The European Innovation Strategy, Competitiveness Clusters and the Positioning of Wallonia

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Regional Innovation Policies and SMEs:
Promoting technology transfer, Fostering Entrepreneurship, Nurturing Start-Ups to Support Regional Dynamics, Tokyo 3-4 February 2010

Outline

1. European Innovation Policy: Lisbon Process
2. European potential clusters
3. Identifying competitiveness clusters: Walloon case study

Stages in European Integration in Economic, Research & Innovation Policies

Period	Stages of economic integration	Period	Stages of integration in RDI
1958-1987	**Trade integration** - Customs Union Integration - Reduced formal barriers - Expansion of internal trade - Barriers to factor mobility remained	1972	Awareness of need for common R&D policies - benefits of CERN, EMBO recognized
1978-1993	Internal market integration - single market - removing of remaining factor mobility barrier - product market reforms - freedom to locate and operate in EU market	1984-2000	R&D integration based on scale rationale - EU R&D support based on the subsidiarity principle - EU support to cooperative R&D programms
1993	Global market integration - rationalization of activities by leading firms - globalization of leading firms driven by inability to reap benefits of flexible labour and product markets	2000	The building of a European Research Area - networking of centres of excellence - common approach to financing large research facilities - increasing mobility of researchers - fifth freedom policy agenda
2000	Lisbon strategy - preparing the transition to a competitive, dynamic and knowledge-based economy - modernizing the European social model	2000	Lisbon strategy - establishing a European Area of Research and Innovation - Creating a friendly environment for starting up and developing innovative businesses, especially SMEs
2010	Post-Lisbon strategy	2010	Designing a new ERA agenda -facing with globalized R&D system -focussing on international cross-border knowledge exchange

1. Lisbon Strategy

"*The Union has today set itself **a new strategic goal** for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion.*"

Lisbon European Council, March 2000

The Lisbon Process: its research & innovation dimension

2000 - Lisbon strategy: economic & social renewal
- Towards a European Research Area
- Friendly environment for start-ups & innovative businesses

2001 - Göteborg additional dimension: sustainable development
- Focus on eco-innovation

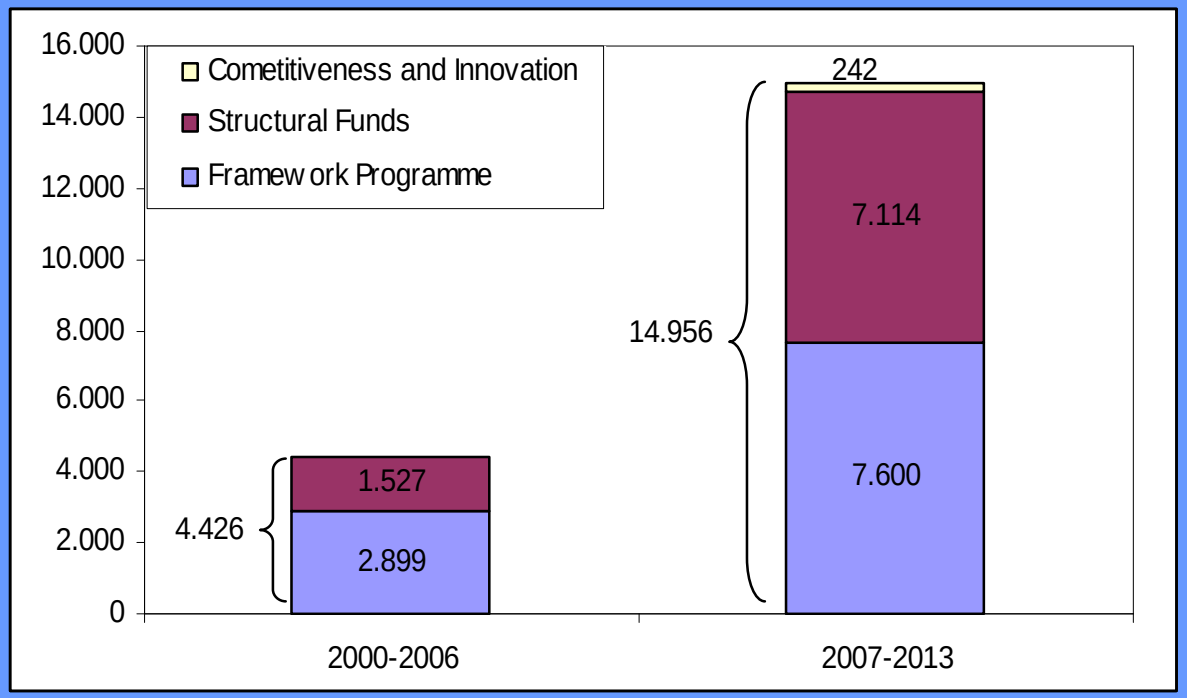
2002 - Barcelona objectives: Targeting the Lisbon strategy
- 70% employment rate
- 3% R&D intensity of which 2/3 financed by the private sector

