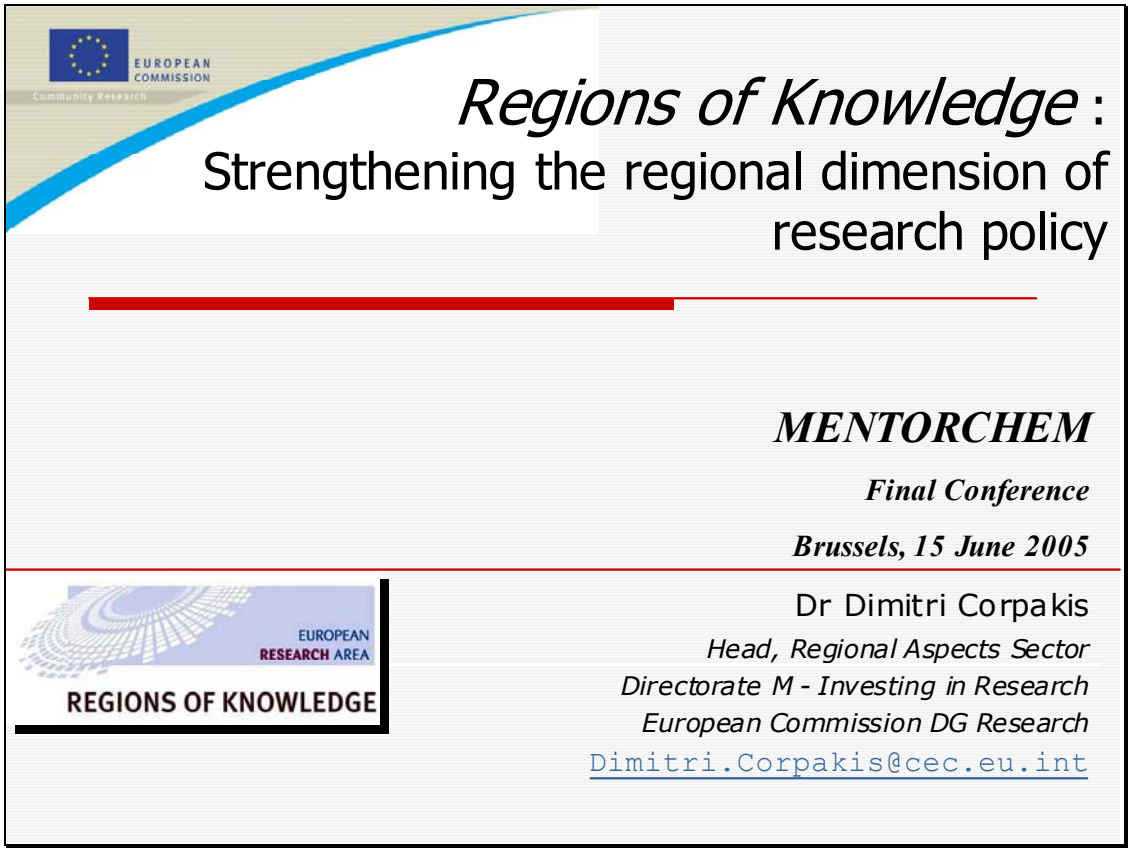
The environment - Recommendations

- Improve the vocational training quality and rely on the companies to adapt it to their needs.
- Complement the technical careers offer with curriculums in more commercial areas.
- Improve the supply of seed capital by means of the support to private investors and the provision of public funds managed by business criteria.
- Include in all the education levels activities in order to demostrate the personal attraction and the social value of the business activity.

- Globalization demands that the competitiveness of the Principality of Asturias must be based on the technological innovation.
- Create knowledge and to turn it effectively into wealth must be a shared aim by all the social agents of the region.
- For this reason, the Administration must operate an impeller and coordinator of a "dialogue for the innovation" which implies the whole society, creating illusion, mobilizing resources and stimulating the creativity.

2. Regions of Knowledge: Strengthening the regional dimension in the research policy

Dimitri Corpakis
DG Research, European Commission



Re-launching Lisbon

Commission Communication to the Spring European Council / Working together for growth and jobs, A new start for the Lisbon Strategy COM (2005) 24 2.02.2005

Establish a partnership for jobs and growth between the Union, the Member States and all economic operators, including business, academia and the European territories

The aim of this new partnership is to 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

15/06/05 CEC-DG RTD M3.1 2

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**

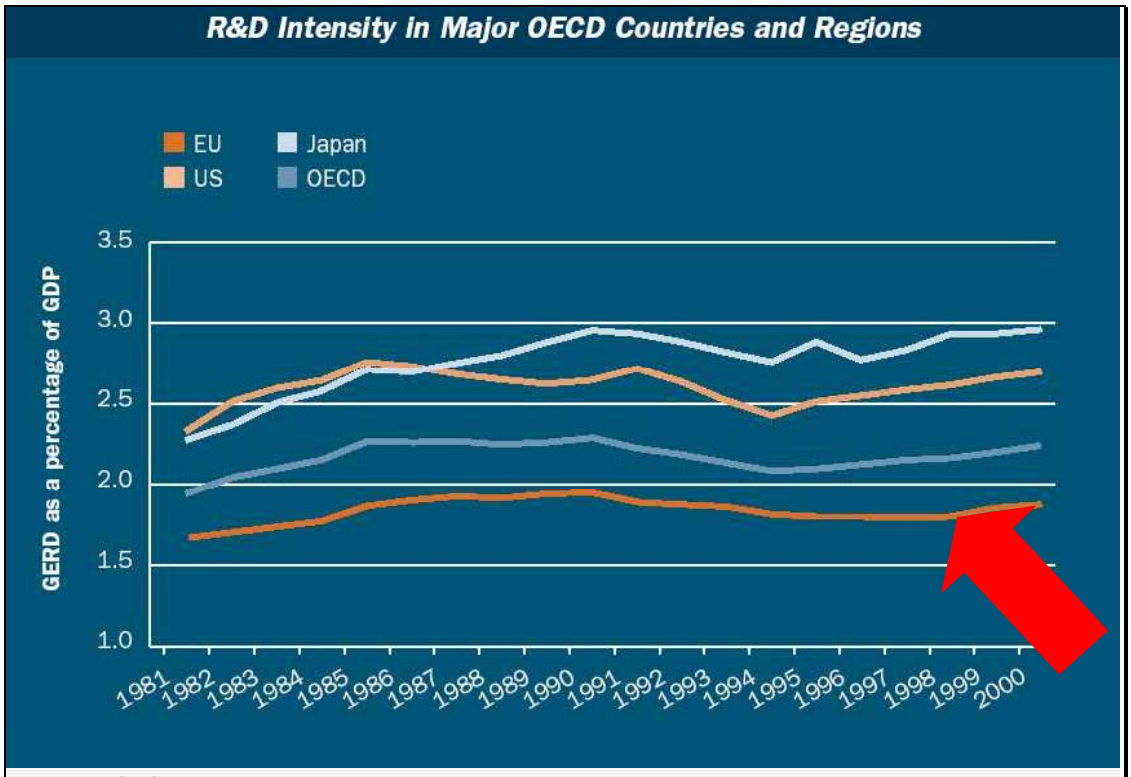
15/06/05 CEC-DG RTD M3.1 3

R&D – European weaknesses

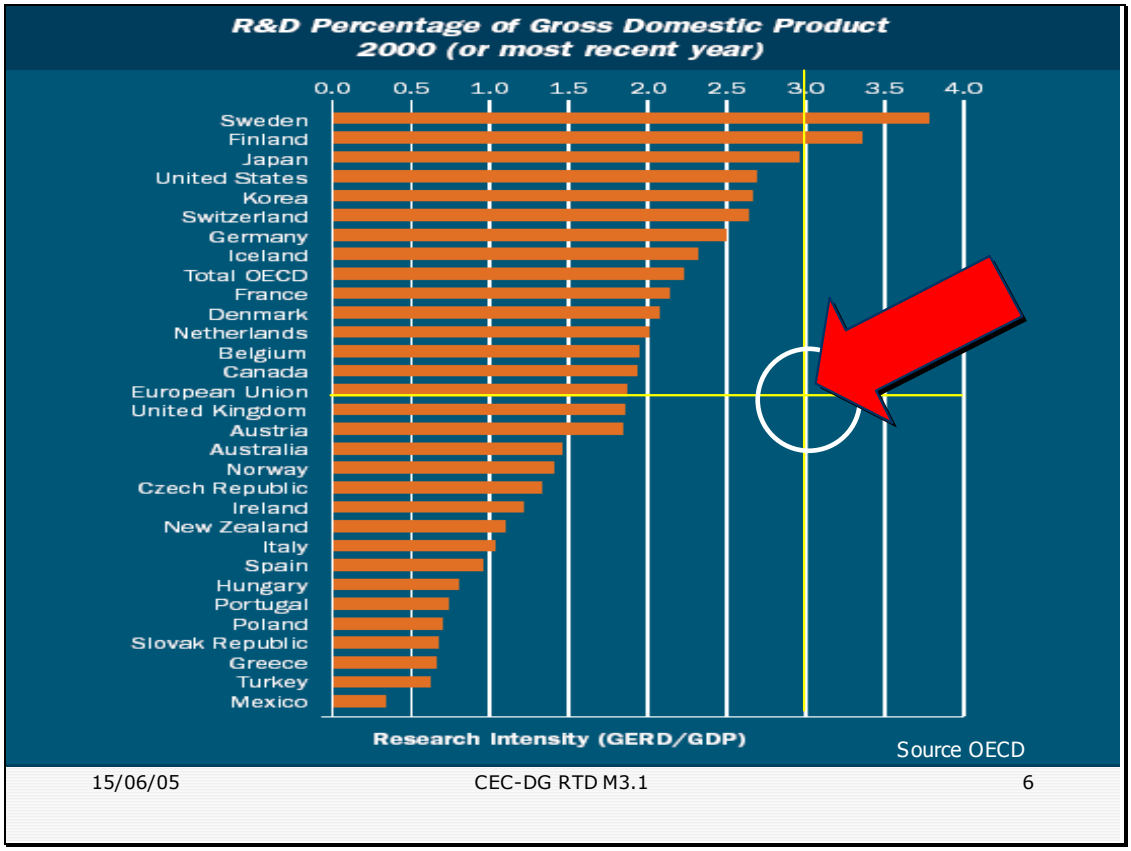
	EU-25	US	Japan
R&D intensity (% of GDP) (3)	1.97	2.59	3.12
Share of R&D financed by industry (%) (2)	55.9	63.1	73.9
Researchers per thousand labour force (FTE) (3)	5.5	9.0	9.7
Share of world scientific publications (%) (3)	38.3	31.1	9.6
Scientific publications per million population (3)	639	809	569
Share of world triadic patents (%) (1)	31.5	34.3	26.9
Triadic patents per million population (1)	30.5	53.1	92.6
High-tech exports as a share of total manufacturing exports (%) (3)	19.7	28.5	26.5
Share of world high-tech exports (%) (2)	16.7	20.0	10.6

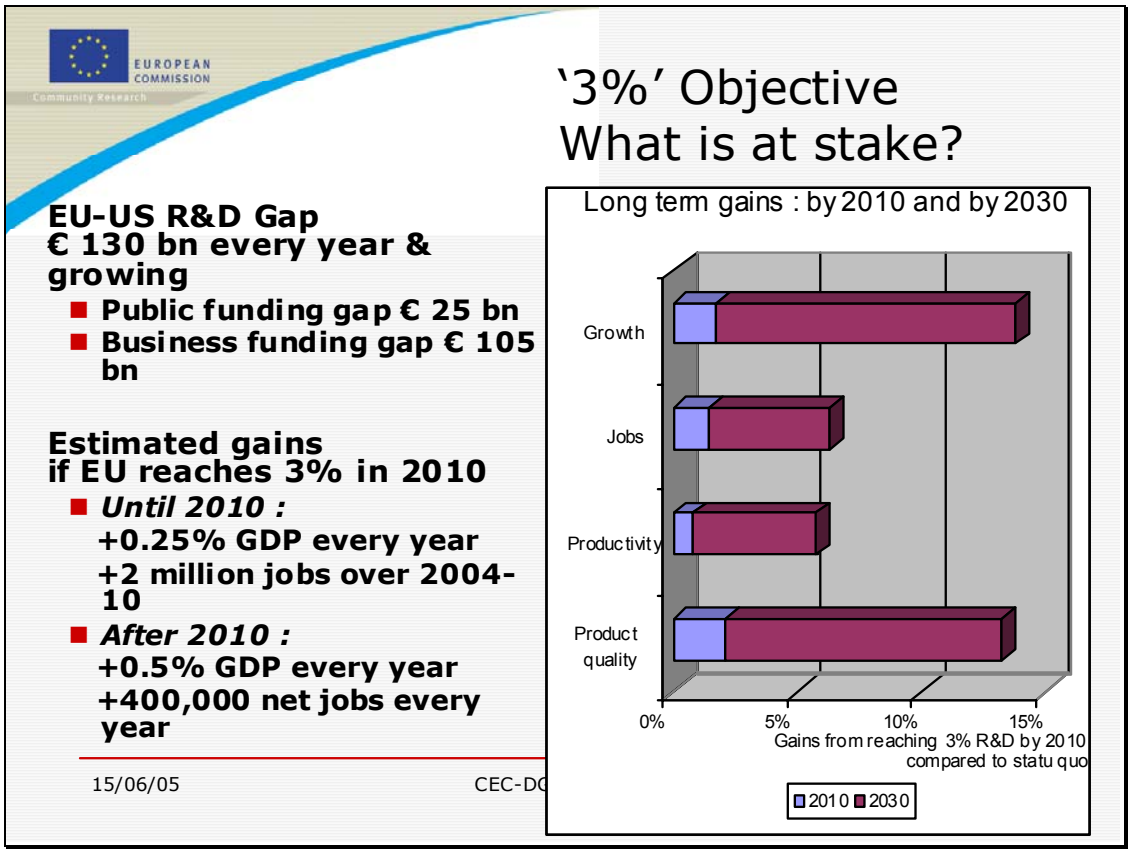
Note: (1) 2000 data (2) 2002 data (3) 2003 data

15/06/05 CEC-DG RTD M3.1 4



15/06/05 CEC-DG RTD M3.1 5


R&D Percentage of Gross Domestic Product
2000 (or most recent year)
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0
Sweden
Finland
Japan
United States
Korea
Switzerland
Germany
Iceland
Total OECD
France
Denmark
Netherlands
Belgium
Canada
European Union
United Kingdom
Austria
Australia
Norway
Czech Republic
Ireland
New Zealand
Italy
Spain
Hungary
Portugal
Poland
Slovak Republic
Greece
Turkey
Mexico
Research Intensity (GERD/GDP)
Source OECD
15/06/05
CEC-DG RTD M3.1
6

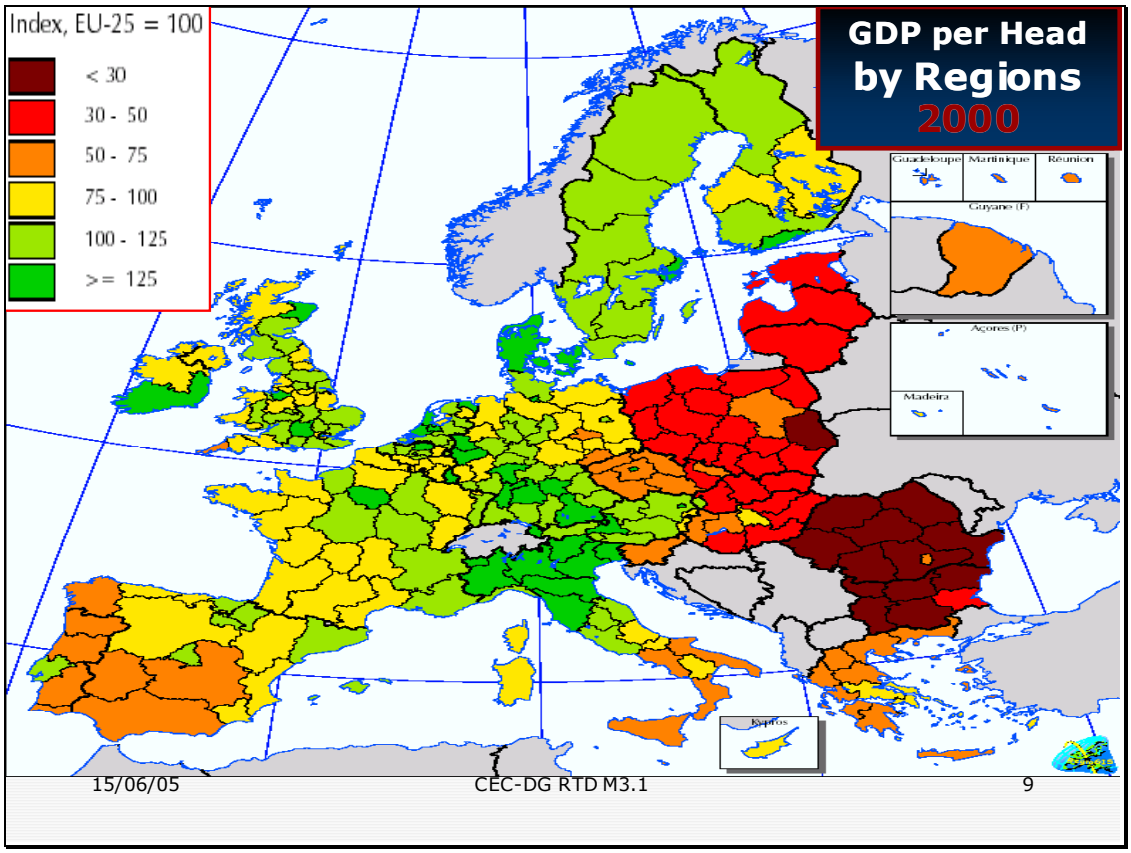

EUROPEAN COMMISSION
Community Research
'3%' Objective
What is at stake?
EU-US R&D Gap
€ 130 bn every year & growing
Public funding gap € 25 bn
Business funding gap € 105 bn
Estimated gains
if EU reaches 3% in 2010
Until 2010 :
+0.25% GDP every year
+2 million jobs over 2004-10
After 2010 :
+0.5% GDP every year
+400,000 net jobs every year
Long term gains : by 2010 and by 2030
Growth
Jobs
Productivity
Product quality
0%
5%
10%
15%
Gains from reaching 3% R&D by 2010 compared to statu quo
2010
2030
15/06/05
CEC-DG

EUROPEAN COMMISSION
Community Research

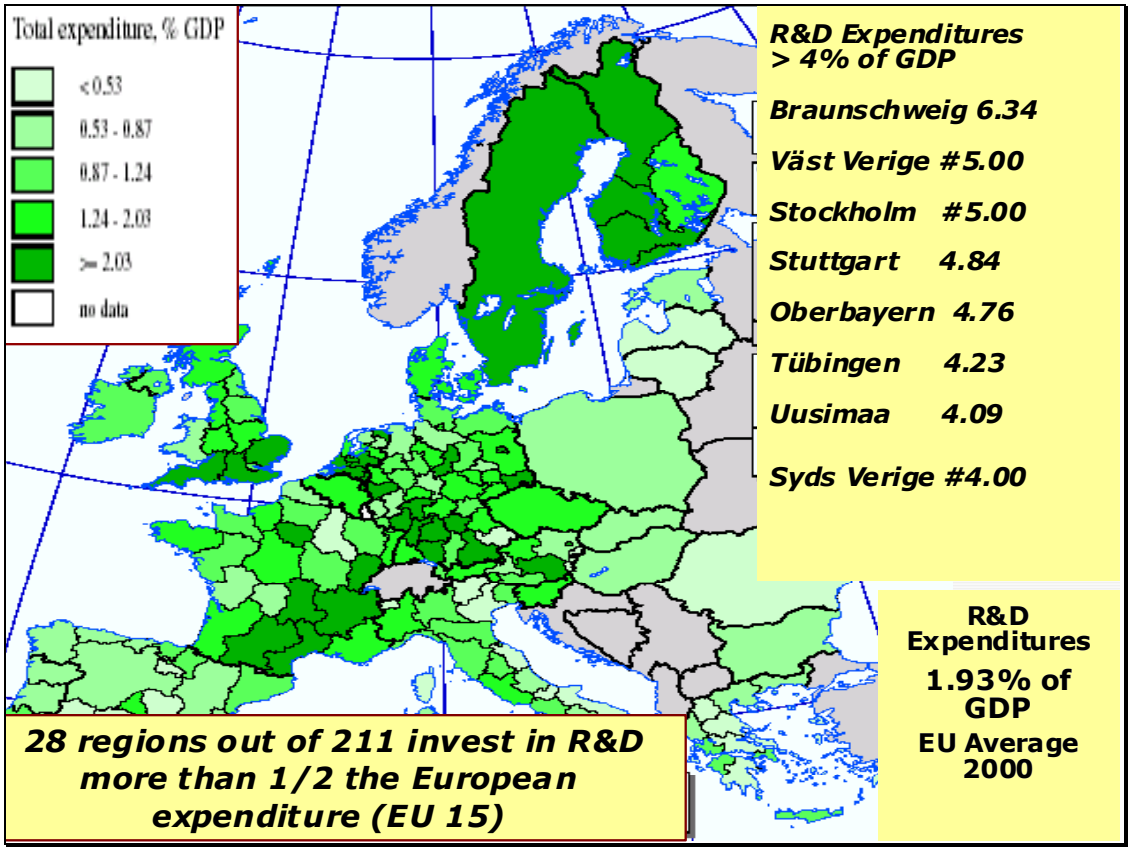
European Research Area (ERA) and its Regional Dimension: concepts

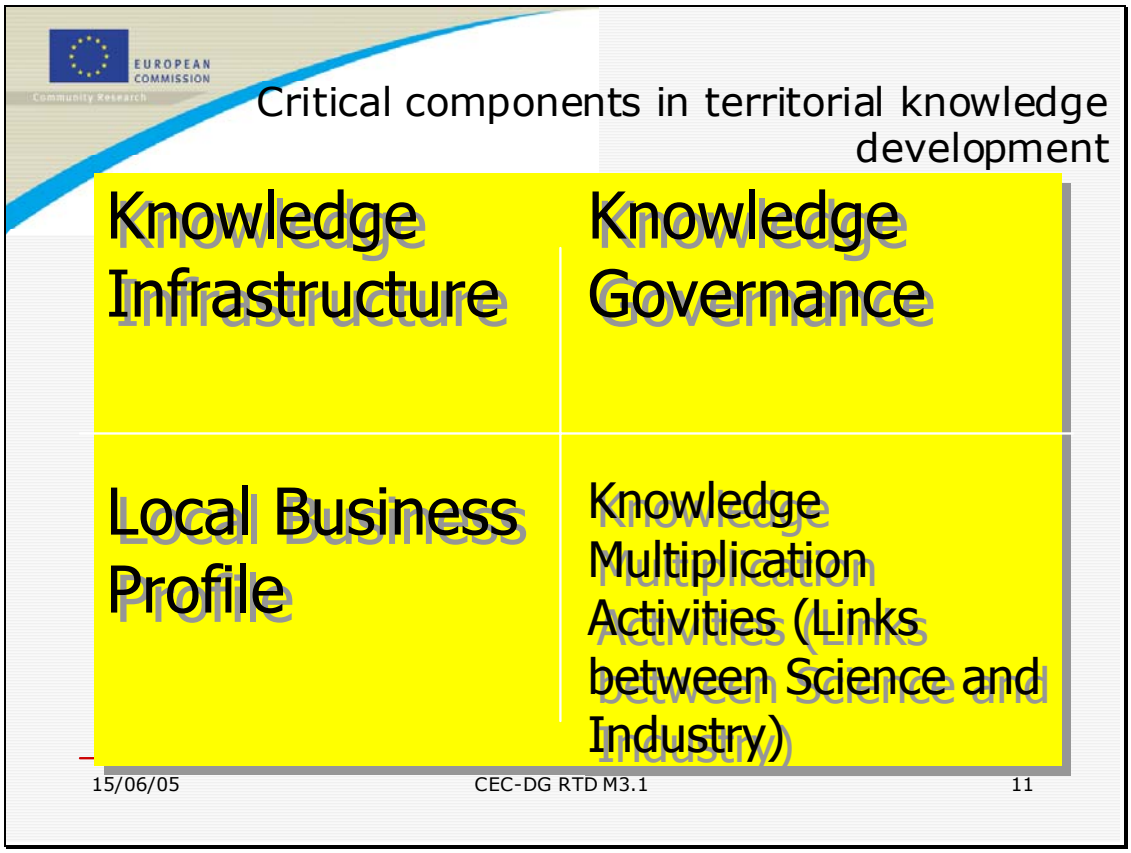
- The ERA, a new vision for European research: Re-invent the European research landscape through large scale integration of resources and overall organisational improvement
- Local and regional factors and operators are important for research policy - a message primarily addressed to the EU Member States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

15/06/05 CEC-DG RTD M3.1 8



15/06/05 CEC-DG RTD M3.1 9


Total expenditure, % GDP
< 0.53
0.53 - 0.87
0.87 - 1.24
1.24 - 2.03
>= 2.03
no data
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


EUROPEAN COMMISSION
Community Research
Critical components in territorial knowledge development
Knowledge Infrastructure
Knowledge Governance
Local Business Profile
Knowledge Multiplication Activities (Links between Science and Industry)
15/06/05
CEC-DG RTD M3.1
11

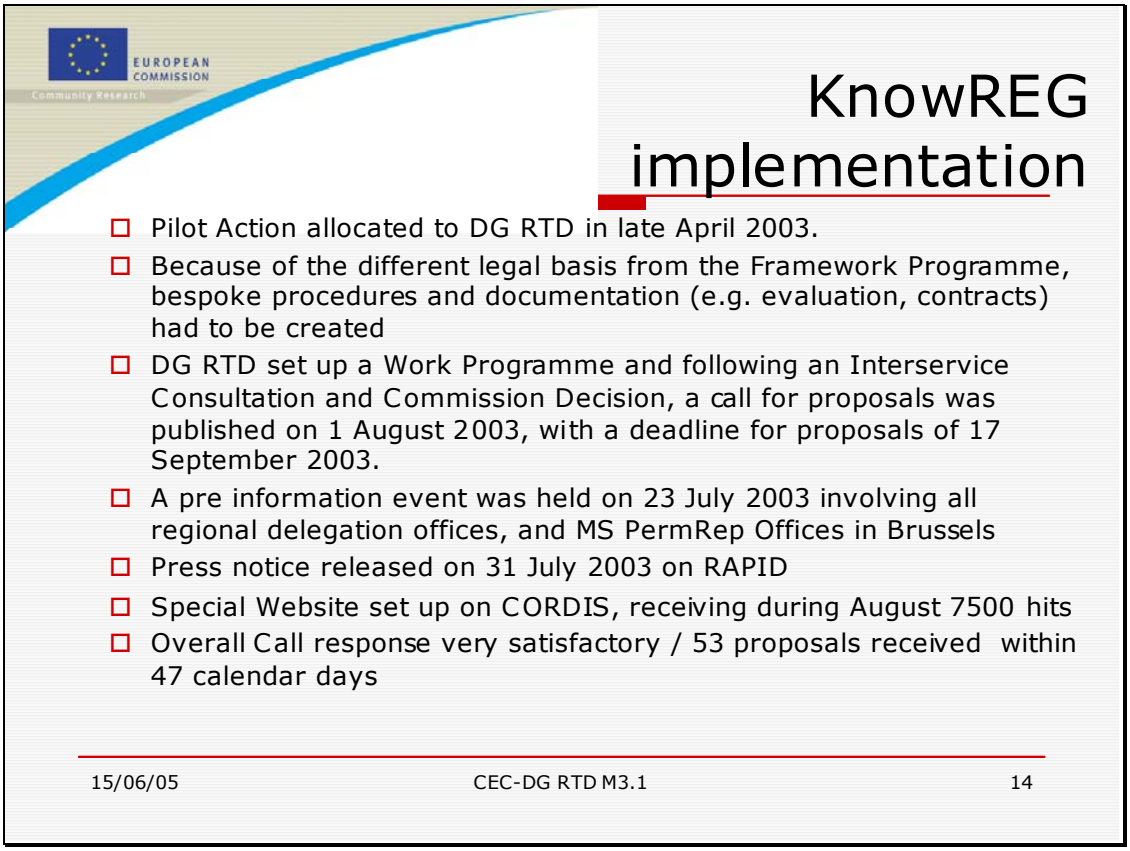
Regions of Knowledge

Introducing the Pilot Action

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

15/06/05 CEC-DG RTD M3.1 13


EUROPEAN COMMISSION
Community Research
KnowREG implementation
Pilot Action allocated to DG RTD in late April 2003.
Because of the different legal basis from the Framework Programme, bespoke procedures and documentation (e.g. evaluation, contracts) had to be created
DG RTD set up a Work Programme and following an Interservice Consultation and Commission Decision, a call for proposals was published on 1 August 2003, with a deadline for proposals of 17 September 2003.
A pre information event was held on 23 July 2003 involving all regional delegation offices, and MS PermRep Offices in Brussels
Press notice released on 31 July 2003 on RAPID
Special Website set up on CORDIS, receiving during August 7500 hits
Overall Call response very satisfactory / 53 proposals received within 47 calendar days
15/06/05
CEC-DG RTD M3.1
14

KnowREG stats

- 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 represent a total grant requested of 13 million euro, representing just under 50% of estimate eligible costs. The average grant request was 250 thousand euro.

