



The Alps-Adriatic as a Knowledge Region (AAKR)

As Seen from Southern Austria

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[My Approach]

- Personal experience
- European transformation (part. after 1989)
- Knowledge Society – Knowledge Region
- Research and organisational experience

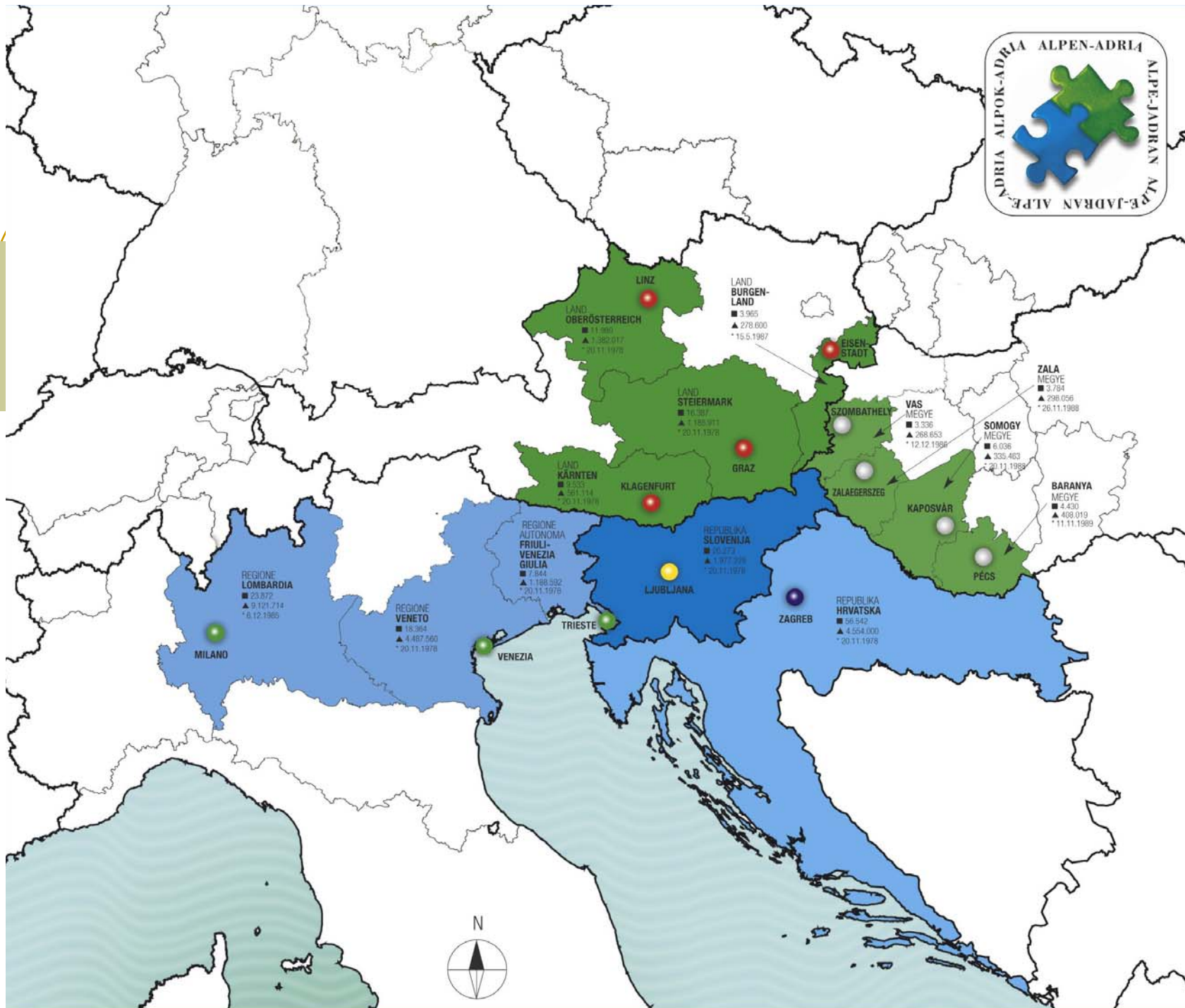
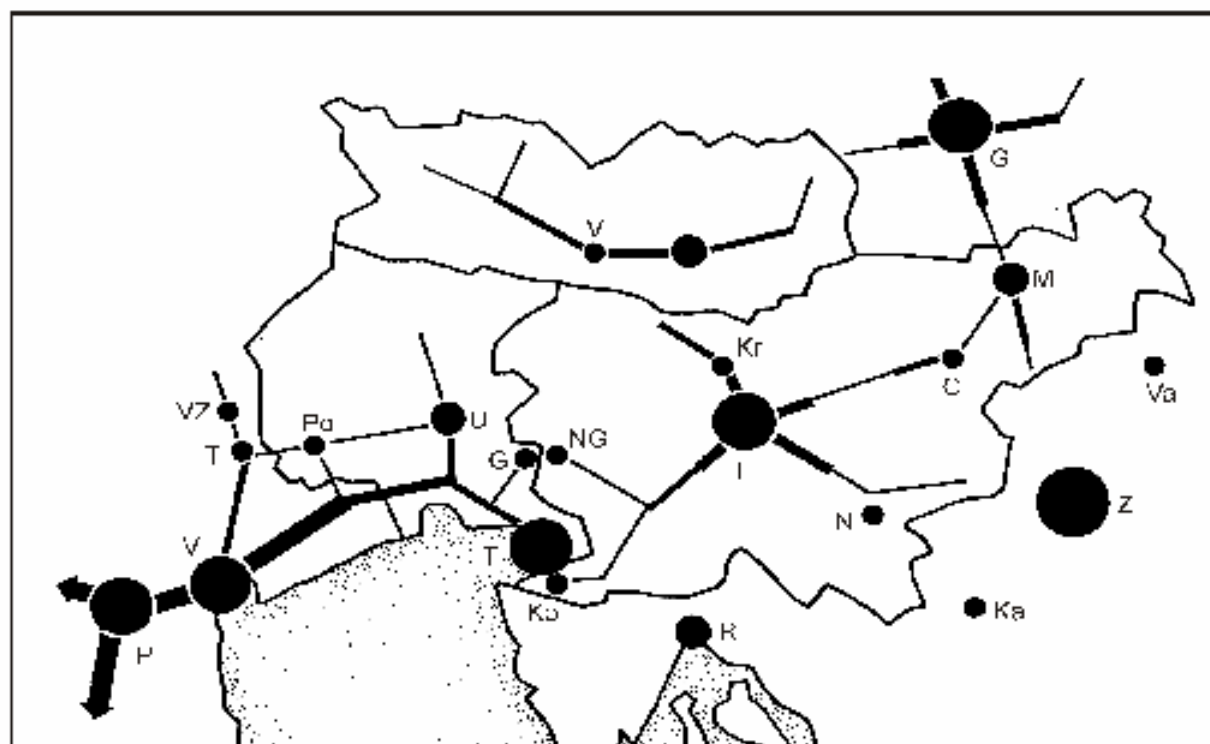
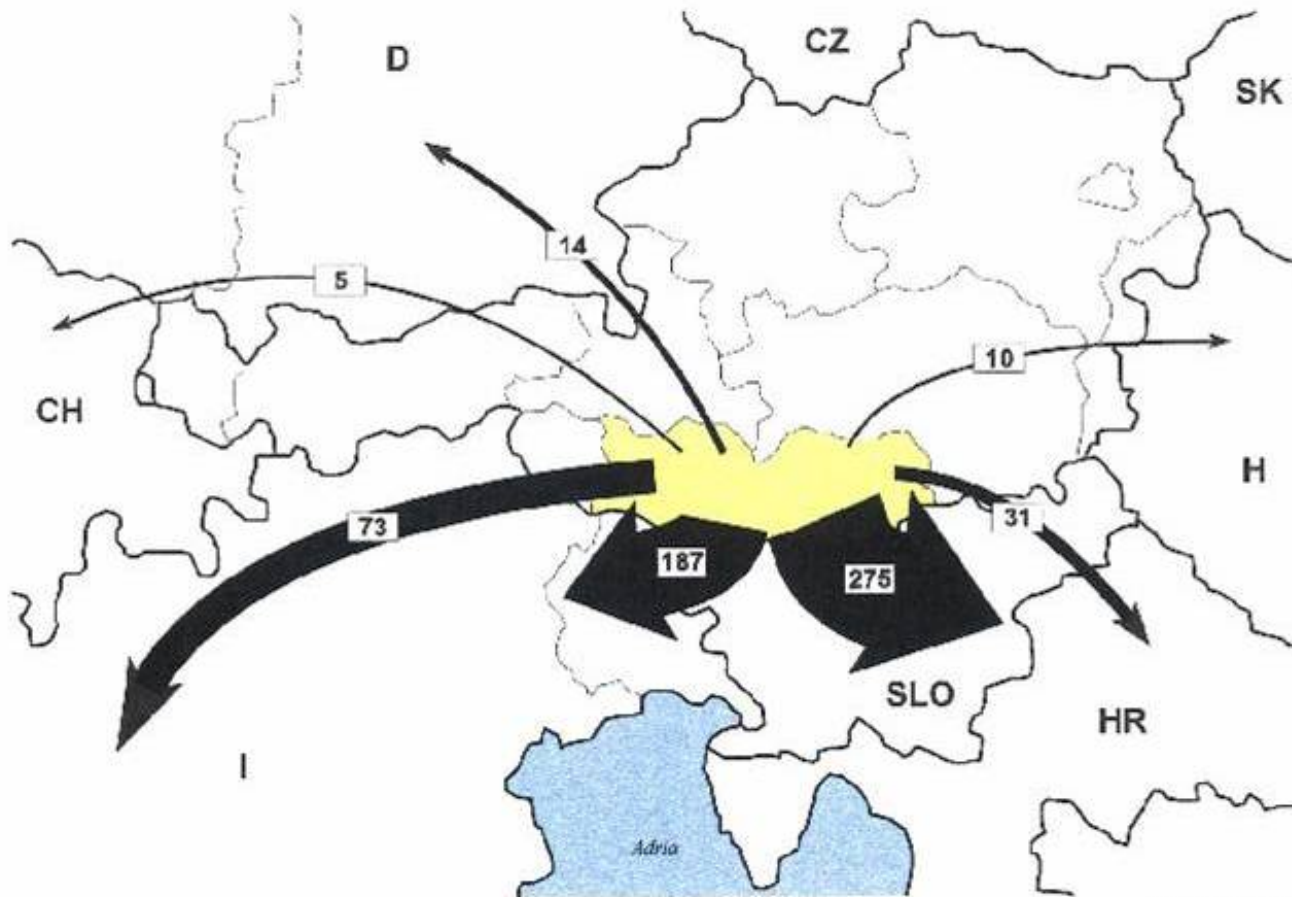


Figure 5 The multi-core structure of the Alps-Adriatic Region. Centres by size of population, relations between and intensity of region-induced traffic (approx.)