2006 - A broad-based innovation strategy

2008 - The renewed Lisbon strategy

2010 - Future of the Community research in the post-2010 period

EC Funding for Research and Innovation (annual average funding) (in millions euros)



The 7th Framework Programme (2007-2013)

Total amount	50521 million euros	
Distributed to	Cooperation (FP, JTI) Ideas (ERC) People (Marie Curie) Capacities (Research infrastructures, SMEs, Regions of Knowledge, Research Potential, Science in society, International Cooperation)	64% 15% 9% 8%
Breakdown of Cooperation among areas	Joint Research Centres Information and Communication Technology Health Transport Nanotech Security & Space Energy Food &Agriculture Environment Socio-economics & Humanities	3% 28% 19% 13% 11% 9% 7% 6% 6% 2%

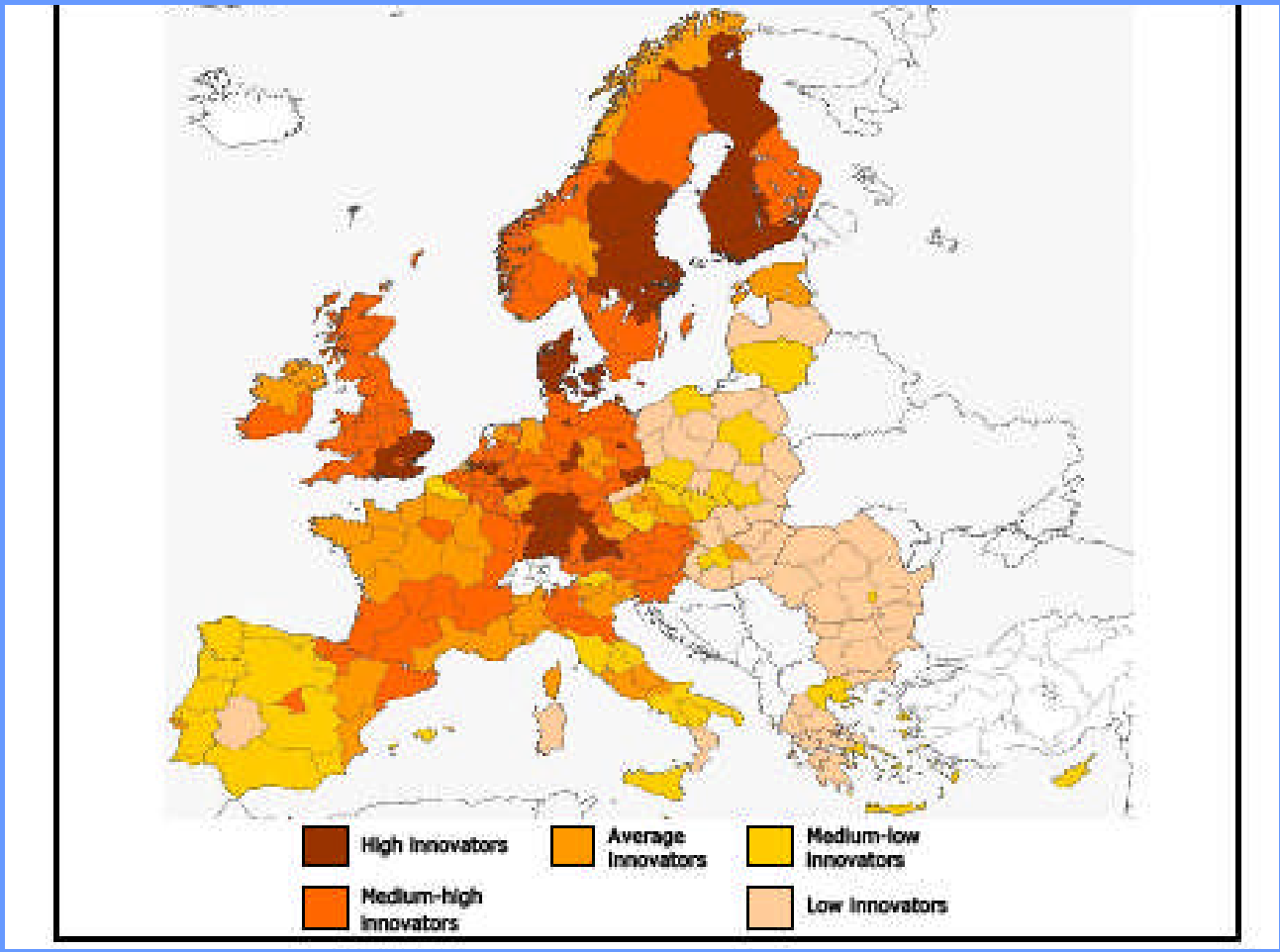
Input Indicators

		Financing sources (%GDP)		Execution sources (%GDP)			Researchers (FTE) per thousand labour force
2006	**R&D Intensity**	**Business enterprises**	**Government**	**Business enterprises**	**Government**	**Higher education**	
EU 27	1.84	1.00	0.63	1.17	0.25	0.40	5.6
Japan	3.39	2.62	0.55	2.62	0.30	0.43	10.7
USA	2.61	1.69	0.76	1.83	0.29	0.37	9.3
China	1.42	0.98	0.35	1.01	0.28	0.13	NA

Output Indicators

2006	World shares of scientific publications (%)	Specialization in the 10 % most cited scientific publications	Specialisations in high-growth scientific disciplines	EPO patent applications per million population	Share in high-tech exports (%)	High-tech VA as % of total manufacturing value added
EU 27	37.6	0.97	Environmental sciences Computer sciences	108	15.2	12.1
Japan	7.8	0.69	Materials science Geological engineering	169	8.1	16.7
USA	31.5	1.45	Health sciences Environmental sciences Civil engineering	109	17.0	18.4
China	8.4	0.68	NA	1	17.1	NA

Regional Innovation Performances



2. European Potential Clusters

Although overall cluster policy development remains at an early stage in the EU, it is gaining momentum. Cluster policy approaches differ across the EU. … the European Cluster Observatory has identified around 2 000 significant clusters defined as regional agglomerations of co-located industries and services, suggesting that 38% of the EU workforce is employed in such clusters...

Communication of the European Commission, 2008

Representativeness of the Database (EU 15)

Number of regions	177
Number of clusters	38
Number of potential regions-clusters	6,726
Number of clusters with a minimal critical mass	4,581
Among which :	342
France	817
United-Kingdom	570
Germany	228
Italy	38
Belgium	
Number of existing clusters registered	639
Among which : Germany	124
France	84
Italy	53
United-Kingdom	53
Belgium	42
Number of regions having registered clusters	137
Variables	Size, Specialization, Focus, Innovativeness, Exports