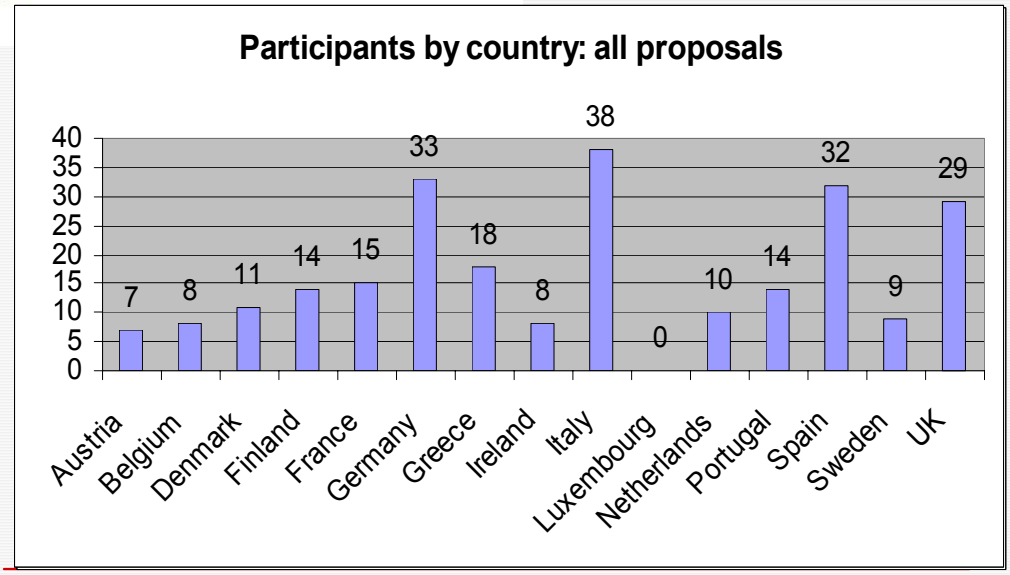
15/06/05 CEC-DG RTD M3.1 15

KnowREG Stats

- Only organisations from current Member States could participate in the call
- The 53 proposals received represent a total of 246 applicant organisations
- geographical distribution well balanced with all countries (except Luxembourg) having more than 5 applicants, 10 Member States having 10 or more, and 4 Member States (Germany, Italy, Spain and the UK) featuring more than 25

15/06/05 CEC-DG RTD M3.1 16

KnowREG (2003)



15/06/05 CEC-DG RTD M3.1 17

Regions of Knowledge (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.

15/06/05 CEC-DG RTD M3.1 18

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.**

15/06/05 CEC-DG RTD M3.1 19

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**

15/06/05 CEC-DG RTD M3.1 20

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.

15/06/05 CEC-DG RTD M3.1 21

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.

15/06/05 CEC-DG RTD M3.1 22

Universities as Change Drivers

- Universities at the crossroads: an evolving role / in constant flux.
- Under the pressure and the influence of many factors Universities may be considered as:
  - innovative learning environments, adopting faster innovations for intelligent learning;
  - knowledge producers and ideal partners of industry and government for socio-economic progress and prosperity.
  - "early-adopters" (first users) of the most advanced technologies (advanced testbeds)
  - **instrumental as efficient drivers for technology-based Regional Development (development of regional clusters)**

15/06/05 CEC-DG RTD M3.1 23

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.

15/06/05 CEC-DG RTD M3.1 24

KnowREG: patterns coming out of the 2003 Call for proposals

- *Regional operational models towards the knowledge based economy*
- *Knowledge management models at regional level*
- *Territorial pacts for knowledge building capacity*

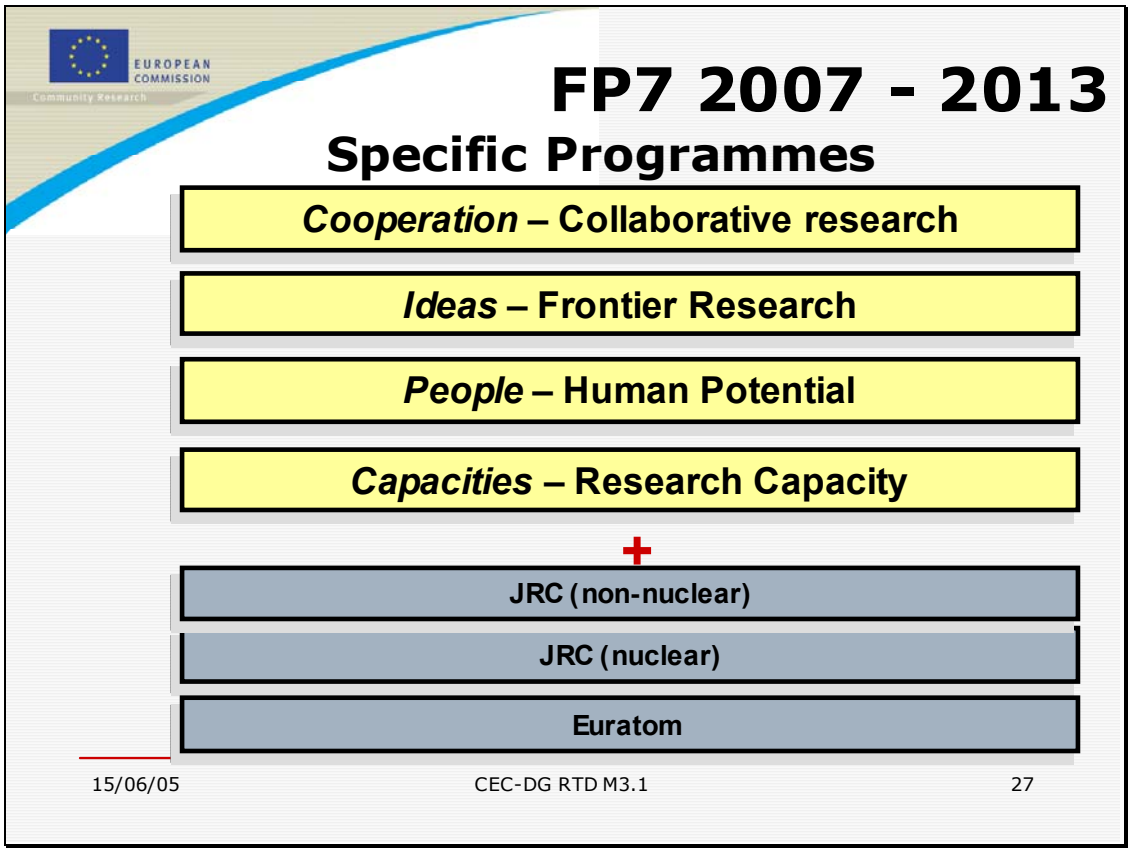
15/06/05 CEC-DG RTD M3.1 25

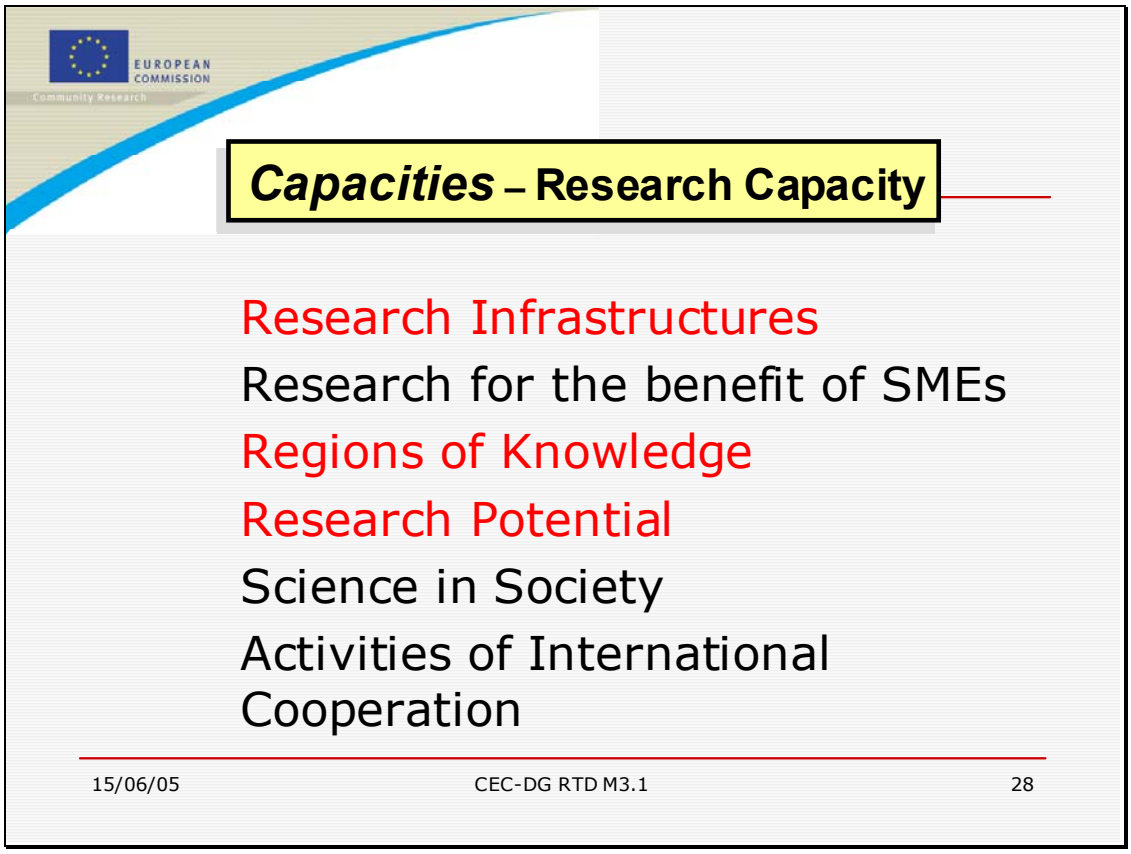
FP7 - What's new ?

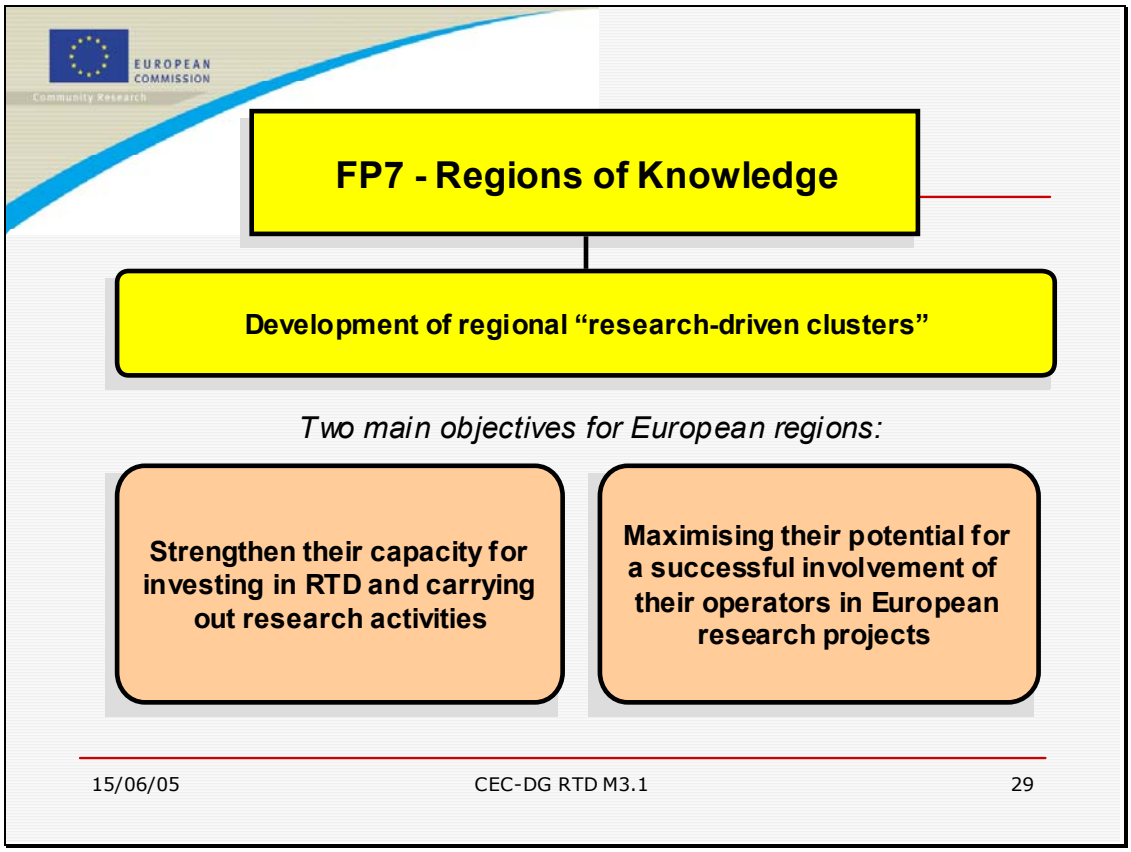
Main new elements compared to FP6:

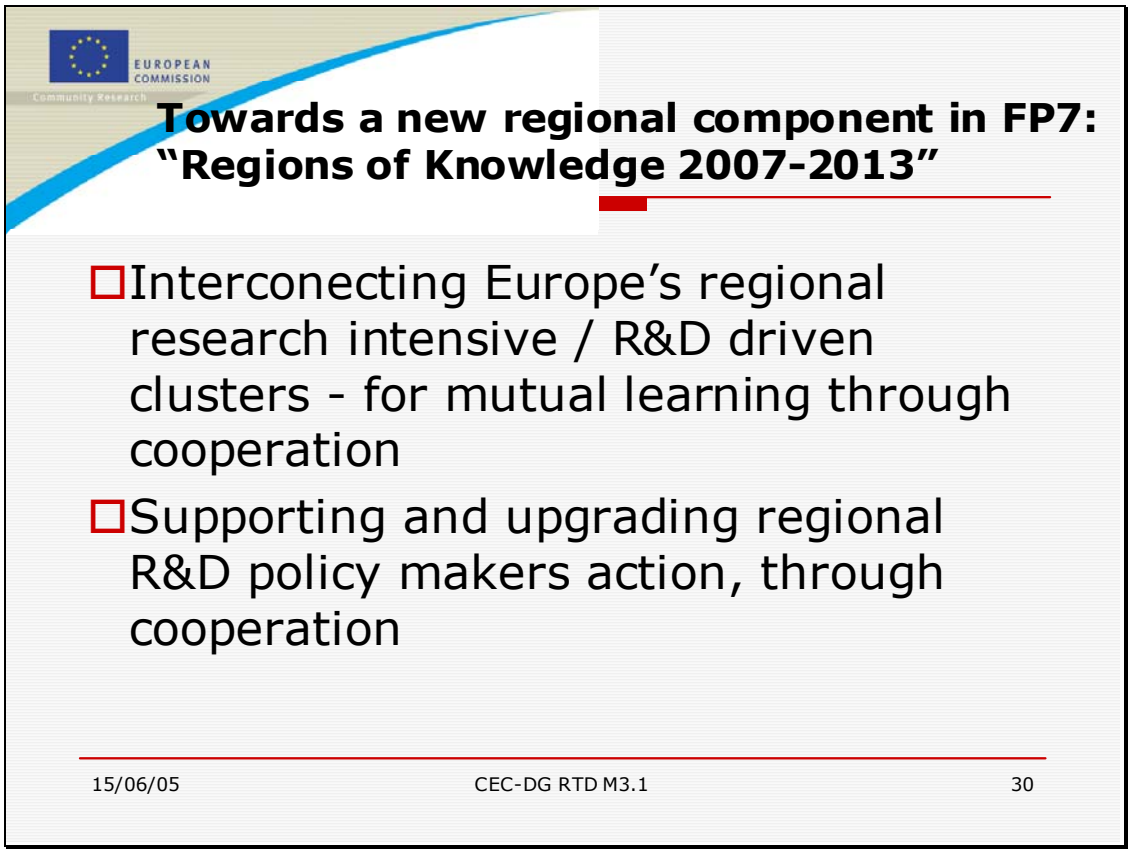
- Annual budget doubled (EUR 5 billion ►10 billion)
- Basic research (~ EUR 1.5 billion per year)
- Capacities Specific Programme - Regional Dimension
- Simplification of procedures
- Logistical and administrative tasks transferred to external structures

15/06/05 CEC-DG RTD M3.1 26


EUROPEAN COMMISSION
Community Research
FP7 2007 - 2013
Specific Programmes
Cooperation – Collaborative research
Ideas – Frontier Research
People – Human Potential
Capacities – Research Capacity
+
JRC (non-nuclear)
JRC (nuclear)
Euratom
15/06/05
CEC-DG RTD M3.1
27


EUROPEAN COMMISSION
Community Research
Capacities – Research Capacity
Research Infrastructures
Research for the benefit of SMEs
Regions of Knowledge
Research Potential
Science in Society
Activities of International Cooperation
15/06/05
CEC-DG RTD M3.1
28


EUROPEAN COMMISSION
Community Research
FP7 - 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
15/06/05
CEC-DG RTD M3.1
29


EUROPEAN COMMISSION
Community Research
Towards a new regional component in FP7: "Regions of Knowledge 2007-2013"
Interconecting Europe's regional research intensive / R&D driven clusters - for mutual learning through cooperation
Supporting and upgrading regional R&D policy makers action, through cooperation
15/06/05
CEC-DG RTD M3.1
30

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***

15/06/05 CEC-DG RTD M3.1 31

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 / Cohesion policy, Competitiveness and Innovation, Education and Training)*

synergies with regional policy, in particular with regard to Convergence and Outermost (RUP) regions

15/06/05 CEC-DG RTD M3.1 32

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

15/06/05 CEC-DG RTD M3.1 33

FP7 Timetable

6 April 2005	**Commission's proposal**
September 2005 ?	**Specific programmes' proposal**
December 2005 ?	**First reading at EP**
January 2006 ?	**Common position at Council**
March 2006 ?	**Second reading and approval at EP**
June 2006 ?	**Adoption**
November 2006 ?	**First calls for proposals**
December 2006 ?	**Launch Conference**

15/06/05 CEC-DG RTD M3.1 34

3. The development of the chemical cluster in Saxony-Anhalt: successful approaches for the cooperation between politics and industry for the support of innovation and competitiveness

Dr. Gunthard Bratzke
isw Institute for Structural Policy and Economic Promotion (Saxony-Anhalt), Managing Director

mitteldeutschland cluster mitte deutschland Chemie / Kunststoffe

I. Chemieindustrie Mitteldeutschlands – Positionsbestimmung

- Die Restrukturierung der Großstandorte der Chemischen Industrie kann weitestgehend als abgeschlossen betrachtet werden.
- Damit sind die politischen Zusagen zur Unterstützung des Strukturwandels der Chemischen Industrie weitgehend eingelöst.
- Im Zuge des Strukturwandels der Chemieindustrie Mitteldeutschlands konnte beim Umweltschutz der fortgeschrittenste Stand der Technik erreicht werden.
- Die Chemiestandorte verfügen über eine weitgehend modernisierte, hochwertige Infrastruktur.
- Das Know-how und die Technologieverfügbarkeit an den Standorten schaffen ein gesundes Klima für Innovationen und Netzwerke.

mitteldeutschland cluster mitte deutschland Chemie / Kunststoffe

- Strukturprägende Großinvestitionen von erheblicher Bedeutung für das Entstehen bzw. die Ansiedlung leistungsfähiger klein- und mittelständischer Unternehmen.
- Neue Entwicklungsphase der Chemiestandorte mit Weichenstellungen: Von der bisherigen Aufgabe der „Restrukturierung“ hin zur „Weiterentwicklung“ der Standorte.

Fazit:

☞ **Die innovativen Ansätze der Chemieparkentwicklung Mitteldeutschlands und die herausgebildeten Kompetenzen im Chemieparkmanagement sind heute ein Wettbewerbsfaktor, den es im Interesse der Erhöhung regionaler Wirtschaftsentwicklung zu erhalten und weiterzuentwickeln gilt.**

mitteldeutschland cluster mitte deutschland Chemie / Kunststoffe

II. Verstärkte strukturprägende Bedeutung der Chemie

- Die Chemische Industrie hat sich angesichts der hohen Entwicklungsdynamik zu einer der strukturprägenden Branchen Sachsen-Anhalts und Sachsens entwickelt.
- Rund 50 Prozent der Chemieproduktion der Neuen Bundesländer wird in Sachsen-Anhalt erbracht.
- Impulse in Richtung regionaler Ausstrahlung und Innovation nehmen zu.
- Etablierung wirtschaftsnaher Forschungseinrichtungen sowie zur Entwicklung innovationsorientierter Netzwerkstrukturen.
- Herausbildung eines Clusters Chemie / Kunststoffverarbeitung in Mitteldeutschland.

mitteldeutschland cluster mitte deutschland Chemie / Kunststoffe

III. Chancen für die Weiterentwicklung

- Für eine nachhaltige Entwicklung der Chemiestandorte gilt es, die gegebene Infrastruktur mit mehr Geschäft zu füllen (Verstärktes Engagement vorhandener Investoren / Neuansiedlungen).
- Ableiten von Handlungsmustern für innovative Lösungen der Standortentwicklung / Kompetenzen bei der Restrukturierung und Privatisierung großer Chemiestandorte als Wettbewerbsfaktor zur Verbesserung der Marktchancen / Zusammenarbeit der Chemieparks im Projekt CeChemNet.
- Zielgerichtete Gestaltung der Rahmenbedingungen für die Standortentwicklung / Verbesserung der Rohstoffverfügbarkeit durch zusätzliche Crackerkapazität und Pipelineanbindung.
- Verbindung der Potenziale des Clusters Chemische Industrie mit denen der Automobilindustrie als regionaler Wachstumsfaktor Mitteldeutschland.

mitteldeutschland

cluster mitte deutschland Chemie / Kunststoffe

- Begleitung des Innovationsprozesses durch die Entwicklung von Netzwerken Wirtschaft / Wissenschaft und durch die Ansiedlung bzw. den Aufbau von Instituten / u. a. Kompetenznetzwerk / Chemiegeprägte Innovationslandschaft Mitteldeutschland.
- Mobilisierung international wahrnehmbarer Kompetenzen im Innovationsbereich als Ansatz, weitere Unternehmen anzusiedeln bzw. Forschungskapazitäten in Mitteldeutschland auszubauen.
- Aufbau eines europäischen Netzwerkes von Chemieregionen als Chance im Rahmen der EU–Erweiterung / Mitteldeutsche Chemiestandorte im Zentrum des erweiterten Europas.
- Verstetigung von CeChemNet als Kooperationsplattform der Chemiestandorte / Chemieparks Mitteldeutschland.
- Länderübergreifende Bündelung der Kräfte (Wirtschaft, Politik, Kommunen, Wissenschaft) zur Umsetzung einer zukunftsorientierten Vision der Entwicklung Mitteldeutschland zu einer der führenden Chemieregionen in Europa.

isw isw Institut für Strukturpolitik und Wirtschaftsförderung gemeinnützige Gesellschaft mbH 6

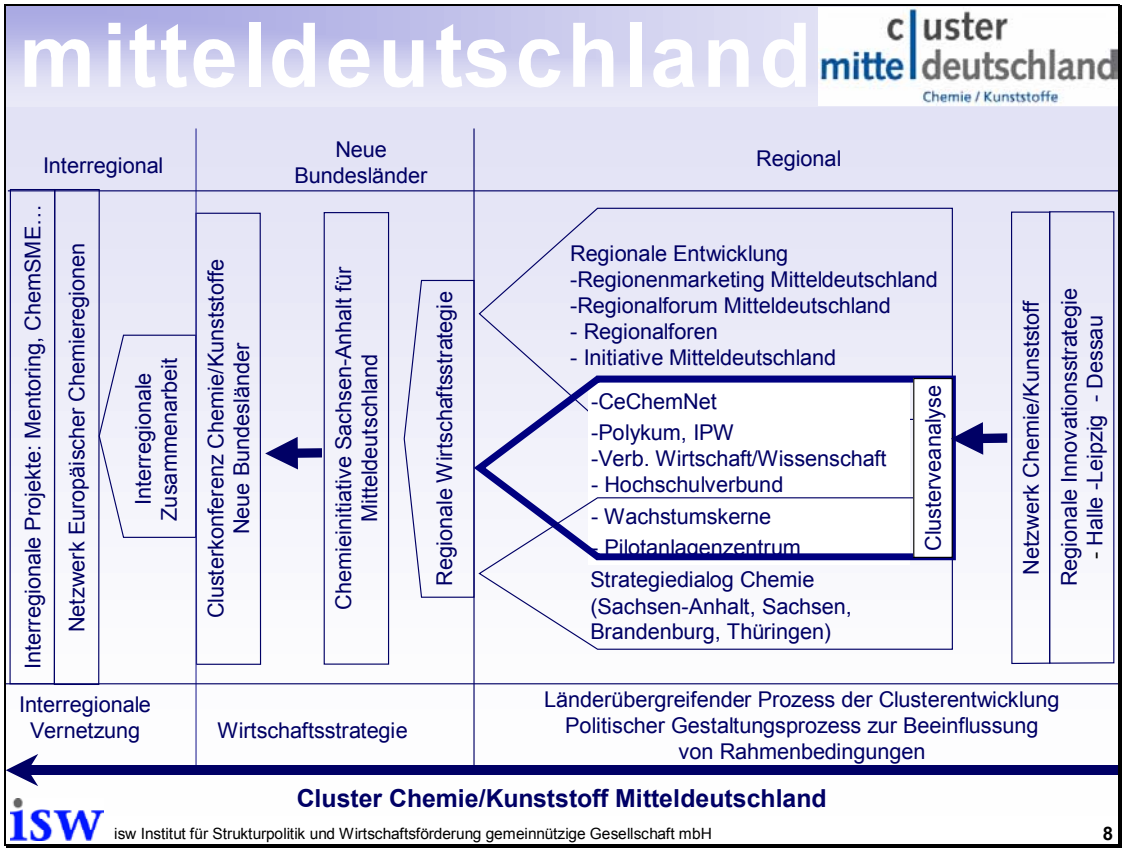
mitteldeutschland

cluster mitte deutschland Chemie / Kunststoffe

IV. Clusterprozeß Chemie/Kunststoffe

- Strategiedialog mit den Landesregierungen Sachsen-Anhalt, Sachsen, Brandenburg und zukünftig Thüringen
- Netzwerk der Chemiestandorte CeChemNet
- PolyKum
- Netzwerk der Europäischen Chemieregionen ECRN

isw isw Institut für Strukturpolitik und Wirtschaftsförderung gemeinnützige Gesellschaft mbH 7


mitteldeutschland
cluster mitte deutschland
Chemie / Kunststoffe
Interregional
Neue Bundesländer
Regional
Interregionale Projekte: Mentoring, ChemSME…
Netzwerk Europäischer Chemieregionen
Interregionale Zusammenarbeit
Clusterkonferenz Chemie/Kunststoffe Neue Bundesländer
Chemieinitiative Sachsen-Anhalt für Mitteldeutschland
Regionale Wirtschaftsstrategie
Regionale Entwicklung
-Regionenmarketing Mitteldeutschland
-Regionalforum Mitteldeutschland
- Regionalforen
- Initiative Mitteldeutschland
-CeChemNet
-Polykum, IPW
-Verb. Wirtschaft/Wissenschaft
- Hochschulverbund
- Wachstumskerne
- Pilotanlagenzentrum
Clusterveanalyse
Strategiedialog Chemie
(Sachsen-Anhalt, Sachsen,
Brandenburg, Thüringen)
Netzwerk Chemie/Kunststoff
Regionale Innovationsstrategie
- Halle -Leipzig - Dessau
Interregionale Vernetzung
Wirtschaftsstrategie
Länderübergreifender Prozess der Clusterentwicklung
Politischer Gestaltungsprozess zur Beeinflussung
von Rahmenbedingungen
Cluster Chemie/Kunststoff Mitteldeutschland
isw
isw Institut für Strukturpolitik und Wirtschaftsförderung gemeinnützige Gesellschaft mbH
8


mitteldeutschland
cluster mitte deutschland
Chemie / Kunststoffe
V. „Strategiedialog Chemie“ zwischen Landesregierung und Chemischer Industrie
• Identifikation von Schwerpunktaufgaben für die weitere Entwicklung der Chemie
• Regelmäßiges Treffen zwischen Landesregierung und Chemischer Industrie auf Basis gemeinsam abgestimmter Tagesordnung
• Bildung von zeitweiligen Arbeitsgruppen (z. B. REACH)
• Aktive Einflußnahme auf wirtschafts-, arbeitsmarkt- und umweltpolitische Positionsbestimmungen des Landes
• Dokumentation der Arbeit; Arbeitsplan; Evaluation des Dialogprozesses und seiner Ergebnisse
• Integration der Sozialpartner (VCI, IG BCE)
isw
isw Institut für Strukturpolitik und Wirtschaftsförderung gemeinnützige Gesellschaft mbH
9

mitteldeutschland

cluster mitte deutschland Chemie / Kunststoffe

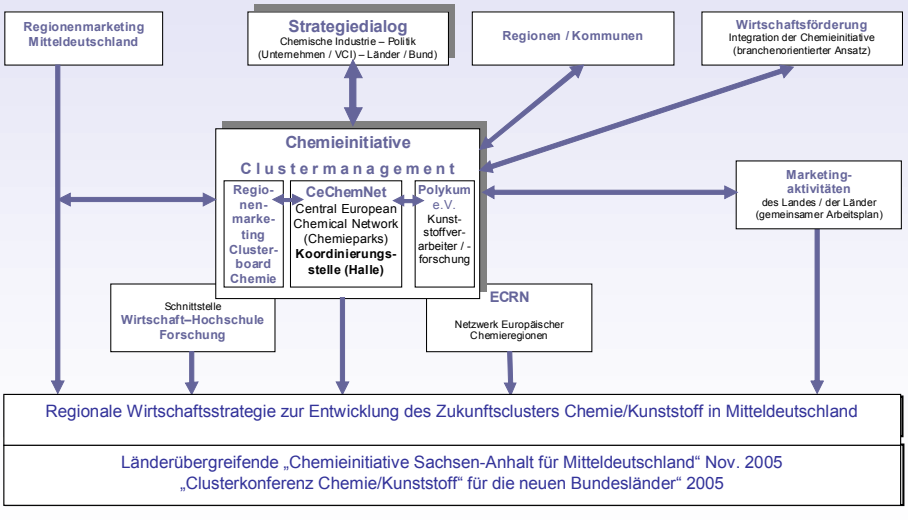
VI. Von der Regionalen Innovationsstrategie zur länderübergreifenden regionalen Wirtschaftsstrategie: Die Chemieinitiative