Abbreviations of cities: C Celje, G Graz, Go Gorizia, K Klagenfurt, Ka Karlovac, Ko Koper, Kr Kranj, L Ljubljana, M Maribor, N Novo Mesto, NG Nova Gorizia, P Padova, Po Pordenone, R Rijeka, T Trieste, Tr Treviso, U Udine, V Venezia/Mestre, Va Varaždin, Veneto, Vi Villach, Vt Vittorio, Z Zagreb

Alps-Adriatic Region Network Intensity for Organisations in Southern Austria



Layout: S. Jantschitz, M. Schmiel
Software: MapInfo 2006



Alpen-Adria Universität Klagenfurt (AAU)

- Member of Alps-Adriatic Rectors Conference (precedency 2008)
- About 10% of AAU 8000 students come from foreign country
- AAU organizes and participates in „Summer schools“ (e.g. Bovec, Koper, Ljubljana, Supetar)

Alpen-Adria Universität Klagenfurt (AAU) Cooperation in Research & Teaching (Examp.)

- University of Ljubljana (history, languages, education, sociology, economics, TA, geography)
- University of Udine (languages, sociology, Informatik)
- University of Trieste (languages, sociology, law)
- University of Zagreb (economics, sociology)

[The Alps-Adriatic as a Knowledge Region?]

- To answer this question we would need a kind of **Knowledge Map** (KM) of the AA territory
- Such a KM would include items like:
 - Universities, R&D institutions
 - Educational statistics; graduates and graduate employment
 - Business clusters and their cross-border outreach

[The Alps-Adriatic as a Knowledge Region?]

- Kind, role and distribution of services across the region
- Status of enterprises (global players, headquarters, SMEs etc.) and kind of branche
- Global and intraregional trade and investment
- Labour market, intraregional mobility of knowledge workers and experts

[The Alps-Adriatic as a Knowledge Region?]

- Internet penetration and participation
- Existence of creative milieus
- Regional innovation systems
- Registered patents
- Public and private R&D support
- Role of knowledge/education in the mind of the population

AA as a Knowledge Region? What should not be forgotten!

- „knowledge“ is a cognitive concept taking attention only of part of human potentials -> today used mainly instrumentally
- Knowledge Society/KR neglects human **expression, creativity** and the complexity of **thinking**
- The AA Region has plenty of this in a long tradition, -> should not be neglected „organize“ knowledge accross borders

[AAKR

]

THANK YOU FOR YOUR
ATTENTION

UNIVERZA NA PRIMORSKEM
UNIVERSITY OF PRIMORSKA
UNIVERSITÀ DEL LITORALE DI CAPODISTRIA



Strategic vision of the University of Primorska:

- Central Europe, South-Eastern Europe, the Mediterranean
- Cultural and environmental contact area; Intercultural communication

The University of Primorska has Cooperation Agreements with most Universities in the wider cross-border area (Italy, Austria, Croatia)





Vir: PK-1000,
GURS



In 2007 the University of Primorska was actively involved in 48 EU projects:

Interreg, 6th Framework Programme, Comenius, Erasmus, Socrates, Leonardo, Ceepus...

Fields of cooperation:

research, education, applied sciences, mobility.

Themes of cooperation:

Intercultural dialogue, Languages, Cultural heritage, History, Anthropology, Geography, Education, Sociology, Management, Tourism, Environment, Agriculture, Health.

Partner institutions from:

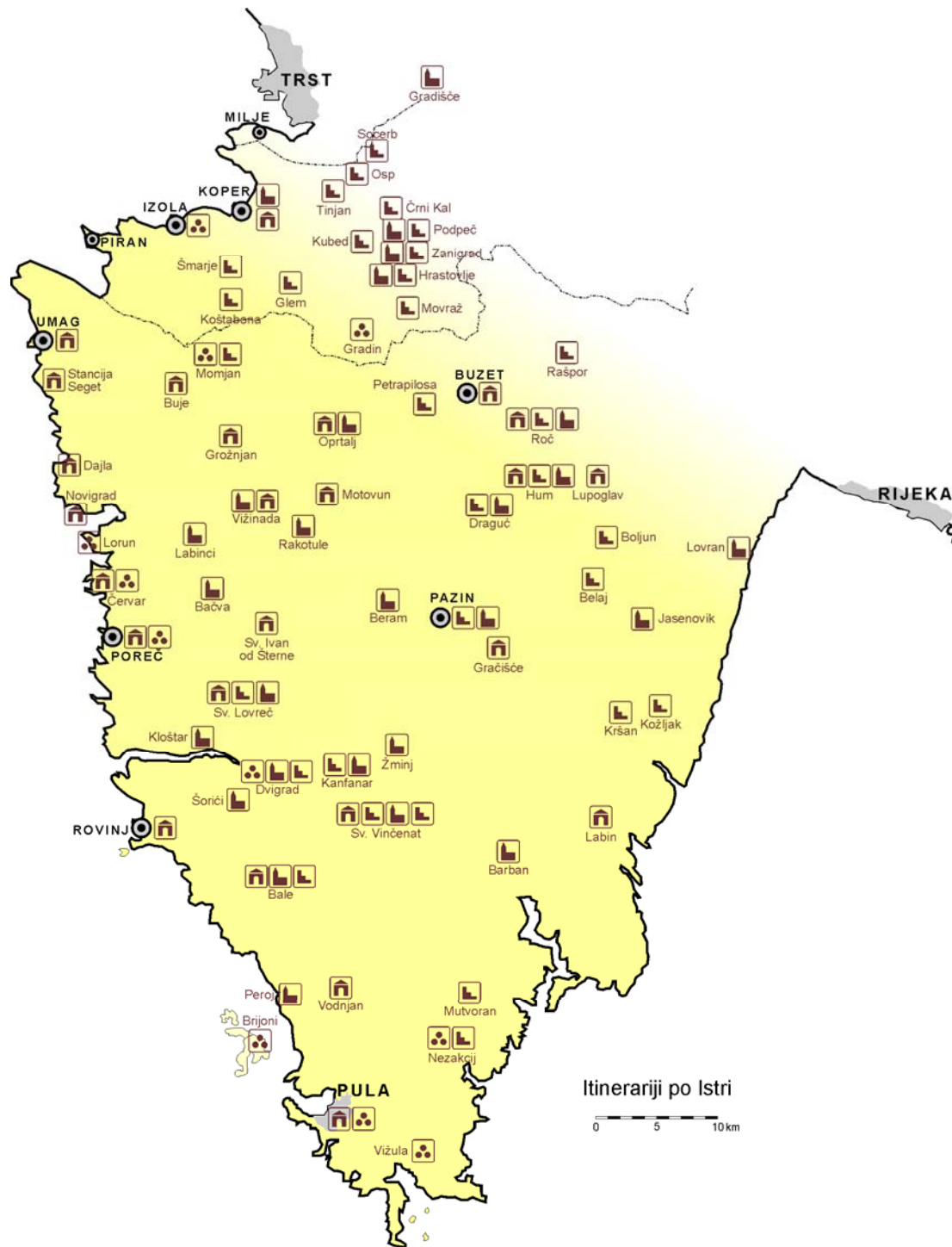
Italy, Austria, Hungary, Croatia, Germany, France, UK, Netherlands, Spain, Poland, Danmark, Finland, Estonia, Lithuania, Norway...



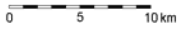
Main recent cross-border cooperation projects:

- EUREGION MAGAZINE, *Partner Regione Friuli Venezia Giulia (ITA)*
- TEMPO Nature, Culture and Sports, *Partner Provincia di Trieste (ITA)*
- HEART OF ISTRIA Cultural heritage itineraries, *Partner Region of Istria (CRO)*
- TIPI NET Traditional agricultural products, *Partner Regione Friuli Venezia Giulia e Regione Veneto (ITA)*
- TROPLO Olive oil products and compost, *Partner Kmečka zadruga (ITA)*
- SIGMA Agriculture, *Partner Provincia di Trieste (ITA)*
- RGF I Agriculture, *Partner University of Rijeka (CRO)*
- ICE Entrepreneurship, *Partner Region of Varaždin (CRO)*





Itinerariji po Istri



Main new cross-border cooperation projects that the University of Primorska is developing with partner Universities in Italy:

- NET OF NATURAL AND CULTURAL SITES OF THE NORTHERN ADRIATIC
- CROSS-BORDER HEALTH
- **SIGMA 2**: TYPICAL MEDITERRANEAN AGRICULTURE
- **KNOW US**: KNOWLEDGE TRASFER FROM UNIVESITIES TO SME
- **SHARED CULTURE**: SHARED HISTORY AND CULTURAL HERITAGE
- **UNIVERSITIES NETWORK**



UNIVERSITIES NETWORK

The project realizes a **Slovenian-Italian Cross-Border Universities Network**, aiming to enhance cooperation and exchange of people and expertise in the fields:

1. Students and faculty mobility
2. Joint degree programs, lifelong and e-learning,
3. Innovation and interdisciplinary collaboration in research
4. Quality evaluation systems
5. Universities, enterprises and public administrations partnerships
6. European co-operation projects and partnerships

Partner Universities involved at present:

University of Primorska

University of Ljubljana

University of Trieste

University of Venice



EUROREGION NESTOS – MESTA

CROSS BORDER COOPERATION BETWEEN
EDUCATIONAL CENTERS

AEBR-FVG
TRIESTE, ITALY
3 APRIL 2008

A presentation by
Alkis Papademetriou



- | | | | |
|--|---------------------------|--|------------------|
| | Euroregion Nestos - Mesta | | Cities |
| | National Borders | | Towns - Villages |
| | Main Road Network | | Customs |
| | Egnatia Road | | Harbours |
| | Rail Road Network | | Airports |

Presentation

- By border
- By activity

Northern Greece and the Borders

- Albania
 - FYRM
 - Bulgaria
 - Turkey
- Only Bulgaria is an EU member

Albania

- Cooperation started only lately; the last few years
- It mainly between the University of Ioannina and University of Tirana
- Focuses on cooperation on medical issues

FYROM

- Albeit the political problems there is a good cooperation of educational institutions and training centers
- It is mainly the university of Ohrid (Ohrid) and the Technical Institutes of Florina, Kozani and Kastoria
- Lately the University of Western Macedonia is creating some CBC activities
 - The cooperation caters to environmental issues concerning the pristine natural reserves of the region

Bulgaria

- It is the oldest and best functioning cooperation
- Between many institutions
 - Democretus University (in Thrace)
 - Aristoteles University (in Thessaloniki)
 - University of Blagoevgrad
 - University of Sofia
 - Various other educational institutes

Turkey

- There is a lot of interest in developing cooperation
- For the moment it is in the sphere of student exchanges
- Democretus University
- Bigli University
- Istanbul University

Themes of co-operation

- It all started with the issues of protection of environment
 - Not the easiest but the safest of topics
- One other favorable theme is the issue of health and health prevention
 - Very important for all sides of the border
- The most advanced issues
 - CBC structures
 - Labor movements
 - etc

Nature of CBC and Funding

We have to distinguish between:

- Interreg / Phare funded programmes
 - The most advanced and sound projects of educational CBC
 - They last for longer periods
 - Devote time to research

- economic development;
- transport and traffic
- regional development;
- environmental protection and nature conservation;
- culture and sports;
- health affairs;
- energy;
- waste disposal;
- tourism and leisure;
- agricultural development;
- innovation and technology transfer
- schools and education;
- social co-operation;
- emergency services and disaster prevention;
- communications;
- public security.

