Coordination of R&D&I policies and their coherence with other policies in Newly Acceded Countries

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FOREWORD

Member States and their regions face often the need of sharing their experiences in many areas like designing and implementing of their own policies, developing coordinated initiatives on issues of transnational interest or by identifying areas where Community initiatives could reinforce national or regional actions.

When the European Council set the 3% of GDP objective for R&D investment, the Commission suggested the "Open Method of Coordination" (OMC) should be applied for this objective as well. The OMC was a method designed to help Member States progress jointly in the reforms they needed to undertake in order to reach the Lisbon goals.

This was the environment when we started the FP6 RTD OMC NET project COGNAC in October 2006. We set out on two specific areas – public research spending and policy mixes and comprehensively the SMEs and research – to contribute to the coherent development, design and implementation of R&D&I policies of the participating regions and to strengthening the role of research policies in the policy mixes of the Regional Innovation Strategies.

The Commission acknowledges that research governance at the level of the regions is central to the development of the ERA, stating that "regions emerge as dynamic players in developing and structuring the European Research Area"[1]. The region is, therefore, considered as a key factor in the implementation of technology policy[2]. These substantiates that the COGNAC project focused mostly at the regional level processes in the project by taking into account the national and European circumstances regarding RDI policies.

The co-operation is a process that supposes a relation among several actors with different characteristics and sometimes with different objectives. Therefore, in any co-operation process barriers can be identified[3].

We had to face with the fact that the COGNAC partner regions are in different levels in the evolution of their regional innovation systems, mostly because of the differences in the decentralization of competencies from the national level to the regional level. So, some regions are only statistical regions while the old member states' and some new member states' regions have their own administrative system. In the old member states and in some new member states there is a clear allocation of competencies and tasks in the regional innovation system among the stakeholders. In some new member states there are no competencies allocated to regional level regarding RDI policy development and implementation or even some actors (like incubators, technology transfer offices, etc.) are missing while these belong to the key actors in a well functioning regional innovation system.

The most important obstacle by carrying out the activities in the COGNAC project was the nature of the available information in the different regions. We realized our partner regions are in different stage of producing relevant RDI statistical information in order to allow joint analysis with other regions. The COGNAC project has done a lot to provide information for regional innovation stakeholder and policy makers. We invite you to visit the homepage of the project to assess this

[1] European Commission, 2001, The regional dimension of the European Research Area", 03.10.2001 COM(2001),page 7
[2] KWF Kärtner Wirtschaftsförderung Fonds (Ed.) Interregional Innovation Policy, page 14
[3] Optimat and VDI/VDE IT, 2005; Horvat, 2006; Köcker and Hunter, 2005; Beltrán, 2007

information (www.cognacproject.eu).

Findings and statements in the book are the results of interactive consultations within the COGNAC project and the authors are solely responsible for this publication, which does not represent the opinion of the Community. The Community is not responsible for any use that might be made of the content of this publication.

Debrecen, 2008

Márta Völgyiné Nadabán
project coordinator

I. INTRODUCTION

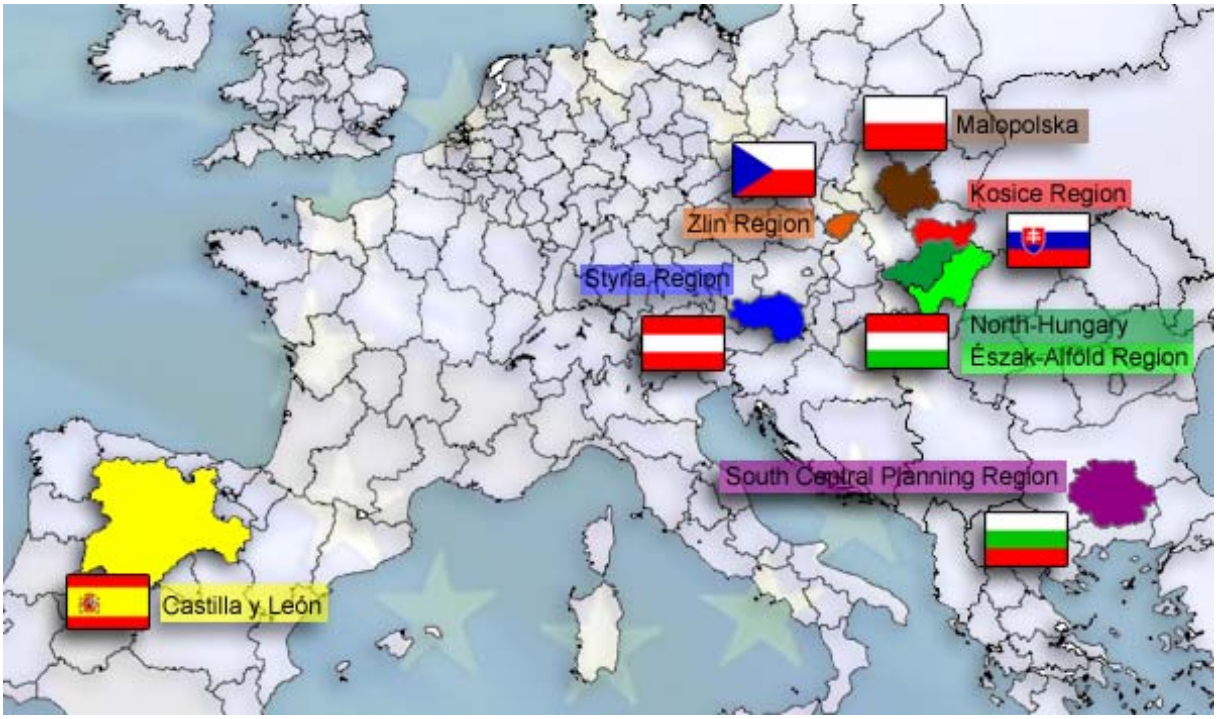
In order to achieve the Lisbon objectives and create a knowledge based society, Europe needs to increase and improve investment in R&D. This requires improving the effectiveness and coherence of research policies at European, national and regional levels. The first cycle of application of the open method of co-ordination (OMC) to the 3% objective provided an overview of the Member States policies in a number of areas, facilitated mutual learning and led to a number of policy recommendations adopted by CREST in October 2004.

The following document is made within a 6th Framework Programme project, Cognac, which is the acronym for **Coordination of R&D&I policies and their coherence with other policies in Newly Acceded Countries focusing on public research spending and policy mixes and SMEs and research**. The project was supported within the first cycle of the **RTD-OMC NET** call. This handbook aims to resume the results of the work accomplished in COGNAC project.

The **strategic objectives** of the project was to increase the effectiveness and coherence of research policies at European, national and regional level by the coordination and exploitation of the synergies and results of the parallel programming activities on the basis of mutual learning between the project partners. The project aimed to achieve this objective through analyzing, comparing and benchmarking of the regional processes on the field of R&D&I policies in the partner regions.

Regions analyzed in the project:

- **Castilla y Leon (Spain)**
- **Kosice Region (Slovakia):** East Slovak Region
- **North Great Plain (Hungary)**
- **North Hungary (Hungary)**
- **Malopolska (Poland)**
- **South Central Planning Region (Bulgaria)**
- **Styria (Austria)**
- **Zlín Region (Czech Republic)**: Stredni Morava



In the project, **two types of regional stakeholders participate** from these given regions: **one regional authority responsible for the regional innovation strategy planning and implementation and one regional stakeholder** (research institute or tertiary education centre). From the 8 regions participating, **2 are at NUTS III level: Zlin and Kosice region**, but the **others are NUTS II regions**. Although, the statistical level of the regions is different, all regions participating in the project has their own proper regional level authority and these authorities operate on the given regional level.

Participant organisation name	**Country, Region**	**Organisation type**
INNOVA Észak-Alföld Regional Development and Innovation Agency (coordinator)	Hungary, Észak-Alföld Region	Regional authority
Regional Development Council in the North Great Plain	Hungary, Észak-Alföld Region	Regional authority
University of Debrecen Medical and Health Science Centre, Faculty of Medicine	Hungary, Észak-Alföld Region	Tertiary educational center
Bay Zoltán Foundation for Applied Research	Hungary, North-Hungary Region	Research institute
Kosice Self-Governing Region	Slovakia, Kosice Region	Regional authority
Technical University of Kosice	Slovakia, Kosice Region	Tertiary educational center
Junta De Castilla Y Leon	Spain, Castilla y Léon Region	Regional authority
Fundación CARTIF	Spain, Castilla y Léon Region	Research institute
ICS Internationalisierungscenter Steiermark GmbH	Austria, Styria Region	Regional authority
Joanneum Research Forschungsgesellschaft GmbH	Austria, Styria Region	Research institute
Krakow Technology Park Ltd.	Poland, Malopolska Region	Research institute
National Institute of Animal Production	Poland, Malopolska Region	Research institute
Applied Research and Communications Fund	Bulgaria, South Central Planning Region	Research institute
District Administration – Stara Zagora	Bulgaria, South Central Planning Region	Regional authority
Regional Authority of the Zlin Region	Czech Republic, Zlin Region	Regional authority
Tomas Bata University in Zlin	Czech Republic, Zlin Region	Tertiary educational center

1. PROJECT SUMMARY

Proposal full title	**Coordination of R&D&I policies and their coherence with other policies in Newly Acceded Countries**
Proposal acronym	**COGNAC**

Topics addressed

- public research spending and policy mixes
- SMEs and research

Proposal abstract

The COGNAC project **aim**s to support the regional dimension of the ERA by increasing the effectiveness and coherence of the R&D&I policies with special focus on the newly associated countries.

By the **coordination of** the regional **policy making processes** (RIS-NAC, Structural Funds) of 6 regions with the support of 2 experienced regions, the partners exploited the added-value of the internal/final results (deliverables) and the synergies of the parallel running projects and activities. The proposal **focus**es on public research spending and policy mixes and comprehensively the SMEs and research target areas.

The **partnership** represents a high value-added as well and has been formulated on special criteria based on the addressed topics by including one regional administration party and one relevant stakeholder per region. The Regional Development Agencies as operative bodies of the Regional Development Councils are **directly involved** in the preparation of the policies and the decisions and thus in the decision making process as well. The stakeholders have been also selected to ensure equal opportunities and equilibrium on the university (public research) and the applied research institution (intermediary to SMEs) side.

The advantages of a **systemic approach** by **inter-programme relationships** ensures a **unique opportunity to create optimal linkage to other related activities of the EU (e.g. Innovation Strategies, Structural Funds, ….) and other international bodies (e.g. IRE)** and a **sustainable, coordinated use and structured availability** of this high value knowledge and information databases.

Specific objectives of the project were:

- **coherent development, design and implementation of R&D&I policies** by the coordination **of the RIS-NAC and Structural Funds** policy development and related activities
- **strengthening the role of research policies in the policy mixes** of the RISs and other policies at regional, national and EU level **by exploiting the synergies**
- development and testing of an effective and tailor-made continuous and dynamic **mutual learning process** to disseminate „good policy practices" and benchmarking activities
- providing additional resources to **foster the development of policy coordination activities** at EU level
- **identification of areas requiring complementary and mutually reinforcing actions** at Member States and EU level complemented by the development of trans-national concerted policy actions and joint initiatives.

2. IMPLEMENTATION PLAN

The project lasted 27 month in total and it started in October 2006. The work accomplished comprises two stages. Stages are built up of work packages (WPs) and tasks are specified and developed chronologically in the WPs. WPs follow the logical phases of the project and each workpackage is led by one of the partners. The project implementation plan has been developed to ensure the maximum effectiveness of the exploitation of the synergies with other relevant projects and activities.

The most important methodological background of the implementation is the Open Method for Coordination with some useful additional specialties due to the nature of the project.

The main resources to realize the project came from the partnering regions. The consortium members have been selected on the basis of their management skills and capacity, experience in the field, regional role and importance and involvement in the policy making process. The RIS projects formed the basis as a pre-project to base all the criteria of the selection and also ensure the success and long-term sustainability of the project.

Stage 1 was the preparation stage and lasted approximately 12 months. It will be used to set up the organizational structure of the project, to fine tune the work programme, to design the communication strategy of the project, to build trans-national and regional consensus in the field of R&D&I. This stage collected all of the information in the partnering regions available on R&D with special respect to summarize the available results and deliverables of the running parallel activities and projects (National Development Plans, RISs).

Stage 2 is the benchmarking phase to result in studies and synergy papers, a transfer model, common priorities and action plan, and recommendations for future EU actions and projects. Analysis of the results should be comparable in all participating regions so it should include nearly the same elements. Existing analyses should be actualized also. By the end of this stage conclusions and recommendations can be also developed.

Based on the above mentioned OMC methodology the **project elements** will include identification and consensus on common objectives, priorities and elaboration of a transnational catalogue of priorities, surveying, benchmarking and establishing common indicators and measurement process to ensure the comparability of the results development of a common and agreed action plan to the long-term sustainability of the project results and partnership elaboration of models to promote policy cooperation and transnational exchange of learning and good practice recommendations for the EU for future activities and reinforcing actions creation of an interregional mutual learning platform.

Project activities covered studies, analyses, synthesis papers, workshops and seminars, working group meetings, exchange of experience and development of joint policy initiatives, action plan, and recommendations. The following document aims to present and summarize the work accomplished in these workpackages.

Work planning:

WP No	Work package title	Organization
WP0	Project management and progress assessment	INNOVA Észak-Alföld Regional Development and Innovation Agency, Co-ordinator
WP1	Interregional Learning Platform	Bay Zoltán Foundation for Applied Research
WP2	Mapping of activities	Technical University of Kosice
WP3	Benchmarking of R&D&I policies and activities	Bay Zoltán Foundation for Applied Research
WP4	Transferability model of best practices	Zlin Region
WP5	Joint policy initiatives and recommendations	Fundacion CARTIF
WP6	Dissemination	INNOVA Észak-Alföld Regional Development and Innovation Agency

II. MAPPING OF R&D&I ACTIVITIES (Workpackage 2)

As European regions are heterogeneous, a systematic approach had to be used in order to analyze the data necessary for developing recommendations to effective national and regional RDI policies.
The objective of this workpackage was to map and analyze scientific, technological and innovation activities, knowledge base and excellence in the participating regions, countries. The main role of workpackage was to provide information for further work accomplished.
The works included analysis of the relevant EU, national and regional R&D&I policies, framework conditions, actions and scientific excellence for all participating regions. This was supposed to create a background for the benchmarking study in WP3.