- 1995 – 1998 RIS Halle-Leipzig-Dessau
- Netzwerk Chemie Kunststofftechnik bis 2001
- Clusterprozess Chemie / Kunststoffe
- 2004 Chemieinitiative für Mitteldeutschland als Regionale Wirtschaftsstrategie
- Ende 2005: Clusterkonferenz Chemie / Kunststoffe Neue Länder

mitteldeutschland

cluster mitte deutschland Chemie / Kunststoffe

„Chemieinitiative Sachsen - Anhalt für Mitteldeutschland“ zur Entwicklung des Clusters Chemie/ Kunststoff



Vorschlag, Stand Nov. 2004

mitteldeutschland

cluster mitte deutschland Chemie / Kunststoffe

Schwerpunktthemen aus Sicht der Wirtschaft

1. **Clusterentwicklung**
   - *Länderübergreifend für interessierte und engagierte Unternehmen und Forschungseinrichtungen*
   - *Clusterprozess zur Vorbereitung einer Branchenkonferenz Chemie/Kunststoffe für die neuen Bundesländer im Jahr 2005*
2. **Wirtschaftsförderung zur Unterstützung des Clusters**
3. **Infrastrukturelle Rahmenbedingungen**
4. **Nachhaltige Sicherung der Rohstoffbasis**

mitteldeutschland

cluster mitte deutschland Chemie / Kunststoffe

5. **Interregionale Kooperation – u.a. Netzwerk der Europäischen Chemieregionen**
6. **Forschungsschwerpunkt Chemie-Kunststoff**
   - *Forschungsförderung durch Innovationszulage*
   - *Schwerpunktsetzung bei Hochschulstrukturreform Beispiel: anwendungsorientierte Materialwissenschaft mit Verarbeitungstechnik*
   - *Fraunhofer Pilotanlagenzentrum für Polymersynthese und -verarbeitung*
7. **Sicherung der Humanressourcen**
8. **Gemeinsames Marketing**

mitteldeutschland

cluster mitte deutschland
Chemie / Kunststoffe

Mitteldeutschland wird wieder ein Kompetenzzentrum der Chemischen Industrie und der Kunststoffverarbeitung werden

mitteldeutschland

cluster mitte deutschland
Chemie / Kunststoffe

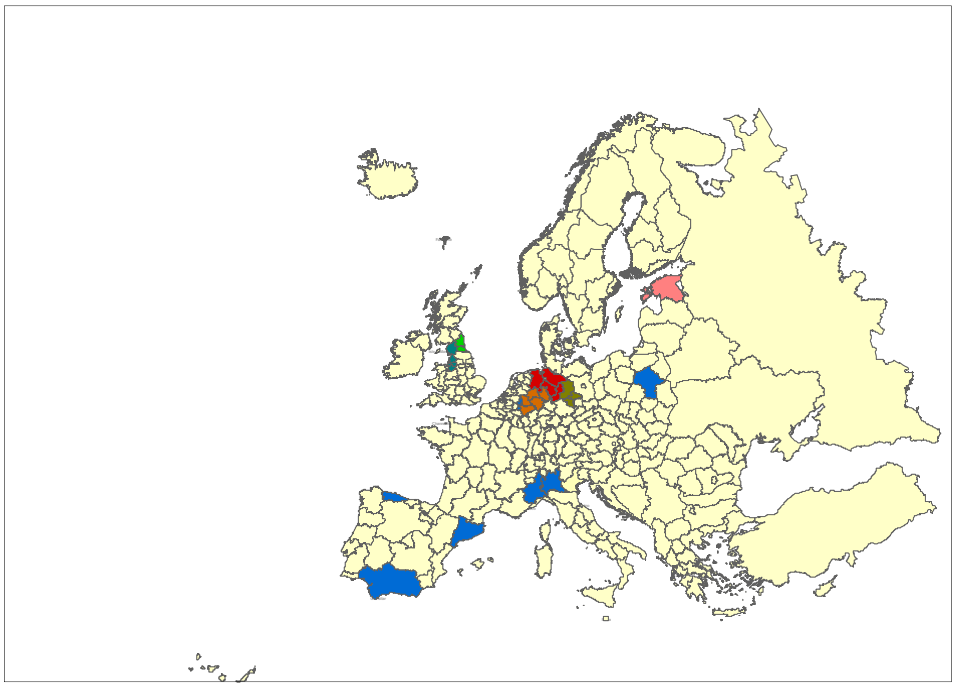
ECRN - European Chemical Regions Network

- Sachsen-Anhalt übernimmt Führungsrolle
- Artikulation von regionalen Interessen auf Europäischer Ebene (Positionierung REACH)
- Initiierung des interregionalen Erfahrungs-austausches und nachhaltigen Partnerschaften zwischen Chemieregionen (Who is Who, Studien, neue Projekte)
- 13 Regionen aus 7 Staaten – Erweiterung durch Aufbau einer eigenen Rechtspersönlichkeit
- 3. Europäischer Kongress der Chemieregionen am 6. Oktober 2005 in Mailand

www.ecrn.net

mitteldeutschland

cluster mitte deutschland
Chemie / Kunststoffe



mitteldeutschland

cluster mitte deutschland
Chemie / Kunststoffe

MentorChem

- Beitrag zur Einbindung des Clusters Chemie/Kunststoffe in internationale Netzwerke
- Vertiefung des interregionalen Erfahrungsaustausches am Beispiel von Chemieparkentwicklung (CeChemNet – AIQPA)
- Schlussfolgerungen für die Weiterentwicklung des Chemieclusters auf Basis von Europäischen best-practice (Chemieinitiative)
- Internationalisierung der Forschungsaktivitäten im Chemiebereich – Identifizierung und Darstellung von Kompetenzen
- Herausstellung von erfolgreichen Politikansätzen zur Entwicklung von Chemieregionen – Verbreitung und Mainstreaming
- Nachhaltige Partnerschaft für zukünftige Kooperationen

4. Conclusions of the MentorChem Project from Lombardy perspective

Paola Peduzzi
CESTEC

BENCHMARKING

IN THE CHEMICAL CLUSTER

Sharpen knowledge about Regions

Joint understanding of Problems

Identification of relevant topics

Identification of evolutionary trends for preparing LFR to structurally transform their industrial system

Qualification of needs / strengths factors in the Partner Regions

MENTORING

Mutual Learning Process

Best Practice exchange

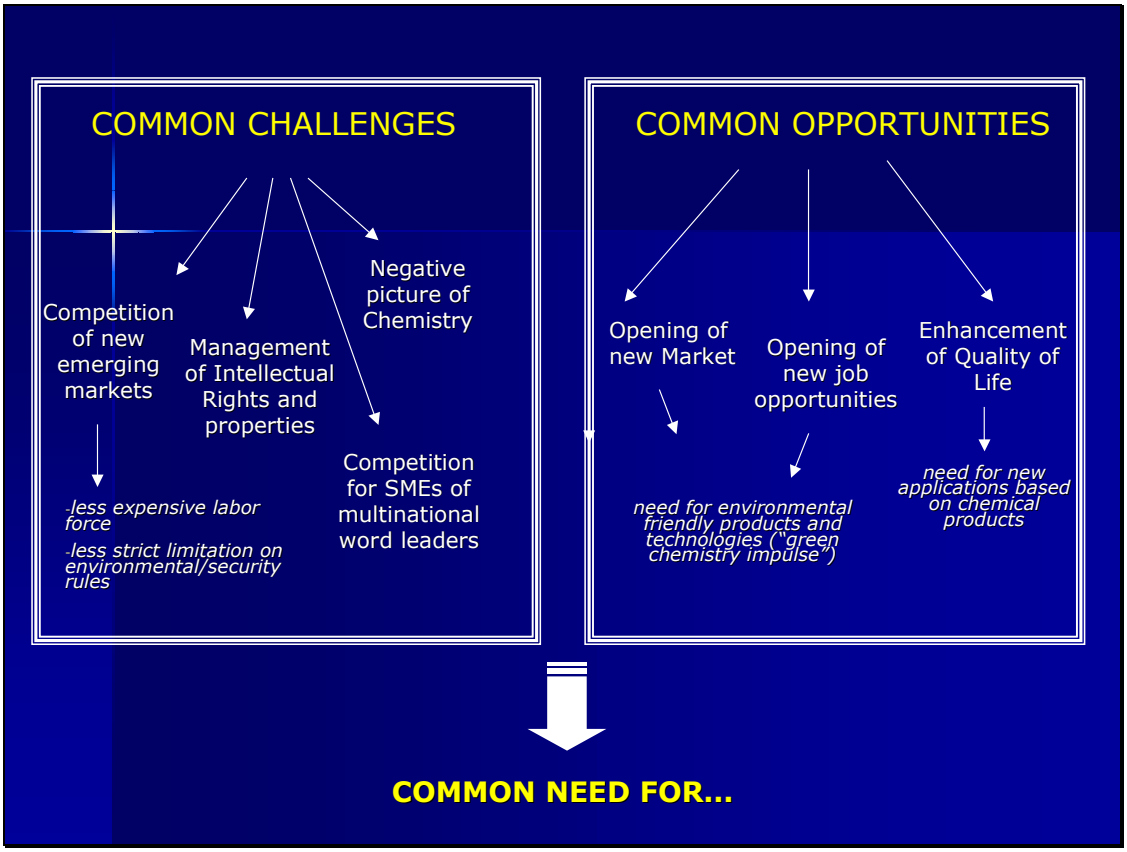
Joint answer to common challenges

Enhancement of successful approaches within the chemical industry chain

Saxony Anhalt, Lombardy Region, and the Principality of Asturias....

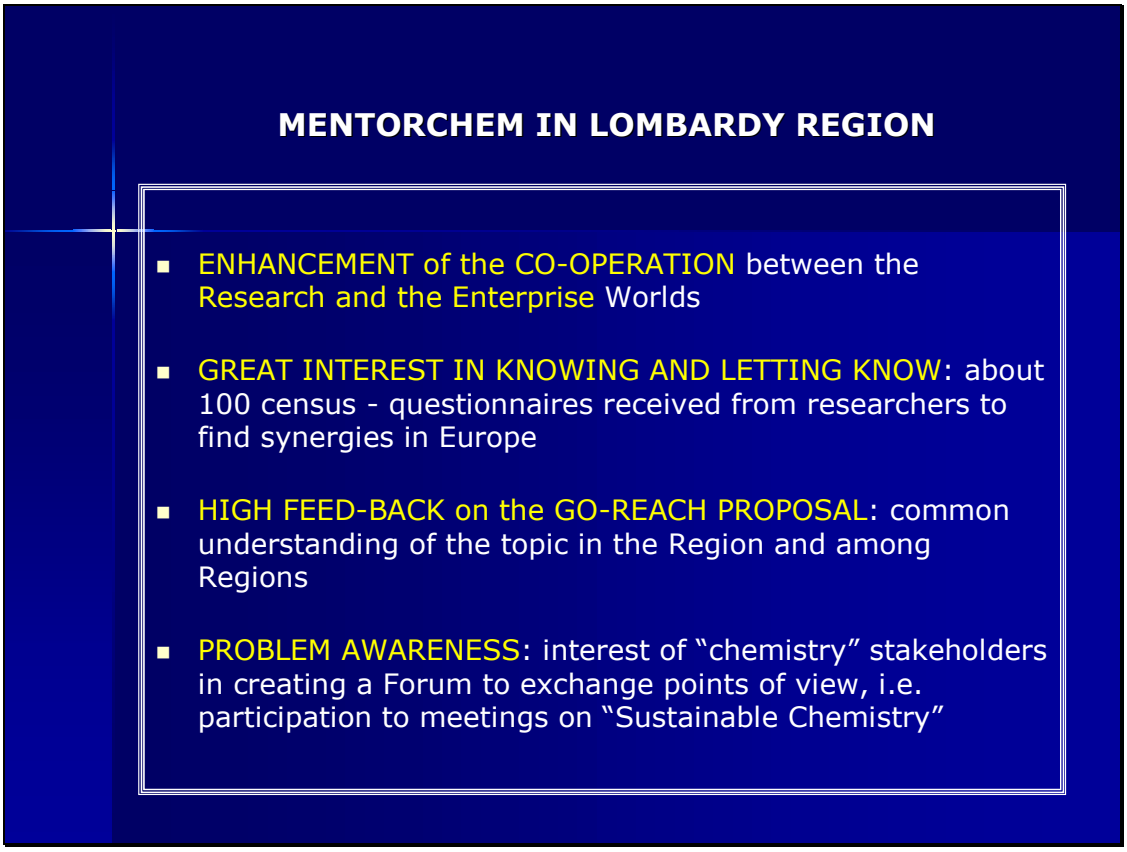
.....VERY DIFFERENT REGIONS

	POPULATION		ECONOMY								LABOUR MARKET	
	1000 Inhabitants, 2001	Population density (inh./km2), 2001	GDP growth (annual average % change), 1995-2001	GDP/head (PPS)			Employment by sector (% of total), 2002			EPO Patent applications per million inh., average 1999-2000-2001	Employment rate (%) 2002	Unemployment rate (%) 2002
				2001, EU15 = 100	Average 1999-2000-2001, EU15 = 100	2001, EU25 = 100	Agriculture	Industry	Services			
EU 15	379.604	117	2,5	100	100	109,7	4	28,2	67,7	153,6	64,2	7,8
EU 25	454.349	114,2	2,6	91,1	91	100	5,4	28,8	65,8	128,6	62,8	9
DEUTSCHLAND	82.339	230,6	1,6	100,4	102	110,2	2,5	32,4	65,2	296,2	65,4	9,4
SACHSEN-ANHALT	2.598	127,1	1,6	65,3	65,9	71,7	4	31	65	47,8	59,2	23,5
ESPANA	40.266	79,8	3,7	84,2	83,9	92,4	5,9	31,2	62,9	24,1	58,4	11,4
PRINCIPADO DE ASTURIAS	1.052	99,5	2,4	72,4	71,9	79,4	7,2	31,4	61,4	9,3	51,5	9,8
ITALIA	57.927	192,2	1,9	100,1	101,3	109,9	5	31,8	63,2	73,2	55,5	9
LOMBARDIA	9.150	383,4	1,9	131,3	133,1	144	1,9	40,1	58	158,5	63,2	3,8


COMMON CHALLENGES
Competition of new emerging markets
Management of Intellectual Rights and properties
Negative picture of Chemistry
Competition for SMEs of multinational word leaders
-less expensive labor force
-less strict limitation on environmental/security rules
COMMON OPPORTUNITIES
Opening of new Market
Opening of new job opportunities
Enhancement of Quality of Life
need for environmental friendly products and technologies ("green chemistry impulse")
need for new applications based on chemical products
COMMON NEED FOR...


COMMON NEED FOR...
High Innovation and Quality content of products and processes
Strong co-operation between Universities / Research Centers and Enterprises: strong support to technology transfer and "demand-side" approach
The inherent relation between Chemical Industry and Research requires precise and effective R&D funding policies (differentiate in terms of Regions, Size of Enterprises and sectors)
European Research networks in order to optimize results building a "structured research", also through exchange of experts between Regions

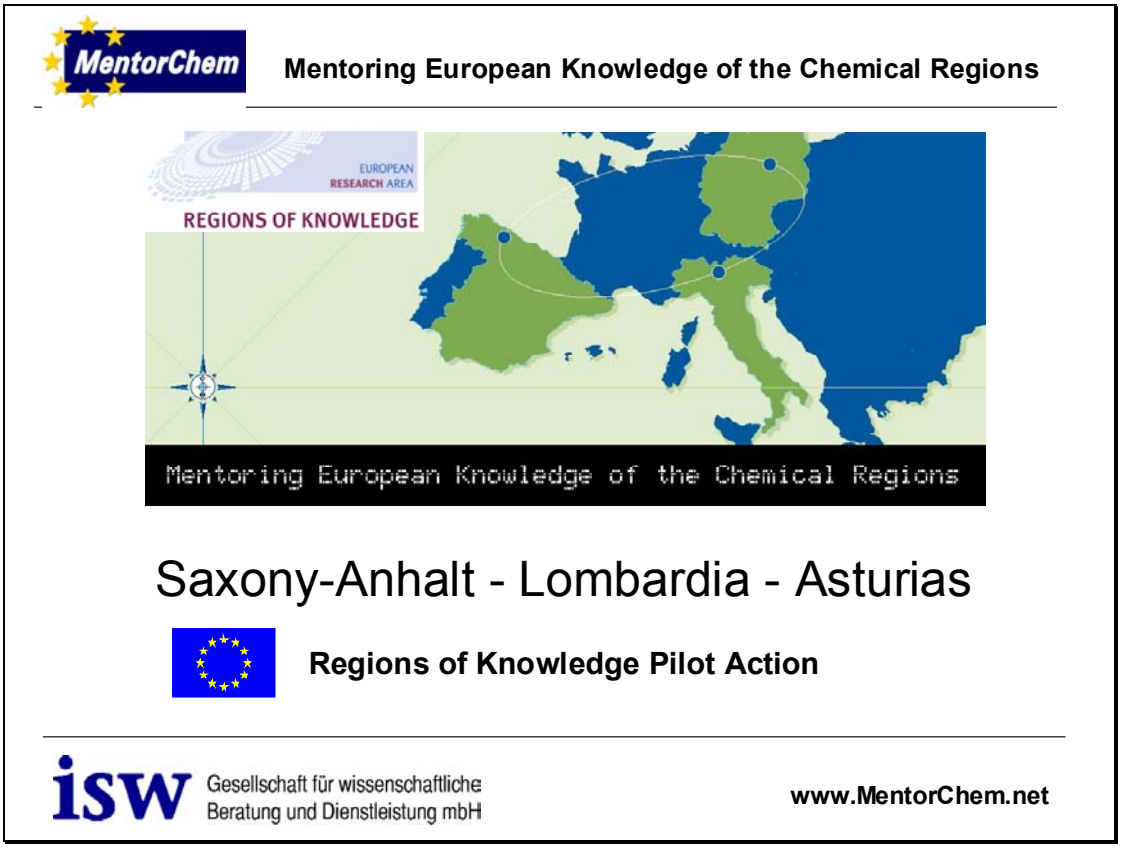

.... also THROUGH MENTROCHEM...
Mutual learning between Regions
Transfer of Innovative policies instruments
BEST PRACTICE EXCHANGE
i.e. Lombardy Region Voucher System to strengthening the regional Innovation capacity
Sharpen knowledge about Regions, strengthening European cooperation
CENSUS ON REGIONAL RESEARCH COMPETENCES
Exchange of experience
CLUSTER MANAGEMENT: SUCCESSFUL EXAMPLES
Joint understanding of problems and problem awareness
SEMINAR ON "REGIONAL STRATEGIES ON R.E.A.CH."
Identification of relevant topics
SUSTAINABLE CHEMISTRY PLATFORM
Joint development of projects
GO REACH PROJECT PROPOSAL


MENTORCHEM IN LOMBARDY REGION
ENHANCEMENT of the CO-OPERATION between the Research and the Enterprise Worlds
GREAT INTEREST IN KNOWING AND LETTING KNOW: about 100 census - questionnaires received from researchers to find synergies in Europe
HIGH FEED-BACK on the GO-REACH PROPOSAL: common understanding of the topic in the Region and among Regions
PROBLEM AWARENESS: interest of "chemistry" stakeholders in creating a Forum to exchange points of view, i.e. participation to meetings on "Sustainable Chemistry"


THANK YOU
for Your attention!

5. Presentation of final results of the MentorChem Project

Andreas Fiedler
isw GmbH, MentorChem Project Coordinator



Mentoring European Knowledge of the Chemical Regions

Partnership

Co-ordinator Saxony-Anhalt: isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

Partner Lombardia: Cestec SpA – Centro Lombardo per lo Sviluppo Tecnologico e Produttivo dell'Artigianato e delle Piccole Imprese

Partner Asturias: IDEPA - Instituto de Desarrollo Económico del Principado de Asturias

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

IDEPA Instituto de Desarrollo Económico del Principado de Asturias

Cestec

Mentoring European Knowledge of the Chemical Regions

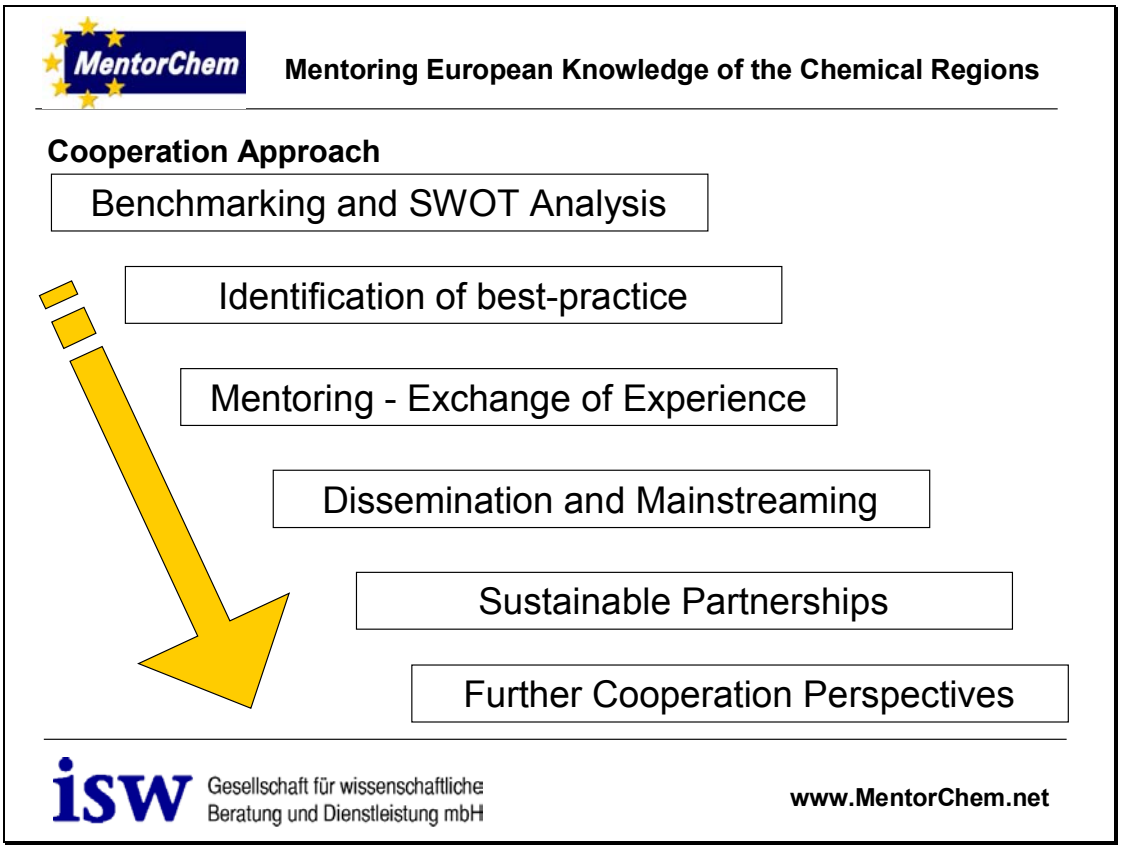
Main Indicators of MentorChem Partner Regions

MentorChem Partner Regions	Inhab. Mio.	GDP Growth 95-01	GDP per Capita 01 EU25=100	EPA patents 99 - 01	Unemployment 2002
Saxony-Anhalt	2,6	1,6	71,7	47,8	23,5
Asturias	1,1	2,4	79,4	9,3	9,8
Lombardia	9,2	1,9	144,0	158,5	3,8

Source: European Commission: 3rd Cohesion Report

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net


MentorChem
Mentoring European Knowledge of the Chemical Regions
Cooperation Approach
Benchmarking and SWOT Analysis
Identification of best-practice
Mentoring - Exchange of Experience
Dissemination and Mainstreaming
Sustainable Partnerships
Further Cooperation Perspectives
isw
Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH
www.MentorChem.net

MentorChem

Mentoring European Knowledge of the Chemical Regions

Major Conclusions of Cooperation

- Regions are facing the same challenges of globalisation, European Integration and structural change of chemical industry
- Interregional exchange of experience about successful policies for the development for support of chemical sector is important
- Benchmarking of and Analysis of SWOT helps to evaluate past and present activities
- Identification of best practice is the basis for mutual learning process
- Conclusions about the transfer of instruments improves regional policy making
- Integration in international networks and knowledge transfer has become an important factor for competitiveness

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

MentorChem

Mentoring European Knowledge of the Chemical Regions

Cooperation AIQPA & CeChemNet

CeChemNet

Central European Chemical Network

CeChemNet Cooperation between the Chemical Sites of Central Germany, The Nordostchemie Association and other local partners
Chemical Site Management Competences :8 project partners, 11 module teams, about 100 specialists of the Chemical Site Management

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

MentorChem

Mentoring European Knowledge of the Chemical Regions

AIQPA
Asociación de Industrias Químicas y de Procesos de Asturias

Exchange of Experience with CeChemNet about implementation of new activities, improved networking and development of the chemical cluster, potential for interregional cooperation

Bayer · DuPont · Roko · Fertiberia · Grupo Empresarial ENCE · Praxair · Industrial Química del Nalón, S.A. · Asturpharma

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

MentorChem

Mentoring European Knowledge of the Chemical Regions

Research Competencies in Chemistry

- Identification of Research Competencies related to Chemistry
- Involvement of stakeholders from university and research organisations
- Mapping of Chemistry Research in the three regions (Joint Brochure)
- Increase transparency and knowledge
- Possibilities for cooperation in 6th and 7th Framework Programme Research
- Mainstreaming towards **European Technology Platform "Sustainable Chemistry"**