Border Regions

- Advantages
 - Variety
 - Market opportunities
 - Interaction
 - From frontier territory and isolation to center of activities and regional or national gateways

- Trans-regional programmes
- These are short term
- In partnership with many other partners
- The topics of cooperation have to do with small soft activities like a study, workshops, meetings etc.

Future of Cooperation

- In the near future it will become stronger with Bulgaria and Turkey
- There is going to be an expansion of different topics to be examined
- It will be more substantial
- With the other countries it is going to take a bit longer before the obstacles on CBC are overcome

*Ungarische Akademie der Wissenschaften
Zentrum für Regionale Forschungen
Westungarisches Forschungsinstitut*



*„Grenzübergreifende Zusammenarbeit von Universitäten und
Forschungseinrichtungen. Ein Beitrag zur Regionalentwicklung
AGEG-Forum*

Triest, 3. April 2008.

Universitäten in der österreichisch-ungarischen Grenzregion

Prof. Dr. János Rechnitzer – Melinda Smahó

Universitätsprofessor, Dekan – Junior Researcher

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projektUniRegio

Interreg IIIA AT-HU-05-01-018

Ziele des Projektes



- Steigendes Interesse an Universitäten in der Grenzregion
- Rolle der Universitäten in der Regionalentwicklung
- Erschließung und Vergleichung der Wissensträger in der Grenzregion
- grenzüberschreitende Zusammenarbeit motivieren, erweitern

Methoden der Forschung



- *Zeitdauer des Projektes*
1. Juni 2005. – 30. September 2006. → 28. Februar 2007.
- *I. Phase: Aufdeckungsphase*
 - Dokumentenanalyse,
 - 30 Interviews (Institutionsleiter, Stadtleiter, Regionale Entwicklungsagentur)
 - Fragebogen (1300 Studenten)
- *II. Phase: Analyse und Entwicklung*
 - Dokumentierung der Erhebungen, Datenverarbeitung
 - 2 Workshops mit Fokusgruppen
 - Dokumentierung und Vorstellung der Ergebnisse (Konferenz, Forschungsbericht)

Projektpartner



**Iff Fakultät für interdisziplinäre Forschung und
Fortbildung
Universität Klagenfurt, Standort Wien**

*Abteilung Stadt, Region und räumliche Entwicklung
Abteilung Hochschulforschung / Higher Education
Research*

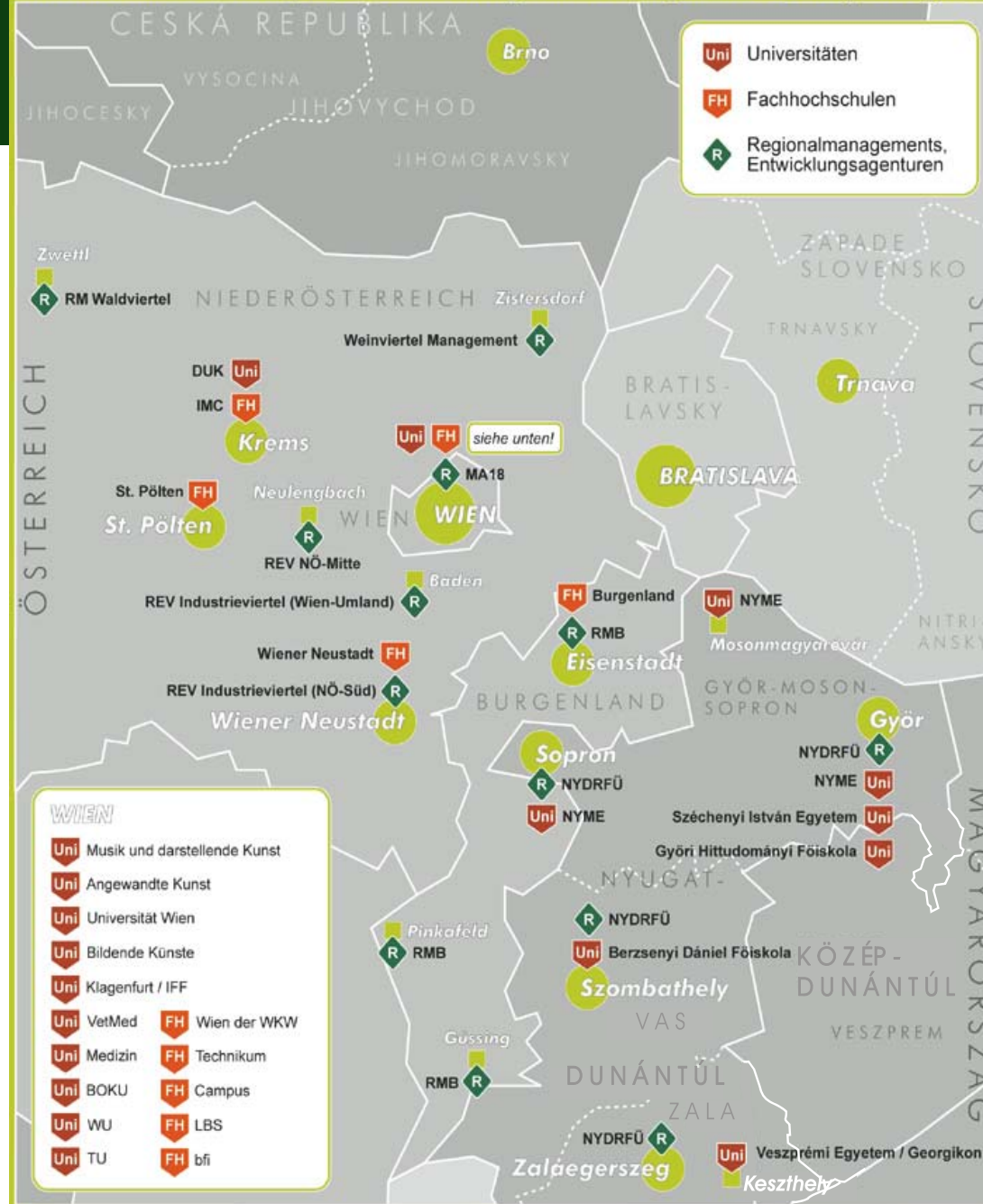


Donau-Universität Krems

Projektgebiet



Hochschulen und Regionalentwicklungseinrichtungen in der Projektregion



Quelle: IFF, 2006.

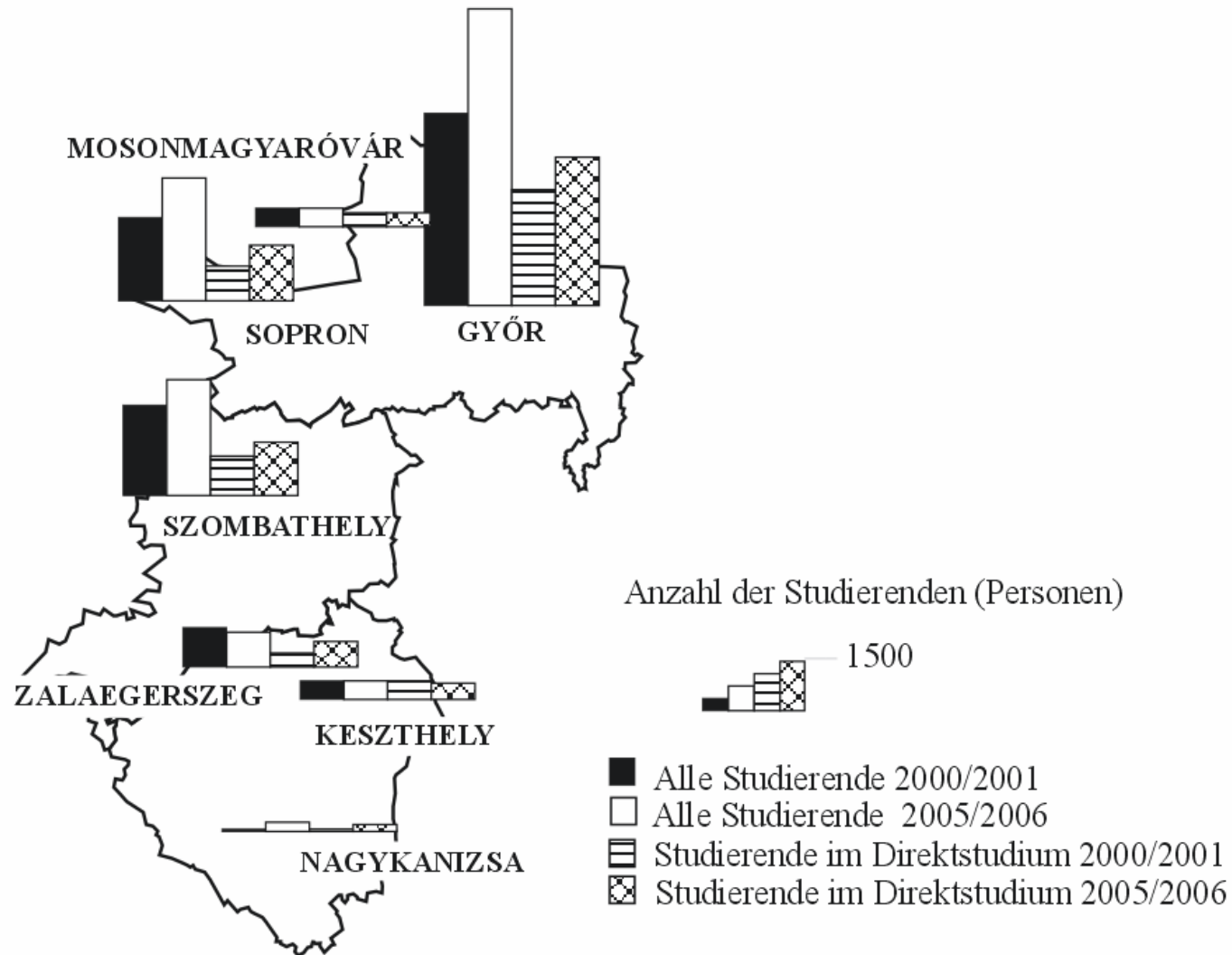
Regionale Verteilung der Forschung und Entwicklung, 2001, 2004