Activities of WP2
The main activities under WP2 were launched at the beginning of 2007 with a great contribution of all COGNAC project partners. In order to furnish all appropriate data to the WP leaders, the structure and form of necessary data had to be defined. To ensure the comparability, template was also based on the existing sources of data such as Erawatch, Trendchart etc. After few round-tables of discussions a template for gathering information was agreed. A partner from each region was responsible for filling the template and delivering it to TUKE.

The activities performed within WP2 could be divided into three main areas:

Mapping R&D&I policies
It is necessary to know the background of each region to be able to analyze the R&D&I policies and to develop transferability model and recommendations. The following areas were touched:

- scientific/economic background of the regions/countries, SWOT and technology foresight,
- comparison analysis on regional, national and EU level policies (regarding e.g. research, innovation, economic and regional development, IT,…),
- the regional and national level programming works (e. g. NDP, growth poles),
- framework conditions, regulatory and administrative factors, institutional systems/structures/actors, legal background,
- the S&T&I statistical systems, and indicators, information systems

Mapping of RDI projects
Absorption capacity of a region can be also evaluated by the scientific projects. Within this task the regional and national RDI activities, and the most important finished, running and planned R&D&I projects (flagship projects) with regional and/or national impact, RIS projects, and the level of the involvement of the industry in the research projects. It was agreed to establish a database about (up to ten) excellent projects (best practice).

Mapping of RDI performers
During this activity information were gathered and structured about the excellence centers, critical masses, joint research centers, SMEs with outstanding innovation potential (classification coming from RIS projects) and synergies were identified.
By this task a database about the excellent research supply capacity in each region called Excellence Thesaurus was established. This database should help the actors to find the best EU level partnerships for themselves.

Four deliverables have been prepared within WP2:

Key regional players inventory: database (name, field of work and availability) of the key regional RDI actors in every participating region of about 20-50 institutions/region depending on the decision of the given region.

Excellence thesaurus (projects, institutions, SMEs, experts): database containing contact addresses for excellent RDI players in every participating region, institutions and SMEs with regional, national and international excellence, and also short summary of the most important projects (max. 10/region) with regional dimension.

Project managers database and forum: database containing 20 – 50 project managers per region in the field of RDI with experience in running international projects. This is not supposed to be a database of research results and academic studies but a database of the research managers to create the possibility for them to communicate and share their experiences in managing EU projects and form opinion on their expectations as well to make the system work more efficiently.

Politicians database and forum: database containing decision makers (members of the innovation councils, development councils, innovation boards, not only on the regional level. This database contains their contact details, positions and possibility to reach them with RDI topics, questions and also a possibility of a meeting point for them to communicate and get to know each other.
The aim of WP2 was to provide WPs 3, 4 and 5 with necessary data which was supposed to be analyzed within those WPs. That is why we will only deeply describe the structure of template for gathering data and provide details on summary data to the gathered data. We will not analyze the gathered data, as they will be described and analyzed in the following chapters.

Template for gathering data
The structure of template followed the areas described in the second chapter (Activities) and the following data were collected:

Area 1: Mapping R&D&I policies
a) Basic socio-economic indicators
a1. Quantitative indicators
a2. Ten most important branches according to the share in total employment in 2005
a3. Ten most important branches according to the share in GDP in 2005
a4. Ten most important branches according to the regional priorities in the strategic documents

b) R&D&I policies and activities
b1. RDI policy national
b2. Other policies
b3. RDI policy regional
b4. RIS priorities
b5. Policy mix for RDI
b6. The list - ten regional top technology areas based on The European Classification (ECLA)
b7. Key Strategic Documents
b8. Legislative on RD and Innovation

c) RDI policy monitoring and foresight systems
c1. Regional information system
c2. National SWOT on RDI

c3. Regional SWOT on RDI
c4. Foresight system (national level)
c5. Foresight system (regional level)

Area 2: Mapping of RDI projects

d) Research projects with regional impact - regional and national projects

d1. RDI activities
d2. Regional Innovation Strategy
d3. Governmental initiatives
d4. Public research spending
d5. SME's initiatives

e) The list - database of ten regional excellent projects

e1. SME and NGO innovation projects
e2. Public research projects

f) Database for Excellence Thessaurus

f1. Excellence/R&D/Knowledge/education/institutions on regional level

Area 3: Mapping of RDI performers

g) Institutions on national level

g1. Government and legislative bodies
g2. Entrepreneurship support institutions
g3. Excellence/R&D/Knowledge/education institutions
g4. Industrial research centers and innovation intermediaries
g5. Innovation Financial System Institutions and Funds

h) Institutions on regional level

h1. Regional government/legislative bodies
h2. Entrepreneurship support institutions
h3. Excellence/R&D/Knowledge/education institutions
h4. Industrial research centers and innovation intermediaries
h5. Innovation Financial System Institutions and Funds

i) Database of key regional players

i1. The list - Key Regional Players Inventory

j) Database for the decision-makers' forum

j1. National representative(s)/bodies (authorities) involved in the project
j2. Regional representative(s)/bodies (authorities) involved in the project

III. BENCHMARKING OF R&D&I POLICIES AND ACTIVITIES (Workpackage 3)

A state of the art study is the main deliverable of the Workpackage 3: Benchmarking of RDI policies and activities. The consortium had decided after long theoretical discussion to merge the deliverables (**Task 3.2 Comparison study on RDI policies and activities and Task 3.3. Benchmarking of the regions on the two priority topics**) into one **State of the Art Study**.

The benchmarking exercise is **focusing on performance indicators** chosen by the consortium and divided on **2 main parts: regional economic performance and regional research performance**.

The **comparison study covers the following areas: RDI policies, legal background, initiatives, activities, projects, RIS priorities, information systems and regional/national SWOT and technology foresight and top technology areas and branches**. As well as the comparison is made on the different regional/national innovation systems, trying to find the strength and the weaknesses of the diverse systems.

The benchmarking exercise tries **to show the differences in the performance** of the regions. It supposed to **choose the best regions**[4] **at NUTS II level by the two priority topic of the project: "*Public research spending and policy mixes*" and "*SMEs and research*".** Geographically the analysis **covers the area of the eight partner regions**. The data gathering was done by the participating representatives of the regions in the previous workpackage. In some cases, where the data was available, the EU15 data are also visible for a deeper comparison.

About benchmarking

Benchmarking[5] **is *a technique*** in which a company measures its performance against the best in class companies, determines how those companies achieved their performance levels and uses the information to improve its own performance. It is an improvement process in which an organisation compares its performance to the "best in class", search the reason how it reaches that performance and try to learn from it.

This tool can be used not only in the cases of enterprises, but between any actors, entity who want to measure performance. The word benchmarking comes from craftsmen who chiselled a mark on the surface of their worktable to make the length measurement easier comparing their object to this scale and using the worktable as the origin for the measurement. The benchmarking – as an analysing process – derives from the reconstruction of Japan industry after the Second World War. Japan experts visited thousands of American and Western European companies to see the products, processes and new technologies, than they adopted and developed them.

Regional benchmarking means that a specific region conducts a benchmarking process in order to improve its regional performance. Regional benchmarking is a powerful strategic policy tool which contributes to the different aspects, specific topics of development of regional economy. Typical steps in a benchmarking process: 1) identification of challenge, 2) preparation of the benchmarking exercise (defining budgets, tasks, and responsibilities), 3) information gathering, 4) analysing the data, 5) develop conclusions and 6) defining a plan for the implementation[6].

[4] See the limits of this benchmarking study on the next page.
[5] http://www.12manage.com/methods_benchmarking.html
[6] MLP Blueprint for Regional Innovation Benchmarking

In the context of national *research policies* the benchmarking can be an instrument for mutual learning and increasing RDI performances. Learning from the best can provide new ideas, solutions for the members in the benchmarked group. It can stimulate the application of new methods and practices (e.g. new call for proposals or programmes). As Key Figures 2001[7] mentioned: "Benchmarking does not involve transfer of practices directly from one context to another, but rather draws on experience elsewhere to stimulate new thinking about policy implementation. In this way benchmarking can improve national policies, instruments and practices, or open totally new possibilities that induce higher future performances."

In the COGNAC benchmarking the **starting point is a general comparison of the regions by some selected performance indicators**. Following, for the aim of a deeper analysis**, there are two priority topics in the project: "SMEs and research", and "public research spending and policy mixes".** The benchmarking focuses on this two topics, aims to define "best in class" region in this two topics.

Limits of COGNAC benchmarking

During the evaluation process of COGNAC benchmarking the project team faced **different type of problems**. First of all, **statistical spatial problems**: in the project consortium *eight regions are involved*. The analyzing work covered these eight regions, the best-in-classes were defined from this restricted area thus, the group of the benchmarked regions is limited, as well as the validity of benchmarking results.

Second, Castilla y Léon, North Great Plain, North Hungary, Malopolska, South Central Planning Region and Styria are **regions on NUTS-2 level**, but Zlin Region and Kosice Region **are from *different territorial statistical level:* NUTS-3**. In the COGNAC project every region is analysed on its own level, but the benchmarking process is an exception. During the elaboration process of this study the works were on NUTS-2 level, and in case of the two regions from lower statistical levels the analysis focuses on the referring NUTS-2 regions that contain them. It is due to the fact that **there are no statistical data on some indicators on NUTS-3 level**, and regions from different statistical levels have highly different performance, and the comparison of them does not produce realistic results. So, **in the benchmarking exercise, Kosice and Zlin Region is represented by their relating NUTS-2 regions: East Slovak Region and Stredni Morava**.

A methodological question **was *how to benchmark policies***. The project team met always the same problem: how can we benchmark policies, projects, qualitative descriptions and indicators and how can we avoid subjectivity. To solve this problem the consortium decided for the case of COGNAC regions i) **to use only quantitative indicators which can be assigned to the two topics (public research spending and policy mixes and SMEs and research)**, and based on the timetable of COGNAC and also taking into account the main objective of the project ii) these indicators are considered as **performance indicators** assigned to the adequate topic iii) the benchmarking study **focuses** on two main needs**: the benchmarking of the performance of the regions, and the benchmarking of the effectiveness of RDI policies.**

The calculated results don't reflect on the general performances of the participating regions. The benchmarking *results are valid only in the environment of this project according to the 2 specific topics of the project*, because they are based on a small number of indicators that were selected by the consortium partners.

[7] European Commission, 2001: "Towards a European Research Area: Key Figures 2001: Indicators for benchmarking of national research policies", European Communities, Brussels

Treatment of data - finding the suitable method

In the benchmarking literature the following steps build up the main part of a regional innovation benchmarking:

- selection of indicators,
- creation of the benchmarking database
- production of the benchmarking data
- analysis and interpretation of statistics
- suggestions for improvement[8].

The method, finally chosen for the analysis is the easiest and less complicated. By each performance indicator the ranks of the regions had been determined and the "best in class" was selected by the aggregation of the rankings of the region. In this way, it could be avoided that different basis of the indicators are compared. As a result only the regional performance results are taken into consideration.

Missing data

The COGNAC benchmarking exercise examines time intervals by some of its selected indicators and by some of them it is examined in one given year. This basis year is usually 2005, except in the cases where 2005 data were not available for more regions – here we had to use data available. The year considered is always indicated next to the indicators.

1. BENCHMARKING

As defining the pretext to the performances of the single regions in R&D, first we took a look on their general economic situation. The partner regions have quite different economical, geographical and historical background. These eight regions accessed to the European Community in four steps and in 21 years[9]. The analysis of the Regional Economic Performance covers economic growth data of the 8 partner regions and includes various other economic and demographic statistics to provide a better picture of regional performance and trends. This study is seeking a better understanding of the economic growth and innovation performance across the regions of COGNAC project and the causes of any variation. Explaining differences in economic performance is a complex task and only a combination of factors is likely to provide a satisfactory explanation. Through these explanations the benchmarking exercise can help to provide useful insights into the current data situation with regard to regional economic statistics.

Regional rankings in terms of economic activity and growth drivers are, for the most part, a mixed bag. Some regions have seen their labour force participation increase dramatically, but the rate still remains low relative to other regions. We present economic profiles for each of the eight regions covered. For each region the profiles outline R&D expenditures, recent growth performance, labour market processes and other notable regional economic features.

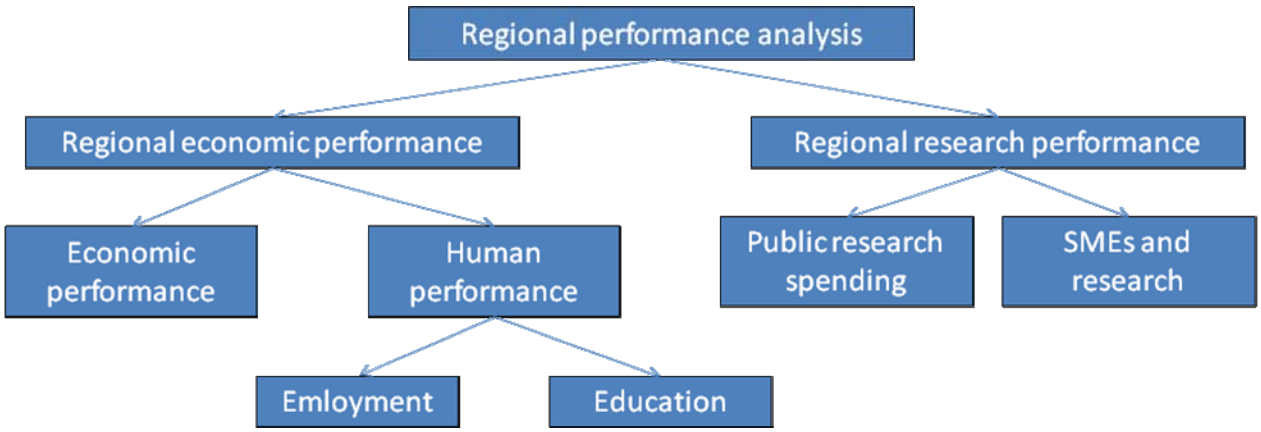
During the information gathering phase the collected data were divided into the parts according to the two targeted topics. Under the regional economic performance chapter the charts and data are benchmarked with regards to the overall regional economical description.

[8] MLP Blueprint for Regional Innovation Benchmarking

[9] Spain accessed in January 1986, Austria in January 1995, Poland, Czech Republic, Slovakia and Hungary in May 2004 and Bulgaria in January 2007.

The **source of these data is collected from the available Eurostat** data to have a generic and common understanding of all data. First experience of the COGNAC team was that it is really hard to find data available at regional level and these regional data coming from the national statistical offices can differ from the Eurostat regional level statistics. That is the reason why the consortium decided to use Eurostat statistics, where the data is available.