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

MentorChem

Mentoring European Knowledge of the Chemical Regions

Regional Strategies on REACH

- Impact of European Legislation on Chemical Industry
- REACH (Registration, Evaluation and Authorisation of Chemicals)
- Combining protection of environment and strengthening competitiveness
- Challenge for Chemical industry, especially SME (costs and administrative burden), regional administration (authorisation) and research (Testing and Evaluation)

Development of joint **Research Proposal „GO REACH“** under EC 6th Framework Programme RTD – IST (IP STREP)

- Development and delivery of a tool set system for effective implementation of REACH on the market (partners from academia, agencies, industry, regional administration ICT industry, chemical federation and service provider)

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

MentorChem

Mentoring European Knowledge of the Chemical Regions

REACH Regulation Meeting : European Regions View

- Meeting of high level representatives on the 4th of May in Oviedo
- Speakers: Asturian Ministry of Industry, Ministry of Environment, Spanish Ministry of Industry, European Commission, Cefic, FEIQE, REACH Experts from Partner Regions Lombardia and Saxony-Anhalt, chemical enterprises and research institutes
- First event of this kind in Spain – broad press coverage and feedback from enterprises
- Impact of REACH on chemical industry in Asturias in comparison to other European regions
- Joint Challenges for practical solution : especially administrative and cost burden for SME
- Participation of relevant stakeholders in decision making process – active formulation of regional position based on interregional exchange of experience

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

Mentoring European Knowledge of the Chemical Regions

Best Practice Solutions for the Development of Chemical Regions

- Identification of best practice in the partner region
- Exchange of experience and dissemination
- **Lombardia:** Meta Cluster, Innovative Action Minerva, Next, Material ConneXion
- **Saxony-Anhalt**: Chemistry Cluster Initiative, Pilot Plant Center Polymer Synthesis and Processing, ECTS Chemical Worker, Chemical Parks and Basel II
- **Asturias:** AIQPA, Regional Technology Centre Network, Professional Training in Chemical Industry

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

Mentoring European Knowledge of the Chemical Regions

Mentoring European Research in Chemistry - MERiC

- Follow up project based on MentorChem results submitted to 2nd call of pilot Action „Regions of Knowledge“
- Partnership: isw GmbH, University of Applied Science Merseburg (Saxony-Anhalt, Cestec (Lombardia) and Industrial Chemistry Research Institute (Mazovia)
- Objective: improvement of the regional RTD policy and R&D investment strategies related to chemistry
- Focus on Policy formulation and regional consensus building
- Integration of initiatives at European, national and regional level for long-term strategic orientation of regional research policies towards the future innovation and growth areas
- Participation in debate of European Technology Platform SusChem

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

Mentoring European Knowledge of the Chemical Regions

www.MentorChem.net

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

Mentoring European Knowledge of the Chemical Regions

Contact

Andreas Fiedler

isw Gesellschaft für wissenschaftliche Beratung
und Dienstleistung mbH

Hoher Weg 3
D - 06120 Halle (Saale)

Tel.: +49 345 - 2998270
Fax: +49 345 - 29982711

E-mail: fiedler@isw-gmbh.de
www.isw-gmbh.de

isw Gesellschaft für wissenschaftliche Beratung und Dienstleistung mbH

www.MentorChem.net

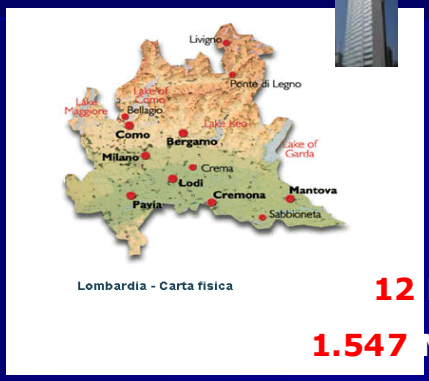
Mentoring European Knowledge I

6. The new Voucher System: Strengthening the innovation capacity in Lombardia

Giampaolo Amadori
Regione Lombardia

FLASH OF LOMBARDY SYSTEM

9.1 millions Citizens
>800,000 Enterprises
2% of EU GDP
20% of Italy GDP
28,3% Italy Export
12 Universities

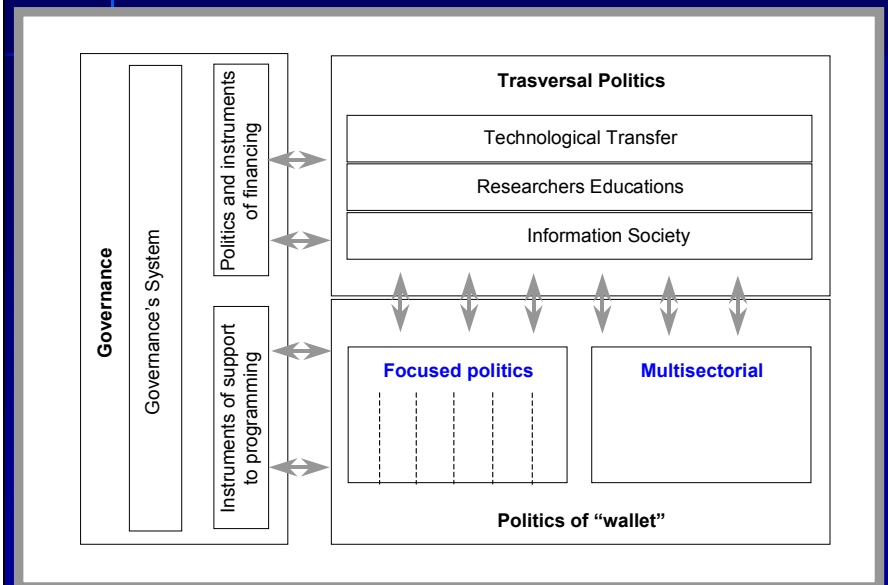


Lombardia - Carta fisica

25% of Lombardy companies have foreign ownerships
800 non-Italian multinationals *(500 in Milan)*
103 Diplomatic Representations in Milan

12 Provinces
1.547 Municipalities
+ Associations, Chambers of Commerce..
1,4% GDP for R&D

THE RL STRATEGIC MODEL for RTD



- RISE **(Technology Foresight)**
- Meta-Districts **(Bio, New Materials, ICT)**
- Funds for Start-Up and Spin-Off **(FinLombarda)**
- Local Agreements **with Provinces**
- Support and Selection of R&D Centres
- Technological VOUCHERs

RESEARCH AND INNOVATION: Lombardy Region strategies

The **innovation capacity** is a key factor for the **development and the enhancement of competitiveness** of an economic system.

Lombardy Region policies supporting entrepreneurship recognizes **research, innovation and technology transfer** as strategic factors.

Lombardy Region promotes **networks of excellences** for SMEs, focusing in particular on strengthening the capacity of **research** and the use of **knowledge** gained through the technology transfer (i.e. facilitating *start ups* and *spin offs)*

MINERVA: Regional Program of Innovative Actions (1/4)

Innovation and knowledge for entrepreneurship

APPROVED	2002
STARTED	2003
ENDED	2004

PROGRAMMA MINERVA l'innovazione e il sapere per l'impresa

MINERVA Programme represents the opportunity to experiment a new approach and **new innovative methodologies** of regional policies.

Through MINERVA Lombardy Region set up and tested **innovative actions** to support the "development of competences" in 2 main areas:

Research & Innovation
and
Information Society

MINERVA:
Regional Program of Innovative Actions (2/4)

Main Aims

- To facilitate the **technical** and **scientific empowerment** of the productive system by supporting a strong link between research and production
- To elaborate **innovation strategies** between public and private sector
- To encourage the **development** of **new technologies** in order to strengthen the competitiveness of the Lombard productive system

MINERVA:
Regional Program of Innovative Actions (3/4)

Three "transversal" initiatives:

1) A "Regional Forum for Innovation", grouping stakeholders of research and technology transfer
2) An "Expertise Repertory" and a "Competency Portal"
3) A pilot survey on technology and foresight monitor, focusing on critical, key and qualified technology

Four "vertical" experimental initiatives

1. A pilot action entitled "*New practices for supporting start-ups and spin-offs and enterprise innovation*", to experiment innovative methods for creating technological enterprises and implementing technology transfer processes
2. An award for SMEs to prize their planning and creativity efforts
3. A support for Market-Place development in connection with the diffusion of ICT based tools
4. The support to SMEs (also in the context of their cooperation with the University/Research world) in order to enhance their participation to European Programmes (i.e. 7th Framework Programme), also through the establishment of trans-regional networks

MINERVA:
Regional Program of Innovative Actions (4/4)

Financial Support

ERDF (European Regional Development Fund)	**2.973.000 €**
National Government (30%)	**986.700 €**
Regional Government (70%)	**2.302.300 €**
Private participation	**2.900.000 €**

Total Budget:
9.162.000 €

MINERVA:
The Technological Voucher

The Technological Voucher is the **innovative financial instrument** chosen by Lombardy Region **to set up innovation entrepreneurship processes** (start ups and spin offs) and interaction between SMEs and Centers of research/development

The Voucher has been experimented in areas having structural difficulties (**Areas Objective 2**), through pilot action (Measure **7.4 A and 7.4 B**)

The Technological Voucher is:
1. **A "Financial Title" issued by the Regional Government**
2. **A nominative, "non-transferable" grant**

MINERVA: The Technological Voucher

The procedure to receive an INTEC Voucher is composed by three steps:

1. Application: the beneficiary has to fill in the dedicated form after having selected the supplier of the required service in "Questio" - *Quality Evaluation in Science and Technology for Innovation Opportunity* System. This system includes: Lombard Universities, Research Centers, Innovation and Technological transfer services in Lombardy, Financial Companies

2. Admissibility control

3. Voucher allocation: the voucher amount is allocated directly to the centre providing the service of consultancy or assistance

MINERVA: The Technological Voucher

- ACTION 7.4 A -

NEW PRACTICIES TO SUPPORT

START UPS AND SPIN OFFS

ACTIVITY PHASE	*VOUCHER VALUE*	*VOUCHER DISTRIBUTED*
I - Technical verification of the Idea	**3.000 €**	**56**
II - Redaction of the business plan	**7.500 €**	**32**
III - Start up of the enterprise	**25.000 €**	**9**

MINERVA: The Technological Voucher

- ACTION 7.4 B -

NEW PRACTICIES TO SUPPORT

ENTERPRISES INNOVATION

ACTIVITY PHASE	*VOUCHER VALUE*	*VOUCHER DISTRIBUTED*
I - Technical verification of the Idea	**10.500 €**	**18**
II - Introduction of the technological innovation	**35.000 €**	**4**
I Bis and I Ter - Technical verification of the Idea	**10.500 €**	**38+11**

MINERVA: The Technological Voucher

In consequence of the success of both Pilot Actions (7.4 A and 7.4 B), Lombardy Region Government decided to spread the application of Technology Voucher to the whole regional territory and experiment new innovative measures:

TECHNOLOGICAL INTEC VOUCHER

Main aims of the new measure are:

1. Connecting research and enterprises sectors assuring an effective match between demand and offer
2. Simplifying administrative procedures for funding calls
3. Increasing SMEs' propensity to innovation and supporting new start ups

TECHNOLOGICAL INTEC VOUCHER

The INTEC VOUCHER finances four kinds of actions:

PATENT ASSISTANCE
Assistance at national and European level during the patent procedure

TECHNOLOGICAL DUE DILIGENCE
Consulting services to evaluate innovation and competitiveness level of technologies proposed for an entrepreneurial or technological transfer project

BUSINESS EVALUATION
Consulting activities for the evaluation of economical and financial aspects of project concerned with Innovation or technological transfer

RESEARCH VOUCHER
Scientific research through cooperation partnerships
Selection of qualified personnel to perform scientific and technical research

Voucher Typology	Beneficiaries	Entity	Duration and peculiarity
PATENT ASSISTANCE	**SMEs**	**3.000€** for national assistance **7.000€** for international assistance (100% of total cost)	Duration of the project: **100 days**
TECHNOLOGICAL DUE DILIGENCE	**Persons, SMEs**	**5.000€** for physical persons (100% of total cost) **3.750€** for SMEs (75% of total cost)	Duration of the project: **60 days**
BUSINESS EVALUATION	**Persons, SMEs**	**10.000€** for physical persons (100% of total cost) **7.500€** for SMEs (75% of total cost)	Duration of the project: **60 days** Amount to be supplied in two equal *tranches*: 50% at the realization of the business evaluation, 50% at the realization of the investment
RESEARCH VOUCHER	**SMEs**	**9.500€** (it represents about the 50% of the maximum amount of research vouchers)	Duration: **1 year**

TECHNOLOGICAL INTEC VOUCHER

SECTORS OF INTEREST

- BIOTECHNOLOGIES (FOOD AND NOT FOOD)
- ELETTRONICHS
- MECHANICHS
- ELETTRO-MECHANICS
- TEXTILE
- CHEMICALS
- INDUSTRIAL DESIGN
- NEW MATERIAL
- ICT
- ENVIRONMENTAL TECHNOLOGIES
- ROBOTICHS
- ARTIFICIAL INTELLIGENCE
- LOW-ZERO EMISSION INDUSTRIAL TECHNOLOGIES

For more information and to download the documentation to submit the requests, please look at :

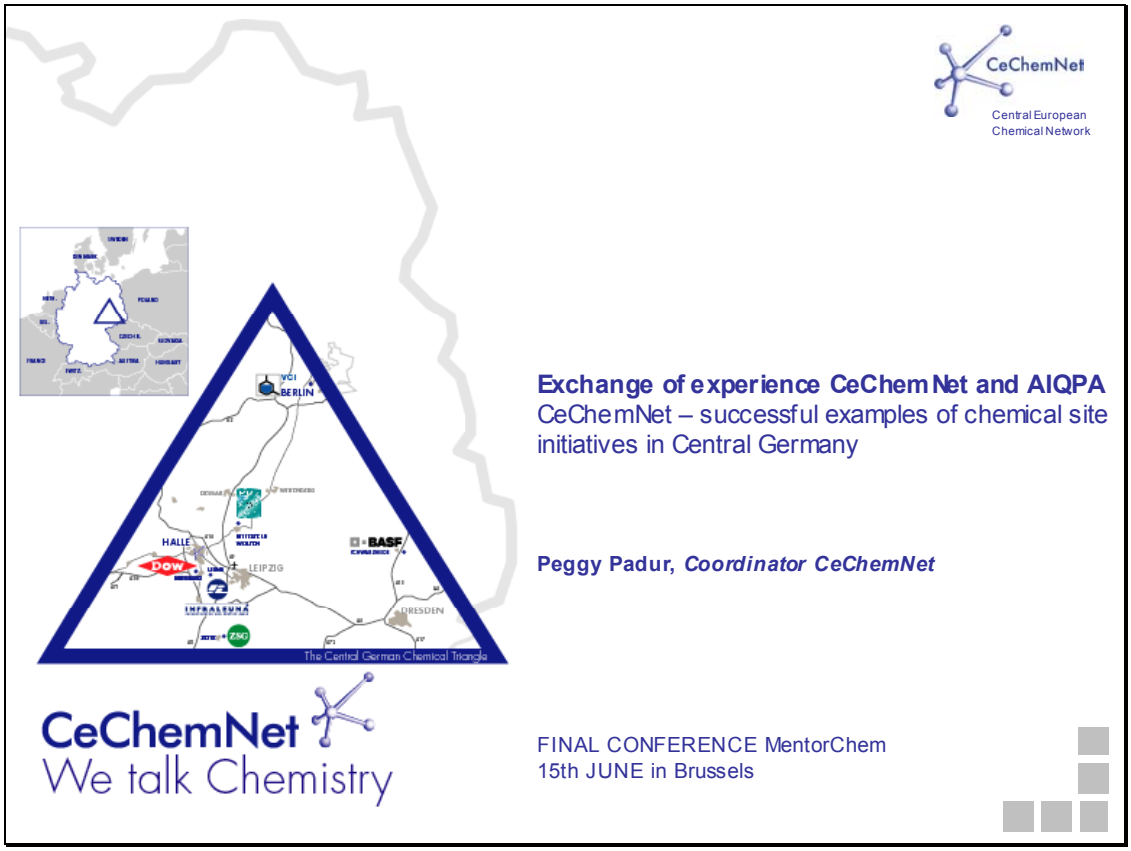
www.artigianato.regione.lombardia.it

Thank You...

Exchange of experience CeChemNet and AIQPA

7. CeChemNet – successful examples of chemical site initiatives in central Germany

Peggy Padur
Coordinator CeChemNet

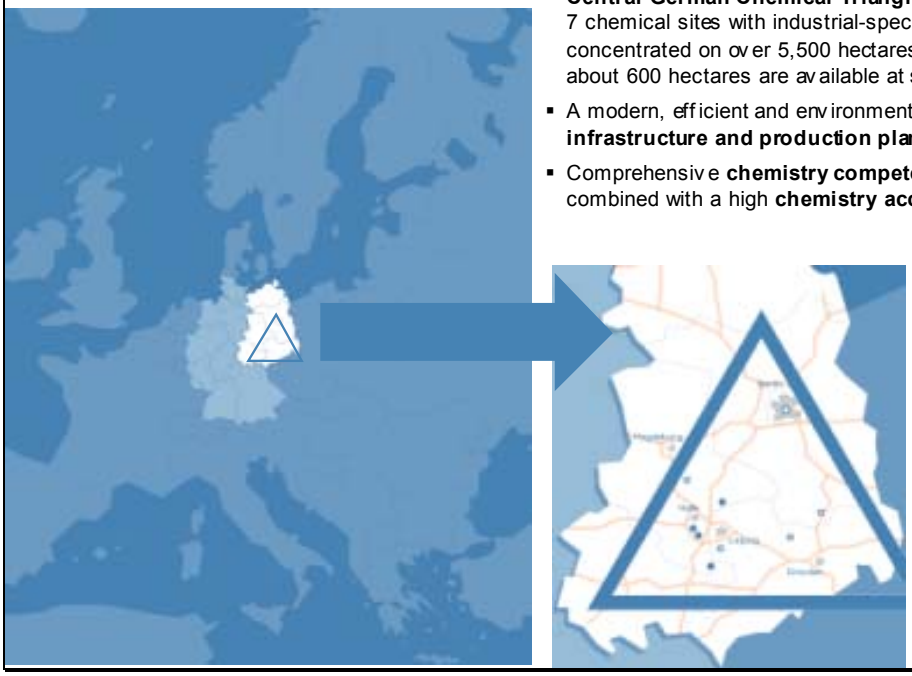


CeChemNet
Central European Chemical Network

Brussels, 15th June 2005

THE CENTRAL GERMAN CHEMICAL TRIANGLE

- **Future-Cluster** chemistry / plastics
- **Central German Chemical Triangle**:
  7 chemical sites with industrial-specific profiles,
  concentrated on over 5,500 hectares,
  about 600 hectares are available at short notice
- A modern, efficient and environmentally compatible **infrastructure and production plants**
- Comprehensive **chemistry competence** is combined with a high **chemistry acceptance**



PAGE 2

CeChemNet
Central European Chemical Network

Brussels, 15th June 2005

COOPERATION PARTNERS

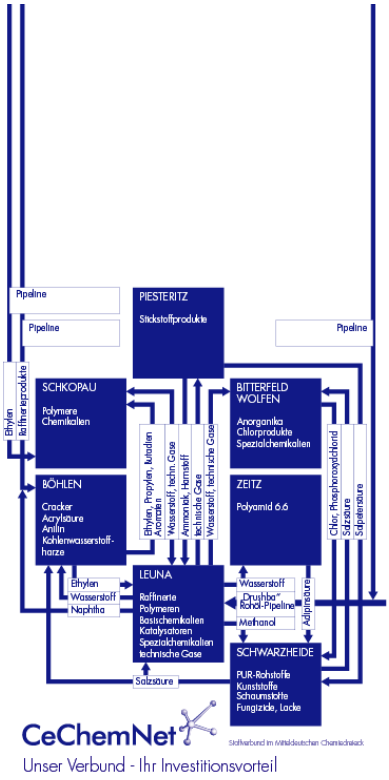
CeChemNet Project Partners

- Preiss-Daimler ChemiePark Bitterfeld/Wolfen GmbH
- InfraLeuna Infrastruktur und Service GmbH
- Dow Olefinverbund GmbH ValuePark®
- BASF Schwarzheide GmbH
- ZSG Zeitzer Standortgesellschaft mbH
- Nordostchemie Association
- BVCT Halle
- isw GmbH Halle

PAGE 3

Brussels, 15th June 2005

MAIN EMPHASES OF COOPERATION between the Chemical Sites



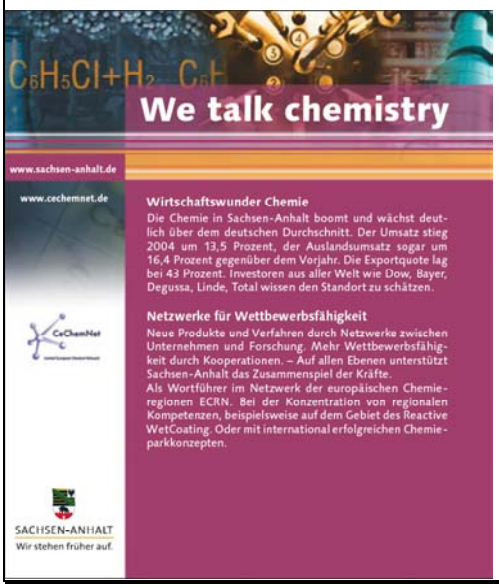
Sites cooperation of the Central German Chemical Triangle

- Potentials and development of synergies between every individual Chemical Site
- Synergies of the raw material compound
- Knowledge transfer of the chemical sites with each other – strengthening of the competitiveness
- Active common design of relevant framework conditions

Brussels, 15th June 2005

CeChemNet
Central European
Chemical Network

MAIN EMPHASES OF COOPERATION between the Chemical Sites



Chemical Park Marketing

- Offensive strategy of the outer representation of the Sites and the raw material compound
- Cooperation concerning site management and the settlement of enterprises
- Increased international noticeability of the network
- New quality in connection with federal supported marketing, image formation and site management

Brussels, 15th June 2005

CeChemNet
Central European Chemical Network

MAIN EMPHASES OF COOPERATION between the Chemical Sites

Competences of Chemical Site Management

- Uniting and marketing of competences of the successful chemical site management and the
- Marketing of special know-how resulting from transformation processes of the Eastern German industry
- Formation of competences as a locational advantage / increased attractiveness for an international cooperation

PAGE 6

Brussels, 15th June 2005

CeChemNet
Central European Chemical Network

CHEMICAL SITE MANAGEMENT COMPETENCES

CeChemNet
Cooperation between the Chemical Sites of Central Germany, The Nordostchemie Association and other local partners

Chemical Site Management Competences
8 project partners, 11 module teams, about 100 specialists of the Chemical Site Management

P-D ChemiePark Bitterfeld-Wolfen	InfraLeuna Leuna	Dow ValuePark® Schkopau Böhlen	BASF Schwarzheide	ZSG Zeitz	Nordostchemie Association	BVCT Halle	isw Halle

MODULE 1 Safety & Security Technology	MODULE 2 Environmental Protecion & Site Clearance	MODULE 3 Infrastructure & Facility Management	MODULE 4 Site Development & Marketing	MODULE 5 Feedstock Cooperation	MODULE 6 IT - Information Technologies
MODULE 7 Human Resources Development	MODULE 8 Know-How & Competence Development	MODULE 9 Financing & Support	MODULE 10 Association & Chemical sector	MODULE 11 Social policy & care	

COMPETENCE PLATFORM ON CHEMICAL SITE MANAGEMENT

PAGE 7

Brussels, 15th June 2005

CENTRAL GERMAN FUTURE CLUSTER CHEMISTRY / PLASTICS

Regionenmarketing Mitteldeutschland

Central German Future Cluster Chemistry / Plastics

- CeChemNet is an essential partner of the cluster
- Concentration on future-clusters as active lobby work
- Deepening of the regional cooperation particularly chemistry/plastics and science – Markedness of innovation possibilities in the fields of chemistry
- Developing synergies to other future-clusters in particular Automotive industry, biotechnology and environment of Central Germany

PAGE 8

Brussels, 15th June 2005

CeChemNet A REGIONAL NETWORK PARTNER OF THE ECRN

Arrangement of international activities

- Integrating interests of East German chemical sites on the platform of the Chemical Regions in Europe ECRN
- Developing the cooperation with Central and East European regions
- Gaining concrete supra-regional partnerships
- Opening access to international network structures for middle enterprises and
- Involving the enterprises into international cooperations and network structures

PAGE 9

Brussels, 15th June 2005

CeChemNet
Central European Chemical Network

EXPERT MEETING CeChemNet - AIQPA

Expert visit of delegation from AIQPA to Saxony-Anhalt on the 11th April 2005

Presentation of CeChemNet history, experiences and competencies in chemical park management

Focus on thematic competence modules and comparison to AIQPA activities

On site inspection of Bitterfeld/Wolfen chemical site – guided tour to Bayer factory

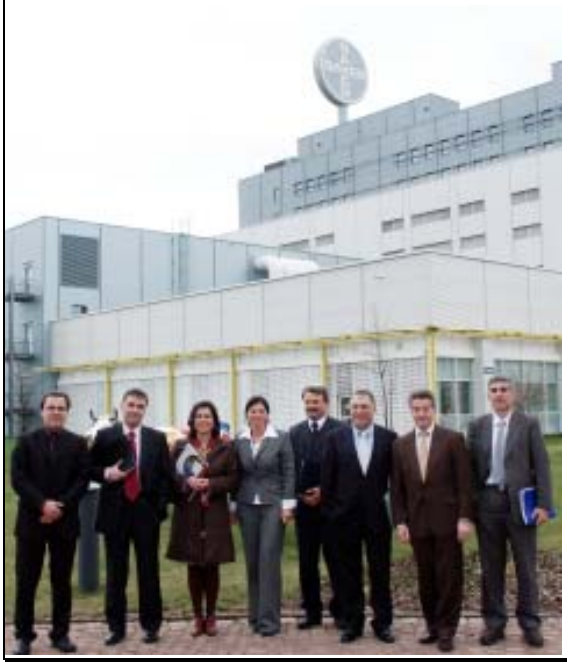
Round table on REACH - exchange of positions and discussion about consequences

PAGE 10

Brussels, 15th June 2005

CeChemNet
Central European Chemical Network

PERSPECTIVES FOR FURTHER COOPERATION



Presentation and comparison of activities and experiences CeChemNet and AIQPA in joint brochure

Identification of topics of joint interest for further cooperation between AIQPA and CeChemNet

- REACH – impact on SME and provision of specific services
- Joint European Research Projects (e.g. CRAFT)
- Safety and Security Management (broad experience on both sides)
- Human Resource Development
- Image of Chemical Industry and Social Care
- Cooperation between big companies and SME
- Further exchange of experts

PAGE 11

Brussels, 15th June 2005

CeChemNet
Central European
Chemical Network

IMPRINT

CeChemNet
Coordination office
Dipl. Ök. Peggy Padur

Hoher Weg 3, 06120 Halle (Saale)
Tel: +49 (0) 345 299 82 718
Fax: +49 (0) 345 299 82 711
Mobile: +49 (0) 172 79 88 528
Peggy.Padur@CeChemNet.de
www.CeChemNet.de

Picture:
Preiss-Daimler ChemiePark Bitterfeld – Wolfen GmbH
InfraLeuna Infrastruktur and Service GmbH
Dow Olefinverbund GmbH ValuePark® Schkopau, Böhlen
BASF Schwarzheide GmbH
ZSG Zeitzer Standortgesellschaft mbH
isw GmbH

PAGE 12

8. AIQPA – Cooperation of chemical enterprises in Asturias

Jose Ramon Fernandez
Coordinator AIQPA

AIQPA Asociación de Industrias Químicas y de Procesos de Asturias

MentorChem : Final Conference

COOPERATION OF CHEMICAL ENTREPRISES AND THE CHEMICAL REGIONS

MentorChem

José Ramón Fernández
Asociación de Industrias Químicas y de Proceso de Asturias

Brussels, 15th of June 2005 **01 of 14**

MentorChem : Final Conference

AIQPA: MAIN OBJECTIVES:

- Co-operation in common activities
- Defining necessities in the sector
- Foreseeing of future problems and situations
- Seeking of opportunities for the Process Industries
- Dissemination of activities

Our Members . . .