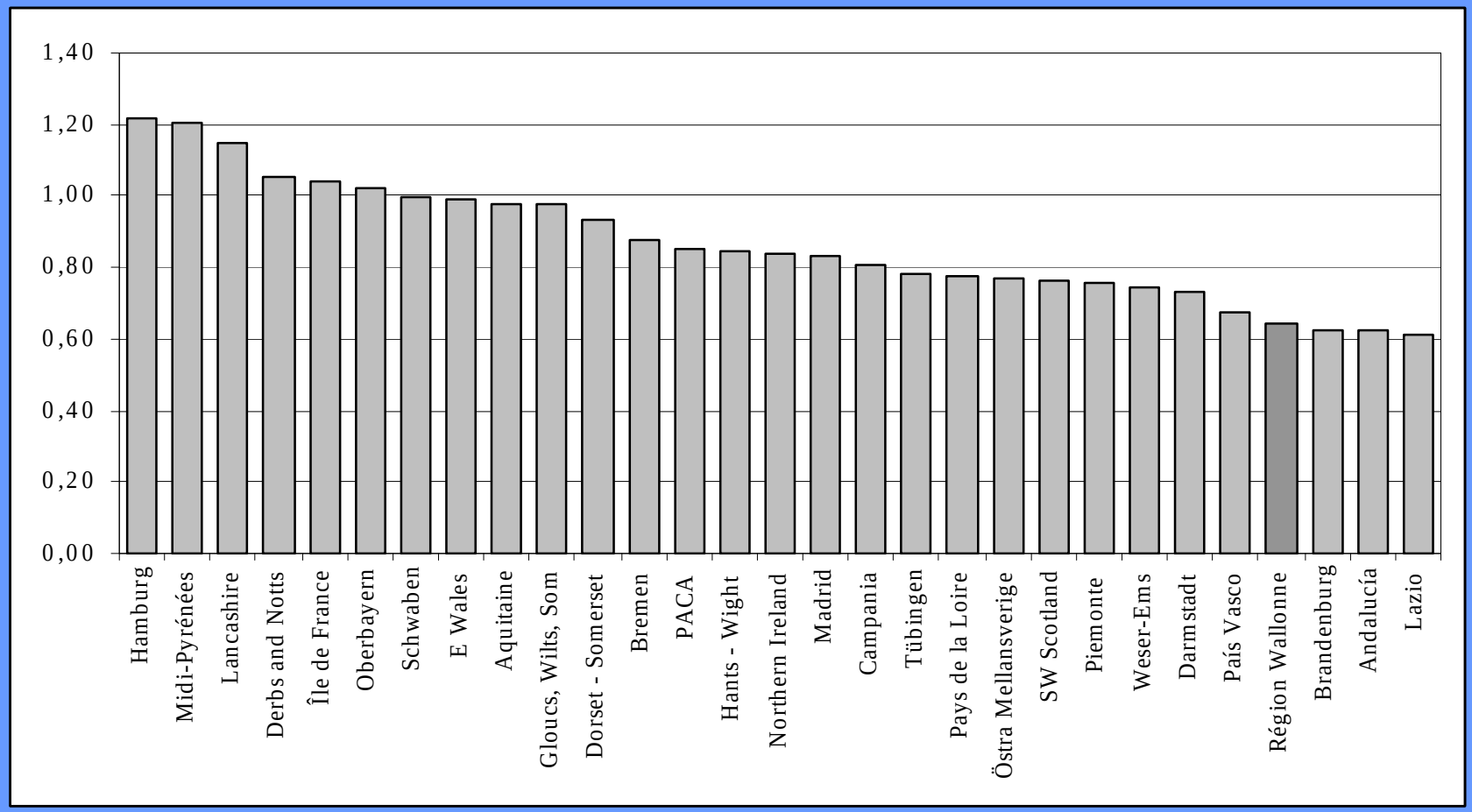
Spatial Concentration of Clusters by Region (Top 15)

Rank	Region	Spatial dimension of the clusters			
		Worldwide	Worldwide Vocation	European	Regional
1	Lombardia	18	8	9	1
2	Île de France	13	1	9	6
3	Cataluña	12	9	7	7
4	Stuttgart	10	1	9	9
5	Veneto	9	9	11	7
6	West-Nederland	8	5	7	5
7	Emilia-Romagna	7	8	16	4
8	Inner London	7	1	1	2
9	Danmark	6	8	14	4
10	Valencia	6	7	7	8
11	Karlsruhe	6	5	6	12
12	Piemonte	5	9	15	5
13	Rhône-Alpes	5	8	15	5
14	Zuid-Nederland	5	5	10	8
15	Madrid	5	5	9	10
91	Wallonia		2	2	16