Regio	Regionale Verteilung des Bruttoinlandproduktes (%)		Regionale Verteilung der FuE-Stellen (%)		Regionale Verteilung der FuE-Arbeitnehmer (%)		Regionale Verteilung der FuE Zuwendungen (%)		Regionale Verteilung der Personen mit dem akademischen Grad „Doktor der Wissenschaften“ (%)	
	2001	2003	2001	2004	2001	2004	2001	2004	2001	2004
Mittelungarn	44,1	44,9	51,3	49,4	57,7	54,9	69,2	69,2	62,2	60,9
Mittel-Transdanubien	10,4	10,2	6,8	6,2	5,4	5,3	6,0	4,9	4,5	4,4
West-Transdanubien	10,4	10,7	6,4	7,6	5,1	4,6	5,0	4,0	2,8	3,7
Süd-Transdanubien	7,2	7,0	8,3	8,9	7,1	9,6	3,6	3,6	7,1	7,4
Nordungarn	8,3	8,1	5,0	5,7	4,5	4,9	2,0	2,9	3,4	3,6
Nördliche-Tiefebene	10,1	10	10,7	11	9,1	9,7	6,8	8,1	10,0	10,5
Südliche-Tiefebene	9,6	9,2	11,4	11,1	11,1	11,1	7,5	7,4	10,1	9,5
<i>Insgesamt</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>

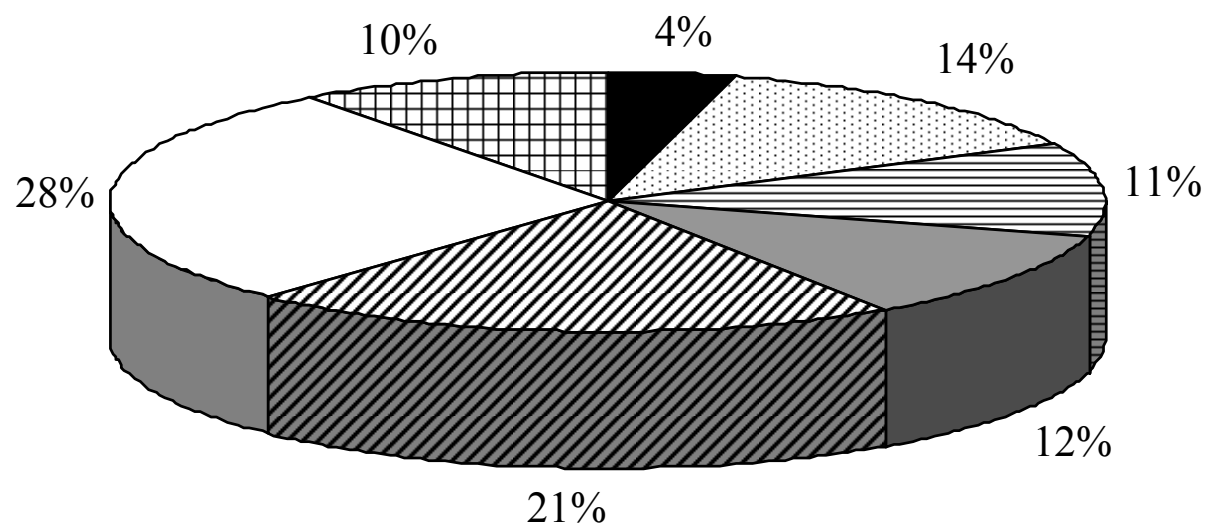
Quelle: Regionalstatistische Jahrbücher und FuE Statistiken

Anzahl der Studierenden in den hochschulischen universitären Zentren der Region West-Trans (Personen), 2000/2001, 2005/2006



Quelle: eigene Bearbeitung nach KSH. Megyei statisztikai évkönyvek, 2004

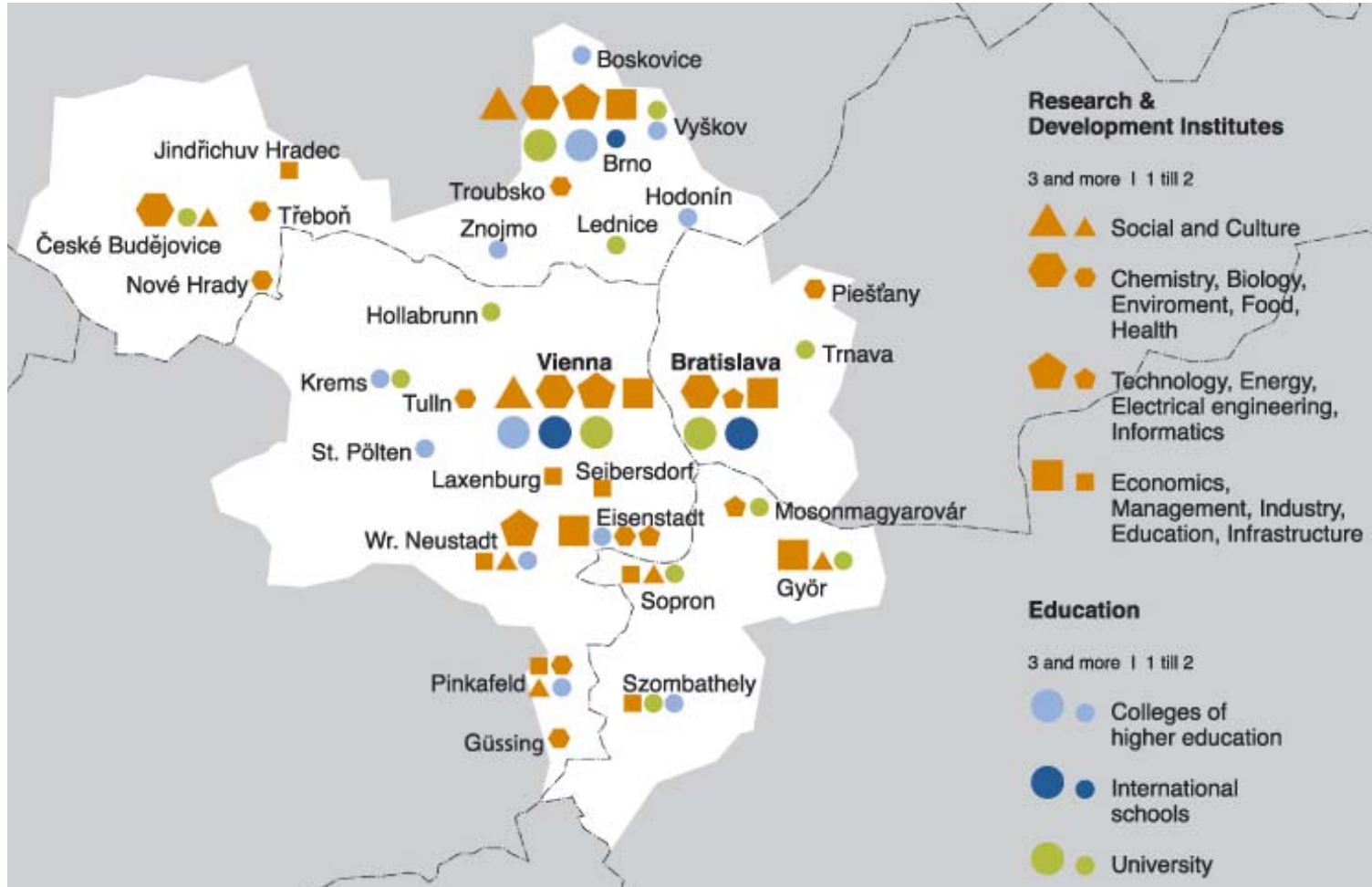
Hochschulbildungsangebot der Region W Transdanubien, 2003/2004



- Landwirtschaftswissenschaften
- ▣ Ingenieurwissenschaften und Mathematik
- ▤ Sozialwissenschaft
- ▥ Gesundheitswissenschaften und Sozialversorgung
- ▧ Lehrerausbildung
- Managementwissenschaften
- ▨ Sonstiges

Quelle: *Statisztikai tájékoztató. Felsőoktatás 2004/2005*

Hochschulinstitutionen und FuE Institute Centroe-Region



Quelle: www.centroe.com.