Bayer · DuPont · ATA · Roko · Rioglass · Fertiberia · Grupo Empresarial ENCE · Praxair · Industrial Química del Nalón, S.A. (NalónChem)

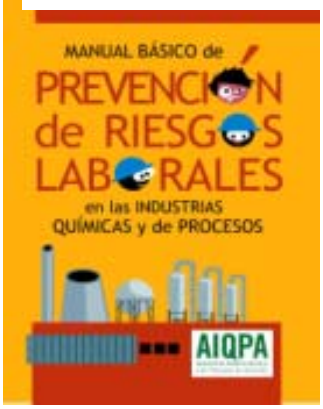
Our Members . . .

Grupo Empresarial ENCE
DUPONT
Fertiberia
PRAXAIR
AFA
ROKO
Industrial Química del Nalón, S.A.
NalónChem
RIO
RIOGLASS
Bayer

MentorChem : Final Conference Brussels, 15th of June 2005 04 of 14

Our Activities . . .

" Basic Handbook:
Prevention of Labour Hazards "



6000 copies distributed

MentorChem : Final Conference Brussels, 15th of June 2005 05 of 14

Our Actitivites . . .

Seminars ...

IPPC

REACH

Workshops ...

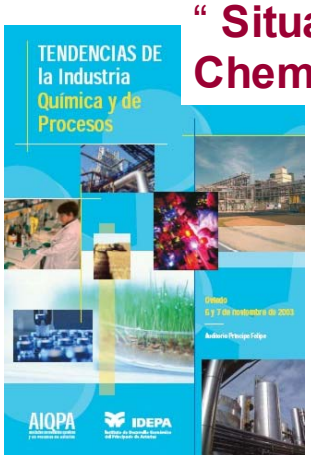
Working Pannels ...

ATEX

SQAS

Courses ...

Our Activities . . .



“ Situation and Perspectives of the Chemical and Process Industry “

4 Sector Meetings

4 Plenary Sessions

20 High-Level Lecturers

Up to 300 participants

Some Projects for the near Future . . .

Evolution and Perspectives in the Chemical Sector

- Working Pannel (National Level)
- Inter-Conferences: Situation Report.

Technical Conditions for the Settlement of Chemical Industries in Asturias

- Technical study:
  Requirements of Chem. Companies,
  Analysis of the Offer,...

Cooperation with other Institutions

- FEIQUE
- IDEPA
- Regional Government

MentorChem : Final Conference | Brussels, 15th of June 2005 | 08 of 14

Cooperation among Regions . . .

MentorChem : Final Conference | Brussels, 15th of June 2005 | 09 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

1. Information activities for SME regarding REACH
2. Cooperation between R&D and SME
3. Experimental Station /Demonstration Centre
4. Cooperation Multinationals & Regional Administration
5. Financing Start-ups and SMEs

MentorChem : Final Conference Brussels, 15th of June 2005 10 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

1. Information activities for SME regarding REACH
2. Cooperation between R&D and SME
3. Experimental Station /Demonstration Centre
4. Cooperation Multinationals & Regional Administration
5. Financing Start-ups and SMEs

MentorChem : Final Conference Brussels, 15th of June 2005 10 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

1. Information activities for SME regarding REACH
2. Cooperation between R&D and SME
3. Experimental Station /Demonstration Centre
4. Cooperation Multinationals & Regional Administration
5. Financing Start-ups and SMEs

MentorChem : Final Conference Brussels, 15th of June 2005 10 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

1. Information activities for SME regarding REACH
2. Cooperation between R&D and SME
3. Experimental Station /Demonstration Centre
4. Cooperation Multinationals & Regional Administration
5. Financing Start-ups and SMEs

MentorChem : Final Conference Brussels, 15th of June 2005 10 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

1. Information activities for SME regarding REACH
2. Cooperation between R&D and SME
3. Experimental Station /Demonstration Centre
4. Cooperation Multinationals & Regional Administration
5. Financing Start-ups and SMEs

MentorChem : Final Conference Brussels, 15th of June 2005 10 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

6. EU R&D Cooperation – Research Competences
7. Cluster Initiative & Regional Association
8. Supporting SMEs in EU R&D Programmes
9. Database of Innovative Materials
10. Chemistry Higher Education

MentorChem : Final Conference Brussels, 15th of June 2005 11 of 14

Cooperation among Regions

TOPICS FOR THE SHARING OF EXPERIENCE:

6. EU R&D Cooperation – Research Competences
7. Cluster Initiative & Regional Association
8. **Supporting SMEs in EU R&D Programes**
9. Database of Innovative Materials
10. Chemistry Higher Education

Cooperation among Regions

VISIT OF IDEPA-AIQPA DELEGATION TO BITTERFIELD :

April, 11th, 2005

Can we Move Forward ? . . .

AIQPA PROPOSALS:

Tighten links with European organizations

Develop in Asturias the experience of Chemical Parks

Improve cooperation between SMEs and big Chemical Companies

THROUGH EXCHANGE OF EXPERTS

MentorChem : Final Conference

COOPERATION OF CHEMICAL ENTREPRISES AND THE CHEMICAL REGIONS

THANK YOU FOR YOUR ATENTION

Mentoring European Knowledge II

9. Research competencies Chemistry Strengthening European cooperation in the Chemistry Research

Dr. Rinaldo Psaro
CNR-National Research Council Lombardia

The main aim of the action is to demonstrate the central role of knowledge in driving regional development and how regional actors can effectively participate in formulating their regions future.

Furthermore, it is the objective to increase collaboration on a transnational/transregional basis to enable learning between European regions and the identification of models and activities that can be implemented in different regions.

The three regions are at different **stages of development** and with different experiences in the area of research and regional policy.

The chemical industry is still one of the key sectors in Europe in terms of employment, turnover and research and development.

MentorChem

Until 1990, the chemical industry has been the second biggest y in East Germany, with a very high employment intensity mployment 300.000 approximately 10% of the employment in cessing industry). Saxony-Anhalt, especially the south of the region, had a central position of the chemical industry.The area Halle–Bitterfeld–Merseburg was closely connected to chemical location in East Germany, with a long tradition reaching back to the beginning of the 20th century.

The reunification of Germany in the year 1989/90 has caused an abrupt, overall and deep economic and structural transformation process of the whole economy.

A general review of the chemical industry has made clear, that due to deficits in the raw material base and the connected pollution of environment, the production sites, technologies and products, the organisation, the market relations and the market prices, above 50% of the present substance was not competitive at an international level.

Therefore, many enterprises were shot down, efficient parts have been outsourced and restructured and new enterprises have been founded. Especially foreign investors have played a special role in this proce

MentorChem

The chemical sector is dominated by SMEs. 88% of the enterprises have less than 200 employees (96% of theplastic/rubber enterprises). only 2 enterprises above 1000 employees and 3 between 500 and 999.

In the plastic and rubber sector there is only 1 enterprise with more than 500 employees. If we look at the total number of enterprises, we can see the positive development between 1998 and 2002 of additional 66 enterprises in the whole chemical sector, which is a growth of 28%.

This is mainly caused by the policy of outsourcing of the big enterprises. As consequence the cooperation between SMEs and big multinationals is becoming more and more important.

A regional economy, based on coal and steel industry, was developed along the first half of the last century. Coal also induced a carbochemical industry. From the point of view of the economy, the chemical sector is not too strong, but its influence goes beyond the limits of economics indexes because of the strong links between steel industry and chemical industry

The chemical industry in Asturias is comprised of Smes (86 %). Only 2 companies employ more than 200 employees and none more than 500.

The most important chemical site is the Dupont complex, which is one of the most advanced production centres in Europe.

The chemical industry of Lombardy is very important under at least three points of view:

•it has a relevant position among European chemical regions,

•it represents a major part of the Italian chemical industry,

•it plays a key role for the competitiveness of the Italian industrial system as a whole.

Among European chemical regions, Lombardy is the second in terms of employees and the first in terms of companies. Its share of chemical employees over total population is one of the largest in Europe confirming that the data don't depend on the size of the area, but reflect an actual concentration of chemical industry in the region. The reason why the result may sound surprising is that, when thinking about chemicals, large petrochemical sites usually come to mind. On the contrary, the chemical industry in Lombardy shows quite different features from other European regions with a strong chemical presence:

•production is not concentrated in a limited number of highly integrated chemical sites,

•large companies do not prevail, as there is an extensive net of small and mediumenterprises.

Excluding companies with less than 10 employees, 91% of all chemical companies have less than 250 workers.

These data confirm that Lombardy is the second European chemical region not because of the presence of many large and integrated sites but rather thanks to a wide net of small and medium chemical companies.

Even if Lombardy is relatively specialised in some chemical sectors, the panorama appears very diversified as there is not a single activity predominating. Considering the strong presence of chemical activities in the region, we can therefore speak about a chemical cluster although it cannot be defined as an Italian industrial district because of the specific features of the sector. An industrial district is an agglomeration of small and medium firms, specialised in a single-product business, concentrated in a specific area. Chemicals do not generate the organisational form of industrial districts because productive processes are vertically integrated a possibility to use subcontracting is very limited.

Innovative Approaches for the development of human resources

Census of the Research Competences in Chemistry and Chemical Engineering in Saxony-Anhalt, Lombardy Region and Principality of Asturias

The sustanaible vision

The European Technology Platform for Sustainable Chemistry

Materials Technology

Reaction and Process Design

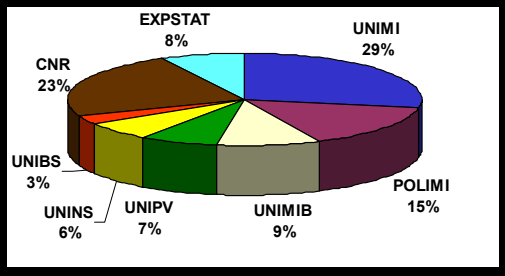
Biotechnology

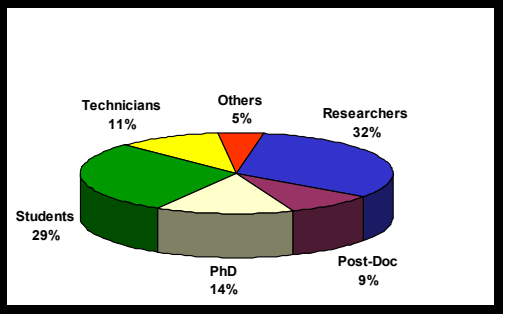
Recent Developments in Nanoscience and Nanotechnology

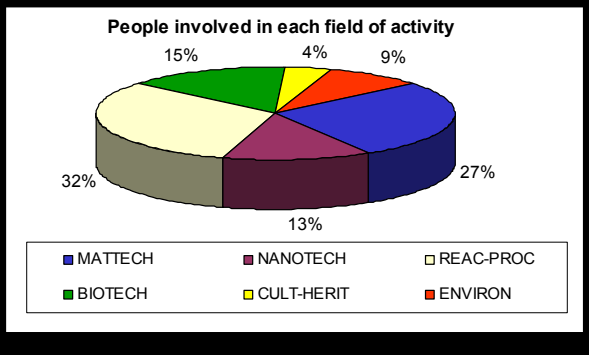
Conservation and Restoration of Cultural Heritage

Environmental Pollution Monitoring

Research Competences in Lombardy Region



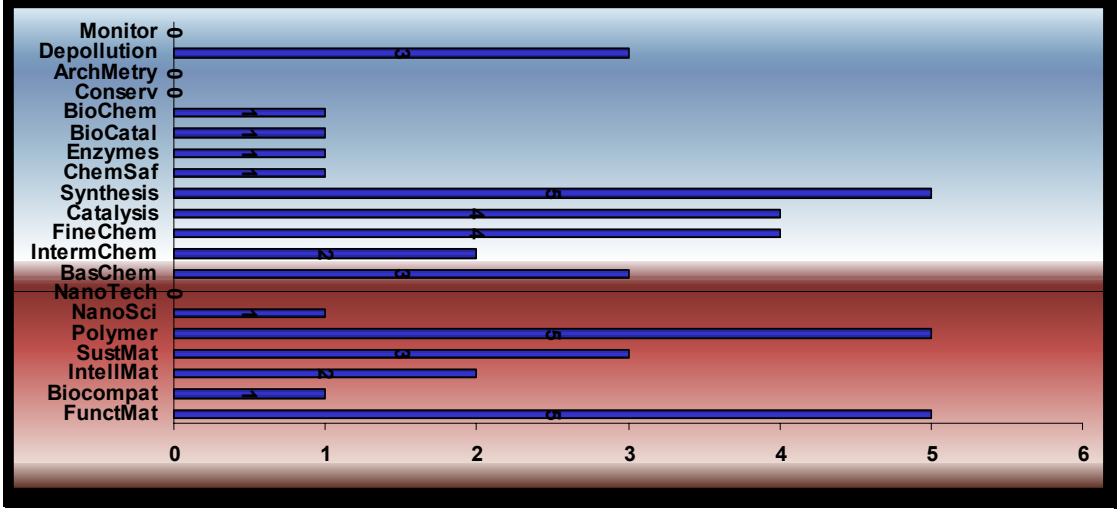


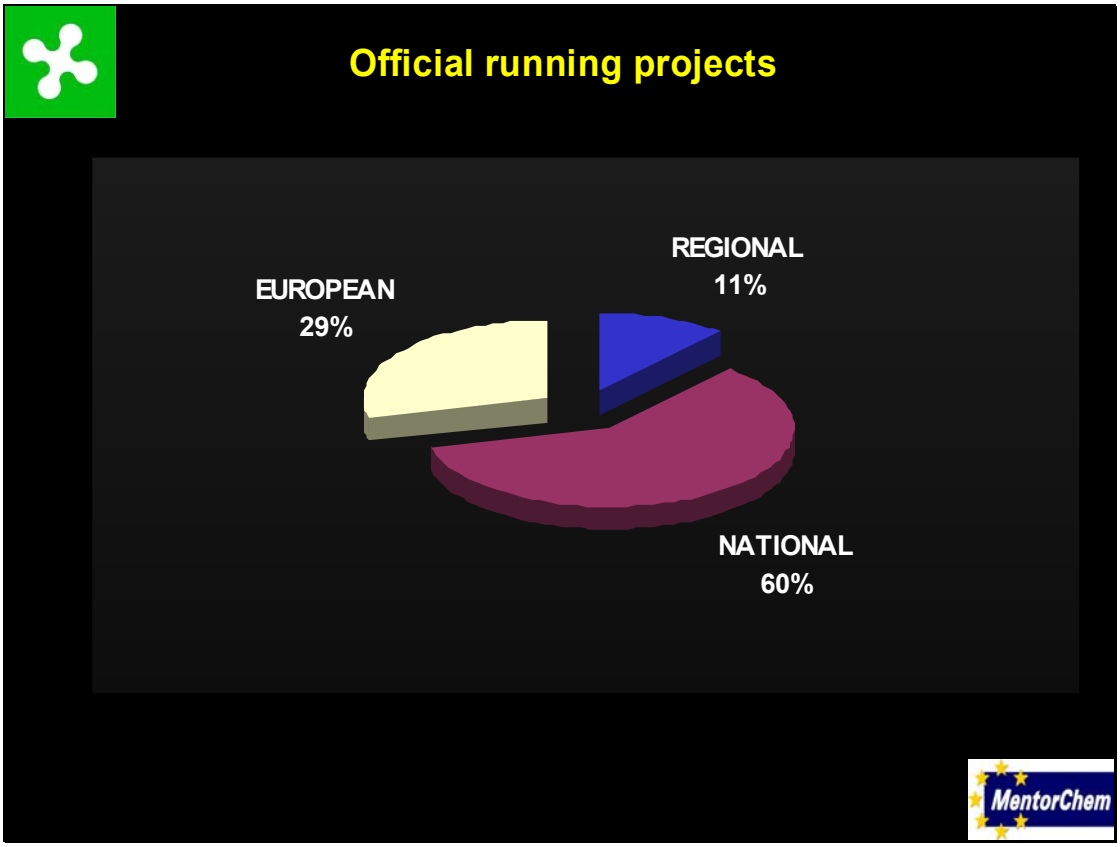


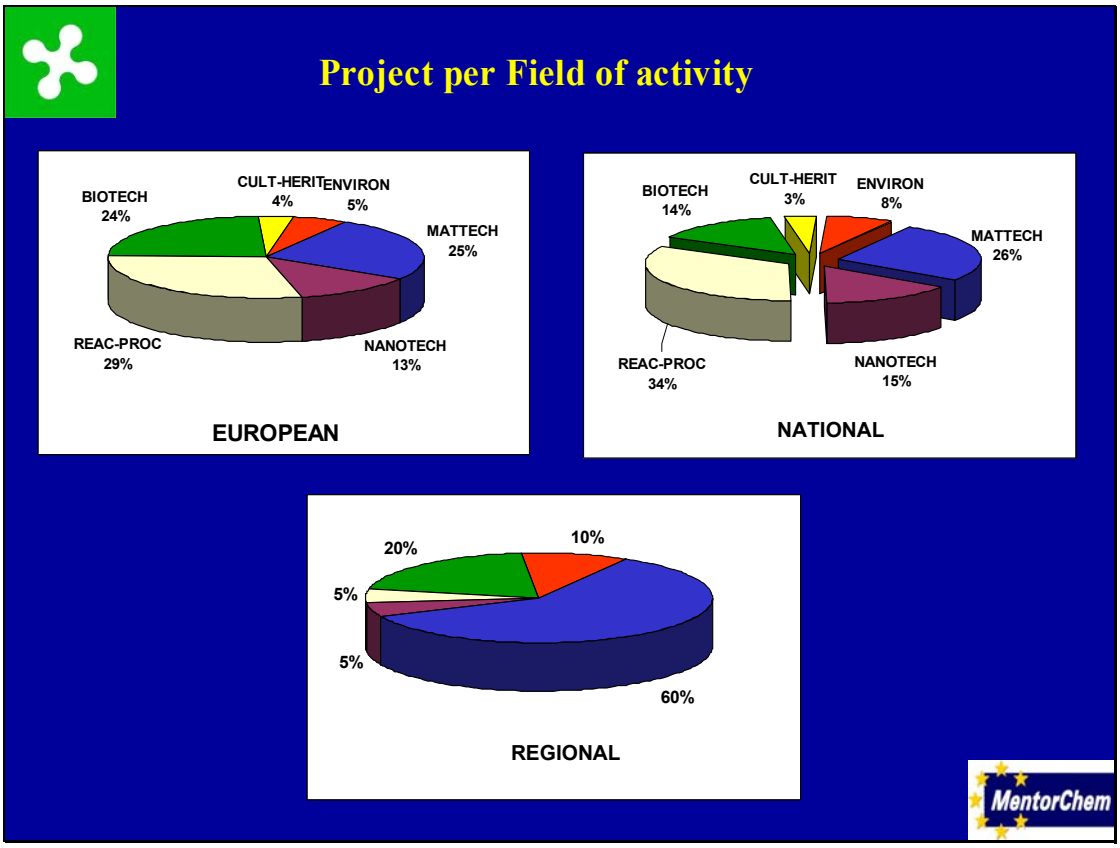
MentorChem

However, the peculiar competences in these main fields are neither evenly distributed throughout the institutions, nor rigorously concentrated in especially devoted research centres, but the situation is rather articulated, as many groups developed polyhedral expertise in different topics

MentorChem




Official running projects
REGIONAL
11%
EUROPEAN
29%
NATIONAL
60%
MentorChem


Project per Field of activity
BIOTECH
24%
CULT-HERIT
4%
ENVIRON
5%
MATTECH
25%
REAC-PROC
29%
NANOTECH
13%
EUROPEAN
BIOTECH
14%
CULT-HERIT
3%
ENVIRON
8%
MATTECH
26%
REAC-PROC
34%
NANOTECH
15%
NATIONAL
20%
10%
5%
5%
60%
REGIONAL
MentorChem

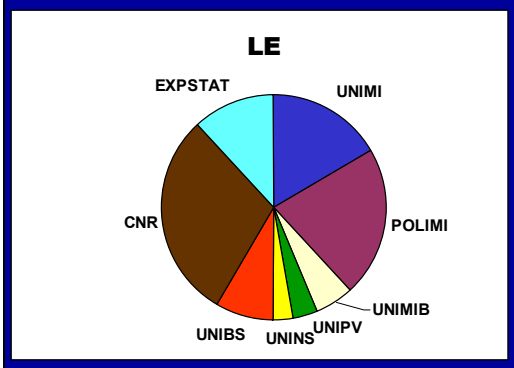
The available national and supra-national project themes do not cover completely the existing know-how that in Lombardy.

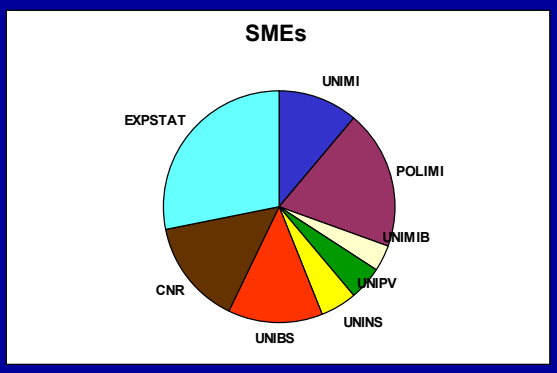
As an example, a great funding effort is devoted to crucial fields, such as the development of novel intelligent materials with improved physico-chemical properties or the enhancement of biotechnological processes enabling new synthetic routes.

Nevertheless, other key topics for a sustainable chemistry, such as the development of innovative environmentally and economically friendly processes to commodities and fine chemicals or the use of renewable raw materials instead of compounds from fossil origin, are often neglected and this could be a drawback in keeping a high level competitiveness in chemical industry.

MentorChem

Collaborations between research institutions and industry





The Technical University, the National Research Council and the four Experimental Stations all account for about two thirds of the partnerships with industries.

MentorChem

Research Competences in in the Principality of Asturias

A series of research groups of investigation in the University of Oviedo, fitted basically by Departments, were considered:

Dept. of Organic and Inorganic Chemistry, Dept. of Physical and Analytical Chemistry, Dept. of Physics, Dept. of Chemical Engineering and Environmental Technology, Dept. of Energy, Dept. of Materials Science and Metallurgical Engineering, Dept. of Construction and Manufacturing Engineering, Dept. of Exploitation and Mining.

The Technological Centres

INCAR – National Institute of Coal

Dept. of Science and Technology of Coal and Coal Products, Dept. of Environmental Chemistry, Dept. of Materials Chemistry, Dept. of Energy and Environmental Technology

SERIDA – Regional Department for Agricultural Food Production Research and Development, *Research Department*

A good part of the lines of research that follow the main research groups are in agreement with the European Platform of Sustainable Chemistry.

Materials Technology

- *Novel productive processes*
- *Sustainable technologies in the field of energy and environment*
- *Functional or intelligent materials*
- *Nanotechnology and nanoscience.*

Reaction and Process Design

- *Optimisation of the processes of production*
- *New Synthetic and Reactions routes*
- *Catalysis*

Biotechnology

- Biological Processes of Development,
- Biocatalytic Processes applied to the preparation of biologically interesting compounds.

Excellent research competences in the fields of fine chemistry and pharmacy in relation to biological and medical applications provides an industrial background for the production of advanced itermediate.

Bitterfeld und Wolfen, Leuna and Buna

Halle-Magdeburg-Quedlinburg/ Gatersleben

The research cluster "Development of active intermediates and special chemistry

In the field of basic research innovative approaches have been developed in the area of Material Chemistry for the development of "intelligent materials"

MentorChem

The universities, colleges and research institutes combine a strong research potential in Saxony-Anhalt. The new university plan will have a focus on chemical and environmental engineering to initiate a modernisation of basic and applied research.

To make its cooperation with organisations in the chemical and plastics processing industries even more effective, Fraunhofer IAP is currently constructing a demonstration centre for polymer synthesis and processing in the Central German Chemistry Triangle - at a traditional location for polymer chemistry, in Schkopau. This centre, with some 1000 square metres of technical space and 700 square metres of office and laboratory space, will be finished in 2005.

MentorChem

By creating this demonstration centre for polymer synthesis and processing in the ValuePark Schkopau, Fraunhofer IAP is creating a new model for effective innovation by businesses in the chemical and plastics processingindustries

The demonstration centre's particular specialism and its modern technical equipment reflect the structure of the chemistry park. Focusing on services for the value creation chain ranging from monomers to polymer components, Fraunhofer IAP and Fraunhofer IWMH are combining their expertise in polymer materials and process development and polymer processing under a single roof.

The objective is to optimise processes in both polymer production and component manufacturing.

With the support of Martin Luther University Halle-Wittenberg, modelling and simulation will be used to integrate new research approaches in the areas of process engineering and polymer reaction engineering.

Green Approach….

The three regions are at different stages of development and with different experiences in R&D.

However, the Census allows us to state that in the three regions most of the human resources are involved on the area that the European Technological Platform for a Sustainable Chemistry points out as prior: Materials Technology, Reaction and Process design and Biotechnology.

The peculiar competences in these main fields are neither evenly distributed throughout the institutions, nor rigorously concentrated in especially devoted research Centers, but the situation is rather articulated, as many groups developed polyhedral expertise in different topics.

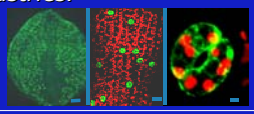
Interdisciplinary Center for Nanostructured Materials and Interfaces - (CIMAINA)

The University of Milano hosts relevant competence and facilities in the field of bio-nanotecnology and promotes a strong interdisciplinary collaboration among physicists, chemists and biologists.

Goal: apply frontier nanotechnology to understand cell and molecular pathways/mechanisms. Emphasis is particularly given to transcriptional regulation and cell cycle control.

Approach: use and develop state-of-the-art imaging techniques, among which single molecule microscopy, fluorescence detection, ect. These new approaches will be based on a deeper understanding of the chemical, physical and biological interactions that influence the assembling of structures at the nanoscale.

Outcomes: The Center will reach a world class standard. It will promote and develop basic and applied research activities in the area of Lombardia. This area in Italy is strategic for the industrial system of Southern Europe and it hosts the majority of the Italian industrial research activities and, in general, the high tech activity of small and medium size industries.



CENTRES OF EXCELLENCE - University of Milan

MentorChem

Centre for bio-molecular Interdisciplinary Studies and Industrial applications (CISI)

- *Focus on the collaboration between accademy and industry in the following areas:*
  - *molecular diagnostics*
  - *drug discovery*
  - *instruments development*
  - *laboratory automation*
  - *higher educational programs (PhD, Masters, etc.)*
- *Develop a technological platform in the following area:*
  - *Combinatorial chemistry, HTS and synthesis*
  - *Genomic, Proteomics and Mycroarray technologies*
  - *Bioinformatics and molecular modelling*
- *Offer service to research labs and biotechnology industries.*

CENTRES OF EXCELLENCE - University of Milan

MentorChem

In Saxony-Anhalt new technology Centre for nano-technology will be established in Halle (TGZ III) for joint research projects.

The University of Oviedo created the Biotechnology Institute of Asturias (IUBA), brings together diverse research groups.

With the same objectives the Thematic Association of Nanotechnology ATI has been founded at the University of Oviedo in relationship with the National Institute of the Coal (INCAR).

MentorChem

In the last ten years the support of the chemical research has been a very limited part of the activities produced by the European Union.

Chemistry has been only indirectly supported as part of new materials, of life science and of environment and quality of life.

Key role of the *European Technological Platform for a Sustainable Chemistry* as focus of chemical research in Europe

MentorChem

With regard to the Regional, National and European financed projects in which the research groups are involved, in several cases, the project titles do not match with the main competences described in the questionnaire by each research group.

This means that the available national and supra-national project themes do not cover completely the existing know-how.

Key topics for a sustainable chemistry, such as the development of innovative environmentally and economically friendly processes to commodities and fine chemicals or the use of renewable raw materials instead of compounds from fossil origin, are often neglected and this could be a drawback in keeping a high level competitiveness in chemical industry.

In order to really succeed to strongly support innovation in the chemical industry, in agreement with the priority of a *European Technological Platform for a Sustainable Chemistry*, the way to follow should be the implementation of a co-ordinated regional, national and European strategy that involves industry, public research community and governments.