Regional economic performance is divided on two subtopics: economic performance and human performance. The indicators of these two groups will give the final results of the regional economic performance. **Regional human performance contains two subtopics as well: one on labour market and on education and training**.



REGIONAL ECONOMIC PERFORMANCE

As it can be seen of the graph above regional economic performance is analysed by two subtopics: economic and human performance, which is further divided into employment and education group.

Four indicators describe the performances in the group of **economic performance**:

1) ***GDP at current market prices**, Year: 2005, Form: purchasing power parities per inhabitant*
2) ***Average real growth rate of regional GDP at market prices** at NUTS level 2 - percentage change on previous year Year: 2000 - 2005 Form: %*
3) ***R&D intensity**. It shows the gross domestic expenditure on research and development (GERD) in the ratio of GDP. Year: 2003[10]. Form: %.*
4) ***Average patent applications** per million inhabitants. Patent applications to the EPO per million inhabitants, Year: 1999-2003. Form: pieces.*

[10] During the calculation period the latest NUTS-II regional data on Eurostat was from 2003.

Fig.1. GDP at current market prices, 2005, Eurostat

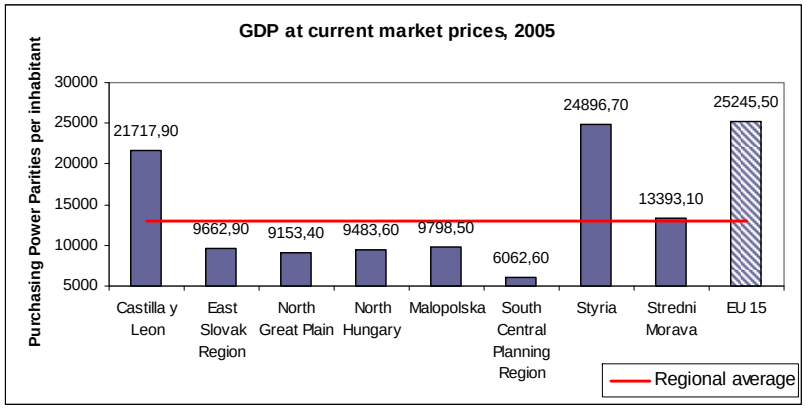


Fig.2. Average real growth rate of regional GDP at market prices, 2000 - 2005, Eurostat

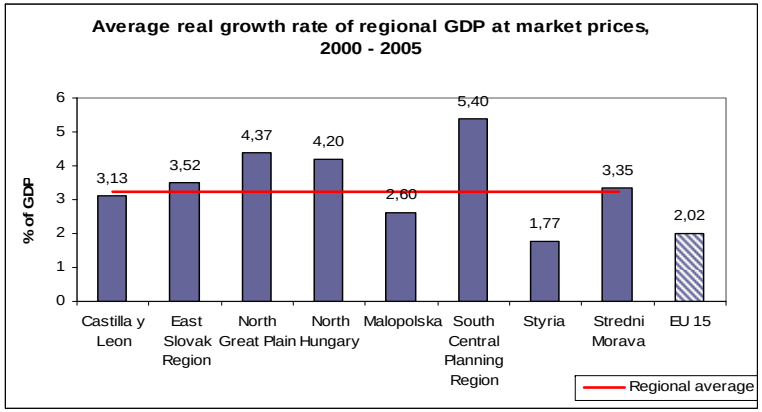


Fig.3. R&D intensity, R&D expenditure in term of GDP, 2003, Eurostat

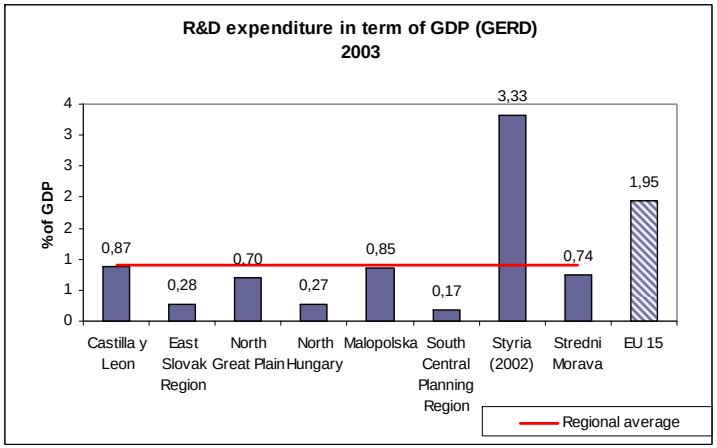
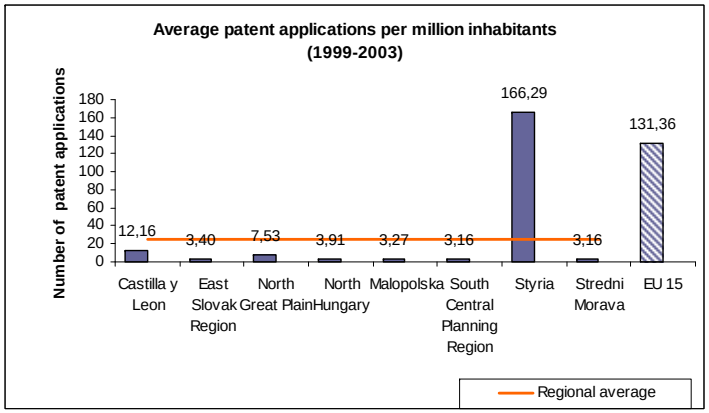


Fig.4. Average patent applications per million inhabitants (1999-2003), Eurostat



Regional human performance is described by the following indicators.

Three indicators belong to the group of **employment:**

1) ***Changes in population density.*** *It shows the changes between 2000-2005 in the ratio of the first year. Year: 2000-2005. Form: %.*
2) ***Average unemployment rate****. It means the average unemployment rate for age 15 years, Year: between 2000 and 2005. Form: %.*
3) ***Employment in knowledge-intensive services****. Employees in this field in the ratio of total employees. Year: 2005. Form: %.*

Fig.5. Changes in population density, 2000-2005, Eurostat

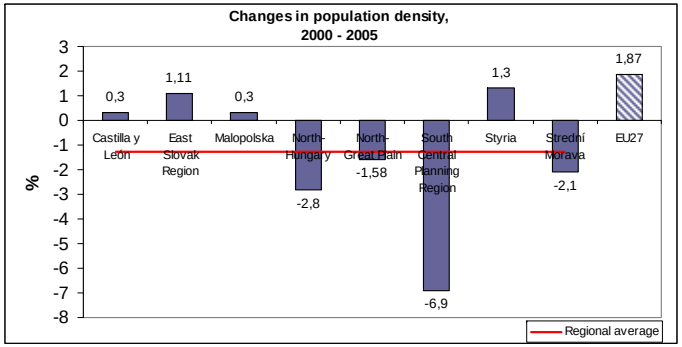


Fig.6. Average unemployment rate, 2000-2005, Eurostat

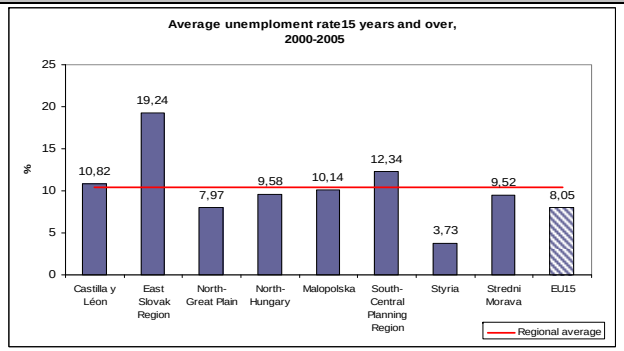
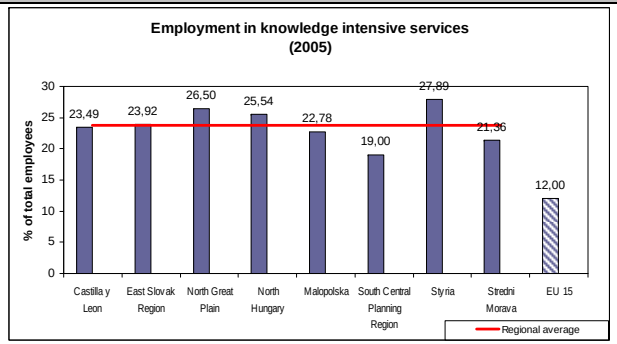


Fig.7. Employment in knowledge intensive services, 2005, Eurostat



Three indicators describe the topic of **education:**

1) ***Population with tertiary education***. In ratio of 25-64 age class. Year: 2005. Form: %.
2) ***Population with secondary education***. In ratio of 25-64 age class. Year: 2005. Form: %.
3) ***Population with lifelong learning***. In ratio of 25-64 age class. Year: 2005. Form: %.

Fig.8. Population with tertiary education, 2005, Eurostat

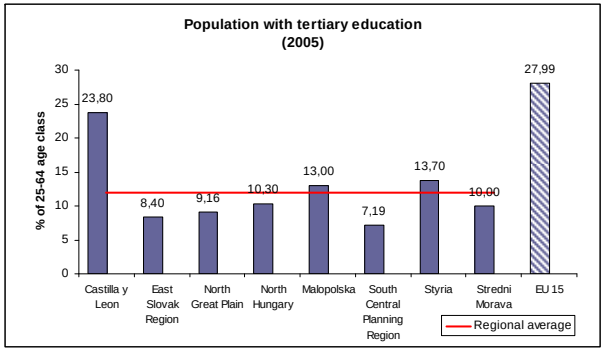


Fig. 9. Population with secondary education, 2005, Eurostat

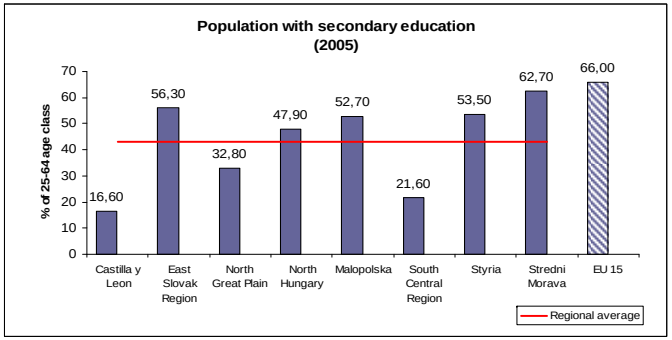
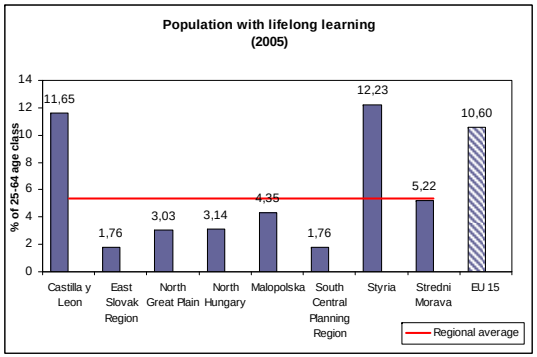


Fig.10. Population with lifelong learning, 2005, Eurostat



Summary of the regional economic performance

Indicator name (year, form)	Castilla y Leon	East Slovak Region	North Great Plain	North Hungary	Malo-polska	South Central Planning Region	Styria	Stredni Morava
GDP at current market prices	2	5	7	6	4	**8**	**1**	3
Average real growth of GDP 2000-2005	6	4	2	3	7	**1**	**8**	5
R&D intensity	2	6	5	7	3	**8**	**1**	4
Average patent applications per mill. inhabitants	2	5	3	4	6	n.a	**1**	**7**
Population with tertiary education	**1**	7	6	4	3	**8**	2	5
Population with secondary education	**8**	2	6	5	4	7	3	**1**
Population with lifelong learning	2	**7**	6	5	4	**7**	**1**	3
Unemployment between 2000-2005	6	**8**	2	4	5	7	**1**	3
Changes in population density	3	2	6	4	3	**7**	**1**	5
Employment in k. i. services	5	4	2	3	6	**8**	**1**	7
SUMMARY	**37**	**50**	**45**	**45**	**45**	**61**	**20**	**43**
Position	**II**	**V**	**IV**	**IV**	**IV**	**VI**	**I**	**III**

There are totally 10 indicators used by the measuring of regional economic performance of the regions. As we can see, in most of these indicator categories, Styria occupies the first position. This result clearly shows, Styria as the best in class region in COGNAC project. In the case of the South Central Planning region, it occupies 6 times the last position by the different indicators. From the Newly Acceded Regions, the performance of Stredni Morava region is the best regarding the position by the indicators.

Remarks to the summary:

The indicators where **Styria** was ranked as first are:

- GDP at current market prices
- Average patent applications per mill. inhabitants
- R&D intensity
- Population with lifelong learning
- Unemployment rate between 2000-2005
- Employment in k. i. services
- Changes in population density

Based on the regional economic performance, we can determine that **Styria is the best performing region in the class**, Castilla y Léon and Stredni Morava with behind it.

REGIONAL RESEARCH PERFORMANCE

In the first part, we tried to delineate general economic performance of the regions and in that way to create a general background for the two priority topics. The second part of the benchmarking exercise on **regional research performance is divided into two parts by the two priority topics**. During the mapping and benchmarking phase of the project, the consortium were trying to find the

most suitable and talkative indicators available for all NUTS II regions, the best featuring the given topics.

One of the difficulties had been first of all to find the proper indicators dedicated to the subject. In the next step, we had to check, if the data is available for the region. First, we checked the availability on Eurostat, in order to receive a set of data with a common basis. If the data wasn't available at Eurostat, regions checked the availability of it at their own national statistical offices. It turned out that in some cases National Statistical Offices do not work with the same methodology by the calculation of some indicators.

Public research spending and policy mixes

Four indicators describe the performances in this group. All indicators below derive from Eurostat data:

1) ***HERD and GOVERD (public research) in the ratio of GDP:*** Government and higher education sector R&D expenditure in the ratio of GDP. Year: 2003. Form: %.
2) ***HERD and GOVERD in the ratio of GERD.*** Government and higher education sector R&D expenditure in the ratio of total R&D expenditure; Year: 2003. Form: %.
3) ***Researchers in the public sector.*** Researchers in the public sector in the percentage of total number of researchers. Year: 2004. Form: %.
4) ***R&D personnel in the public sector.*** R&D personnel in the public sector in the percentage of total number of researchers. Year: 2004. Form: %.

In the case of these indicators, first the repartition among the different sector of performance can be analysed. After, we take a look at the public sector of research: governmental and higher education sector.