Ziehungskreis der Westungarische Univer

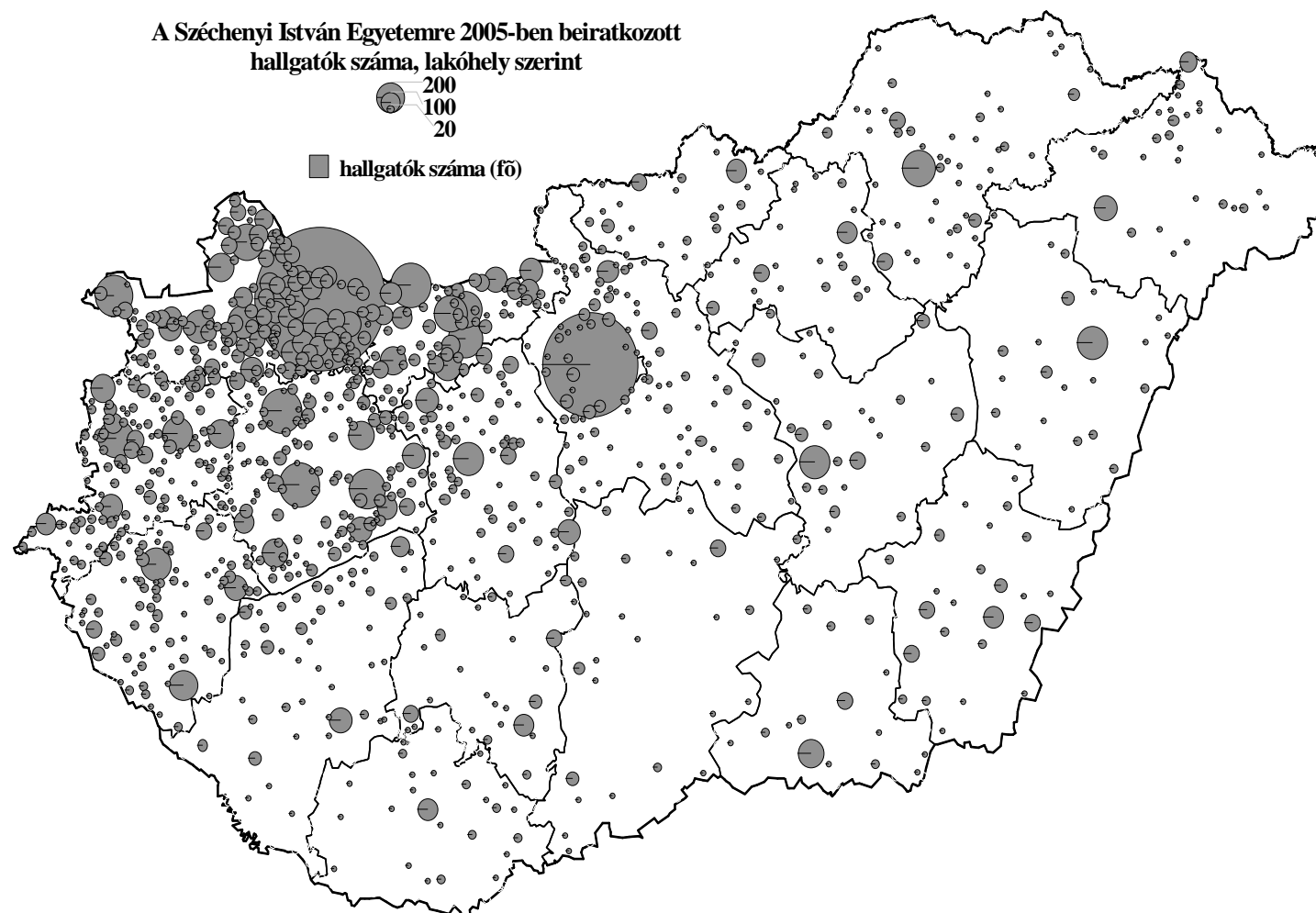


A Nyugat-Magyarországi Egyetemre 2005-ben beiratkozott
hallgatók száma, lakóhely szerint



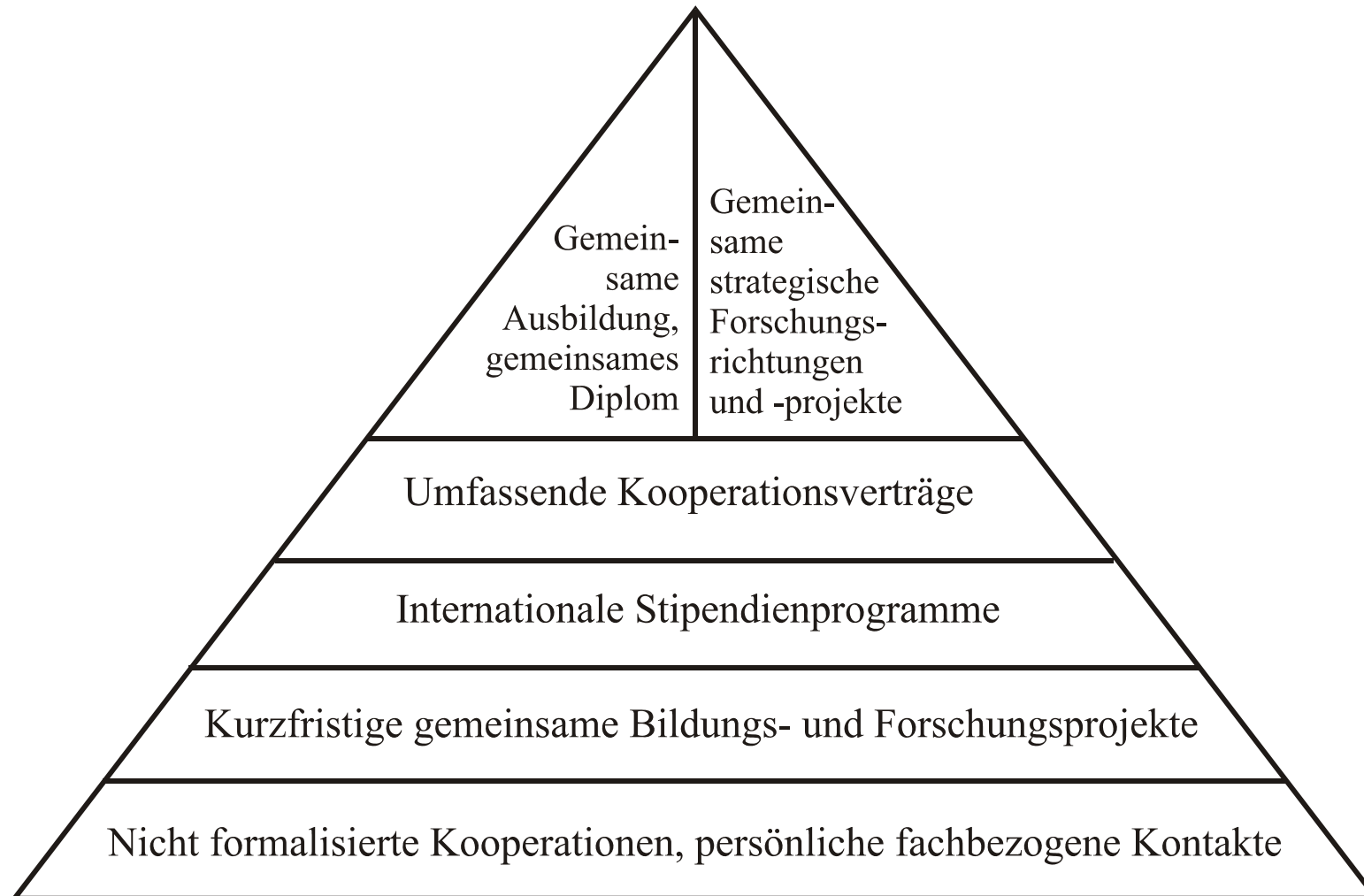
Quelle: *eigene Bearbeitung*

Ziehungskreis der Széchenyi István Unive



Quelle: *eigene Bearbeitung*

Hierarchie der internationalen Beziehung Hochschulinstitutionen



Quelle: *eigene Bearbeitung.*

Internationale Beziehungen

Beeinflussende Faktoren



- geographische Lage
- Sprachkenntnisse
- verschiedene Bildungsstruktur
- zersplitterte, unübersichtliche Beziehungssystem innerhalb der Universität
- fehlende Internationalisierungsstrategie
- sonstige Faktoren (Finanzierungsprobleme, Kapazitätsmangel, administrative Belastungen, usw.)

UniRegio – Projektergebnisse

Studentenerhebung



- Zukunftspläne im Auslande – Studium, Arbeit (9,1%)
- absolvierte Auslandsstipendium (2,1%)
- geplante Auslandsstipendium (1/3) ↔ Immobilität (65,5%)
- Beeinflussende Faktoren
 - internationale Beziehungen und Verträge der Universität
 - Mangel an Finanzierungsmitteln (26%)
 - Interesselosigkeit (22%)
 - Sprachprobleme (19%)



*Die 10 beliebtesten Länder, wohin die Befragten ein Stipendium gewinnen möchten
(Zahl der Erwähnungen)*

	<i>an der ersten Stelle erwähnt</i>	<i>an der zweiten Stelle erwähnt</i>	<i>an der dritten Stelle erwähnt</i>	<i>alle Erwähnungen</i>
Großbritannien	97	63	41	201
Deutschland	79	68	38	185
Österreich	44	43	29	116
Italien	36	14	15	65
Spanien	19	21	21	61
Vereinigte Staaten von Amerika	14	23	24	61
Frankreich	9	18	15	42
Holland	8	16	13	37
Finnland	14	4	18	36
Schweiz	5	6	20	31

Quelle: Páthy-Tóth, 2007.

UniRegio – Zusammenfassung, Vorschläge



- mehrere strategische Beziehungen und Zusammenarbeit zwischen den ungarischen und österreichischen Instituten
- bewusster Ausbau der internationalen Beziehungen an den Universitäten – Entwicklung einer Internationalisierungsstrategie
- neue Ansprüche der Studenten in Betracht ziehen
- Bildungsqualität erhöhen (inkl. Sprachkenntnisse)
- Mobilität der Studenten stärken

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Danke für die Aufmerksamkeit!

Prof. Dr. János Rechnitzer – Melinda Smahó

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HEMARD
**Higher Education Management and Regional
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Postgraduate Training Programme

Danube University Krems
/ Alpen Adria University Klagenfurt
Cooperation between Universities / RDAs of
Sweden / Finland / Spain / Hungary / Spain

Termin 22.06.2008 - 04.07.2008

LINKAGE COMMITTEE OF THE UNIVERSITIES

- **MEMBERS**

- **AQUITAINE**

- Université Bordeaux I - Science
- Université Victor Segalen Bordeaux II - Medicine
- Université Michel de Montaigne Bordeaux III - Lettres
- Université Montesquieu Bordeaux IV - Sociales
- Université de Pau et des Pays de l'Adour

- **EUSKADI**

- Universidad del Pais Vasco
- Universidad de Deusto
- Universidad de Mondragón

- **NAVARRA**

- Universidad Pública de Navarra
- Universidad de Navarra

AIMS

- TEACHERS AND STUDENTS MOBILITY
- “DOUBLE” DEGREES
- DOCTOR’S TRAINING
- R+D CO-OPERATION
- COMMON LANGUAGES PROMOTION
- BOLOGNA DECLARATION



WORKING COMMUNITY OF THE PYRENEES

- Technology, Science and Training
- Call for proposals
- Universities and Technology Centers
- Over 2 million euros
- Managing Authority of the Interreg Program

Experience in the field of cross-border cooperation INTERREG IIIA and common funds Navarra-Aquitaine

Trieste, April 4th, 2008

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Presentation



HONORARY PARTNERS



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DE ARAGON



FEDERACION ESPAÑOLA DE INDUSTRIAS
DE LA ALIMENTACION Y BEBIDAS



Excmo.
Ayuntamiento de
SAN ADRIAN



→ **Private non-profit** making organisation based in San Adrián (Navarra). Set up in 1981, as an initiative by the Ebro Valley business sector of preserved vegetables

→ **The main aim** of the CNTA is to contribute to the development and innovation of the agro-food industry offering technical and scientific support to improve their quality and competitiveness



-ANALYTICAL: 6 Departments with 7 laboratories- Physicochemical and Instrumental, Biotechnology, Microbiology, Quality, Water, Packaging and the Environment- to cover the requirements of the agro-food sector, guaranteeing food quality and safety levels.