- Joint research projects,
  participation to European support programmes,
  projects supported by Regions themselves
- Stronger relationships among companies and
  between them and Public research of different Regions
- Reinforce links between Universities and
  Public Research Centres
- Enhance benefits on the European territory

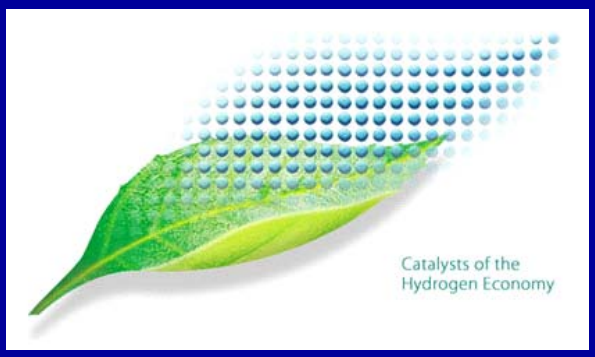
In metals, the mean free path of an electron at room temperature is ~10 to 100 nm. Hence, in a metallic particle with a diameter of ~100 nm or less, substantial deviations from bulk metallic properties are expected, and new size-dependent properties may emerge.

The melting temperature of gold decreases drastically with size for spheres smaller than 20 nm. At diameters from ~10 to 100 nm, the spheres appear red, not gold, when well dispersed, as in stained glass.

Red gold. Stained-glass window in Milan Cathedral.

Niccolò da Varallo between 1480 and 1486

MentorChem



Acta and CNR (ICCOM-ISTM) has made a nanotechnology breakthrough which will enable fuel cell products to expand from early adopters to the mass consumer market. The fuel cell industry is forecast to grow at nearly 70% per annum but at present there are commercial barriers that are preventing its full potential from being realised. We have developed a new family of catalysts that use low cost materials, work at low temperatures, enable the use of cheap, safe and environmentally friendly fuels, and solve other technical issues, thereby enabling fuel cells to be transformed into mass market products.

MentorChem

10. IPR Helpdesk: Supporting EU R&D Cooperation

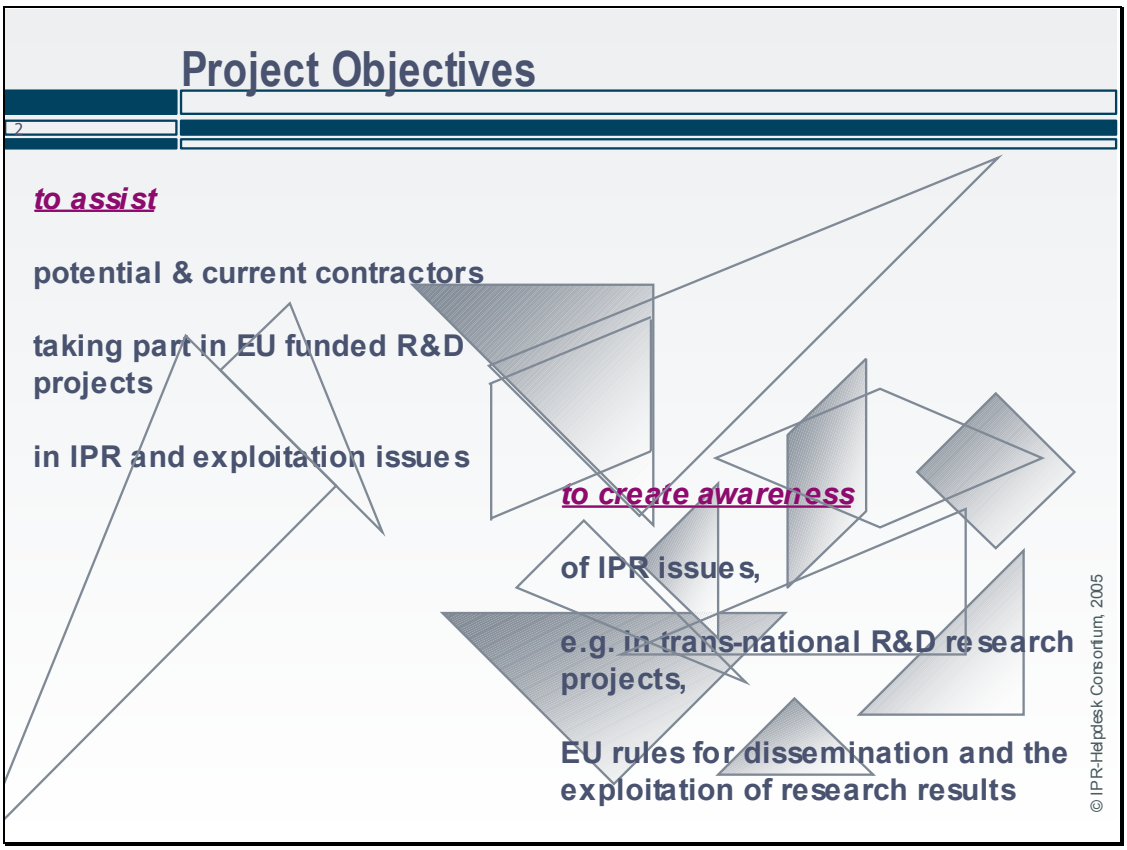
Agnieszka Krochmal-Wegrzyn
IPR Helpdesk Project

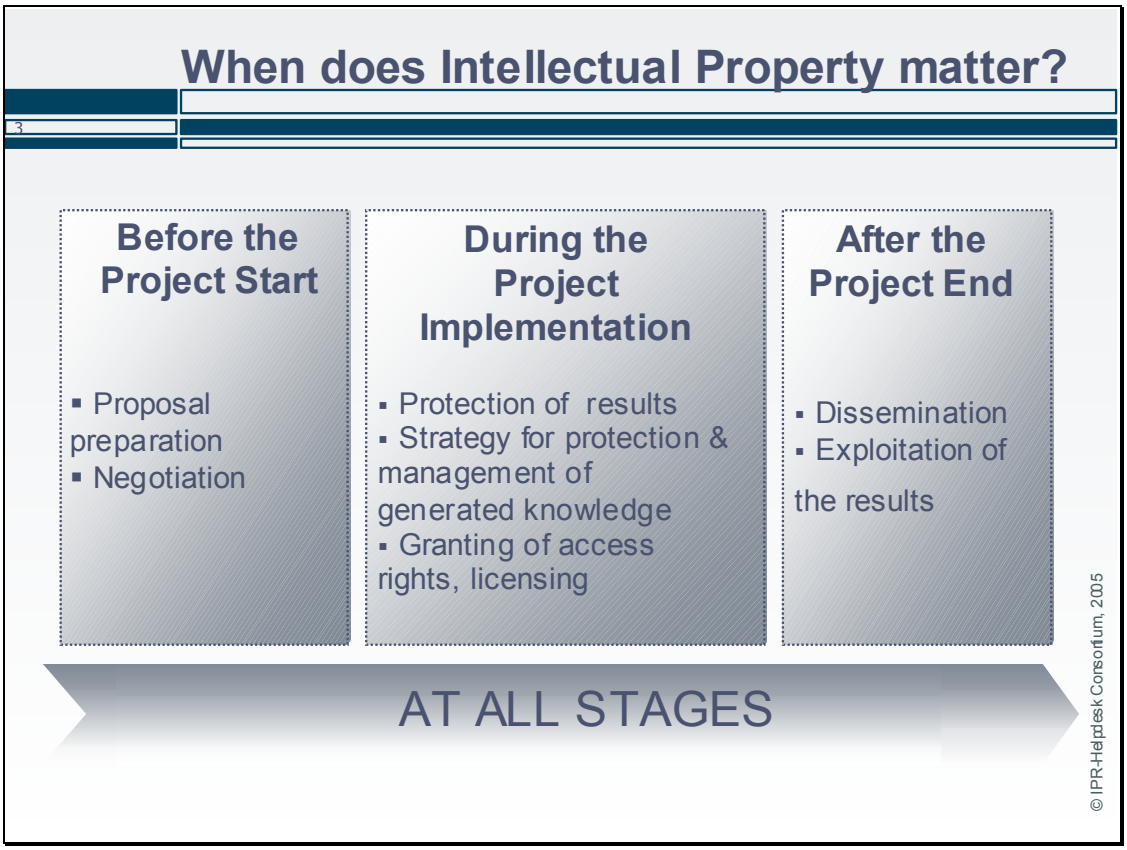
IPR Helpdesk

Discover the world of the IPR-Helpdesk

Agnieszka Krochmal-Wegrzyn
agnieszka.krochmal@uj.edu.pl

A project funded by the European Commission, DG Enterprise and Industry, under the 6th Framework Programme of the European Union


Project Objectives
2
to assist
potential & current contractors
taking part in EU funded R&D projects
in IPR and exploitation issues
to create awareness
of IPR issues,
e.g. in trans-national R&D research projects,
EU rules for dissemination and the exploitation of research results
© IPR-Helpdesk Consortium, 2005


When does Intellectual Property matter?
3
Before the Project Start
▪ Proposal preparation
▪ Negotiation
During the Project Implementation
▪ Protection of results
▪ Strategy for protection & management of generated knowledge
▪ Granting of access rights, licensing
After the Project End
▪ Dissemination
▪ Exploitation of the results
AT ALL STAGES
© IPR-Helpdesk Consortium, 2005

We help you manage intangible project assets

4

- Dissemination
- Settlement of disputes
- Licensing
- Confidentiality
- Access Rights
- Ownership
- Patenting

Welcome to the world of the IPR-Helpdesk

5

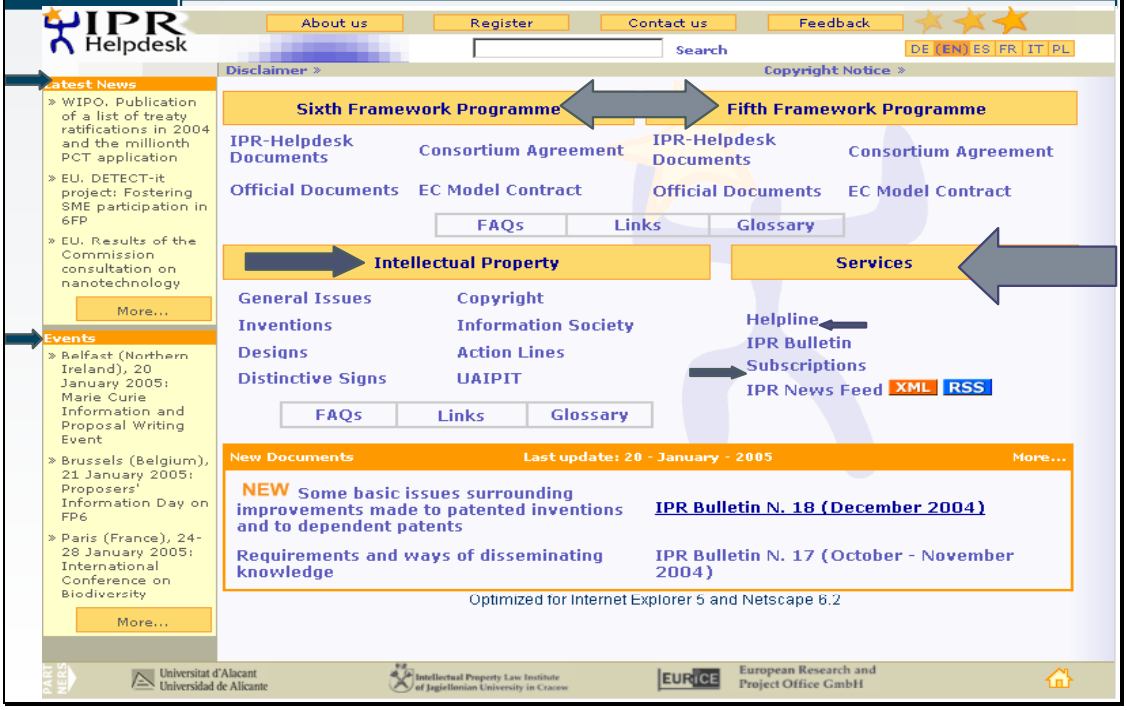
Services of the IPR-Helpdesk

6

- Helpline
- Website
- eNewsletter
- Bulletin
- Training Actions

www.ipr-helpdesk.org

7



Helpline

8

- Expert & personalised advice in 3 working days per email
- in the following 6 languages: English, Spanish, French, Polish, German, Italian
- and free of charge

eNewsletter

9

- Daily, weekly, quarterly subscription to:
- IPR-Helpdesk documents, News & Events, IPR Bulletin
- in 6 languages

IPR-Bulletin

10

- Expert articles ,
- success stories,
- best practice reports
- published bi-monthly –
- in 6 languages

How to contact the IPR-Helpdesk?

11

Project Management Office

Universidad de Alicante
Edificio Germán Bernácer
P.O. Box 99
E-03080 Alicante

Spain

fon +34 96 590 97 18
fax +34 96 590 97 15

email ipr-helpdesk@ua.es

Representative Office

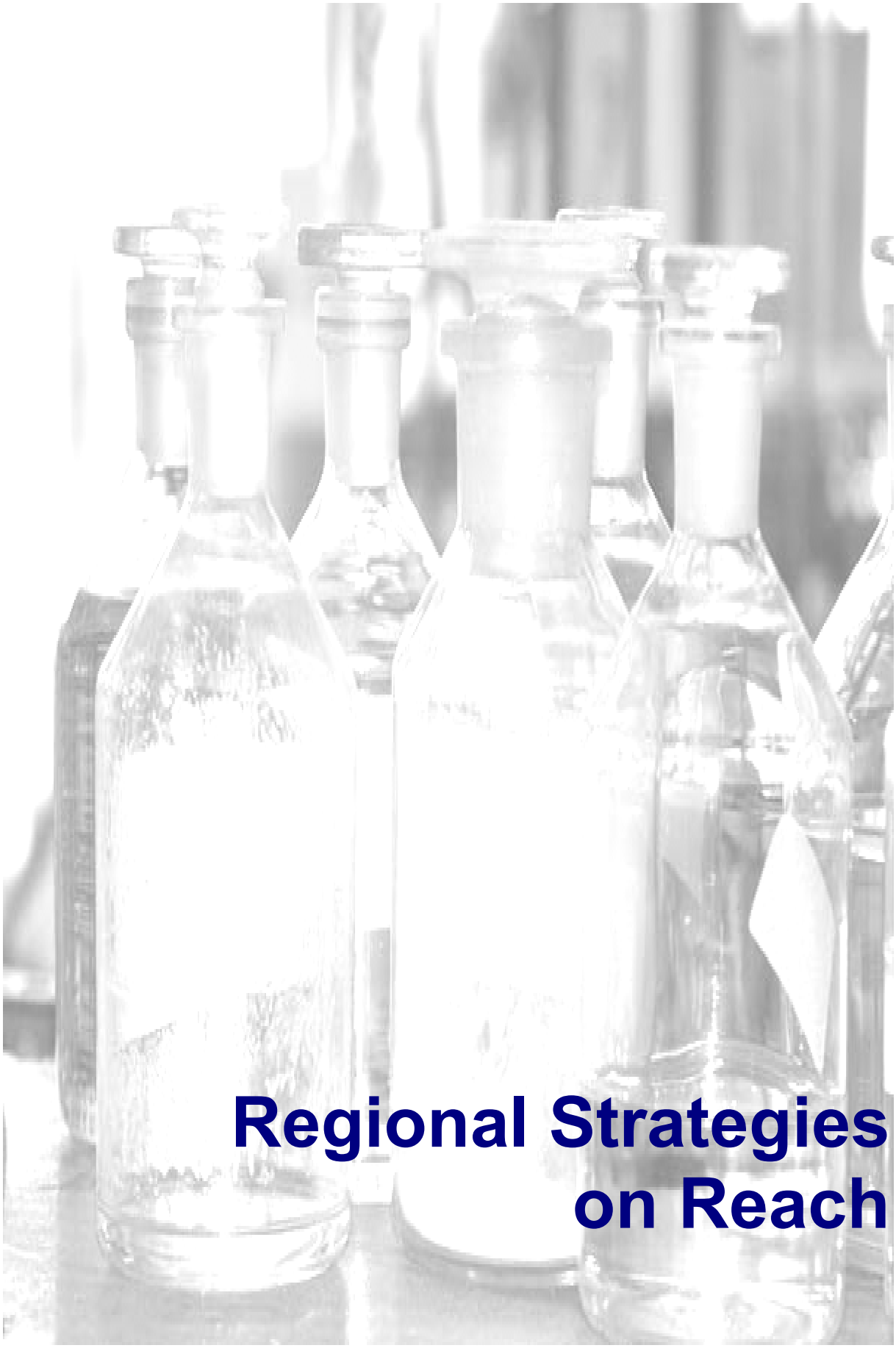
98, Rue du Trône
B-1050 Brussels

Belgium

fon +32 (0) 2 50 00 979
fax +32 (0) 2 50 00 980

email ipr-helpdesk@ua.es


IPR
Helpdesk
Make it your Point of Reference
www.ipr-helpdesk.org



Regional Strategies on Reach

11. Go Reach – Presentation of strategies to react on the challenge of REACH

Giampaolo Amadori
Regione Lombardia

R.E.A.CH Characteristics

REGISTRATION — Producers / Importers will have to collect and deliver to the central Agency information on chemicals produced / imported for more than one ton /year, ensuring their safe use and management

EVALUATION — A central Agency will evaluate the reports and potential high-risk chemical substances and will require deeper information to companies (substance-tailored testing)

AUTHORISATION — If risk is under control, the central Agency gives permission of using hazardous substances that rise concern. Substances of very high concern can be used either in a way where the risks are adequately controlled or are replaced by suitable alternative substances / technologies

RESTRICTION — Restrictions on the manufacturing, marketing and use of substances can be imposed if high risk concern arises

EUROPEAN CHEMICALS AGENCY

Creation of an European Agency to manage all technical, administrative and scientific aspects of the R.E.A.CH Regulation

Objective of GO-REACH

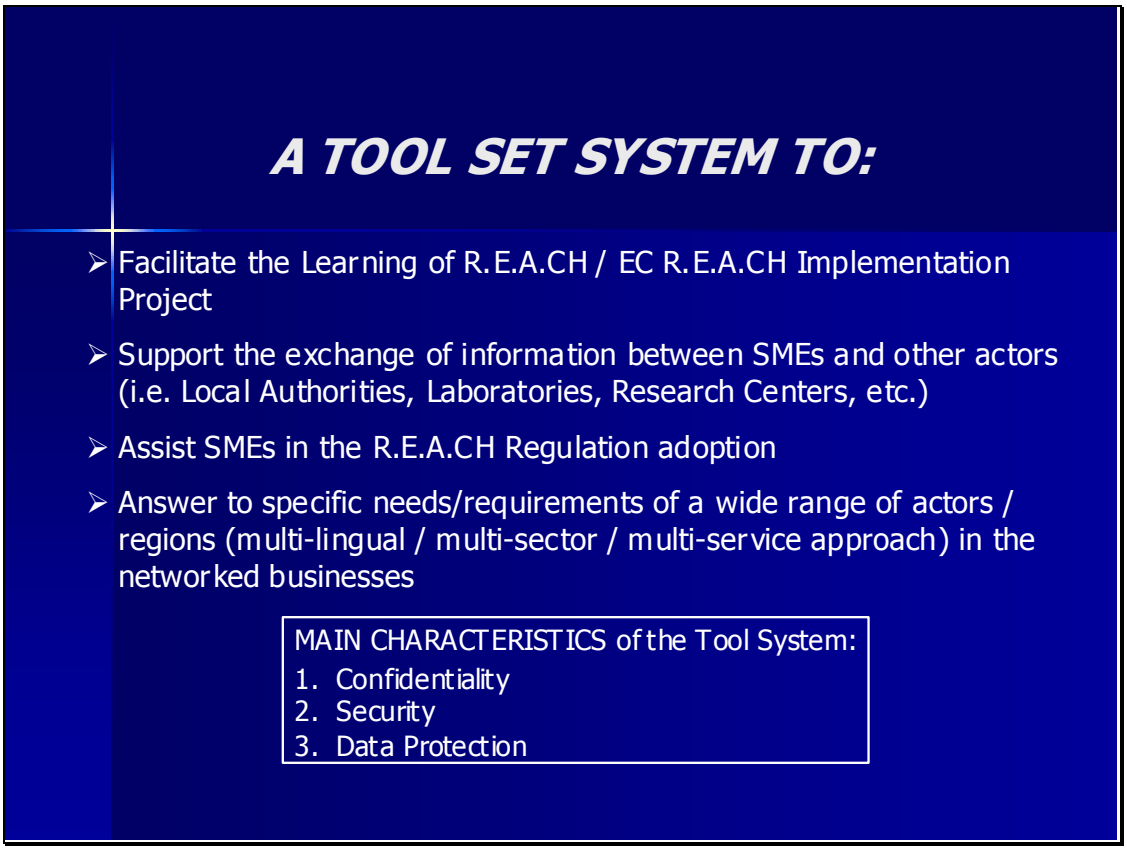
"A User Support System to Approach REACH"

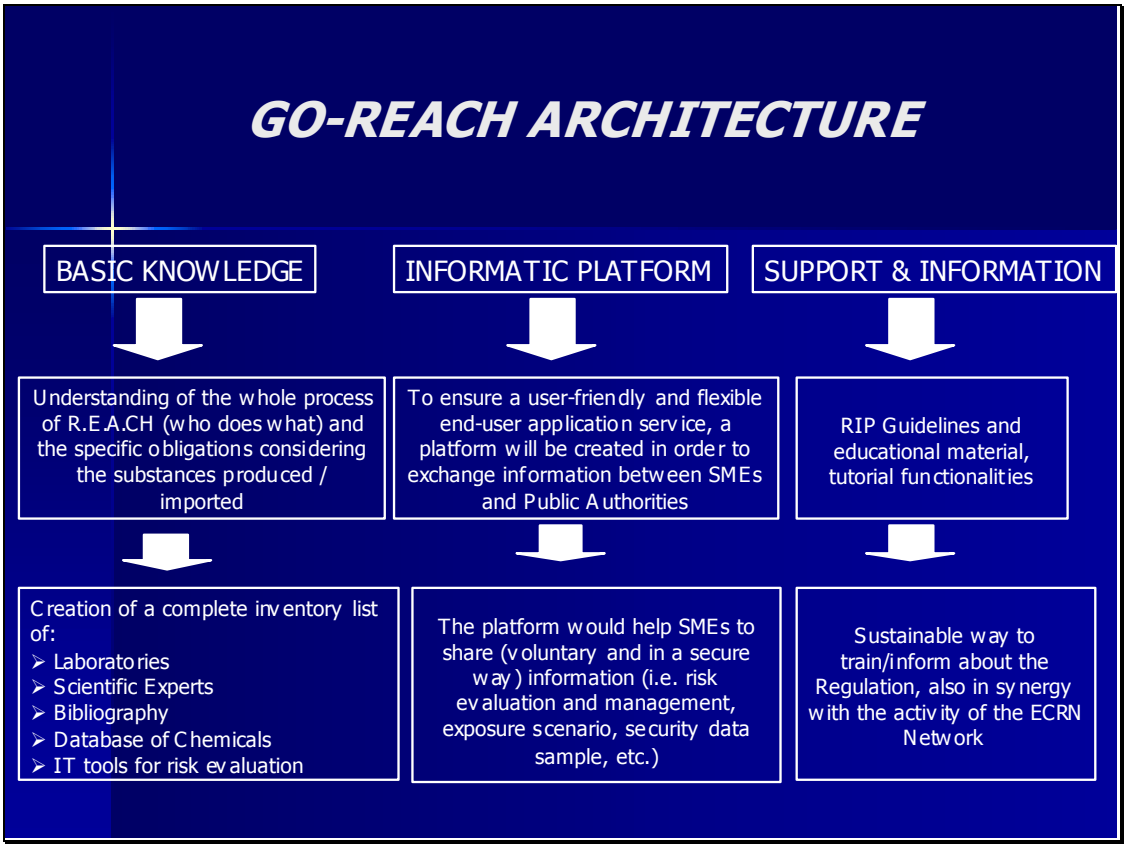
Development of a Tool Set System to help the Industrial System in the implementation of the R.E.A.CH Regulation

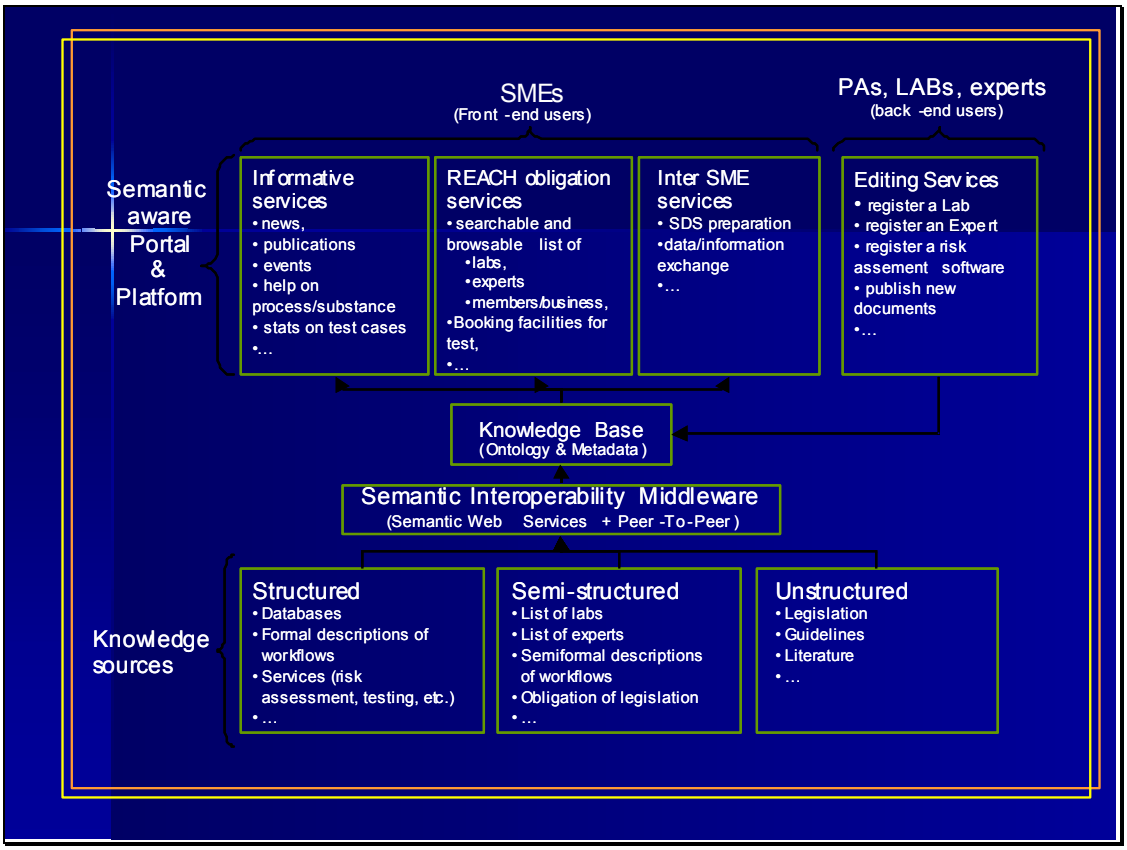
Target: Chemicals Producers and Downstream Users with a particular attention to SMEs

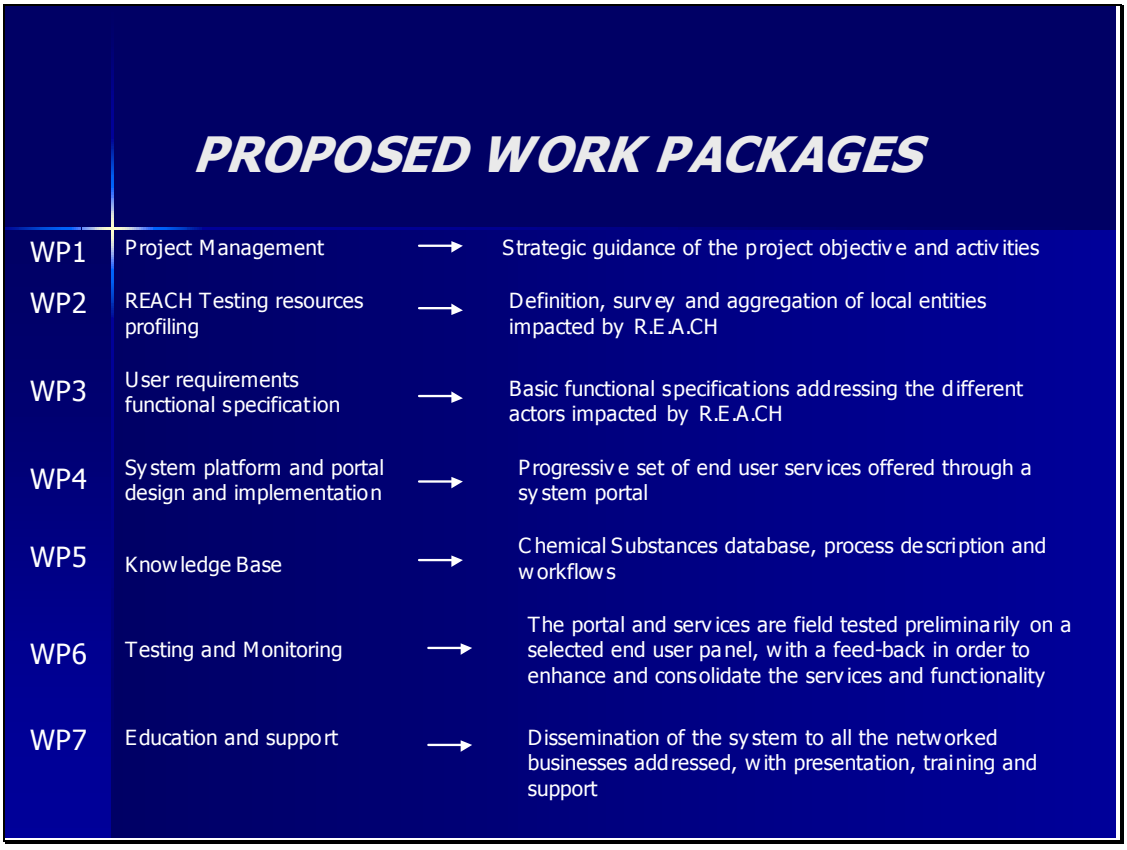
SMEs will be directly impacted by the R.E.A.CH Regulation mainly in:

- Lack of Information
- Lack of Training
- Add. costs to adopt the Regulation


A TOOL SET SYSTEM TO:
Facilitate the Learning of R.E.A.CH / EC R.E.A.CH Implementation Project
Support the exchange of information between SMEs and other actors (i.e. Local Authorities, Laboratories, Research Centers, etc.)
Assist SMEs in the R.E.A.CH Regulation adoption
Answer to specific needs/requirements of a wide range of actors / regions (multi-lingual / multi-sector / multi-service approach) in the networked businesses
MAIN CHARACTERISTICS of the Tool System:
1. Confidentiality
2. Security
3. Data Protection


GO-REACH ARCHITECTURE
BASIC KNOWLEDGE
INFORMATIC PLATFORM
SUPPORT & INFORMATION
Understanding of the whole process of R.E.A.CH (who does what) and the specific obligations considering the substances produced / imported
To ensure a user-friendly and flexible end-user application service, a platform will be created in order to exchange information between SMEs and Public Authorities
RIP Guidelines and educational material, tutorial functionalities
Creation of a complete inventory list of:
Laboratories
Scientific Experts
Bibliography
Database of Chemicals
IT tools for risk evaluation
The platform would help SMEs to share (voluntary and in a secure way) information (i.e. risk evaluation and management, exposure scenario, security data sample, etc.)
Sustainable way to train/inform about the Regulation, also in synergy with the activity of the ECRN Network


SMEs
(Front -end users)
PAs, LABs, experts
(back -end users)
Semantic aware Portal & Platform
Informative services
• news,
• publications
• events
• help on process/substance
• stats on test cases
•...
REACH obligation services
• searchable and browsable list of
•labs,
•experts
•members/business,
•Booking facilities for test,
•...
Inter SME services
• SDS preparation
•data/information exchange
•...
Editing Services
• register a Lab
• register an Expert
• register a risk assement software
• publish new documents
•...
Knowledge Base
(Ontology & Metadata)
Semantic Interoperability Middleware
(Semantic Web Services + Peer -To-Peer)
Knowledge sources
Structured
• Databases
• Formal descriptions of workflows
• Services (risk assessment, testing, etc.)
• ...
Semi-structured
• List of labs
• List of experts
• Semiformal descriptions of workflows
• Obligation of legislation
• ...
Unstructured
• Legislation
• Guidelines
• Literature
• ...