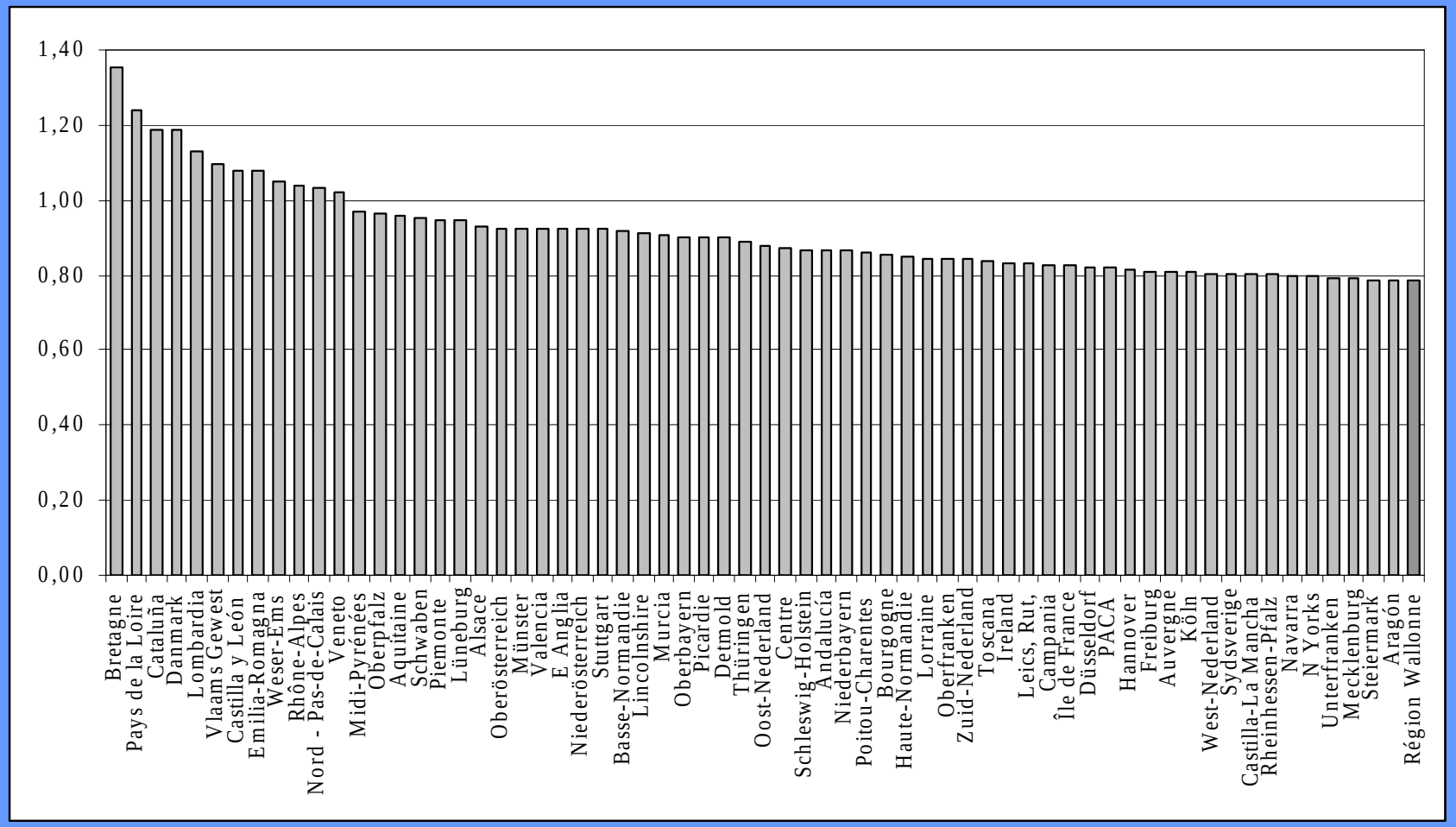
Spatial Concentration of Clusters by Techno-economic Field

Clusters	Spatial dimension of the clusters				
	Total extra-regio	Worldwide	Worldwide Vocation	European	Regional
Information Technology	37	12	11	14	54
Processed Food	20	12	3	5	112
Heavy Machinery	24	11	5	8	57
Production Technology	32	8	9	15	53
Communications Equipment	30	8	8	14	48
Education & Knowledge Creation	40	7	19	14	82
Biopharmaceuticals	30	7	13	10	45
Metal Manufacturing	23	7	6	10	61
Transportation & Logistics	34	6	13	15	84
Aerospace	29	5	8	16	9
Electrical Equipment	28	5	8	15	33
Automotive	32	4	6	22	36
Chemical Products	18	1	4	13	34
Power Generation and Transmission	15	1	2	12	17
Total	978	237	266	475	1913

Classification of Aerospace Potential Clusters



Classification of Agro-food Potential Clusters



3. Identifying Competitiveness Clusters

Competitiveness cluster is defined as:

an association of companies, research centres and educational institutions working in partnership under a common development strategy to generate synergies through innovative projects.

and is characterized by four success factors :

implementing a common economic development strategy, creating extensive partnerships between players, focusing on technologies for markets with high growth potential, reaching sufficient critical mass to develop international visibility