-TECHNICAL ASSISTANCE: Technical support to companies through advisory services, training and consultancy services. CNTA offers a Pilot Plant and develops control processes and registration transactions for export-

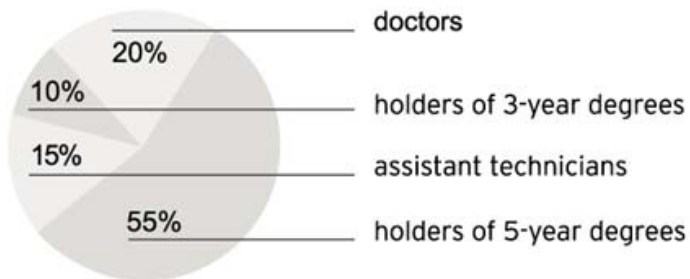
-R&D&i: management, coordination and development of projects promoted by the Centre or in collaboration with Universities, Public Research Centres or Companies, from looking for partners and managing the consortium to negotiating research projects and the transaction of financial aid and R+D+i proposals.

STAFF 2008: 102 EMPLOYEES

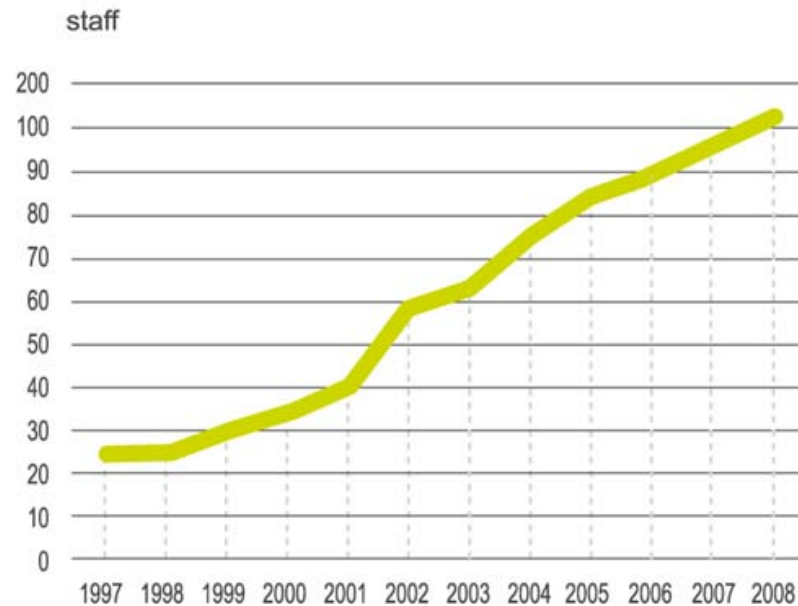
STAFF 2008

Permanent staff	82
Holders	20
TOTAL	102

PERCENTAGES



EVOLUTION OF THE HR



Activity Areas



- Detection of **contaminants in foodstuffs**: Pesticides, acrylamide, SEM, BADGE and derivatives, heavy metals, Dioxines and PCB's.
- **Molecular Biology** techniques (PCR, Sequencing, Elisa) applied to food control : GMO detection, species Identification, Genetic traceability.
- **Microbiology** detection of pathogenic microorganisms by classical and genetic techniques (Listeria, Salmonella, Legionella, etc.).
- Analysis of **foodstuffs composition**: nutrient composition including nutraceuticals and additives.
- **Traceability and product's authenticity**: fraud research (in fruit derived juices, meat products, oils). Composition, origin or varietal purity tests.
- **Environmental monitoring**: waste water, solid residues



Technological development of experiments

- Products and processes development at the **Pilot Plant**
- Food safety management system: **HACCP Systems** and traceability
- Processing files to export to the U.S.A. Regulated by the Food and Drug Administration (USA)
- Training activities
- Advice and consulting services
- Sanction proceedings transactions
- Calibrations services

LINE 1: DEVELOPMENT OF NEW FOOD PRODUCTS FROM BIOPROCESSES AND USING NATURAL ADDITIVES OBTAINED FROM CLEAN TECHNOLOGIES

LINE 2 : APPLICATION OF NEW PRESERVING TECHNOLOGIES LESS AGGRESIVE FOR ORGANOLEPTIC OR NUTRITIONAL CHARACTERISTICS, HIGH PRESSURES AND INTELLIGENT ACTIVE PACKAGES

LINE 3: DEVELOPMENT OF NEW ANALYTIC CONTROL METHODS FOR FOOD, PROCESS CONTROL AND PREDICTION OF FORECASTING PRODUCT SHELF-LIFE

LINE 4: RESPONSE TO THE DEMANDS OF THE AGRO-FOOD SECTOR





Retsa

RED TEMÁTICA DE SEGURIDAD ALIMENTARIA ESPACIO PIRENAICO
RÉSEAU THÉMATIQUE DE SÉCURITÉ ALIMENTAIRE. ESPACE PYRÉNÉES

Red cofinanciada por:



INTERREG III-A



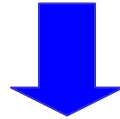
Gobierno
de Navarra



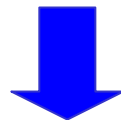
BACKGROUND

- **White Book on Food Safety**
 - Consumers must be able to achieve a wide range of safe and high quality products from every Member State
 - “From the farm to the fork” approach
- Risk elements affecting food safety: **Food warnings:** Food Infections, BSE, dioxins, acrylamide, semicarbazide, etc.
- New **consumers demands** aware of food and health relationships.

Meetings in the frame of other cooperation projects



Appropriateness of creating a **thematic network** as a starting point for a permanent cooperation in order to approach problems related to **contaminants**, substances not intentionally added to foods (i.e. dioxins, PCBs, heavy metals) and **residues**, those present as a result of an deliberate use i.e. pesticides)



RETSA

- *Red Temática de Seguridad Alimentaria, RETSA* (Food Safety Thematic Network), is an initiative inside the Pyrenees Border Space between Spain and France
- RETSA gathers Research Institutes, Technological Centres and Laboratories devoted to Food Safety
- It is funded by INTERREG IIIA programme and co-funded by the Regional Government of Navarra
- Objective: promoting a deeper contact and cooperation → building a framework of scientific and technological cooperation.
- From October, 2003 to October 2007
- Budget: 1,1 M€

INITAL PARTNERS



- **CNTA – Laboratorio del Ebro (Coordinator)**
- APESA
- Arvalis- Institut du vegetal
- AZTI
- CITA
- Centre d'Analyses Méditerranée Pyrenées
- CETIOM
- GAIKER
- LEIA
- IRTA -Centro de Tecnología de la Carne
 - Centro UdL-IRTA. Área de postcosecha
 - Área de Genética vegetal
- Instituto Lactológico de Lekumberri
- Laboratoire Dep. des Landes
- Laboratoire de Physico-Toxico-Chimie des Systèmes Naturels
- Universidad de Lleida. Dpto. Tec. de Alimentos
- Universidad de Zaragoza – C. Nac. Ref. EET
- Universidad del País Vasco. Dto. Química Analítica
- Universidad Pública de Navarra. Área de Nutrición y Bromatología
- Ultratracés Analyses Aquitaine (Ut2A)

29
PARTNERS

ASSOCIATED MEMBERS

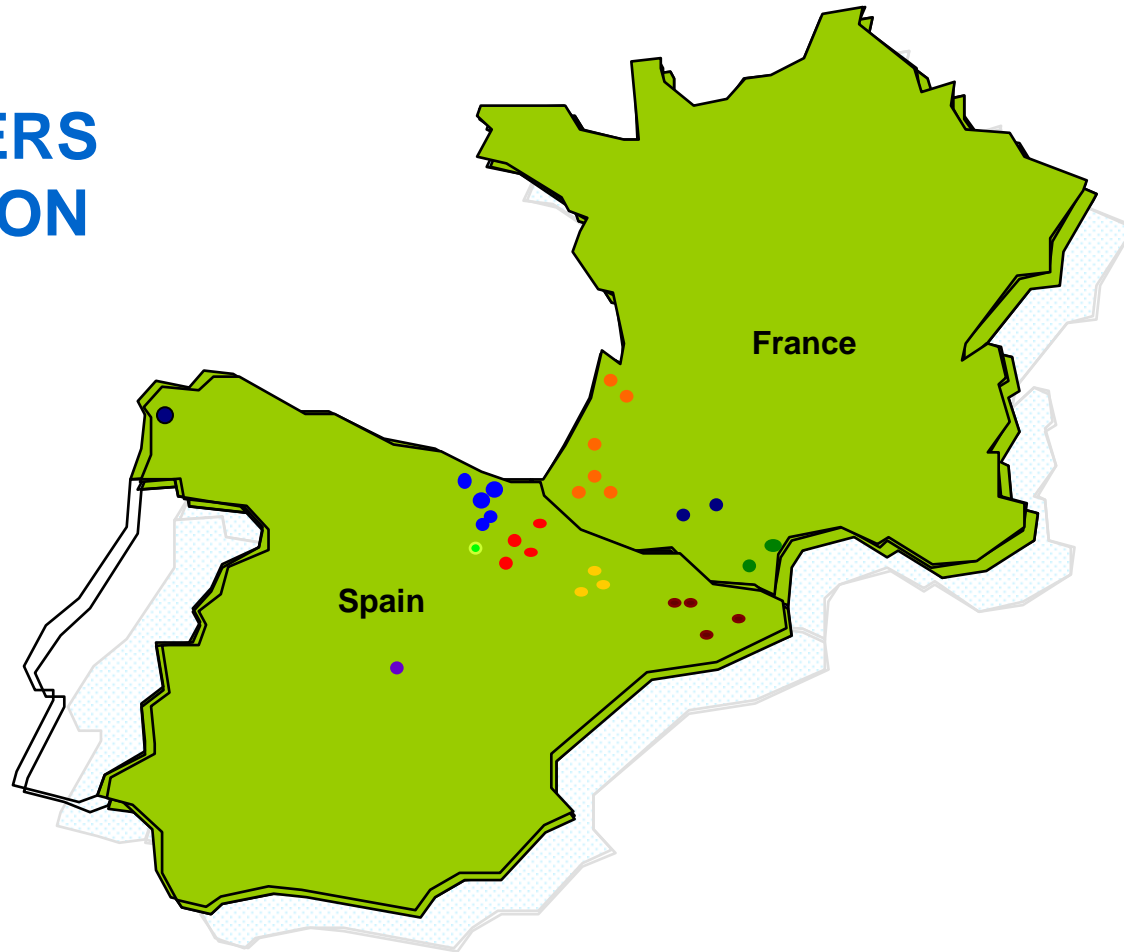
- Universidad de Navarra. Dto. de Química y Edafología
- ITERG – Institut des Corps Gras
- Universidad de Santiago de Compostela
- Agropolis
- Centro Nacional de Alimentación
- Pôle SSA
- Zeu-Inmunotec
- CTIC
- Lei-Artibai