PROPOSED WORK PACKAGES
WP1 Project Management → Strategic guidance of the project objective and activities
WP2 REACH Testing resources profiling → Definition, survey and aggregation of local entities impacted by R.E.A.CH
WP3 User requirements functional specification → Basic functional specifications addressing the different actors impacted by R.E.A.CH
WP4 System platform and portal design and implementation → Progressive set of end user services offered through a system portal
WP5 Knowledge Base → Chemical Substances database, process description and workflows
WP6 Testing and Monitoring → The portal and services are field tested preliminarily on a selected end user panel, with a feed-back in order to enhance and consolidate the services and functionality
WP7 Education and support → Dissemination of the system to all the networked businesses addressed, with presentation, training and support

Consortium:

Representatives from different regional-sectorial realities:

Competence Centers (Universities, Agencies, Industry, etc.), Regional Authorities, Industrial Associations, Service Companies, etc.

1- Selected partners in the project proposal

2-Enlarged endorsement and users across the regions

Agenda:c

MAY '05	Consolidation of the Partnership
MAY – JULY '05	Development of the Proposal (EC IST5-networked businesses specs.)
SEPTEMBER '05	Proposal Submission to EC

Proposal Contact reference:

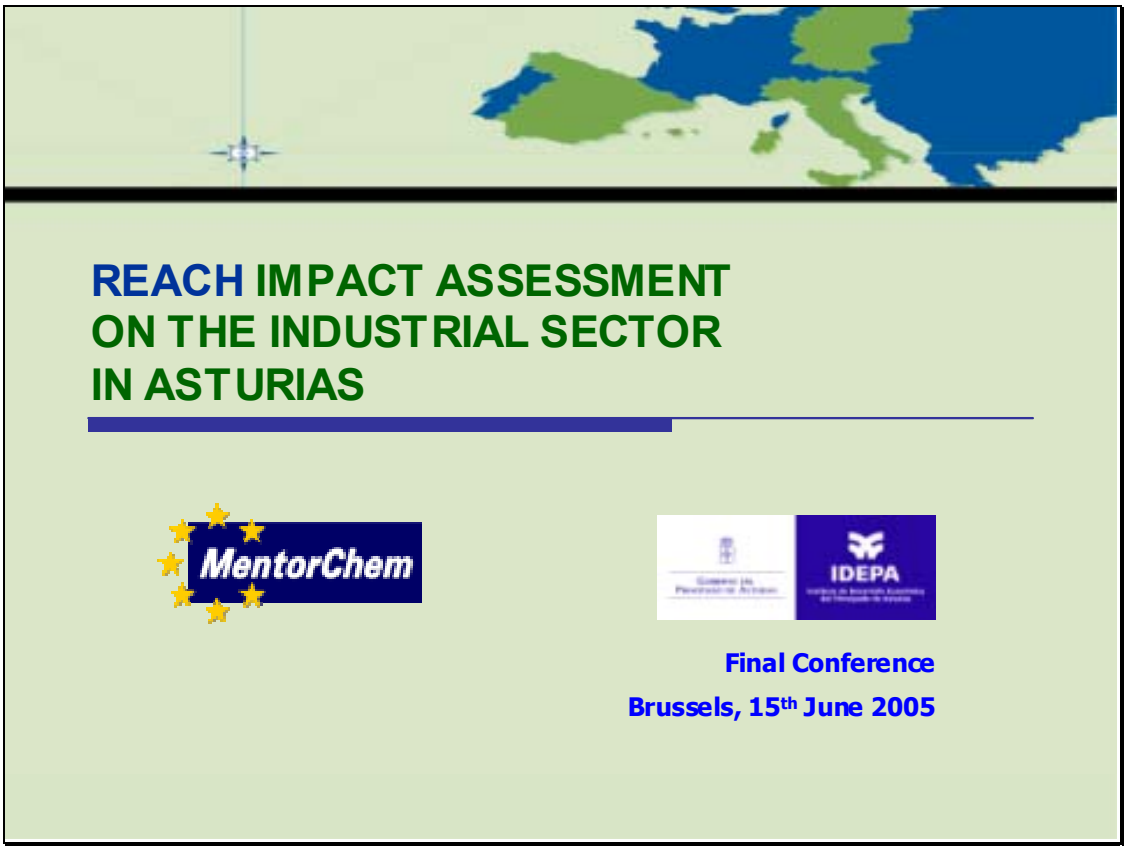
Alberto Savoldelli
Politecnico Milano

Alberto.savoldelli@polimi.it
+39 335 6769838

Thank You for Your Attention

12. Regional impact of Reach in Asturias

Maria Jose Suarez
IDEPA Asturias



Context

June 1999 : Chemicals Legislation Review initiated.

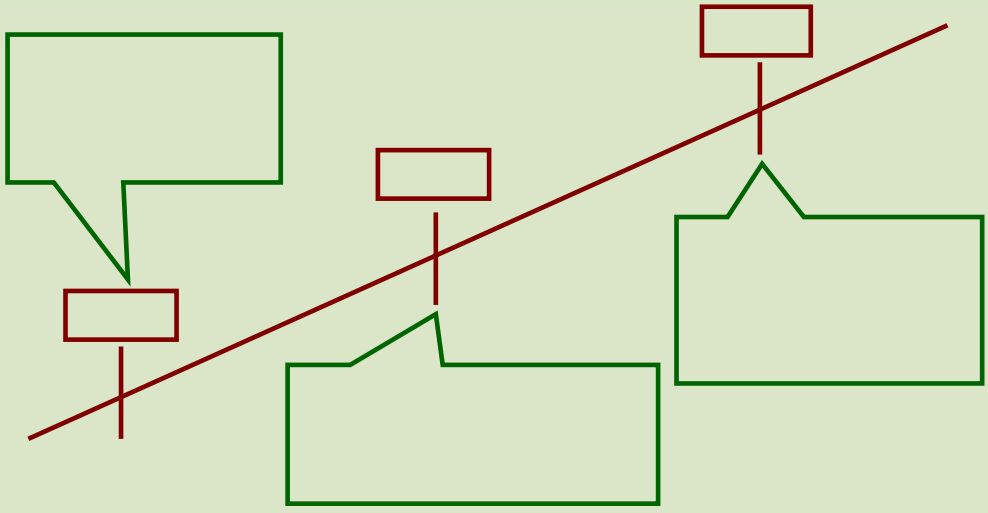
February 2001: White Paper about Chemical Substances and Preparations.

May 2003: First REACH Draft. Internet consulting.

July 2003: REACH, more than 6 400 remarks.

October 2003: First REACH Regulation Draft approved.

Context (2)



Context (3)

From 1981:

Distinction between so-called "Existing" Chemicals (EINECS – 100.000 substances – closed) and "New" Chemicals (ELINCS – 3.700 substances – open).

Troubles:

Barrier to New Chemicals Assessment, due to highly demanding analytical requirements.

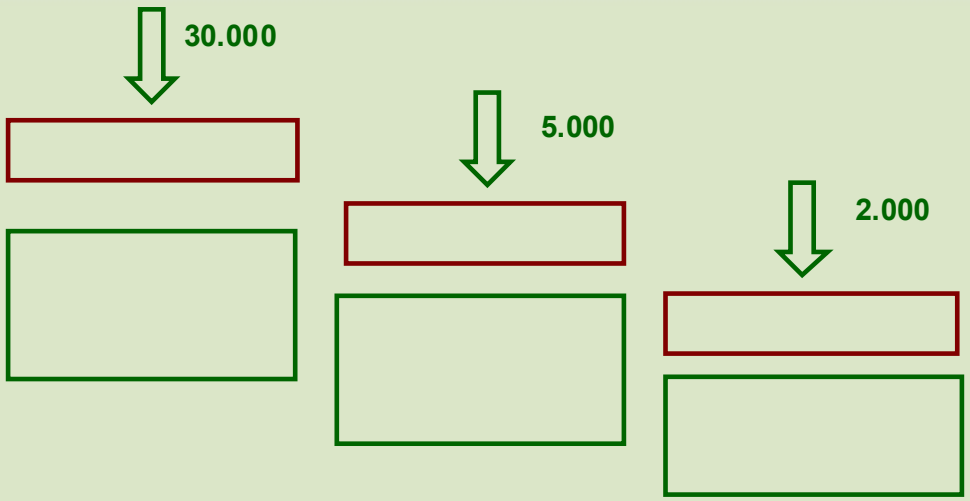
Existing Chemicals Risks Assessment process excessively slow and complex.

Solution: REACH

MentorChem

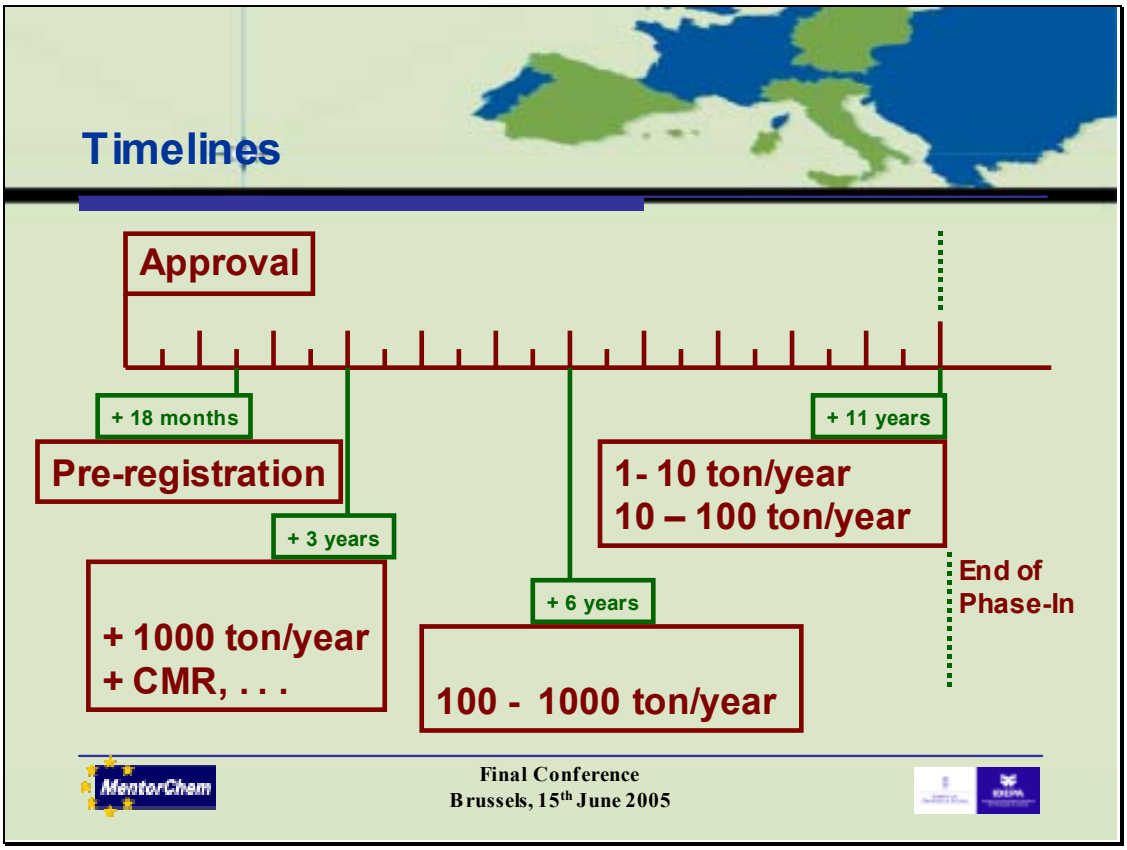
Final Conference
Brussels, 15th June 2005

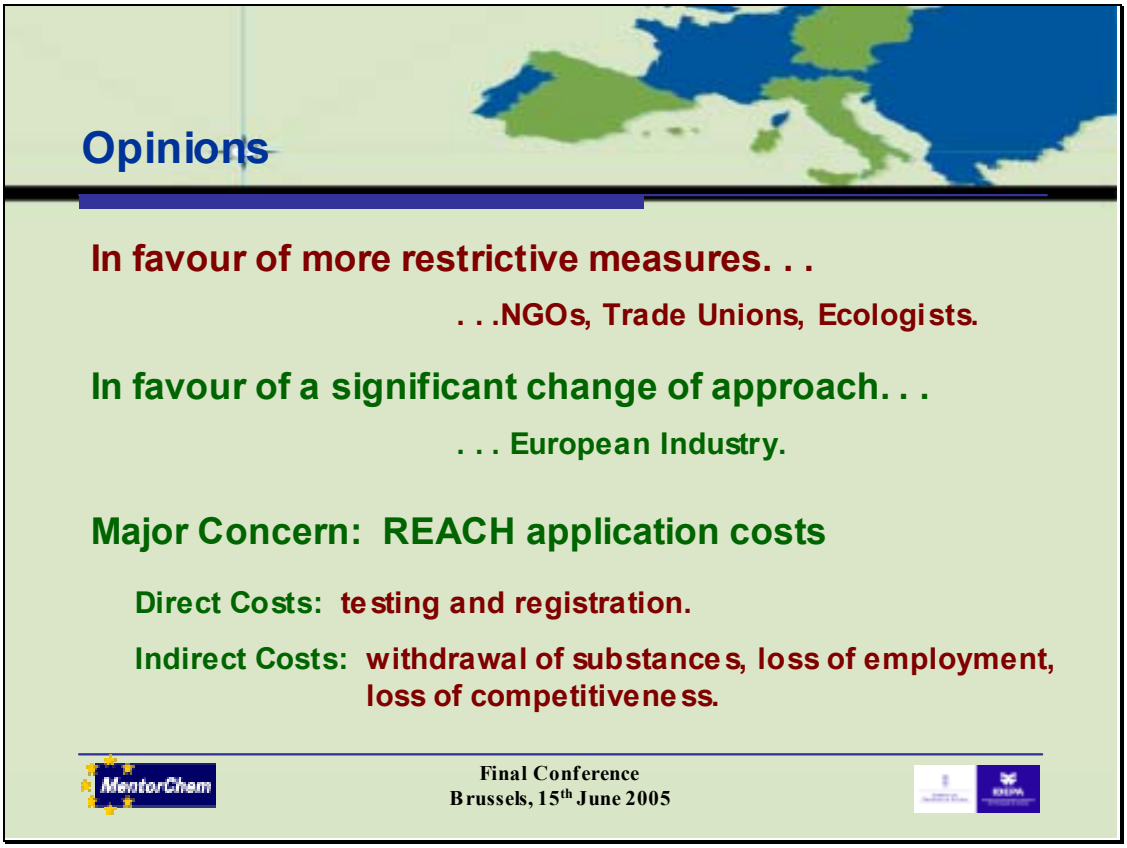
Basis



MentorChem

Final Conference
Brussels, 15th June 2005


Timelines
Approval
+ 18 months
Pre-registration
+ 3 years
+ 1000 ton/year
+ CMR, . . .
+ 6 years
100 - 1000 ton/year
+ 11 years
1- 10 ton/year
10 – 100 ton/year
End of
Phase-In
MentorChem
Final Conference
Brussels, 15th June 2005


Opinions
In favour of more restrictive measures. . .
. . .NGOs, Trade Unions, Ecologists.
In favour of a significant change of approach. . .
. . . European Industry.
Major Concern: REACH application costs
Direct Costs: testing and registration.
Indirect Costs: withdrawal of substances, loss of employment,
loss of competitiveness.
MentorChem
Final Conference
Brussels, 15th June 2005

Economic impact in Asturias

Methodology:

1. 329 companies - from asturian chemical industry - consulted.
2. Number of chemical substances and preparations produced or imported.
3. Application of testing and registration standard costs.
4. Adjustment factors, in order to set a range.
5. Estimation of the economic impact in Asturias

Economic impact in Asturias

Direct Costs Estimation:

	Other reports	AIQPA report
1 - 10 ton/year	15.000 a 35.000	20.000
10- 100 ton/year	150.000 a 350.000	200.000
100-1000 ton/year	350.000 a 550.000	400.000
1000 ton/year	400.000 a 1.000.000	650.000

Economic impact in Asturias

Indirect Costs Estimation:

Econometric Models:

- Withdrawal of substances
- Effects on downstream users
- Loss of employment
- Loss of competitiveness

Estimated as multiplier of the direct costs:

Between (x 2,3) and (x 650)

AIQPA Report: between (x 2) and (x 5)

Economic impact in Asturias

Results:

1 - 10 ton/year	2
10- 100 ton/year	6
100-1000 ton/year	4
1000 ton/year	22

1 - 10 ton/year	5
10- 100 ton/year	6
100-1000 ton/year	5
1000 ton/year	9

Economic impact in Asturias

Results:

Substances produced in Asturias by SMEs :

1 - 10 ton/year	2
10- 100 ton/year	6
100-1000 ton/year	4
1000 ton/year	12

⇨ 70,6 %

Substances imported to Asturias by SMEs:

1 - 10 ton/year	4
10- 100 ton/year	4
100-1000 ton/year	3
1000 ton/year	3

⇨ 56,0 %

MentorChem

Final Conference
Brussels, 15th June 2005

Economic impact in Asturias

Results:

1 - 10 ton/year	201
10- 100 ton/year	116
100-1000 ton/year	49
1000 ton/year	54

⇨

	Upper limit (50 %)	Lower limit (5 %)
1 - 10 ton/year	100	10
10- 100 ton/year	58	6
100-1000 ton/year	24	2
1000 ton/year	27	3

1 - 10 ton/year	10
10- 100 ton/year	1
100-1000 ton/year	3
1000 ton/year	7

⇨

	Upper limit (50 %)	Lower limit (5 %)
1 - 10 ton/year	5	1
10- 100 ton/year	1	0
100-1000 ton/year	2	0
1000 ton/year	4	0

MentorChem

Final Conference
Brussels, 15th June 2005

Economic impact in Asturias

Results:

Testing and Registration Costs and Direct costs:

	Substances and preparations. Upper limit	Cost by group (Euros)	Testing and registration costs (thousand Euros)	Direct costs (thousand Euros)
1 - 10 ton/year	112	20.000	2.240	2.947
10- 100 ton/year	71	200.000	14.200	18.684
100-1000 ton/year	35	400.000	14.000	18.421
1000 ton/year	62	650.000	40.300	53.026
CMR , PBT , vPvB	13	150.000	1.950	2.566

Consortia Formation (- 1 %) : 94.688

MentorChem

Final Conference
Brussels, 15th June 2005

Economic impact in Asturias

Results:

	Substances and preparations. Lower limit	Cost by group (euros)	Testing and registration costs (thousand Euros)	Direct costs (thousand Euros)
1 - 10 ton/year	18	20.000	360	474
10- 100 ton/year	18	200.000	3.600	4.737
100-1000 ton/year	11	400.000	4.400	5.789
1000 ton/year	34	650.000	22.100	29.079
CMR , PBT , vPvB	2	150.000	300	395

MentorChem

Final Conference
Brussels, 15th June 2005

Economic impact in Asturias

Results:

SMEs direct costs (less than 250 employees) :

81,1 %

MicroSMEs direct costs (less than 10 employees):

13,5 %

Economic impact in Asturias

Results:

First scenario (upper limit)	
(pesimistic approach) (thousand Euros)	(optimistic approach) (thousand Euros)
473.441	181.725

Second scenario (lower limit)	
(pesimistic approach) (thousand Euros)	(optimistic approach) (thousand Euros)
200.345	76.901

Economic impact in Asturias

Economic Impact:

	(pesimistic approach) (thousand Euros)	(optimistic approach) (thousand Euros)
Direct costs	94.688	38.450
Divided by 11 years	8.608	3.495
Impact:		
On Asturian chemical industry GVA	4, 0 %	1, 6 %
On Asturian industry GVA	0, 2 %	0, 1 %
On Asturian GDP	0, 05 %	0, 02 %

Economic impact in Asturias

Economic Impact (2):

	(pesimistic approach) (thousand Euros)	(optimistic approach) (thousand Euros)
Direct + Indirect costs	473.441	76.901
Impact:		
On Asturian industry GVA	13, 7 %	2, 2 %
On Asturian GDP	2, 9 %	0, 5 %

Economic impact in Asturias

Opinions of the Polled Managers:

(71 %) Little workability of the system (unclear, cumbersome...)

(41 %) Volume is not a risk indicator

(32 %) Registration by manufacturer instead of by substance makes no sense

(42 %) Concerned about the impact of registration aditional costs, on products marketed outside the European Union

Economic impact in Asturias

Conclusions:

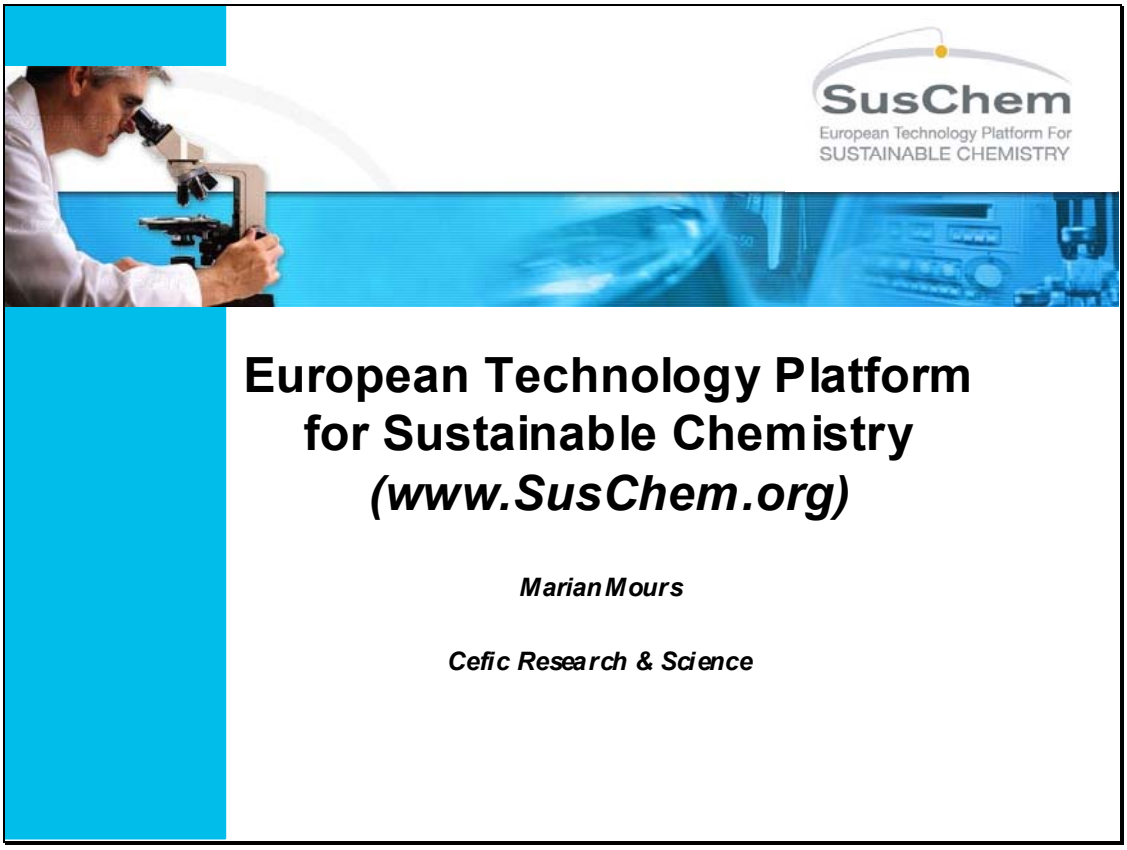

THANK YOU FOR YOUR ATTENTION
Cestec
isw
IDEPA
MentorChem
MentorChem
Final Conference
Brussels, 15th June 2005