Fig.11. HERD and GOVERD in the ratio of GDP (2003)[11], Eurostat

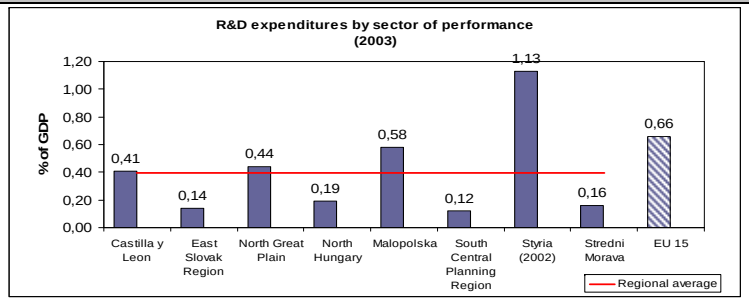


Fig.12. Dispersion of R&D expenditure by sector of performance (2003), Eurostat

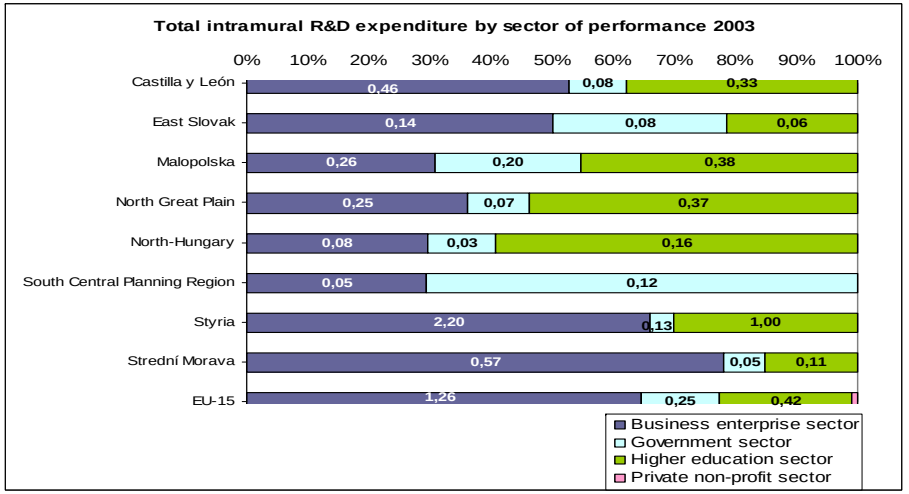
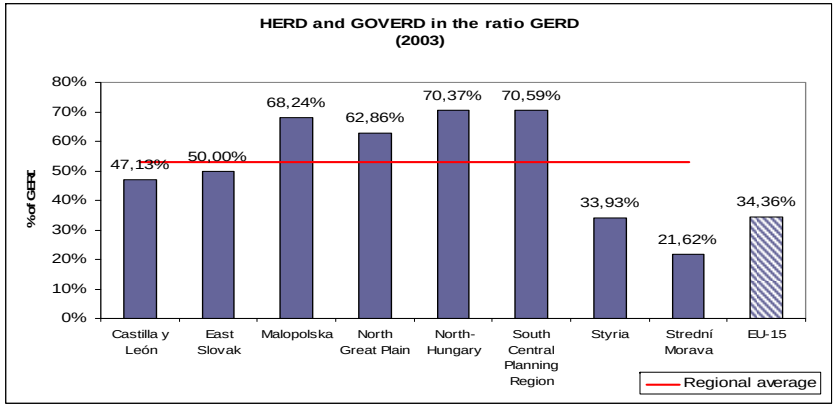


Fig.13. HERD and GOVERD in the ratio of GERD (2003), Eurostat



[11] There are four basic sectors as sources of funding the performance of RD activities in four sectors of R&D performance:

- business/enterprise sector (own sources or resources from other enterprises)
- government sector (public funds allocated from the state budget for RDI, regional budget, etc.)
- higher education sector (own resources)
- private non-profit sector

Fig.14. Researchers by the sector of performance in the % of active population, Eurostat

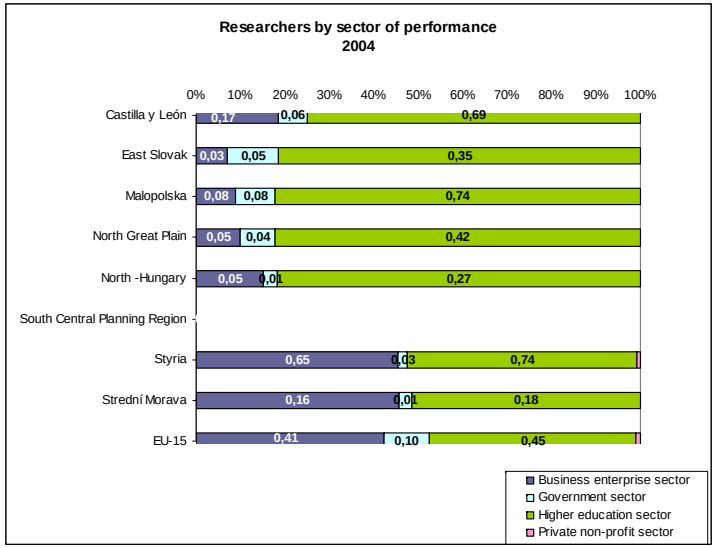


Fig.15. Researchers by the governmental and higher education sector in the ratio of total (2004), Eurostat

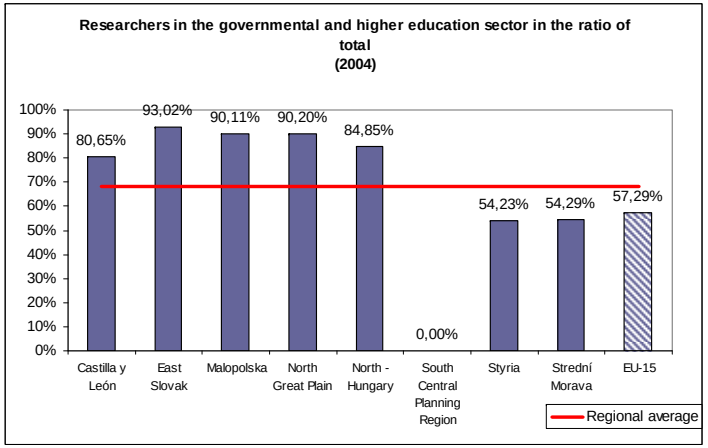


Fig. 14. is a cumulated chart of the four performance sector (business, higher education, government and public non-profit) and shows the repartition of researchers by sector of performance. From the graph below it can be seen that only in the case of Styria and Stredni Morava, the percentage of researchers is higher than the EU15 in the business sector. In the cases of the other region, its researchers work mostly in the higher education sector. In the case of South Central Planning region, unfortunately data wasn't available.

If we want to further refine the picture of researchers by the sector of performance, we should take a look on the graph showing the participation of researchers in the governmental and higher education sector. It can be seen from the graph above, that in most of the participating regions the ratio of researchers in the public sector is much above the EU15 average and only two regions perform below the EU15 average: Styria and Stredni Morava. Their researchers are more active in the business sector, than in the other COGNAC regions. The most unpleasant figure can be found by East Slovak region, where almost the 93 % of researchers work in the public sector.

Fig.16. R&D personnel by sector of performance (2004), Eurostat

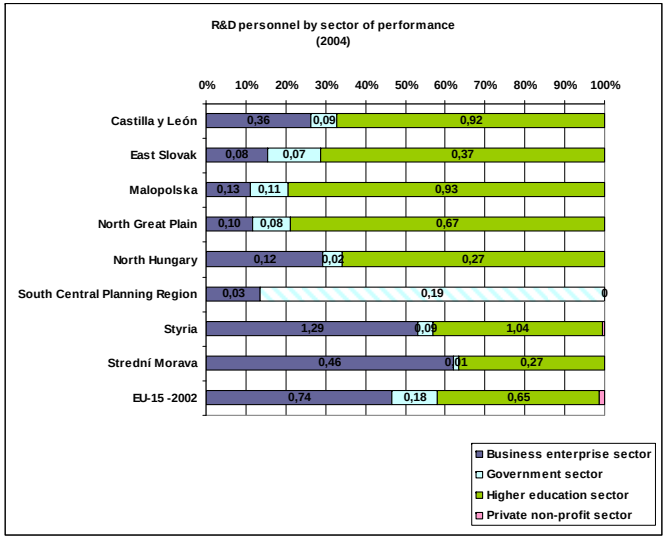
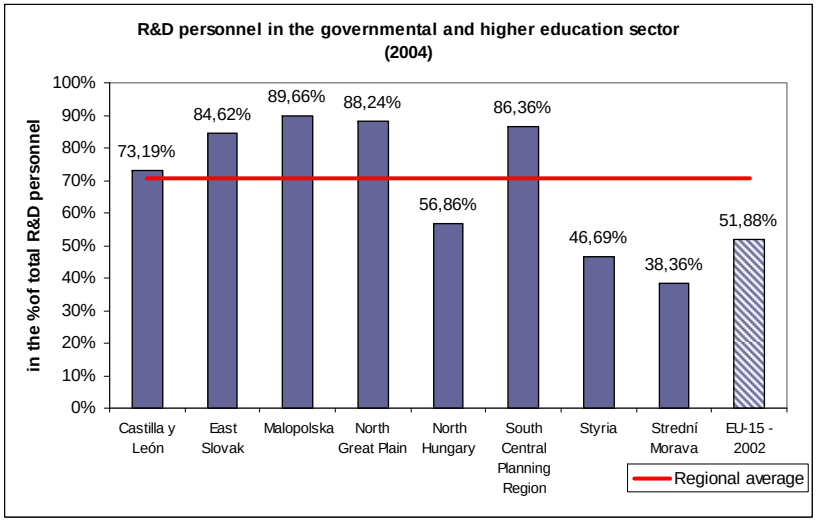


Fig.17. R&D personnel in the public sector (governmental and higher education) (2004), Eurostat



The R&D personnel by sector of performance shows a quite the same picture as the researchers by sector of performance. Generally, it can be told that R&D personnel are mostly in the higher education sector in the cases of Castillay Y Léon, East Slovak Region, Malopolska, North-Great Plain and North Hungary. In the case of South Central Planning Region the blue unit shows that there is no available data for the repartition between the government and higher education sector. The best performance in this cumulated indicator belongs to Styria and Stredni Morava, there is a higher percentage of their R&D personnel working in the business sector.

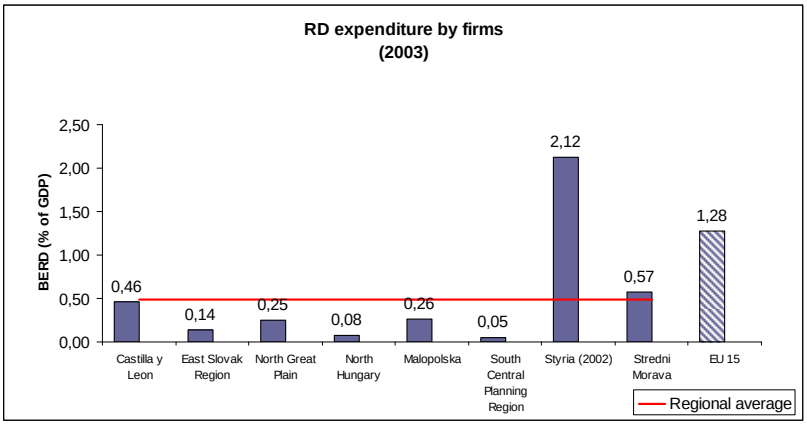
Research performance: SMEs and research

During the datamining phase it turned out that there is no regional data available on the performance of SMEs, as a result R&D indicators of Eurostat had been observed from the point of entrepreneurship. This can be misleading in a way, that in the entrepreneurial sector (business sectors) not only SME are included. **By the following indicators, the share of business sector had been analysed**.

Following indicators had been assigned to the SMEs and research subgroup:

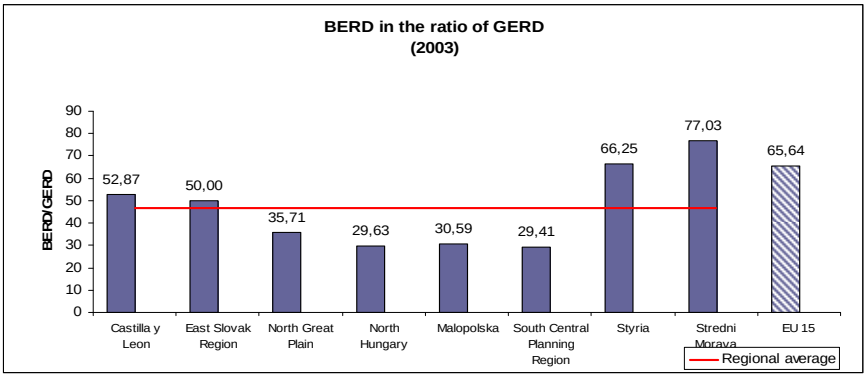
1) ***R&D expenditure by business enterprise sector:*** Business enterprise sector R&D expenditure in the ratio of GDP. Year: 2003. Form: %.
2) ***BERD in the ratio of GERD.*** Business enterprise sector R&D expenditure in the ratio of total R&D expenditure; Year: 2003. Form: %.
3) ***Researchers in the business sector.*** Researchers in the business sector in the percentage of total number of researchers. Year: 2004. Form: %.
4) ***R&D personnel in the business sector.*** R&D personnel in the business sector in the percentage of total number of researchers. Year: 2004. Form: %.

Fig.18. BERD as a % of GDP, Eurostat (2003)



The Fig. 18 shows that the level of R&D expenditure by business sector is on a very low level in the analyzed regions; however the result of Styria is significantly more than the EU15 average. It means that the enterprises in Styria spend much more for R&D than the other regions. It is remarkable that Stredni Morava is the best performer among the new member states. The less favourable position belongs to South Central Planning Region, with 0,05 %.