French website of competitiveness clusters

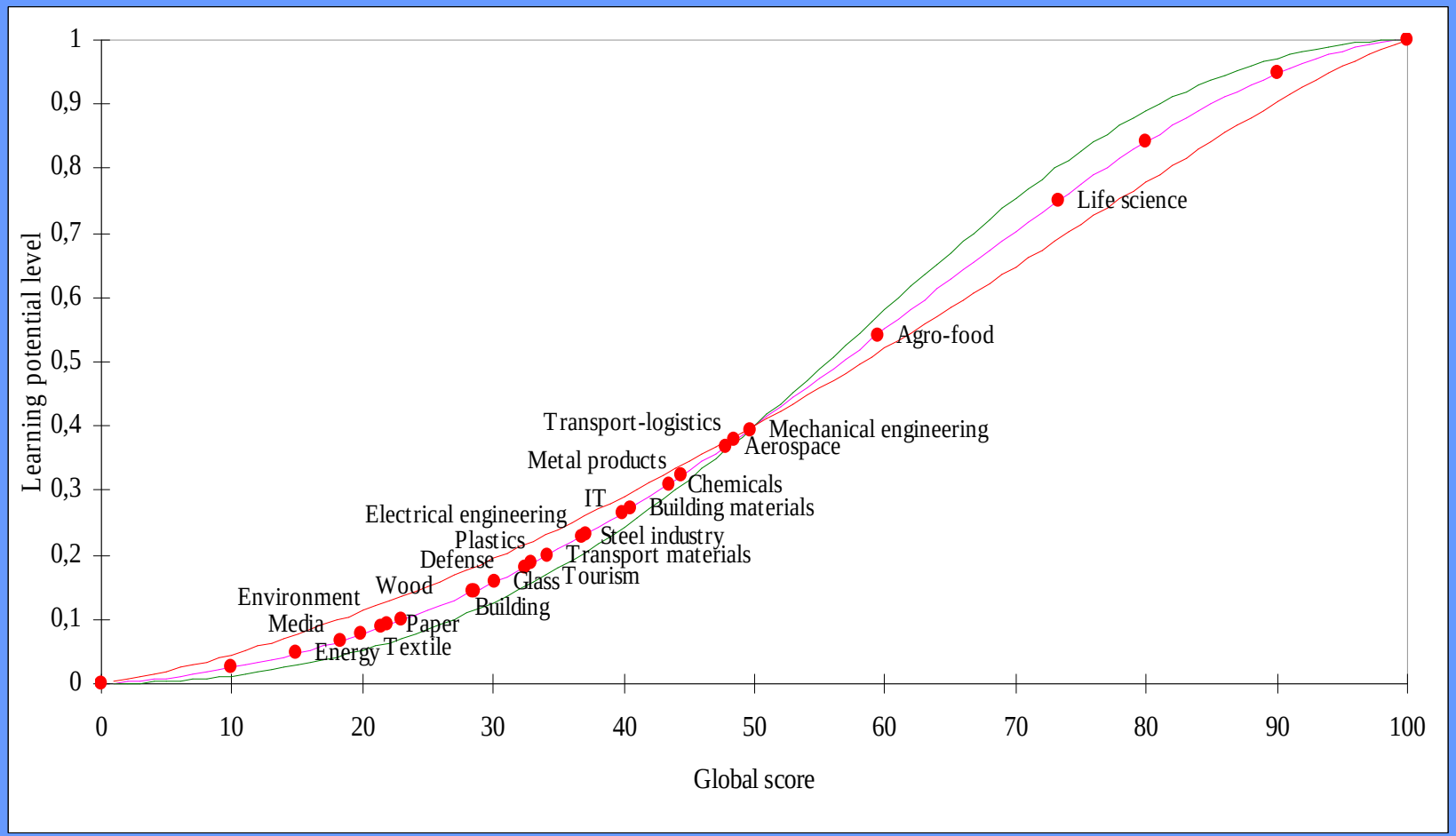
Walloon Clusters

Techno-economic fields	Competitiveness clusters	Enterprise networks
Aeronautics-space-defense	SkyWin	Space Photonics
Biotechnologie-santé	BioWin	Clinical research
Mechanical engineering	MecaTech	MITECH (Microtechnology)
Agro-food & agro-industry	Wagralim	Nutrition
Transport-Logistics	LiW	Transport-Logistics
Information and communication technology		IT TWIST (image, son et texte numérique)
Environment-energy	*A cluster projects in this field should be selected in the next months*	Eco-construction CAP 2020 (energy performance of building) TWEED (environment and sustainable dévelopment) Solid wastes
Plastics		Plastiwin
Automobile		Auto-Mobility