Round Table

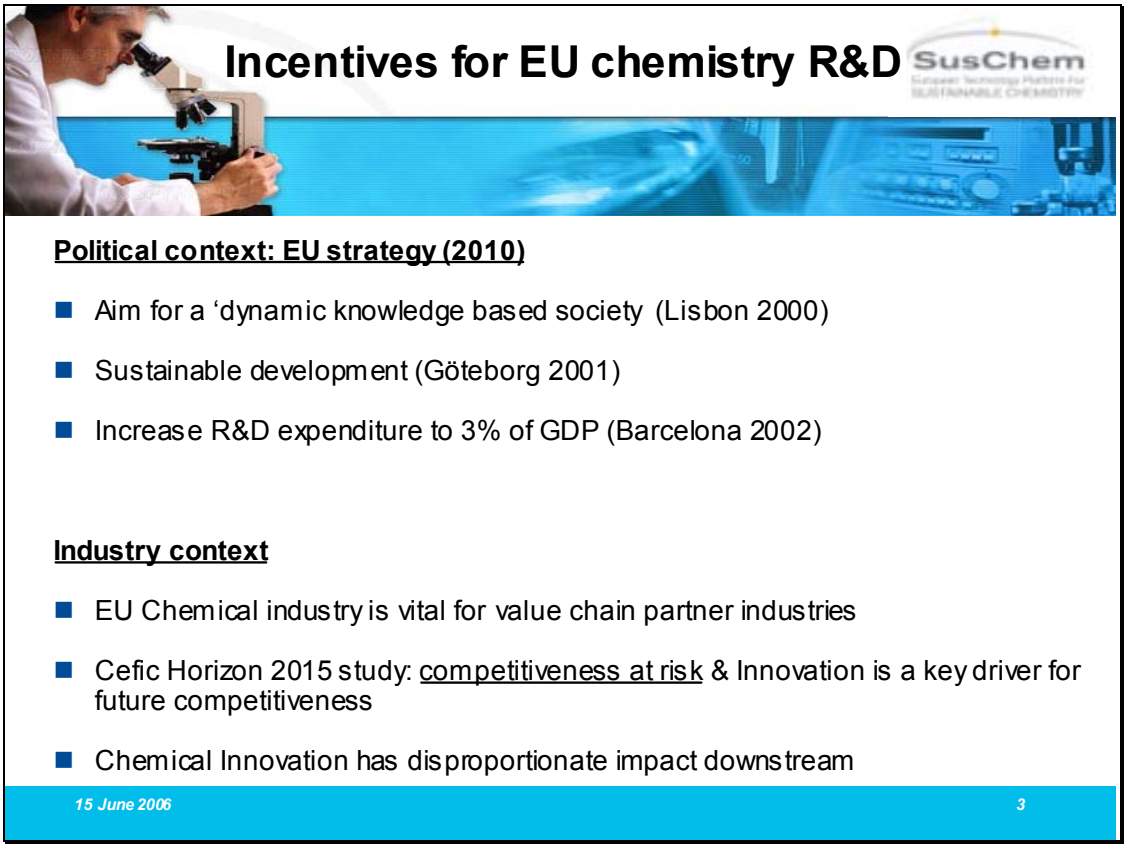
The European Technology Platform”Sustainable Chemistry” perspectives of Europe an Research Policy for the chemical sector and challenges for the regions

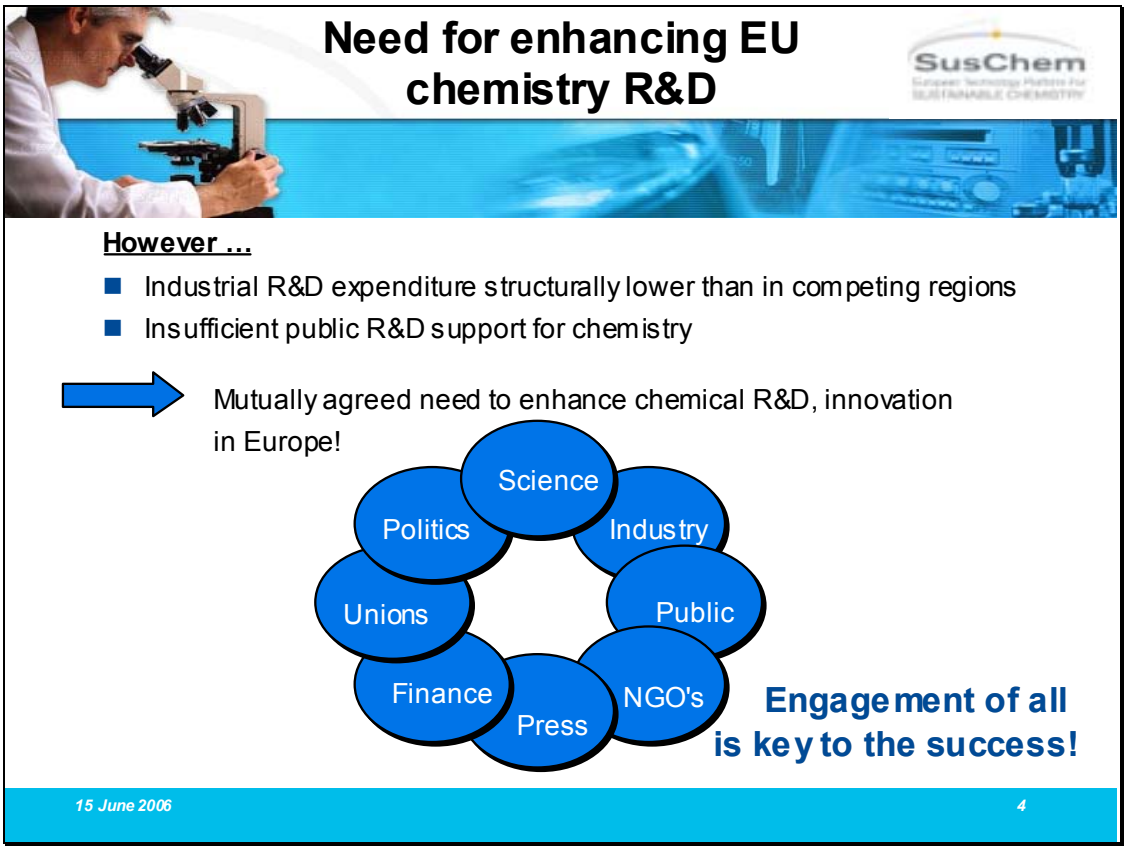
12. European Technology Platform "Sustainable Chemistry" – Introduction

Dr. Marian Mours
European Chemical Industry Council, CEFIC




Humanity's Top Ten Problems
for next 50 years
SusChem
ENERGY
WATER
FOOD
ENVIRONME
POVERTY
TERRORISM
DISEASE
EDUCATIO
DEMOCRA
POPULATION
Clean, clever & competitive
2000 6 Billion People
2050 8-10 Billion People
Source: Prof. R.E. Smalley, „Our Energy Challenge", Columbia University, NYC, 23 September 2003
15 June 2006
2


Incentives for EU chemistry R&D
SusChem
Political context: EU strategy (2010)
Aim for a 'dynamic knowledge based society (Lisbon 2000)
Sustainable development (Göteborg 2001)
Increase R&D expenditure to 3% of GDP (Barcelona 2002)
Industry context
EU Chemical industry is vital for value chain partner industries
Cefic Horizon 2015 study: competitiveness at risk & Innovation is a key driver for future competitiveness
Chemical Innovation has disproportionate impact downstream
15 June 2006
3


Need for enhancing EU chemistry R&D
SusChem
However …
Industrial R&D expenditure structurally lower than in competing regions
Insufficient public R&D support for chemistry
Mutually agreed need to enhance chemical R&D, innovation in Europe!
Science
Politics
Industry
Unions
Public
Finance
Press
NGO's
Engagement of all is key to the success!
15 June 2006
4


European Technology Platforms
SusChem
June 2004 Commission publishes FP7 outline (COM (2004) 353) & ETP discussion document:
ETP's are 1 of 6 priorities for FP7, and are a framework to unite stakeholders around:
- A common vision and approach for the technology concerned
- Definition of a Strategic Research Agenda (SRA)
- An implementation plan for the SRA, mobilisation of a critical mass of research and innovation effort
European Technology Platform for Sustainable Chemistry is one of these initiatives
EUROPEAN COMMISSION
Community research
TECHNOLOGY PLATFORMS
from Definition to Implementation of a Common Research Agenda
15 June 2006
5

Final communication on FP7

- The 7th Framework Programme is tailored to better meet industry's needs.
- Where industrially relevant, the definition of work programmes will draw on the strategic research agendas developed by industry-led technology platforms. These strategic research agendas, presenting the European dimension of research challenges, also influence national research programmes. Furthermore, by always looking at the market potential of new inventions, they help to overcome Europe's weakness in commercialising the results of research.

15 June 2006 6

Objectives and Scope of SusChem

Two major objectives:

1. Shaping the research agenda and innovation framework conditions for a sustainable EU (chemical) industry
2. Shaping the chemistry agenda to make Sustainable Development (in the wider industrial sense) happen in Europe

Scope

- Technology areas:
  1. Industrial (or white) biotechnology
  2. Materials technology
  3. Reaction and Process Design
- Horizontal issues
  - Generic barriers and constraints to chemistry innovation in Europe

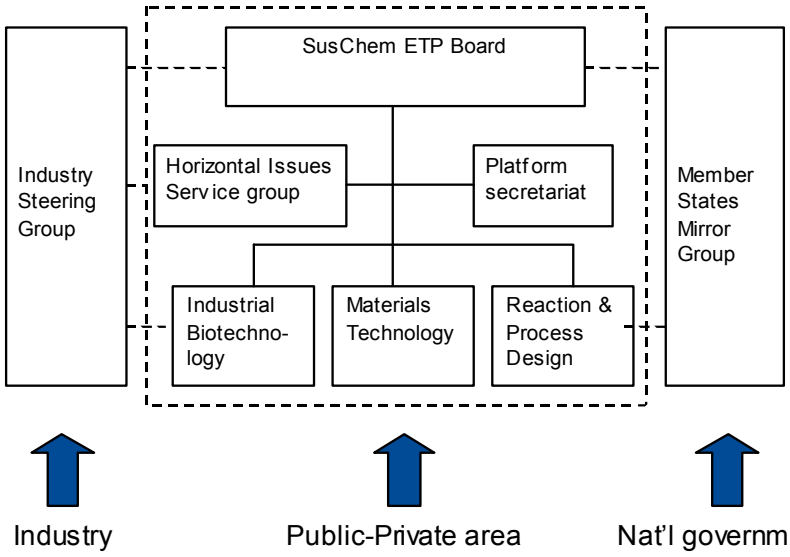
15 June 2006 7

The vision for 2025 and beyond

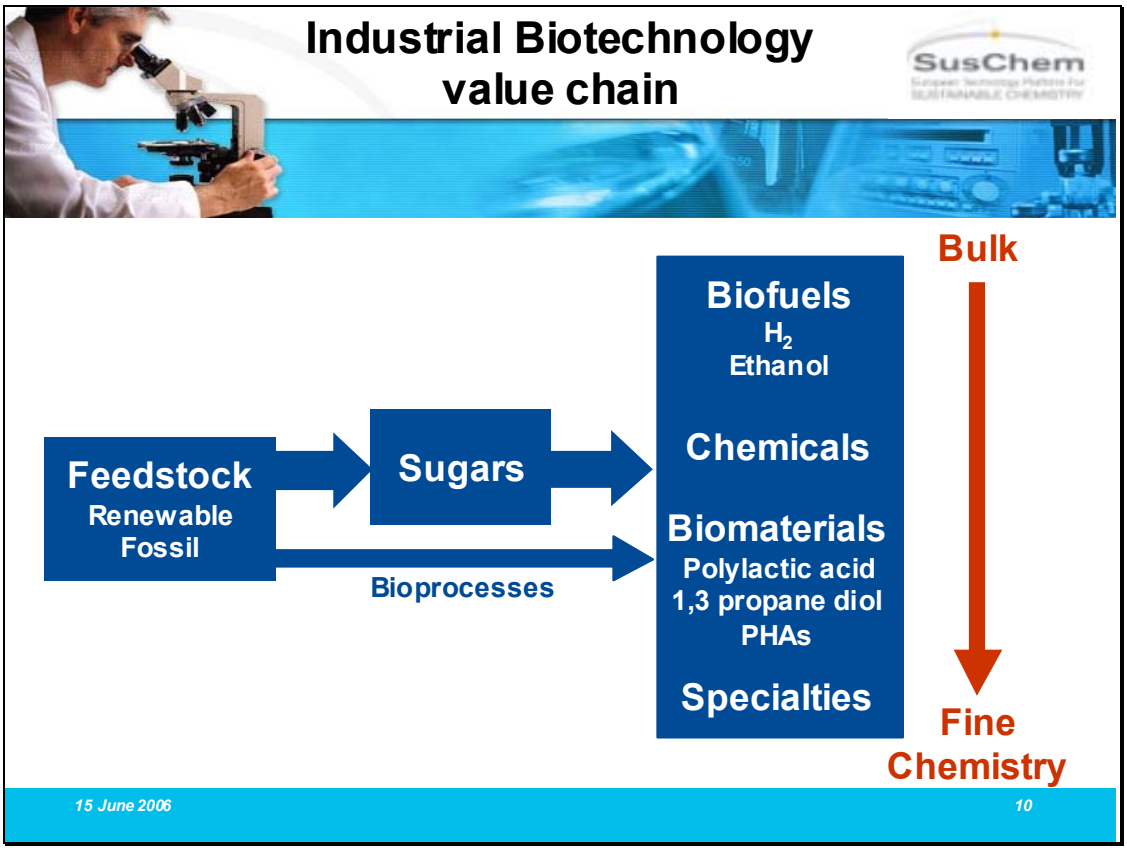
- The European chemical and associated industries will remain competitive based on technology leadership and innovation.
- Mastering the molecular scale (as in nanotechnology and biotechnology) will yield new generations of products with enhanced properties leading to new applications in many industrial sectors.
- Better use of chemistry and biotechnology will enable increased eco-efficiency of the industry.
- The industry will have a reputation as a reliable, safe, and responsible partner in society.
- Europe will provide an effective framework for chemical and biotechnological innovation and will strengthen its excellent skill base.

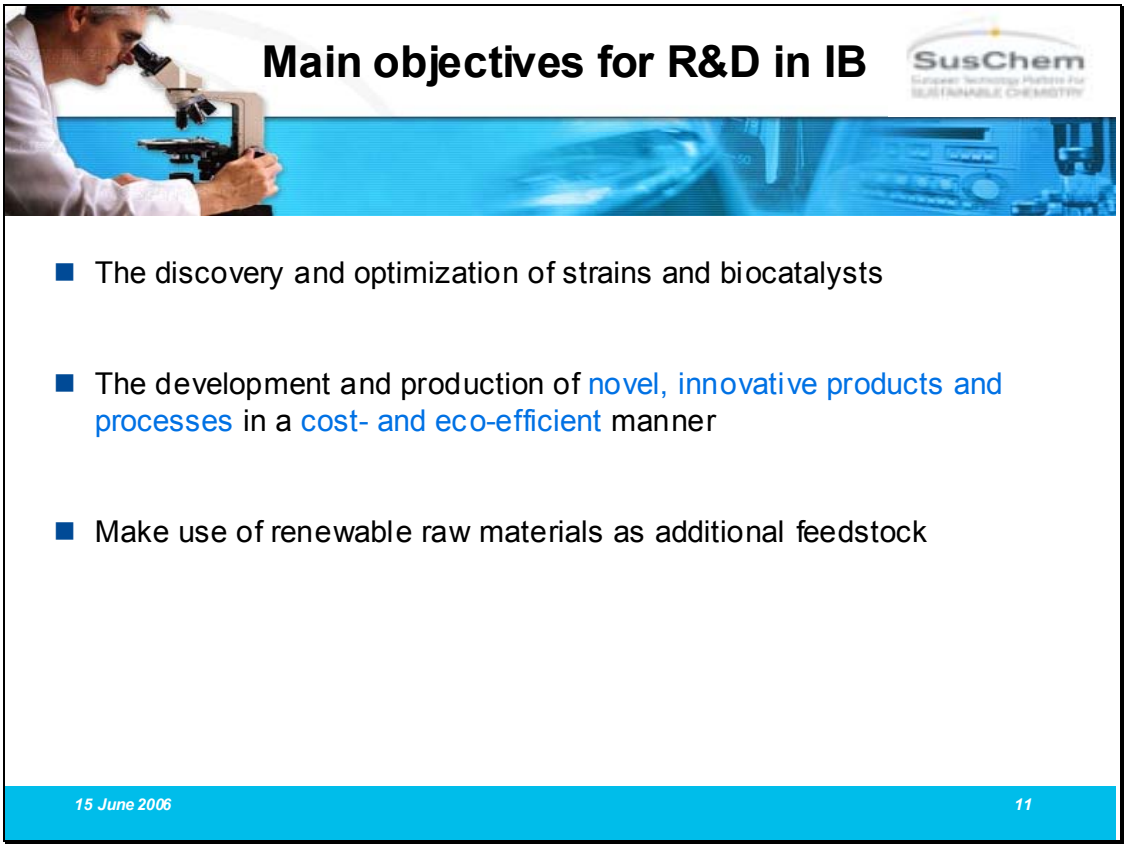
15 June 2006 8

Platform governance

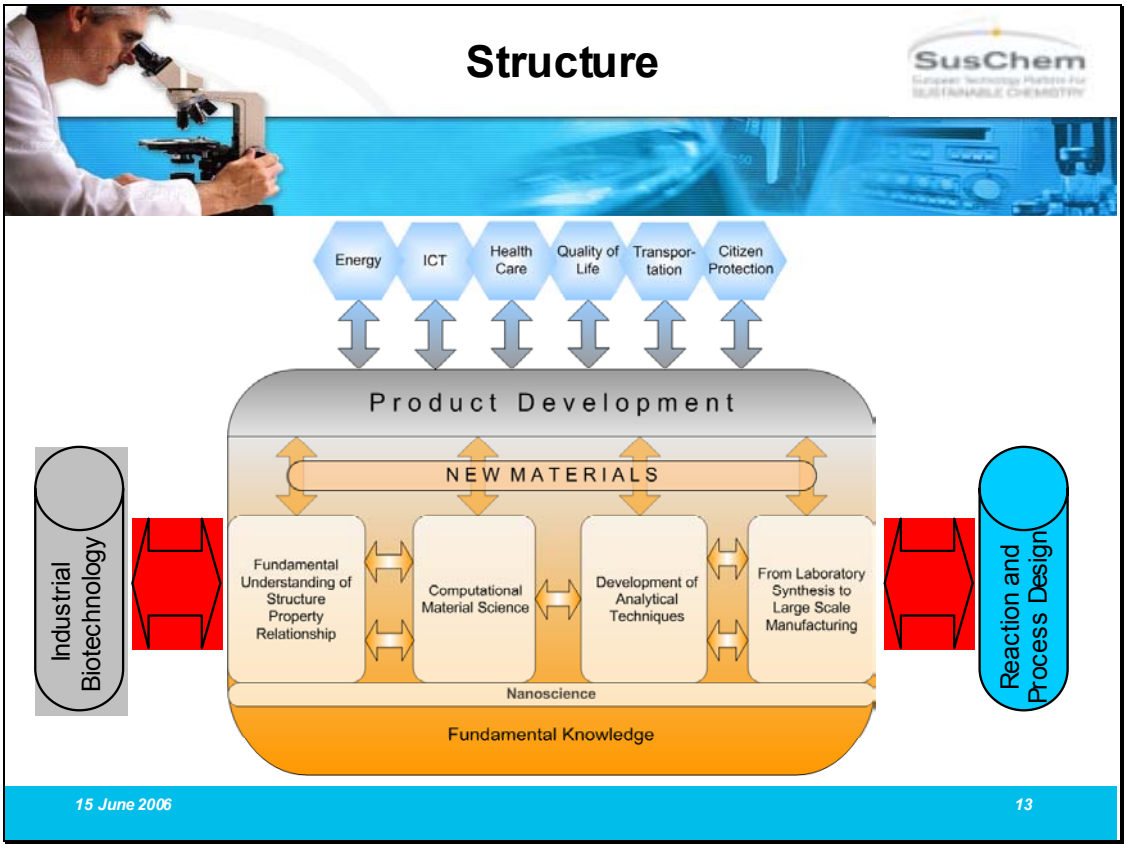


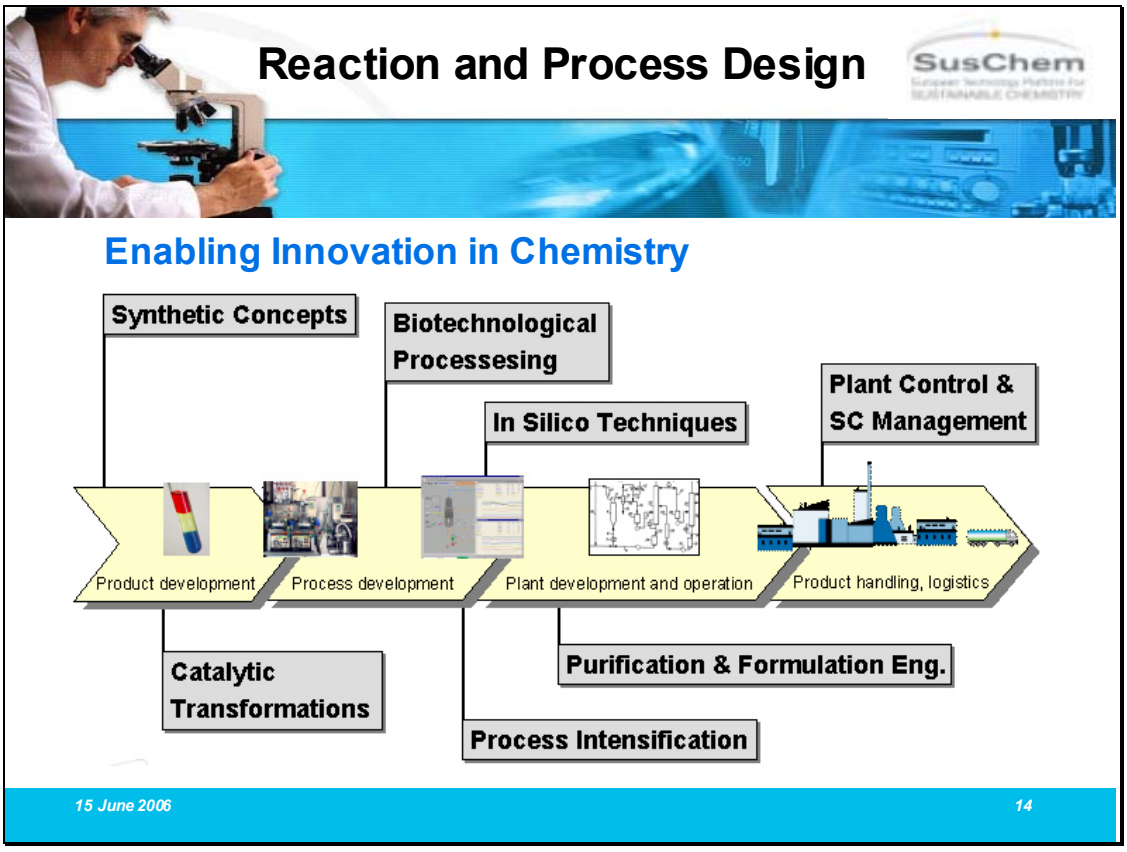
15 June 2006 9

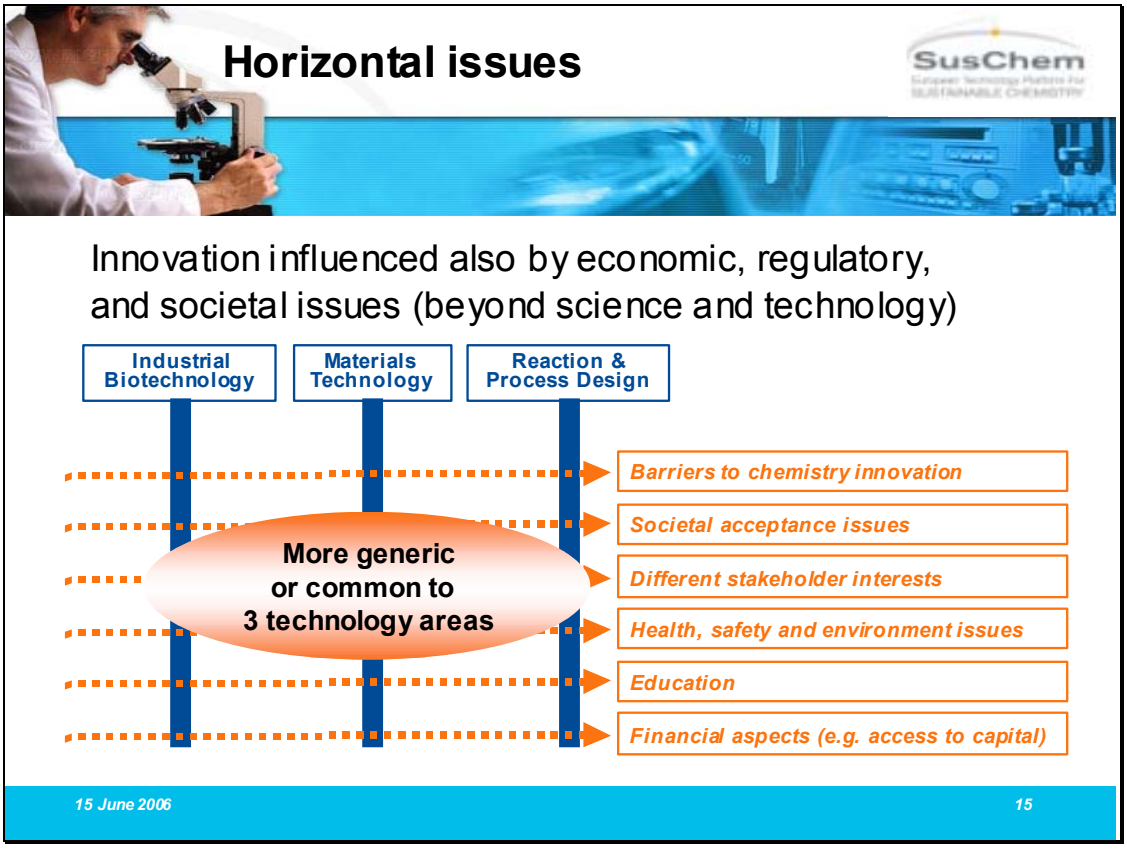

Industrial Biotechnology value chain
SusChem
Bulk
Biofuels
H_2
Ethanol
Chemicals
Biomaterials
Polylactic acid
1,3 propane diol
PHAs
Specialties
Feedstock
Renewable
Fossil
Sugars
Bioprocesses
Fine Chemistry
15 June 2006
10


Main objectives for R&D in IB
SusChem
The discovery and optimization of strains and biocatalysts
The development and production of novel, innovative products and processes in a cost- and eco-efficient manner
Make use of renewable raw materials as additional feedstock
15 June 2006
11


Materials contribute to societal needs
SusChem
Energy Management
New materials and technologies to transform, safe or store energy
Quality of Life
New materials and technologies to enhance quality of life, nutrition, mobility and transport
CIE: Communication, Information, Entertainment
Organic semiconductors in displays, chip-, or photovoltaic
Health and Care
Biomaterials, implants, drug delivery, cosmetics, diagnostics, sensors
National and personal security
Sensors, protection materials, recognition and destruction of war agents
15 June 2006
12


Structure
SusChem
Energy
ICT
Health Care
Quality of Life
Transpor-tation
Citizen Protection
Product Development
NEW MATERIALS
Industrial Biotechnology
Fundamental Understanding of Structure Property Relationship
Computational Material Science
Development of Analytical Techniques
From Laboratory Synthesis to Large Scale Manufacturing
Reaction and Process Design
Nanoscience
Fundamental Knowledge
15 June 2006
13


Reaction and Process Design
SusChem
Enabling Innovation in Chemistry
Synthetic Concepts
Biotechnological Processesing
In Silico Techniques
Plant Control & SC Management
Product development
Process development
Plant development and operation
Product handling, logistics
Catalytic Transformations
Purification & Formulation Eng.
Process Intensification
15 June 2006
14


Horizontal issues
SusChem
Innovation influenced also by economic, regulatory, and societal issues (beyond science and technology)
Industrial Biotechnology
Materials Technology
Reaction & Process Design
More generic or common to 3 technology areas
Barriers to chemistry innovation
Societal acceptance issues
Different stakeholder interests
Health, safety and environment issues
Education
Financial aspects (e.g. access to capital)
15 June 2006
15

Future process

Definition of SRA and implementation plan

- Draft SRAs → June 2005
- Strategic Research Agenda →
  Stakeholder event November 2005 (London)
- Implementation Action plan →
  Stakeholder event August 2006 (Munich)

Implementation (2006 - …)

- FP7, and beyond
- Alignment with National level initiatives

15 June 2006 *16*

Conclusions

- SusChem – a renewed impulse to EU chemistry R&D and innovation
- Without chemistry sustainable development cannot be accomplished – chemistry is part of the solution !
- Immediate focus on FP 7 but also long-term focus including national and regional initiatives
- Innovation for and in Europe

"Chemistry isn't everything but everything is nothing without chemistry"

15 June 2006 *17*


SusChem
European Technology Platform For
SUSTAINABLE CHEMISTRY