Fig.19. BERD in ratio of GERD (2003)[12], Eurostat



The Fig. 19 refines further the picture of business R&D expenditures. The business R&D expenditures compared to the total R&D expenditures are in 2 regions above the EU15 average: Styria and Stredni Morava. The best performance belongs to the Czech Region with 77,03%. The regional average of the COGNAC participants is really lagging behind the EU15 average. The high percentage of BERD in ratio of GERD in Stredni Morava, were on account of low amounts of government and higher education expenditures in the region. With those public spending being low, the percentage of business expenditures looks like a good figure. The high BERD in ratio of GERD mainly demonstrates the limited public budgets being spent in Stredni Morava in comparison with traditional Czech R&D centres (incl. Prague, South Moravian Region and Moravian-Silesian Region):

[12] BERD: Total business expenditure on R&D

GERD: Gross domestic expenditure on R&D

Summary of the regional research performance

Indicator name (year, form)	Castilla y Leon	East Slovak Region	North Great Plain	North Hungary	Malo-polska	South Central Planning Region	Styria	Stredni Morava
Public research spending and policy mixes								
HERD and GOVERD in the ratio of GDP (2003)	4	7	3	5	2	**8**	**1**	6
HERD and GOVERD in the ratio of GERD (2003)	3	4	5	7	6	**8**	2	**1**
Researchers by governmental and higher education sector (2004)	3	7	6	4	5	**8**	**1**	2
R&D personnel by governmental and higher education sector (2004)	4	5	7	3	**8**	6	2	**1**
Summary	14	23	21	19	21	30	6	10
Position (public research spending)	III	VI	V	IV	V	VII	I	II
SME and research								
R&D expenditure by firms (2003)	3	6	5	7	4	**8**	**1**	2
BERD in the ratio of GERD (2003)	3	4	5	7	6	**8**	2	**1**
Researchers by sector of performance (2004)	2	6	5	5	4	**7**	**1**	3
R&D personnel by sector of performance (2004)	3	6	7	5	4	**8**	**1**	2
Summary	11	22	22	24	18	31	5	8
Position (SME and research)	III	V	V	VI	IV	VII	I	II
Final ranking	**III**	**VI**	**V**	**V**	**IV**	**VII**	**I**	**II**

By the summarization of the indicators related to the regional research performance of the regions the following order had been formulated among the regions: the first position is taken by Styria, thanks to its quite high R&D expenditure even at European level. Styria had the first position by 5 indicators altogether out of the 8 indicators connected to research performance. The other three first positions are occupied by Stredni Morava region, leaving behind Castilla y Léon. In the case of Stredni Morava the relatively high R&D expenditures by the business sector determines its performance. Stredni Morava is a highly industrialized territory and as a result most of its R&D is coming from the business sector, as well as most of its R&D staff is employed in the business sector. The following position is taken by Malopolska region, followed by North-Great Plain, North-Hungary, East Slovak and South Central Planning Region.

Summary

Indicator name (year, form)	Castilla y Leon	East Slovak Region	North Great Plain	North Hungary	Malo-polska	South Central Planning Region	Styria	Stredni Morava
Total points of ranking (regional economic performance)	37	58	49	53	50	69	24	47
Total points of ranking (public research spending)	14	23	21	19	21	30	6	10
Total points of ranking (SME and research)	11	22	22	24	18	31	5	8
TOTAL	62	103	92	96	89	130	35	65
PLACES	**II**	**VII**	**V**	**VI**	**IV**	**VIII**	**I**	**III**

The aim of the benchmarking phase had been to create a context on regional economic and research performance for the further analysis of the COGNAC regions.

Not surprisingly, **Styria occupies the first position in both categories: regional economic and research performance** and from the Newly Acceded Countries, **Stredni Morava can be found at the third position** in the aggregated table. This result can be derived from extremely high BERD ratio in the GERD (77,03).

To sum up, it can be stated that by the selected performance indicators **Styria is the best performing region from the "COGNAC regions"**. However, **the consortium had decided not to benchmark only against Styria the Newly Acceded Countries, but to select some policy/initiative good practice from all regions.** The reason why the consortium decided not to benchmark against Styria, is the historical, structural difference from the regions of the Newly Acceded Countries. Furthermore, the consortium was seeking some good practices as well, which are not that much depending on the economic performance of the region.

2. COMPARISON STUDY

The comparison phase of the Workpackage 3 is trying to find the strength and the weaknesses of the COGNAC regions' diverse systems. Further on, the situation of Regional Innovation Systems are presented in a comparison way, focusing mainly on similarities and differences regarding legal background, decision-making, responsibility, main actors, involvement of SMEs, financing, monitoring system, R&D&I initiatives, activities, projects and RIS priorities, information systems, regional/national SWOT, technology foresight. We also introduced the top ten technologies/technology branches, possible technology clusters/cooperation possibilities, the ten most important branches according to the share in GDP in 2005 except Zlín and Styria who doesn't have data for 2005, and the ten most important branches according to the share in total employment in 2005 as well.

For the comparison we used the database created in WP2, the guide which had specific questions regarding the situation about the innovation system in the regions, the results of the a regional workshops organized for the regional, the suggestions of the a working group (WG) which was set up in order to exchange the experiences and contribute to the information and best practices gathering of the project. The working groups were established.

In order to identify common and different factors between the 8 COGNAC regions, the first step is to characterise them regarding their accession to Structural and Cohesion Funds. **All COGNAC regions are Convergence regions, except Castilla y León (ES) and Styria (AT) which are Phasing-in and Competitiveness and Employment Regions respectively**. Convergence regions have as a main goal reaching the 75% of the average GDP in the EU25. Non convergence regions have their focus on fostering innovation, knowledge-based society, environment protection and accessibility.

COGNAC Objective 1 regions (East Slovak Region (SK), North Great Plain (HU), North Hungary (HU), Malopolska (PL), South Central Region (BG) and Stredni Morava (CZ) focus on improving conditions for growth and employment by investing in human and physical capital; on innovation and on the development of the knowledge society; on encouraging adaptability to economic and social change; on protection of the environment; and on improving administrative efficiency.

Castilla y León and Styria, as regions not covered by the Convergence objective **will benefit from the Competitiveness Objective** oriented on strengthening regional competitiveness and attractiveness through supporting innovation, the knowledge society, entrepreneurship, protection of the environment and risk prevention.

For both, Objective 1 and Competitiveness Regions, to foster a business climate promoting the production, dissemination and use of new knowledge by firms is a priority. All regions have as major goals making regional RTD innovation and education supply more efficient and accessible to firms, in particular SMEs.

Because of the different legal background the differences in RDI systems are obvious. The main important difference between the eight regions' legal background is the structure of the public administration system. The two old members' strength is the local decision-making and high scale autonomy in the public administration systems and they both have a strong interim level between the level of local governments and the state. The provinces in Styria have strong autonomy; have own parliament and regional government. The 17 autonomous communities in Spain have own management as an own parliament. That's why, Styria and Castilla y Leon have high scale autonomy in the public administration systems, their identity and regional way of thinking goes back to

historical times.

In some new member states there are initiations for national R&D regulation. These states' administration systems are divided into two parts: the state administration and the local governments. In the NAC countries the state is strongly centralized: there are intermediary level (e.g. counties) between the settlements and the state, but these forces rather mean the regional 'arms' of the central government and have top-down roles than being the communities of the local actors (bottom-up roles). An exception could be Poland where the de-concentration process is stronger because regional level governments get several national (central governmental) competences, more that in other COGNAC NAC countries.

There are tendencies in the regions to force down the level of decision-making competences. In Styria the federal policy defines the financial capabilities and the agenda, while the regions can choose the way of implementation. In the NAC regions there is no possibility to form laws on regional level; it is regulated only on national level. **Regional decision-making bodies in R&D exist in Malopolska, North Hungary and North Great Plain**. The two Hungarian regions have regional innovation committee but regional innovation council is only in North Hungary to support the regional innovation financing system (there are specific financing possibilities delegated to the regions). In the South Central Planning Region the institutional structure is weaker than in the other regions, because the national ministry related to economy is the only responsible organization in RDI. In Malopolska and Slovakia the system is three-levelled, NUTS III and NUTS II level also have elected representation, and the regions have responsibility in RDI planning (the latter is true for Hungary also). A "Governing Body of Innovation in Malopolska Region" was set up in 2006. In Slovakia a law is under preparation to transfer some powers from the national to the regional government level. In Zlín, the main decision making body is the Regional Authority of the Zlín Region in the field of activities defined in Regional Innovation Strategy and the RIS Steering Committee can give recommendations.

The NAC countries' RDI issues are managed on national level, mostly by the ministry dealing with economy. A process has started to put more responsibility to lower level, and Poland, Hungary and Slovakia is in better position from this viewpoint because regional institutes had been set up and have possibility to do at least the planning phases in RDI. In the two OMS regions regional regulations do exist, several bodies work on RDI on NUTS II level. They make laws, and implement them.

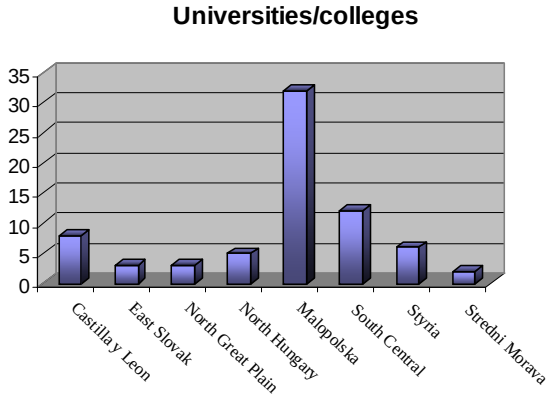
Speaking about responsibility, the main power is usually the regional government/parliament, and the (regional) ministries support the common regional policy on their own professional field. In every COGNAC country each ministry has sectoral responsibilities within the regional strategy and it allocates specific budget to accomplish its responsibilities. The two old member states have regional responsible actors who decide on the regional R&D policies. The main power is usually the regional government/parliament, and the (regional) ministries support the common regional policy on their own professional field. In the Mediterranean region a Science and Technology Commission approve the decisions, and an Industrial and Economic Competitiveness Forum contains regional experts and establishes the basis of the subsequent regional strategies. It is similar in the Alpine region, where R&D policy lies with the regional government and is currently distributed between three departments. Supporting organizations also exist (Council for Research and Technology, Core Group), moreover to ensure the communication between business and public sector, a forum meets three-four times per year.

In the new member states usually the national ministries governs the RDI policies and a national advisory organizations support the policy making process. There are differences between the

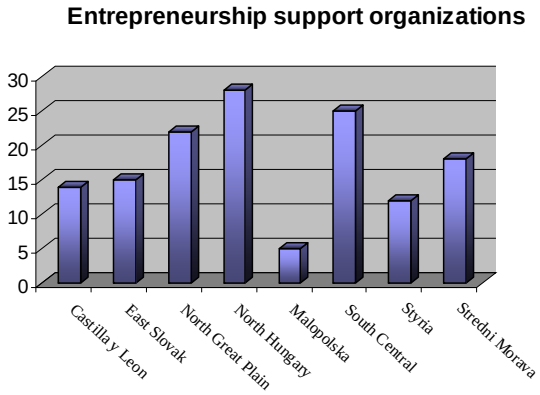
countries in term of institutional specialization, but we cannot say that the more a system is complex (great number of stakeholders), the better it is. For example, in Hungary there are numerous institutes and intermediating bodies working on the field of RDI, while the Bulgarian region has much less. In some case, the regional level got possibility to have an effect on research policy meaning that the regional committees or agencies support the central policy. They have responsibility to form their own regional strategy and/or can influence the national system of RDI calls. In Hungary there is a central budget for research and development, and a certain % of it is earmarked to the seven regions.

The problem is that the communication between the business and public sector in the NAC countries is weak (e.g. Zlín Region, Hungary), and the companies can not influence the regional RDI issues. This can be one of the main challenges for the new member states in the following years.

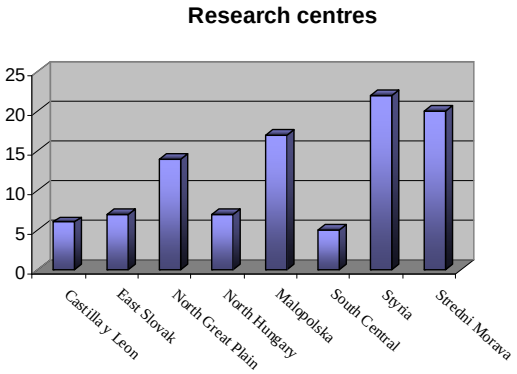
In all regions the stakeholders see the importance of the wide range of actors who can help the regional development. The education system helps the future improvements on the field of research, development and innovation. In all regions the universities appear as one of the most important actors among the regional innovation stakeholders.



In all regions there are also other actors in the different regions, such as business institutions, incubator organizations. Technology Transfer Centres, Innovation Centres and the Chamber of Industry and Commerce have various institutes in the analyzed regions, which try to serve the small and medium-sized enterprises in the area of integration with the European Union. In the EU member states clusters (in this case innovation clusters) are becoming popular and important. In Styria the policy level of the Regional Innovation System plays an important role concerning R&D&I where the government is elected every 4 years. There are also intermediaries and support institutions of the RIS and co-operative research institutes. There are 3 types of competence centres: K-plus, K-ind and K-net. Whereas K-plus and K-ind are research centres, the latter with more industry cooperation, K-net is a network with locally different research nodes. 18 of these competence centres are located in Styria. In Slovakia besides the universities, the institutes of Slovak Academy of Sciences are other important players, like research institutes. The most important innovation intermediary is the Science and Technology Incubator in Košice that aims to support SMEs, dealing with innovation and HT projects, and regional development.



There are entrepreneurship support organizations and intermediaries such as industrial parks, business incubators, technology centres, laboratories, and science parks, which take an important role in the innovation in all regions and these, are emphasized in all regions. Styria and Castilla y León mentioned the government as a key actor in innovation, there are even departments dedicated to innovation, science and research and it strengthens and adjusts the region's position. Co-operative research institutes and competence centres also play a significant role in every region as you can see it in the table below.



Regarding the communication between the actors we can tell that there are some problems in the newly joined regions/countries. In the new member states' regions (Zlín region, North Hungary, North Great Plain, Kosice region, South Central Region Planning) the communication causes some problems regarding the co-operation in policy making. They are still not considered important players in the field of innovation policies by the national level. In most cases the connection between the innovation actors in the NAC regions are formal, based on the activities in the frame of the Innovation Committee and through the services and initiatives of the Regional Innovation Agencies. The old member states' regions have already figured out the way of communication and it helps them to cooperate better with the stakeholder and with those who are dealing with innovation policies.

The involvement of SMEs in Zlín region, Hungary's both region and in Kosice region[13] in the regional level policy making processes is low because the innovation policy in the regions is very new and there is lack of visible results helping to persuade companies that regional policies can be beneficial for them. On national level the involvement of SMEs in the policy making processes happens through organizations but this involvement is not significant. In fact in Bulgaria there is only involvement on national level. In the 2 old member states' region the problems regarding involving SMEs and other actors are already solved. Styria has already initiated forums where the communication is continuous and happens periodically and in Castilla y León the RIS was developed based upon strong social dialogue, which is a basic element of the industrial policy in Castilla y León so the SMEs and experts are strongly involved.