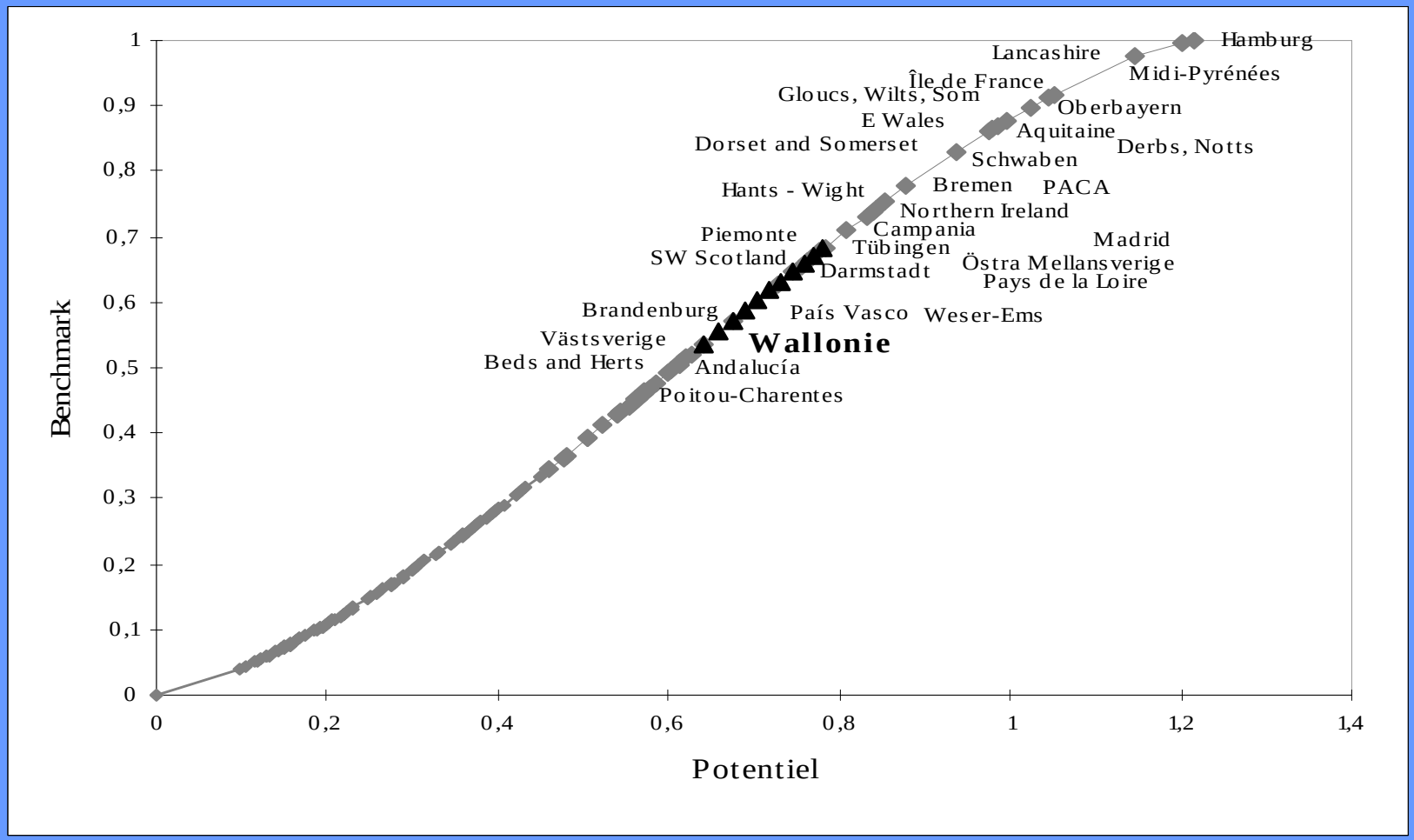
Criteria for the Measurement of Potential Clusters

I. Economic Base (4 variables)
2. Evolution of the Economic Base (2)
3. Technological Base (3)
4. Evolution of the Technological Base (2)
5. Scientific Base (4)
6. Evolution of the Scientific Base (2)
7. State of the Recovery/Development Process (13)
8. Perspectives of Evolution of the Strategic Portfolio (6)