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PARTNERS LOCATION



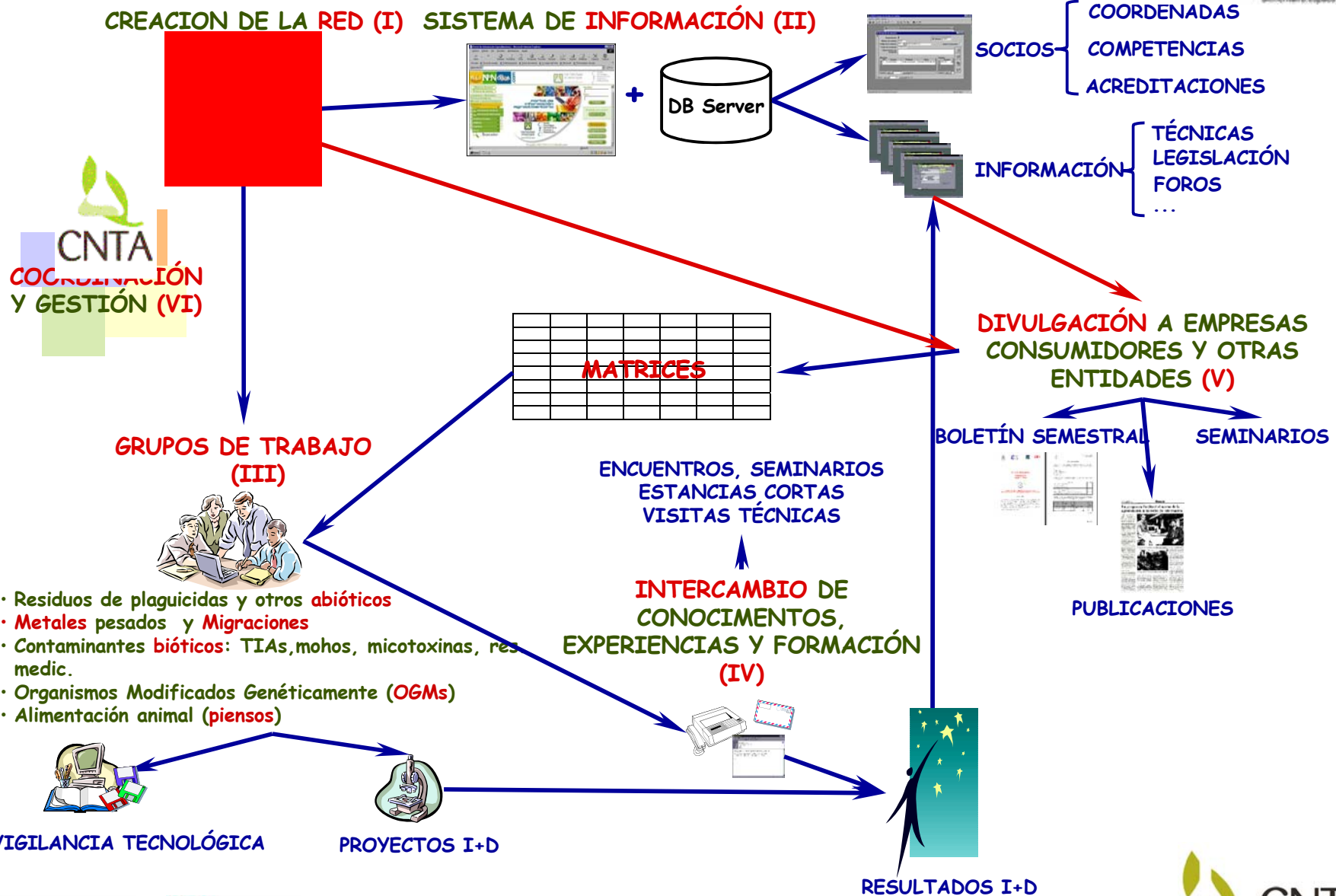
WORKING AREAS

- **Abiotic residues and contaminants:** analysis of phytosanitaries, antibiotics, etc,
- **Biotic contaminants:** fast detection of pathogens, mycotoxins, etc.
- **Heavy metals and migrations:** metal speciation, migration from packaging to foods, toxicology, etc.
- **GMOs (Genetically Modified Organisms):** development of analytical tools, field “coexistence”, etc.
- **Animal feeding animal:** raw materials origin, residues and contaminants detection, etc.

OBJECTIVES

- **Creation of expert working groups:** evaluation of analytical techniques, definition of problems, etc.
- **Knowledge exchange** among partners.
- **Training** of researchers and technicians:
 - Technical visits
 - Training stages
 - Organization of technical meetings and seminars
- Development of cooperation R&D projects.
- **Promotion and spreading of RETSA available services for the Food Sector**
- **Knowledge transference and training:** conferences, technical documents, etc.

FLOW CHART



- Residuos de plaguicidas y otros **abióticos**
- **Metales** pesados y **Migraciones**
- Contaminantes **bióticos**: TIAs, mohos, micotoxinas, res medic.
- Organismos **Modificados Genéticamente (OGMs)**
- Alimentación animal (**piensos**)

RESULTS

- 12 working groups meetings
 - Working lines and competences
 - Knowledge exchange
 - Sharing of problems and proposals



RESULTS



- **Scientific and technical meetings:**

- *Especiación de metales en la industria agroalimentaria: desde la investigación hasta el análisis de rutina* (Metals speciation in food industry: from research to routine analysis), Montardon, January 23-24, 2006
- *Desarrollo y utilización de técnicas rápidas de análisis para el control de la seguridad alimentaria* (Development and use of fast analytical techniques for food safety control), February, 15th 2006
- *Criterios microbiológicos aplicables a alimentos: nuevo reglamento 2073/2005* (Applicable microbiological criteria for foods: new EC Regulation 2073/2005), June 15th, 2006)



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Gobierno de Navarra



RESULTS

- Training

- Stages
- Congress attendance
- Course “*Validación y cálculo de incertidumbre en determinaciones microbiológicas aguas y alimentos*” (Calculation and validation of uncertainty in microbiological analysis of foods)
- Intercomparative study of antibiotics analysis
- Technical questions



RESULTS

• Dissemination to Food Sector

– Web page: www.retsa.com

- Acces to technical documentation, interesting links, etc.

– Services offered by the network: catalogue

– Free technical seminars

– Technical articles



CENTRO NACIONAL DE TECNOLOGÍA Y SEGURIDAD ALIMENTARIA(CNTA)

Dirección: Carretera NA 134 km 50, 31570 San Adrián (Navarra)
web: www.cnta.es

RESPONSABLE DEL PROYECTO: D.ña.: Silvia Garcia de La Torre.
Cargo: Técnico Área I+D+i
Telf: 948 870159 Fax: 948 996127
e-mail: sgdelatorre@cnta.es



DESCRIPCIÓN DE LA ENTIDAD

El Centro Nacional de Tecnología y Seguridad Alimentaria – Laboratorio del Ebro es una organización sin ánimo de lucro creada en 1991 a iniciativa de las empresas del sector de conservas vegetales. Está ubicado en San Adrián (Navarra). Fue reconocido oficialmente como Centro Técnico Nacional de Conservas Vegetales por la Comisión Interministerial de Ciencia y Tecnología en 1991. Así mismo está considerado como Centro de Innovación y Tecnología (CIT) y Oficina de Transferencia de Resultados de Investigación (OTRI) por el Ministerio de Ciencia y Tecnología y es un Laboratorio acreditado por ENAC conforme a la norma UNE-EN-ISO/ IEC 17025:2000, certificado por Lloyd's Register conforme a la norma UNE-EN-ISO 9001:2000 y homologado por el Gobierno de Navarra para la realización de análisis agroalimentarios y de aguas. Desde el inicio de su actividad, en 1991, se ha dedicado al asesoramiento y colaboración técnica para el buen desarrollo de los procesos de elaboración de las industrias transformadoras de alimentos, ofreciendo servicios de análisis, asistencia técnica, difusión de información de interés tecnológico, desarrollo de proyectos de I+D+i y cualquier otra labor encaminada a favorecer la competitividad de las empresas, fomentando la eficacia en los procesos que desarrollan y la calidad de los productos que elaboran.

Actualmente, el CNTA está consolidando nuevas líneas de actuación centradas en el sector de carnicías, de bebidas, biotecnología, aguas potables y residuales, plaguicidas, harinas, aceites y grasas. Son las nuevas líneas de trabajo que responden a la demanda del sector agroalimentario, sector que busca su espacio en un mercado cada vez más globalizado y preocupado por los niveles de calidad, servicio, satisfacción que exige el consumidor.