During the realization of the project we pointed out some important issues. The old member states can think ahead concerning the regional development, because they have their own regional funding to develop their regions. In the new members the supply and demand side of the innovation has to be developed especially between the regional actors. Some social problems cause difficulty in the new member regions to think ahead and some of the harms are still make the improvement harder. Because these regions don't have their own regional budget, they can only use the funds that are delegated to them. In the South Central Region, where the innovation system is not fore-gone and don't even have own sources they have difficulty to implement the RIS priorities.

Financing is one of the most difficult questions – how to find money to implement new ideas. The Ministries have an important role in Malopolska, Hungary's both region, Kosice region, Styria and Castilla y León but in the Zlín and South Central Region – as they mentioned – there are greater priorities than innovation. The regions in Hungary do not have own incomes, but based on the legal regulation of the Innovation Fund 25% must be spent for regional innovation purposes. It serves the RIS realization. The source is the National Technology and Innovation Fund[14]. The Regional Development Councils make the decision on the final beneficiaries, but the President of the National Office for Technology and Research must countersign the decision on final beneficiaries. Only Styria and Castilla y León have budget for innovation on regional level which makes the regional development easier and on the other hand more efficient. (In Castilla y León in 2008, R&D&I budget was the 3% the regional budget. Hungary and Styria use some amount as an appropriation fund for R&D and it gives opportunity to concentrate on the actual researches. The co-financing by regional budget and budgets of some partners (e.g.: with universities) are also relevant in all regions. There are many proposals submitted to Operational Programs in all regions except Malopolska, and Kosice

13 In these regions SMEs are not part of the policy making process at all and they are not even represented on national level. However the North Hungary Regional Innovation Council has 21 members and beside the universities and other institutions it involves 6 enterprises (4 SMEs).The SMEs and some large companies were involved in the Innovation Committee until 2007. From that date only the chamber of commerce and the enterprise promotion agencies are invited in the Council, which represent the companies in Hungary. In the East Slovak Region at this time, there is no involvement of the regions into the national level policy making processes and strategic planning. Regarding the involvement of SMEs in the regional/national level policy making processes there is a Council of State Program, which is responsible for managing the state program of research and development..

14 Research and Technological Innovation Fund: Act XC of 2003, approved by the Hungarian Parliament on November 10, 2003, established the Research and Technological Innovation Fund, which provides stable and reliable financing for RTDI activities. The Fund is financed by mandatory contributions of all companies registered in Hungary, matched yearly by the government budget. The so-called innovation contribution, based of the (adjusted) net turnover, for medium size and large companies grows from 0.2% in 2004 to 0.3% by 2006. Micro-enterprises and small-size enterprises are exempt from paying a contribution. It is also a legal requirement that resources of the Fund be spent through competitive calls, and at least 25% should go for regional innovation purposes.

Region. In Malopolska the funds for innovations among entrepreneurs that have been growing since 2002 show a positive trend. The old member states' regions Styria and Castilla y León have already a functioning system for distributing money.

Innovation Financing System Institutions and Funds on regional level

<table>
<tr><th colspan="8">REGIONS</th></tr>
<tr><th>Castilla y Leon</th><th>Kosice</th><th>North Great Plain</th><th>North Hungary</th><th>Malopolska</th><th>South Central Region</th><th>Styria</th><th>Zlín</th></tr>
<tr><td>ADE finances ADE financiering</td><td rowspan="5">there are no such institutions</td><td>Hungarian Innovation Fund: Baross Gábor Programme</td><td>Hungarian Innovation Fund: Baross Gábor Programme</td><td>(MARR S.A.) The Malopolska Agency for Regional</td><td rowspan="5">No data</td><td>Zukunftsfond Steiermark (Future Fund)</td><td>Regional Support Fund, Ltd.</td></tr>
<tr><td>Iberaval SGR)</td><td rowspan="4"></td><td rowspan="4"></td><td>Tarnow Agency for Regional Development</td><td>Steiermärkischer Wissenschafts- und Forschungslandesfond (Styrian Science and Research Fund)</td><td rowspan="4"></td></tr>
<tr><td>ADE capital SODICAL SCR</td><td>Jagiellonian Innovation Centre</td><td rowspan="3"></td></tr>
<tr><td>Madrigal investments Madrigal participaciones, S.A.</td><td rowspan="2"></td></tr>
<tr><td>Business angels (BANCAL)</td></tr>
</table>

For the best results the monitoring systems need development so we will be able to follow the processes and make changes in the future when needed. There is some kind of supervision in all regions but these don't cover every detail. In Zlín, in Hungary's both regions, in South Central Planning Region and in Styria there are only monitoring system-covering implementation of the RIS. The responsible organizations collect the indicators of the single projects, but these indicators don't show the effectiveness of a project, only the financial and technical performance according to the contract. In the South Central Planning Region, in Styria and in Castilla y León, the ministries' responsibility is the RDI projects' monitoring on national level where the monitoring implies a continuous contact with each regional ministry and a yearly report including both, financial and technology indicators. In Malopolska, the control and evaluation of the projects goes hand in hand with its implementation. A Balanced Scorecard (BSC) was adopted as an assessment tool for this purpose which allows the evaluation of the strategic goals using specific strategy implementation measures. With the help of the BSC, it is possible to control the progress of implementing project's guidelines at every stage of its development. Regarding the monitoring system in Kosice on regional and national level on RDI projects, there is a council of support of research and development which

monitors national projects financed by money granted by the agency. Regarding the monitoring system on regional and national level on RDI policies the Ministry of Education creates methodical materials for preparation, financing, coordination and monitoring of application of state research and development programs just like in the above mentioned regions.

All the regions gave useful information about their information system, which showed that every country has their own Statistical Office which provides data, projects, information mostly at national and regional levels and which is updated yearly. Some regions for example North Hungary, North Great Plain and Styria have their own regional information portal, where everyone can download different information and data about the regional circumstances. The sites of the regional directorates of Hungary are accessible but data are not collected in NUTS 2 level, only NUTS 1, 3 (county), 4 (micro-region) and 5 (settlement). Information about the accessibility to the regional and national financial sources can be found on the Regional Development Agency of North Hungary website. There are several other small institutes that offer information about the region, but none of them is overall. The Regional Innovation Agency's site has also useful data about innovation, and proposals.

Regarding the foresight system Malopolska, North Hungary, and North Great Plain mentioned concrete projects, programs, which cover research areas in the given region. Data from other areas like Zlín region, South Central Planning Region, Kosice region, Castilla y León are included in the National Innovation Strategies and deals with the concrete fields of the region. In the case of foresight system at regional level the situation is quite different. The regional foresight systems are under development in some of the regions like Malopolska, North Hungary, North Great Plain, East Slovak, and Castilla y León. For example Zlín region do not have regional foresight system yet, only documents and analysis could be used. South Central Region Planning has no data in this category, neither national nor regional level. Styria mentioned no information at regional level too.

Foresight system

REGIONS	REGIONAL LEVEL	NATIONAL LEVEL
Styria	NO	There was a foresight exercise for areas of expertise. The National Innovation System was originally based on the conclusions drawn from the foresight exercise
South Central Planning Region	NO	NO
Zlín	NO, there are only documents concerning socio-economic analysis	There was a foresight exercise in the Czech Republic, some documents exist e.g.: Technology Foresight in the CR, but systematic foresight is questionable
North Hungary	NO	In Hungary a Technological Foresight Program (TEP) has started already in September 1997. The report was finished at the end of 2000. It draws up 3 visions about the possible behaviour types of Hungary in the technological development processes
North Great Plain	NO	
Malopolska	Foresight performed within preparation of regional operation programme as well as other	National Foresight Programme “Poland 2020” dues to a strong demand for such expertise Foresight Project was activated

	analysis. The driving forces have been identifies and three scenarios have been designed	in Poland as well by Ministry of Science and Higher Education on December 2006. Foresight Project covers three research areas: Sustainable Development of Poland, Information and Communication Technologies and Safety
Kosice	Foresight performed within preparation of regional operation programme as well as other analysis. The driving forces have been identifies and three scenarios have been designed	In the Slovak Republic, a long-term forecast of development and utilisation of science and technology using of the forecast method
Castilla y León	NO, although there are just foresight exercises for specific industrial fields	Non strictly by the OPTI has elaborated more than 40 studies on sectoral technology prospective since 1998

The economic characterisation of the COGNAC regions has been done from two perspectives. Firstly, taking into consideration the priority sectors that the regions have stated in their RIS documents and, secondly, bearing in mind the regional specialities in comparison to their national context.

In R&D&I strategic documents of North Great Plain, regional authorities indicate agriculture and transport as emerging markets. The current most important branches for the region have been identified to be agriculture, processing industry, tourism, transport, education and health and social care. Current most important branches in Košice Self-Governing Region, according to R&D&I strategic documents, are manufacturing of machinery and equipment; manufacturing of electrical and optical equipment; food and beverages industry; and wood industry. As an emerging sector, Košice Self-Governing Region stresses the growing importance of tourism. Tourism is a current important branch for Malopolska and North Great Plain, while it is considered as an emerging relevant sector in Košice Self-Governing Region, Castilla y León and South Central Planning Region.

Malopolska considers science and research activity as its main current branch; especially strategic documents refer to this activity carried out in R&D&I support institutions. Emerging sectors in Malopolska are IT, industrial design, nanotechnologies, and tourism- as it was expressed above. Emerging economic branches in North Hungary are manufacturing of electrical and optical equipment and chemicals as well as environmental industry, hotels and restaurants, post and telecommunications. Current developing branches are machinery and metal products manufacturing, electricity gas, steam and hot water supply and food and beverages industry. Styria focuses on five emerging markets: food and beverages, communications, creative industry and engineering. Human technology was identified in the region as one of the most important current branch, together with the automotive sector.

Current most important in South Central Planning Region are agriculture, chemicals, wood, furniture and paper industry as well as leather and shoe manufacturing. Tourism was indicated as the only emerging sector considering strategic documents. Construction industry was only mentioned as a priority economic sector by Malopolska's R&D&I strategic documents, which can be a surprising data considering the amount of structural funds devoted to infrastructure in the upcoming years and for the NAC countries. Agriculture and food industry have a strong representation in the strategic document among COGNAC partners, which are still more relevant in regions of the Newly Acceded Countries as in Styria and Castilla y León.

Four regions (Styria, Castilla y León; Zlín Region and South Central Planning Region) have mentioned the wood industry in their R&D&I strategic documents. The relevance of wood industry has been connected to furniture industry in three cases (Castilla y León, Zlín Region and South Central Planning Region) and to manufacturing of pulp, paper and paper products, publishing and printing in the case of two regions (Zlín Region and South Central Planning Region). Three strong industrial centres of the COGNAC regions indicate current important manufacturing of machinery and equipment (North Hungary, Castilla y León and Košice Self-Governing Region) and very important chemical branch is mentioned as well by three COGNAC regions (North Hungary, Zlín Region and South Central Planning Region).

Nanotechnologies, tourism, telecommunications, IT and biotechnology are most often seen as emerging sectors in which authorities of the COGNAC regions seek for a chance to be innovative and leading in the future.

When comparing the contribution of the ten branches to the regional GDP with the contribution they have to the National average GDP, it can be said that Castilla y León stands out of the National average per its activity in Energy production, Agro-Food Industry and production of equipment for the Automation sector. The Agro-Food and the Automations sectors are two of the most consolidated sectors recognised by the Regional Scientific Research, Technological Development and Innovation Strategy for Castilla y León 2007-2013.

North Great Plain, as it happens with Castilla y León, also stands out of the Hungarian average, because of the importance of its Agro-Food sector; but generally it is quite aligned with National priorities. Nevertheless, in terms of economic or residential infrastructure provision, North Hungary indicators are higher than national average. Also, the lack of a proper transport infrastructure has a negative impact in the region's important contribution to the national economy. Košice Self-Governing Region has for most of its industry sectors a similar share in the GDP as the same sectors in the country in national GDP. The greatest difference can be observed in electricity, gas and water supply sector, which shows great significance of Košice Self-Governing Region for the country concerning this sector. Much lower share in the GDP of the region in comparison with the national number has transport, storage and communication sector.

Differences between the region of Malopolska and Poland as a whole are spotted in IT, banking, food industry (including tobacco), chemicals and tourism. In Styria, currently, and due to the strategic importance given to traditional and recognised emerging sectors, economic activity is managed around 7 successful clusters that gather together all relevant actors around a specific activity. The seven clusters run in Styria are Automobile Cluster, Wood cluster, Human Technology, Material Cluster, Environmental Technologies Network, Creative Industries Network, TechForTaste and SimmNet. Most important economic sectors for the Zlín Region (CZ) and for Stara Zagora (BG) are in line with the most relevant sectors for the Czech Republic and for Bulgaria as a whole.

IV. TRANSFERABILITY MODEL OF GOOD PRACTICES – Workpackage 4

Transferability model of good practices identified in COGNAC partner regions (countries) is describing transferability of different initiatives aimed at fulfillment of certain objectives in R&D&I development support. All project participants led by the partner from Zlín Region, Czech Republic (Regional Authority of the Zlín Region with help of regional Technology Innovation Centre) have identified their best regional initiatives (or national ones but with significant regional impact) and those initiatives were described in details for identifying aspects influencing their transferability from one region to another. Initiatives were defined as programmes of support or development projects and it was decided that each region will introduce maximally two best initiatives for purpose of this project workpackage. The selected best practice COGNAC regions initiatives are following:

STARA ZAGORA (BULGARIA)	**A1**	National Innovation Fund
	A2	National Science Fund
NORTH GREAT PLAIN (HUNGARY)	**B1**	Regional Knowledge Centers at Universities
	B2	Baross Gabor Programme
NORTH HUNGARY (HUNGARY)	**C1**	Regional Innovation Agencies
	C2	Research and Technological Innovation Fund
CASTILLA Y LEÓN (SPAIN)	**D1**	Cofinancing of the Ramón y Cajal Programme
	D2	Technology parks in Castilla y León
STYRIA (AUSTRIA)	**E1**	Competence Centres (K-plus, K-ind, K-net)
	E2	Innovation investment in SME's
MALOPOLSKA (POLAND)	**F1**	Interships in high-tech SME's
	F2	Support to creation of theses for SME's
ZLIN REGION (CZECH REPUBLIC)	**G1**	Programme Clusters
KOŠICE REGION (SLOVAKIA)	**H1**	Košice IT Valley

Detailed description of selected 14 initiatives with individual lists of conditions for transferability is one of outputs of the workpackage 4. Conditions for transferability of each initiative are divided into two groups. The first group comprises criteria for definition of the initiative which are general and basic, those which need to be fulfilled in any case for the implementation of the initiative. The second group is “specific criteria of transferability” and these are criteria which are critical for the success of the initiative. Such criteria were defined mostly by regional experts on basis of successful experience with implementation of particular initiative.