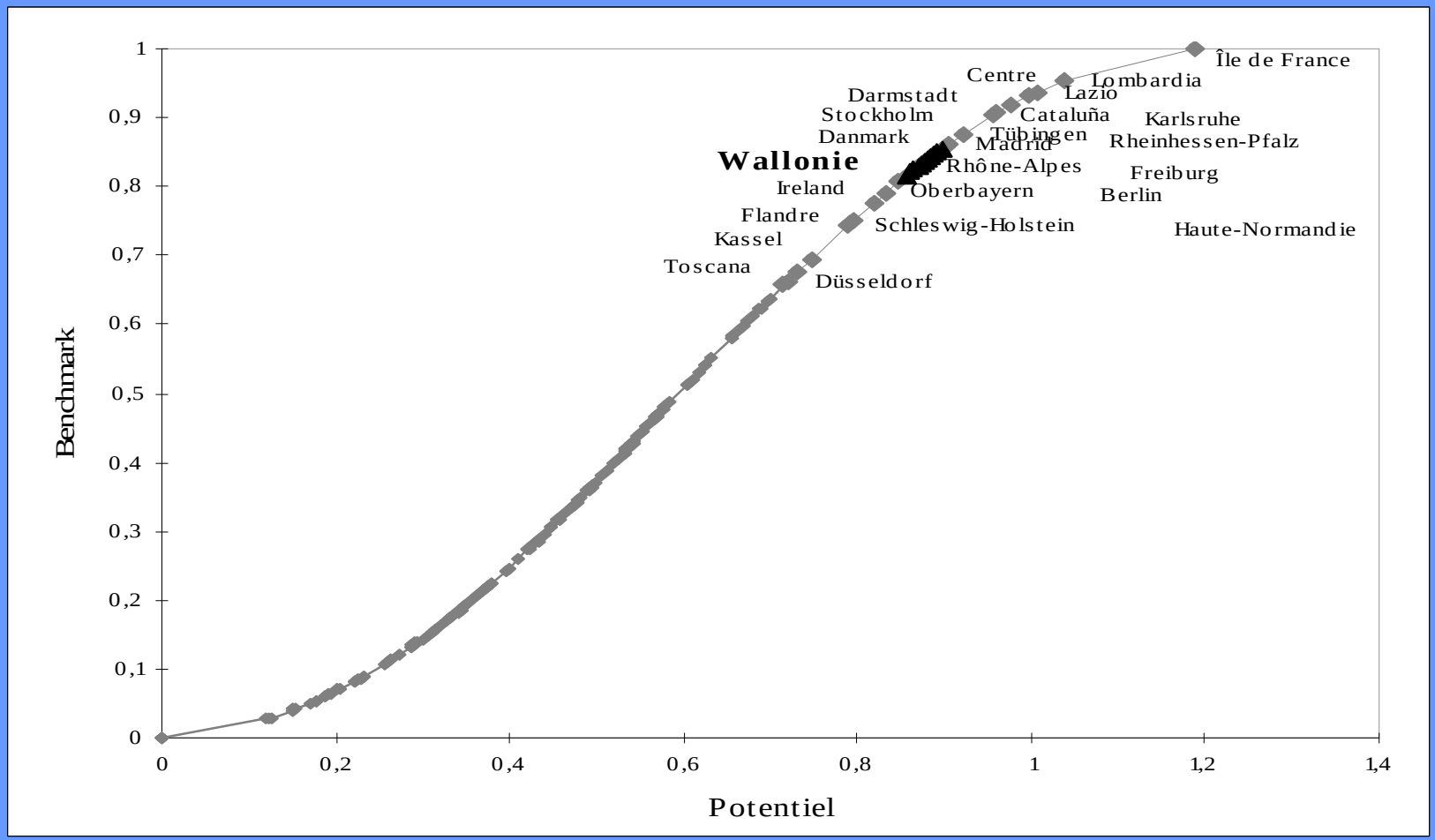
Competitiveness Clusters and Learning Process



Expected Evolution of the Walloon Aerospace Cluster



Expected Evolution of the Walloon Biotech Cluster



Conclusions

The European Innovation Policy: Designing a new action plan

The European clusters: Towards World-Class Clusters

The Walloon clusters: an evolving policy and the design of an environmental competitiveness cluster