ÁREAS DE ACTIVIDAD MÁS RELEVANTES

El CNTA contribuye al desarrollo y competitividad de las empresas. Centramos nuestra actividad en:
• Proporcionar asistencia técnica para el adecuado desarrollo de los procesos de elaboración de las empresas del sector agroalimentario: Asesoramiento en fábricas, calibraciones, tramitación de expedientes de exportación, etc.,
• Facilitar servicios analíticos capaces de cubrir las necesidades de calidad, seguridad y cualquier especificación del producto fabricado. Disponemos de 6 Departamentos con 8 Laboratorios que responden a la demanda del sector agroalimentario, garantizando los niveles de calidad y seguridad de los productos.
• Coordinar, gestionar y desarrollar proyectos de investigación con las empresas y Administraciones. Las nuevas líneas de seguridad y tecnología alimentaria se desarrollan en el CNTA a través de diversos proyectos concertados con empresas de interés general para el sector

ANALÍTICAS

El Área analítica está estructurada en 6 Departamentos con ocho laboratorios en los que se realizan más de 209 métodos de ensayo.
1. En el laboratorio de Análisis Físico-químico e Instrumental se analizan tanto la composición de los alimentos: valor nutritivo, vitaminas, azúcares, almidón, capsicina, licopeno, etc., como el contenido de aditivos y contaminantes: nitratos, metales, plaguicidas, acrilamida, etc.
2. En el laboratorio de Microbiología se realizan ensayos para la determinación de la aptitud microbiológica de los alimentos así como microbiología de puntos críticos y análisis de la potabilidad de las aguas.
3. El laboratorio de Biotecnología realiza ensayos para la detección cualitativa y cuantitativa en tiempo real de organismos modificados genéticamente (OGM) y otras técnicas relacionadas con la caracterización y trazabilidad genética de variedades, especies o individuos.
4. En el Laboratorio de Aguas se realizan los análisis de los parámetros físico-químicos, y posibles contaminantes de aguas de consumo, aguas superficiales, aguas de río y aguas de proceso: materia orgánica, alcalinidad, nitratos y nitritos, cloruros, sulfatos, etc.
5. En el laboratorio de Envasés se analizan las características del barniz y la hojaldra, los parámetros de calidad del envase, las causas responsables de la corrosión y contaminantes: estaño y BADGE.
6. El laboratorio de medio ambiente trabaja en el estudio de las aguas residuales y potables y realiza caracterizaciones de vertidos con medición de caudales y determinación de la carga contaminante.
7. El laboratorio de calidad realiza controles de calidad en producto acabado y en materia prima: texturas, defectos, revisión de etiquetado, pruebas organolépticas, etc.

OTROS DATOS DE INTERÉS

El CNTA cuenta con un valor añadido, el Portal de Vigilancia Tecnológica www.ainnova.com.
ainnova.com contiene información sobre: Legislación, Normativa, Patentes y Marcas, Técnicas Analíticas, Productos, Mercados y Nuevos Productos, Tecnologías de Producción, Directorio de Empresas, Publicaciones, I+D+i, Foros, Foros, Ferias, Congresos y circuitos.
Para la difusión activa de toda esta información se elaboran las alertas de vigilancia tecnológica, de periodicidad quincenal o mensual, sobre las diferentes áreas del portal, que se distribuyen vía correo electrónico.



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RESULTS



- **Development of R&D projects (I)**

- “Hacia una doble valorización de subproductos de la industria agroalimentaria”. **APESA and CNTA**
- “Optimización del control de residuos de fitosanitarios. Estudio de interferencias y contaminaciones en alimentos de producción ecológica”. **CNTA and Universidad del País Vasco.**
- “Desarrollo de una metodología multiresiduo de detección de antibióticos en alimentos de origen animal: aplicación de nuevas moléculas inductoras de fluorescencia para la cuantificación de residuos mediante hplc-fld”. **ALVO-Instituto Lactológico de Lekumberri and CNTA.**
- “Desarrollo de un método rápido de medida de residuos de pesticidas en aceites vegetales”. **AZTI and L’ITERG**
- “Desarrollo de un sistema basado en la biología molecular, para la identificación y cuantificación de esporas butíricas, productoras de defectos tecnológicos en quesos. **ALVO and Gaiker.**
- “Estudio de distribución y especiación de minerales y elementos traza en leche cruda de vaca y fórmulas infantiles”. **ALVO and Universidad de Navarra**
- “Desarrollo de sistemas moleculares para la prevención y diagnóstico de la mamitis bovina”. **ALVO-Instituto Lactológico de Lekumberri and Gaiker.**



RESULTS



- **Development of R&D projects (II)**

- “Técnicas de detección y cuantificación de residuos Medicamentosos y contaminantes en Leche. Parte II Micotoxinas”. **ALVO and Universidad de Navarra.**
- “Incidencia de la Listeria monocytogenes en explotaciones ovinas y queserías de la D.O. Idiazabal de la Comunidad Autónoma del País Vasco” **Universidad del País Vasco and ALVO**
- “Desarrollo de nuevos métodos para cuantificación y detección simultánea de patógenos en alimentos.” **AZTI and ALVO.**
- “Métodos alternativos a la comercialización tradicional del espárrago con Denominación Específica Espárrago de Navarra”. **CNTA and UPNA**
- “Seguimiento de elementos traza (Pb, Cd, As, Cu, Zn) en el sector porcino del Suroeste de Francia” **CETIOM, APESA, ARVALIS and Universidad de Pau.**
- “Futural: nuevos alimentos”. **IRTA, CNTA, Gaiker and Azti**
- “Doble valorización de subproductos del proceso de elaboración de frutas”. **CNTA and APESA**



RESULTS



- **Development of R&D projects (III)**

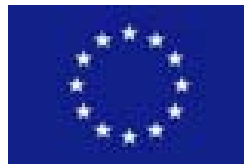
- “Alternatives in water-treatment plants of ruminant and non ruminant slaughterhouses (sludge safe). **CNTA and APESA**
- “Selection and improving of fit for purpose sampling for specific foods and risks”. **CNTA and Universidad de Lleida**
- “Desarrollo de un sistema basado en la biología molecular, para la solución de problemas tecnológicos y sanitarios en muestras de leche procedente de ganado ovino”. **ALVO and Gaiker.**
- “Alianza estratégica para la mejora de la seguridad de los alimentos a través del envasado”. **CNTA and Leia**
- ” Desarrollo de un test para la detección de residuos de antibióticos en alimentos”. **ZEU-INMUNOTEC S.L, Universidad de Zaragoza and CITA**
- “Desarrollo de test rápidos para la detección de antibióticos y sulfamidas en carne”. Realizado por **ZEU-INMUNOTEC S.L, Universidad de Zaragoza and CITA**
- “Diseño de métodos inmunoquímicos para el análisis y la evaluación de la calidad de los alimentos” **Universidad de Zaragoza, ZEU-INMUNOTEC S.L, and CITA**
- “Diseño y evaluación de un protocolo de análisis de residuos de medicamentos en carne”.. **Universidad de Zaragoza, CITA and ZEU-Inmunotec.**



PROJECTS:

Multiple valuation of residues generated by the agrofood processing industry

Multiple valuation of residues generated by the fruit processing industry



CALLS:

INTERREG IIIA: 2006-2008

NAVARRA-AQUITAINE: 2005, 2006, 2007 and 2008



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PARTNERS:



National Centre for Food Technology and Safety
San Adrian. Navarra



National Renewable Energy Centre
Pamplona. Navarra



Association Pour L'environnement Et La Sécurité
Aquitaine



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de Navarra



BUDGET

PARTNER	BUDGET
National Centre for Technology and Food Safety (CNTA)	128.215,60 €
National Renewable Energy Centre (CENER)	124.769,00 €
Association Pour L'environnement Et La Sécurité Aquitaine (APESA)	83.360,00 €
TOTAL	336.344,60 €



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Introduction

Spain and particularly Navarra has a strong food processing industry that produces high amounts of residues per year.

High added value compounds can be found at considerable concentrations in determined agrifood residues.

Utilization of agrifood wastes both to extract high added value compounds and to produce biofuels, would reduce dependence on petroleum while turning current liabilities into a double valuation process



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Objective

The aim of this study is the search of alternatives for upgrading by-products generated by the agrofood and fruit processing industry

Two consecutive alternatives have been developed in this project:

1. Bioactive compounds extraction
2. Bioethanol and biomethano production



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Residues



Characterization

Bioactive compounds extraction



Biomethane production



Bioethanol production



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Results:

Several vegetable and fruit industry byproducts have been studied as a potential source of bioactive compounds and biofuels.

Bioactive compounds have been extracted by using Clean Technologies such as Supercritical Fluid Extraction and Membranes Technologies.

High added value compounds such as carotene and alpha tocopherol have been extracted by supercritical fluids technique from some of the studied agrifood byproducts,

The residue obtained after extraction has been used to check their potential as source of biofuels.

The results obtained confirm the valuation of agrifood byproducts to be used as valuable feedstock for high-value compounds extraction and for biofuels production



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ADKNOWLEDGEMENTS

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Mrs. Estíbaliz Garayoa

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RETSA assistant**

THANK YOU



Cross-border cooperation between
universities and Euroregional Structures:
the case of Galicia/Norte

Luis Domínguez Castro

Jean Monnet Chair. University of Vigo
(Spain)

OVERVIEW

- The Euroregional Studies Centre Galicia-Norte de Portugal
- Eixo Atlântico Studies Service
- Iberian Centre of Nanotechnology at Braga
- European Centre of Excellence Jean Monnet Cross-border
- Masters in European Union Policy, Development and Cross-border co-operation
- Centre of Transborder Documentation Galicia-North of Portugal

The Euroregional Studies Centre Galicia - North of Portugal

- POINTS OF SUCCESS

- Six universities, one regional government, one regional administration, one association of municipalities
- Foundation of Private Law
- Training Course

- POINTS OF FAILURE

- Very slow decision making
- Lack of professional management
- Lack of visibility
- Vague aims

Eixo Atlântico Studies Service

- POINTS OF SUCESS
 - Group of analysis of Euroregional Strategic Studies
 - Group of experts of six universities
 - Of course Euroregional Studies
 - Strategic Studies Library
- POINTS OF FAILURE
 - Excessive offer of strategical plans
 - Influence capability
 - Lack of economic resources

Iberian Centre of Nanotechnology at Braga

- POINTS OF SUCESS
 - Agreement between both national governments
 - Adequacy in both regional strategical frameworks
 - North located, Galician directed
- POINTS OF FAILURE
 - Top-down decission
 - Weak involvement of local agents
 - POCTEP participation

European Centre of Excellence Jean Monnet Cross-border

- POINTS OF SUCCESS

- Five Jean Monnet Chairs from two States
- A shared Master
- Group of analysis for Euroregional Strategies

- POINTS OF FAILURE

- Lack of juridical personality
- Weak Visibility
- University of Vigo vs. University of Minho

Masters in European Union Policy and Territorial Co-operation

- POINTS OF SUCCESS

- Curriculum elaborated in joint meetings by professorship from University of Vigo and University of Minho
- Further interest by the Galician Parliament
- Master framed in the Bologna Declaration

- POINTS OF FAILURE

- Different Bologna national frames
- Difficulties to attract the interest of companies in welcoming practice students
- Excessive offer

Centre of Transborder Documentation Galicia - North of Portugal

- **POINTS OF
SUCCESS**

- Collaboration between
University and civil
society
- Political opportunity

- **POINTS OF
FAILURE**

- Lack of Portuguese
partnership

Conclusions

- 1.- Individual collaboration professorship with cross-border structures vs. Institutional collaboration
- 2.- Top-Down co-operation and bottom-up co-operation
- 3.- Formation and research