For creation of transferability model it was needed to sum up common features (especially objectives) of all initiatives and it turned out to be little bit problematic since the scope of initiatives was too broad. Therefore the workpackage leader have identified main areas of intervention of initiatives on basis of transnational catalogue of priorities (see deliverable 5.1. from subsequent workpackage 5 of the project) and formed 4 groups of initiatives accordingly – Networking and Infrastructure, Financing, Direct Support to SME’s, Human Resources.

The division of identified COGNAC region's best practice initiatives to the groups for transferability model elaboration is following:

Group 1	Initiatives
NETWORKING AND INFRASTRUCTURE	B1 Regional Knowledge Centers at Universities
	C1 Regional Innovation Agencies
	D2 Technology parks in Castilla y León
	E1 Competence centres
	G1 Programme Clusters
	H1 Košice IT Valley

Group 2	Initiatives
FINANCING	A1 National Innovation Fund
	A2 National Science Fund
	B2 Baross Gabor Programme
	C2 Research and Technological Innovation Fund

Group 3	Initiatives
DIRECT SUPPORT TO SME'S	E2 Innovation investment in SME´s

Group 4	Initiatives
HUMAN RESOURCES	D1 Co-financing of the Ramón y Cajal Programme
	F1 Intership in high-tech SME´s
	F2 Support to creation of theses for SME´s

The grouping of initiatives leads us to elaboration of 4 models. This enables to focus on description of common features for transferability in each of models. We expect that readers who are interested in studying best practice initiatives of COGNAC regions and their transferability can get basic information from the particular transferability model and after choosing which area (networking and infrastructure, financing, direct support to SME's, human resources) is most interesting for them they can study detailed description of initiatives together with their lists of conditions for transferability in the subsequent document comprising these details (deliverable D 4.1. Description of Best Practice Initiatives and Lists of Conditions for Transferability). Those who need to know even more concrete details about particular initiative can find links to particular web pages and contact persons in description of each initiative.

The models described below are taken from the final output (deliverable – D 4.2. Transferability Models of Best Practice Initiatives) and each model contains information about basic features of transferability like key players of administration, target groups, usual financial sources, general and strategic conditions for transferability and expected results to which the implementation of such initiatives should lead.

TRANSFERABILITY MODEL 1 – GROUP "NETWORKING AND INFRASTRUCTURE"

describing transferability of initiatives aimed at fulfillment of following objectives:

- ***creation of innovative network of companies, universities and public sector,***
- ***development of support infrastructure/specialized services for innovative companies,***
- ***support of strong cooperation between companies and universities or research centers***

Key players	Regional governments, research centers and universities, regional innovation agencies
Description	Initiatives from group "networking and infrastructure" react to need to strengthen cooperation in innovation between different partners and there are different tools to fulfil this objective in COGNAC partner regions/countries. Identified best practise in Hungary focused on creation of Regional Knowledge Centres at Universities which should ensure closer co-operation of universities with business. The second example from Hungary is establishment of Regional Innovation Agencies which are expected to co-ordinate technological innovation networks of different players. In Spanish region Castilla y León the networking and infrastructure in innovation is ensured by operation of Technology parks in which favourable conditions for creation and growth of knowledge-based companies and for establishment of formal and operational dealings with universities and research centres are ensured. Austria is supporting the necessary infrastructure and networking activities in R&D and innovation through a programme for the establishment of competence centres which aim at linking science with industry. There was support for the creation of 3 types of such centres – K plus (joint research centres of university institutes, non-university research organizations and enterprises with performing of industry-related research on a precompetitive stage), K net (networks of excellence with participation of industry and the scientific community), K ind (joint research centres of university institutes, non-university research organizations and enterprises which are more industry-oriented than K plus). The Czech Republic implemented initiative "Clusters" supporting co-operation of companies and other subjects in sectors where potential for such co-operation was identified. The implementation of this initiative helped to map the potential and to establish clusters on regional level which should contribute to higher performance of its members and growth of regional economy. Such clusters can also work on national or cross-border level. Networking approach in form of cluster is also described as best practise example from Košice Region (Slovakia). The Košice IT Valley Association is a partnership of leading international and national IT companies, universities and the public sector with the aim of establishing an IT centre of excellence in the region, thereby making a genuine contribution to the benefit and prosperity of its population.
Target groups	Target groups for "networking and infrastructure" initiatives are companies (since the focus in this type of initiatives is always on companies bringing innovation results to market) and universities and research centers (existing ones or newly established as a result of the initiative). Universities and research centers are important players of cooperation networks which can ensure links of science with business.
Geographic level	All of initiatives in this group have important regional impact but some are launched and administrated on national level. It is case of Hungary, Austria and Czech Republic. These are national programmes whose aim is to support innovation processes on regional level through regional knowledge centers, regional innovation agencies, competence centers and clusters. Initiatives in Castilla y León and Košice regions are projects which are realized on the regional level with expectation of significant results for the economy of particular region.
Financial sources	Networking activities require involvement of different players (private, public) and also financing should be ensured from different sources. For less developed regions it is common to support those activities from EU Structural Funds but there must be contribution of national and/or regional public budget. For private companies to be really interested in results it is generally recommended that private funding should form certain per cent (e. g. min. 40% for Austria's Competence centers) of total budget for realization of the initiative.
Conditions of	General conditions for transferability of initiatives of this group are following:

transferability	- definition of implementing and administration bodies - budget and its structure for realization of initiative - geographic coverage of initiative - definition of criteria for cooperation/networking - involvement of all key players in the region - definition of communication and marketing strategy towards target groups and public - system for monitoring and evaluation of results There are also special conditions which should be fulfilled in most of initiatives from this group. It depends on concrete situation if these factors should be taken into consideration when thinking about transferability of concrete initiative from this group: - long term orientation of initiative - ensuring willingness of collaboration of all expected players - definition of system for transfer of knowledge - to find qualified coordinator of complicated networking activities - definition of criteria for establishment and work of supporting infrastructure - overall support (political, financial) by regional government and support by respected personalities in the region - creation of cooperation links abroad - criteria for selection and definition of common problems of companies expected to be involved in clusters - focus on high quality services with added value, provided by created infrastructure and networks
Links to strategic documents	Initiatives launched on the national level should be part of a national strategy, mostly implemented by responsible ministries or specialized bodies (e. g. National Office for Research and Technology in Hungary). In case of networking and building of needed infrastructure supporting innovation there is often public debate as basis for launching of the initiative and also inspiration by successful models from other countries. Regional initiatives are mostly in accord with Regional Innovation Strategy but for some regions which did not have their innovation strategies when starting to implement the initiative it should be mentioned in overall regional development programmes. Both regional and national initiatives should also reflect EU level policy objectives with regard to possible financing from structural funds or other EU sources.
Expected results	- Strong cooperation between companies and R&D institutions (universities) leading to commercialization of R&D outputs - Increase in regional R&D and innovation expenditures (preferably by companies with respect to Lisbon strategy) - Increase in the number of companies using innovation support services in the region - Increase in the number of new, technology-oriented companies in the region - Increase in the number of new products, processes and services developed in the region and revenues generated by these innovations - Number of new innovation clusters and networks in the region, and the number of partners/ members

TRANSFERABILITY MODEL 2 – GROUP "FINANCING"

describing transferability of initiatives aimed at fulfillment of following objectives:

- **establishment of financing sources (funds) supporting applied research**
- **establishment of financing sources (funds) supporting innovative projects of companies**

Key players	National governments, parliaments, Regional Innovation Agencies and Councils
Description	Initiatives from group "Financing" are funds established on national level to finance projects contributing to development in innovation and thus in the economy as a whole. The important factor should be possibility of setting priorities to be financed on regional level which is the practice in Hungary. There are following best practice initiatives identified in COGNAC partner regions: Bulgarian National Innovation Fund is a government scheme for subsidizing innovative projects on a competitive basis in the Bulgarian economy. The main goal is raising innovative activity and thus increasing competitiveness of the Bulgarian enterprises. The National Science Fund of Bulgaria is a legal entity, under the auspices of the Ministry of Education and Science which promotes the increase of scientific and research initiatives effect on national, regional and international level, as well as the development of a prosperous society and economy through basic and applied research. The National Science Fund organizes activities and promotes the international scientific cooperation, stimulates, finances and facilitates the science and applied research through competitions. The Research and Technological Innovation Fund from Hungary which was approved by the Hungarian Parliament, creates a stable and reliable financial ground for research, technological development and innovation activities. It helps re-orienting private sector resources towards R&D innovation activities, assisted by matching public funds. It finances projects of companies, researchers, technology and innovation centres, business organizations and higher education institution's research units according to the priorities set by particular regions. The Baross Gábor Programme (Hungary) which has financial sources from the above mentioned Research and Technological Innovation Fund was prepared and created by National Office for Research and Technology. This programme gives the frame and the tool to support RDI project in all Hungarian regions. Every year, there are seven single Baross Gábor programmes in the country, one in each region. The regions have the right to propose on what kind of RDI activity they want to support from this amount in their own region.
Target groups	Financing is always provided to those who are realizing projects in the field of applied research and innovation and those can be all companies, higher education institutions research centers, technology and innovation centers, business organizations.
Geographic level	Initiatives are launched on national level, funding is also national but in case of Hungarian Research and Technological Innovation Fund every single regions can define their own priorities under which financial sources will be spent for particular projects.
Financial sources	Funds for financing applied research and innovation projects are part of public budget which is allocated by central government for such purposes. In Hungary the central budget is not the only revenue source but there are also so-called "innovation" contributions paid by enterprises which don't have any research and development activities. It is form of special tax encouraging companies to become more innovative. In case of Baross Gábor Program 25% of the total budget of the Hungarian Research and Technological Innovation Fund is allocated to the regional initiatives which amount is distributed among the 7 Hungarian regions based on their statistical and economical performance.
Conditions of transferability	General conditions for transferability of initiatives of this group are following: - legal basis - geographic coverage of initiative - objectives to be fulfilled by the financial tool - definition of implementing and administration bodies - target groups and eligibility of potential participants for funding - eligible costs to be covered from funds - fund budget and its source and structure for realization of initiative

	- system for monitoring and evaluation of achieved results - definition of implementation process There are also special conditions which should be fulfilled in most of initiatives from this group. It depends on concrete situation if these factors should be taken into consideration when thinking about transferability of concrete initiative from this group: - focus on financing for particular group (e. g. SME's) - definition of thematic priorities and links to EU framework programs priorities - properly specified criteria for selection of projects for financing - simplified process of project applications for financing - involvement of (international) experts in evaluation of effectiveness of initiative - proper publicity to financing possibilities and achieved results - precisely defined rules for putting money to the Fund and allocation of budget - cooperation in selection of financing priorities on national and regional level
Links to strategic documents	Since funds are established by national government there is link to strategic documents on national level (National Innovation Strategy, National Scientific Research Strategy) and they are also conditioned by national legislation. The basis for the planning of the Baross Gábor Program is the regional innovation strategy of the single Hungarian regions.
Expected results	- Increased expenditure in RDI activities by companies - optimization of regulatory framework for innovation support activities - increased rate of commercialization of the results of innovation activity in enterprises - growing number of staff working on innovation - increased number of patents

TRANSFERABILITY MODEL 3 – GROUP "DIRECT SUPPORT TO SME's"

describing transferability of initiatives aimed at fulfillment of following objective:

- **support to RDI and investment projects of SME's with an innovative character**

Key players	Regional governments, regional funding organization
Description	There is one initiative in the group "direct support to SME's" which is focused directly on financing innovation projects: Innovation investment in SME's is a programme implemented by region of Styria (Austria). The main goal of the program is to support investment projects with an innovative character regarding products, services and production processes as well as the settlement of innovative and future-oriented companies in Styria. Costs related to an innovative investment project are fully covered by grant in this initiative.
Target groups	SME's – those who are realizing projects directly supporting innovation processes
Geographic level	Described initiative has regional impact and the implementation depends on financial sources and competencies of particular regions. In case of Styria it is regional initiative.
Financial sources	Any such initiative requires fund with conditions of money allocations which are favorable for SME's. The Styria has its own Styrian Economic Promotion Fund which is used to finance projects in above mentioned initiative.
Conditions of transferability	General conditions for transferability of initiative in this group are following: - legal basis - geographic coverage of initiative - period of programme implementation - definition of implementing and administration bodies - target groups and eligibility of potential participants for funding - eligible costs to be covered from funds and mode of funding - system for monitoring and evaluation of achieved results - definition of implementation process There are also special conditions which should be fulfilled in any of initiatives directly supporting SME's. But it depends on concrete situation if these factors should be taken into consideration when thinking about transferability of initiative from this group or any other concrete initiative (not described in the COGNAC project): - quick and simple process of project applications and administration of initiative - significant focus on innovation through support rate (which can reach 100% of costs)
Links to strategic documents	The initiative is based on the Economic Strategy of Styria (Wirtschaftsstrategie Steirmark) and it is also in accord with Regional law for the Promotion of Economy in Styria and the Styrian Economic Promotion Fund is established by law as well.
Expected results	- Increase in regional innovation expenditures - Increase in the number of new, technology-intensive companies in the region - Increase in the number of new products, processes and services developed in the region and revenues generated by these innovations - Decrease in the average age of products produced in the region

TRANSFERABILITY MODEL 4 – GROUP "HUMAN RESOURCES"

describing transferability of initiatives aimed at fulfillment of following objectives:

- **increase of the research capabilities of R&D,**
- **increase of collaboration between higher education units and SME's**
- **to ensure human resources for research activities as well as for innovation projects in companies**

Key players	National and regional governments, universities and other higher education institutions, employers associations
Description	Initiatives from group "human resources" are focused on talented students and their involvement in innovation and research activities. Best practice examples of COGNAC regions are following: The Spanish region Castilla y León supports hiring Doctors by public universities in the region for development of their research potential. The tool for support is co-financing of the national Ramón y Cajal Programme. This is not only best practise example in attracting young scientists but also example of cooperation between the national and regional levels based on the five principles of mutual collaboration in R&D: co-information, co-decision, co-responsibility and co-management and co-financing. The talented doctor's salaries are partly financed by national level and rate of this financing is decreasing for each next year. The region Castilla y León finances this decrease. Region Malopolska (Poland) launched two small budget initiatives but very effective in the field of human resources. The first one was "Interships in high-tech SME's" which is focused on renewable energy especially knowledge and technology transfer. The leader of the initiative is Polish Network „Energie Cités"(PNEC) and activities comprise students' work for the companies from the field of renewable energy for half a year without interruption their studies. The candidates for probations were chosen from all technical universities in Krakow. The second initiative from Malopolska is focused on collaboration between higher education institutions and SME's in the field of MA and PhD theses. Students and professors were supported when elaborating thesis for concrete SME's according to their needs. Approx. 100 SME's identified their needs and on basis of those needs 48 MA and PhD theses were elaborated by selected students.
Target groups	Researchers, MA and PhD students, SME´s, trainees
Geographic level	All three initiatives described in this group are regional, even though the Spanish initiative Ramón y Cajal Programme is national one but region Castilla y León adjusted conditions according the needs of region. The Malopolska Region initiative "Support of creation of theses for SME's" was preferably launched for certain subregions, which was ensured by massive communication of initiative in these subregions.
Financial sources	These initiatives are not much cost-intensive and it is not direct support to companies, therefore in Malopolska it was financed fully from public sources (through Operational Programmes with use of EU structural Funds, respectively through Regional Development Plan). In Castilla y León public sources (national and regional) together with university budgets were used to finance described initiative.
Conditions of transferability	General conditions for transferability of initiatives of this group are following: - legal basis - geographic coverage of initiative - period of initiative implementation - definition of implementing and administration bodies - target groups and eligibility of potential participants for funding - eligible costs to be covered and mode of funding - system for monitoring and evaluation of achieved results - definition of implementation process - amount and structure of budget for initiative realization

	There are also special conditions which should be fulfilled in any of initiatives in this group. But it depends on concrete situation if these factors should be taken into consideration when thinking about transferability of concrete initiative from this group: - proper publicity and awareness measures - criteria for cooperation and recruitment of researchers/students for support - motivation and willingness for higher education institutions to participate - interest of SME's for cooperation with students - proper timing of initiatives with regard to academic year etc. - conditions for co-financing by different partners - motivation for students/young researchers and perspective for further personal growth in the particular field after the end of the initiative
Links to strategic documents	The Spanish initiative was launched in accord with National Plan for Scientific Research, Development and Technological Innovation and on regional level it is also in line with the objectives pursued by the Regional R&D+I Strategy 2007-2013 which defines a system structured around four types of players, the regional authorities, the educational system, researchers and business, oriented towards the innovation culture, improving the scientific and technological qualifications of human resources in Castilla y León and attracting talent as a basis for modernizing and constructing competitive advantage in the region. The best practice initiatives from Malopolska were included in Regional Innovation strategy and also in further development programmes (plans) covering the whole Poland. The initiative from Malopolska "Intership in high-tech SME's" is based on Integrated Regional Operational Programme (IROP), measure 2.6, which was one of seven operational programmes which were used in implementing the 2004-2006 National Development Plan/ Community Support Framework (NDP/CSF). The second initiative from Malopolska "Support for creation of theses for SME's" is based on Integrated Regional Development Plan (ZPORR) which was implemented in 2004-2006 and covered implementation of the regional development in entire Poland. The specific financial scheme for Regional Innovation Strategy was measure 2.6 under which Malopolska presented this initiative.
Expected results	- Number of researchers funded - Scientific progress of the researcher and her/his integration in the R&D centre - Number of successfully defended theses (increasing cooperation between MA and PhD students and SME´s) - improve cooperation between NGOs, universities and business sector - practical orientation and utilization of diploma and doctoral theses (written by company needs)

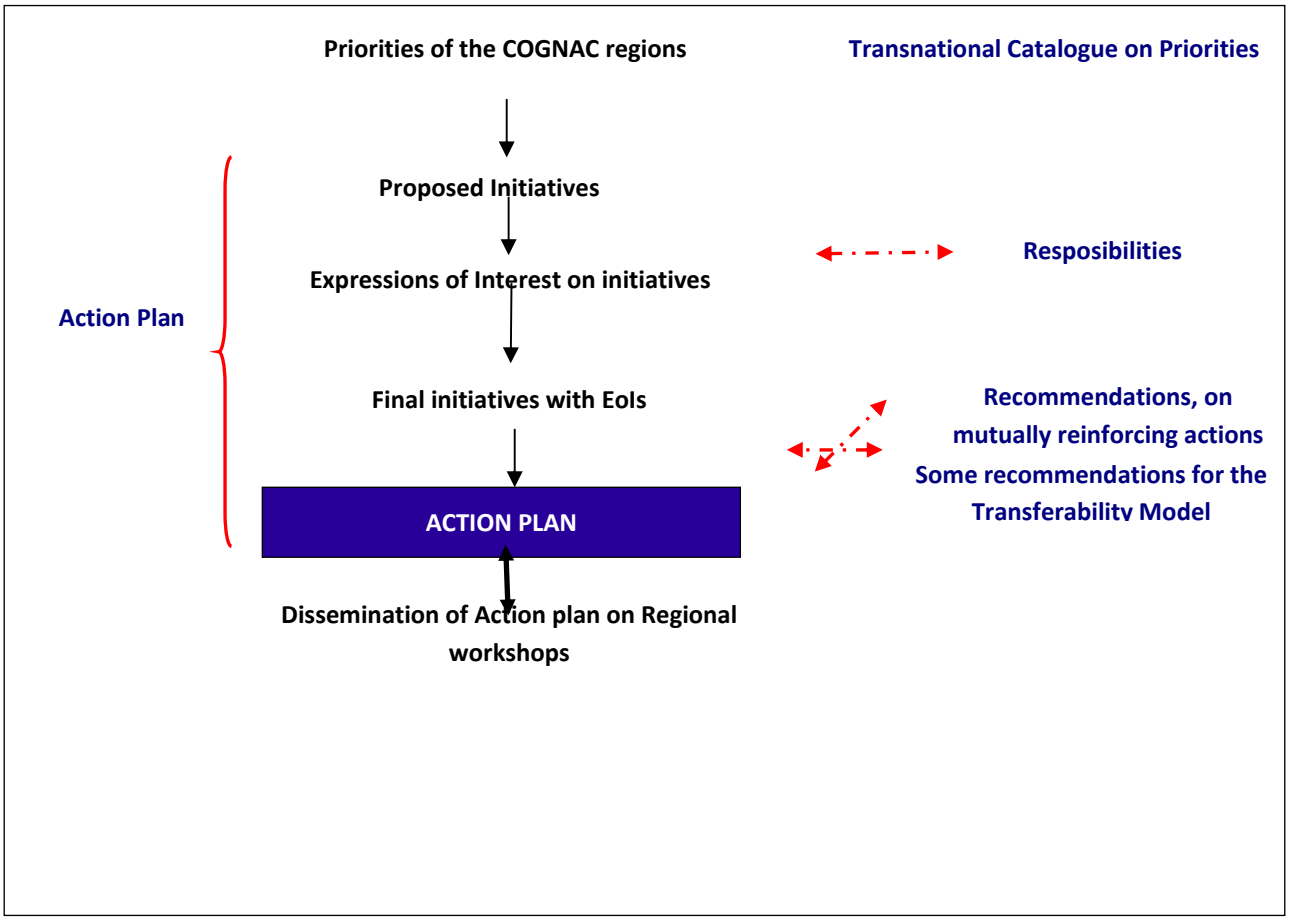
V. JOINT POLICY INITIATIVES AND RECOMMENDATIONS (Workpackage 5)

Foundation CARTIF, in WP5, using the knowledge generated in the previous project WPs and fostering the **mutual learning** among the COGNAC partners, coordinates the development of the action plan.

Two objectives have been achieved through the development of the action plan. On one hand, to materialise the strategic objectives identified into specific actions, and on the other hand, to foster the mutual learning between COGNAC partners by means of the interactive actuation among involved partners.

The whole process followed throughout the development of WP5 is detailed in the diagram below, which shows how each one of the tasks realised is linked to the Action plan.

WP5 diagram



Mutual learning among the COGNAC partners has been present during the whole COGNAC project, but it was even more relevant in the WP5. Firstly, in the elaboration of the transnational catalogue on priorities, secondly in the design of the action plan through joint actions and in the elaboration of the responsibilities matrixes, and finally in the collection of recommendations on mutual reinforcing actions and on transferability model.

In this sense, the mutual learning has been practised in two directions. On one hand, within a given region, by celebrating regional workshops, among the COGNAC partners and the actors of the regions with competencies in R&D&I field. And on the other hand, in the meeting which had place in some of the regions involved.

As a starting point, the most important themes on R&D&I issues for COGNAC partners were collected and a list of 86 priorities was gathered. In the collection of the most important themes, the analysis of the economic and R&D&I context were realised.

The **economic context analysis** was done considering, firstly the priority sectors in the regions and secondly the regional specialities in comparison to their national context. As for the **R&D&I context analysis**, the SWOTs analysis and the RIS analysis were realised. As results of analysing the SWOTs, frequently mentioned strengths, weaknesses, opportunities and threats were identified in some of the regions, although not in every one of them.

STRENGTHS

- Increase of **R&D expenditure.**
- Presence of **strong and consolidated universities** in COGNAC regions.
- Most COGNAC regions consider to have **qualified personnel** although industry is not able to absorb it, because of the brain drain process.
- Creation of **knowledge centres** and **technological parks** supporting enterprises to develop their research and development policies.

OPPORTUNITIES

- The development **cooperation in R&D&**I among relevant actors
- **The increase of the support of innovation** and R&D activities
- The **specialisation of the regions**. The development of the traditional sectors as the strategic ones in several regions

WEEKNESSES

- **Lack of innovation culture** among the companies, especially in the Small and Medium Enterprise sector
- Many partners show a **low level of R&D+I expenditure** within the SMEs sector.
- **Lack of internationalisation** of the regional companies as well as other participants of the market
- The majority COGNAC regions remarks the challenge to **improve the cooperation** between companies and R&D+I institutions.

THREATS

- **Brain drain process**. The process is being observed and connected with the lack of opportunities for young and talented individuals in the region
- The **lack of or the wrong innovation politics** that result in many disadvantages in the COGNAC economies

Therefore, the analysis of the economic context in every region and the RIS analysis of the majority of the regions were taken into consideration by each COGNAC region to define the regional innovation priorities. After collecting every regional R&D&I priorities (very similar in some of the cases), the exhaustive list of the 95 priorities collected were analysed and a classification by 13 themes related to R&D&I issues was established (See table 1)

From the transnational catalogue on priorities, the table 1 was elaborated. On it, it is possible to see the number of the priorities by themes which are present in the R&D&I policy of the eight involved partners.

Table 1: Relevance given to the different themes by each COGNAC region

THEMES	COGNAC REGIONS								
	North Great Plain	North-Hungary Region	Styria	Malopolska	Castilla y León	Zlín Region	Košice Self-Governing Region	South Central Planning Region	Total by theme
HH.RR	2	1	1	0	1	2	3	0	10
Innovation support infrastructure and services	1	3	0	3	2	2	4	0	15
Favourable innovation environment	2	1	1	1	1	1	2	1	10
Excellence of R&D and innovation	1	0	1	0	1	1	0	0	4
Co-operation with other regions or countries	1	0	2	3	1	2	2	0	11
Technology co-operation	2	3	1	1	1	0	3	0	11
Technology transfer and commercialisation	1	3	0	1	0	0	2	0	7
Science and society / Diffusion	0	0	0	0	1	0	0	0	1
Entrepreneurship	2	0	0	0	1	1	1	0	5
Governance	1	3	1	1	1	0	4	0	11
Finance / Funding	1	1	0	1	1	0	2	0	6
SMEs	0	1	1	0	0	0	0	0	2
ICT	0	1	0	0	1	0	0	0	2
Total by region	14	17	8	11	12	9	23	1	95

Some conclusions obtained from table above are:

- The number of priorities varies among the COGNAC region
- The number of priorities is an indicator of the differences among the innovation systems of the regions
- The number of priorities is an indicator of the needs of the COGNAC regions

The wider the scope the higher the number of priorities and the younger the R&D&I policy the more general and ambitious the policy and, hence, the higher the number of priorities

As result of all previous analysis, could be concluded that the regions involved have common priorities and they are affected by common factors and therefore it was possible to think about the

possibility of beginning a process of creation of interesting initiatives with a **transnational approach,** that is, it was possible to think in the elaboration of **joint actions.**

From the beginning of the generation of the COGNAC Action Plan, it was decided to **involve intensively all partners** as they have better knowledge of their regional needs and capabilities. Besides, in order to ensure the transnational approach of the collected initiatives, these were **disseminated among the main R&D&I actors of the COGNAC regions** to gather Expressions of Interest (EoIs) on them. That process was relevant to detect which initiatives were more widely and deeply accepted among R&D&I regional actors, according to theirs R&D&I priorities.

Based on the initial pool of 17 initiatives proposed, in Krakow meeting, five initiatives were selected according to the opinion of COGNAC partners, and also based on the interest that the partners had gathered among the R&D&I actors in the involved regions.

The Action Plan was designed by means of a set of joint initiatives, proposed by the COGNAC partners in order to be implemented in their regions taking into account their R&D&I priorities.

The **COGNAC action plan allows focusing four priorities** that were developed by 5 COGNAC partners in coordination with CARTIF and the rest of the partners **(see table 2)**. Some details about the background, the objectives, the potential beneficiaries and the working plan of each of these initiatives are shown in the table 2.

Table 2: COGNAC Action Plan

INITIATIVES	PARTNER	PRIORITIES
CANI Consulting Agencies to New Innovative Enterprises	TUKE	Innovation support infrastructure and services
RDCIP R+D+I Platform	Bay-Logi BZAKA	Technology co-operation
MOBILITY Easing researchers mobility to SMEs and fostering research activity by SMEs	RDA of North Great Plain	Human Resources Technology co-operation
CABAN Cognac Area Business Angels Network	Zlín region	Entrepreneurship
AGROBIO Agro-biotech cluster	CARTIF	Technology co-operation

CANI promoted by Košice Self-Governing Region looks forward to creating specialised agencies educating entrepreneurs in the field of entrepreneurial knowledge with respect to research, development and innovation activities.

This initiative is based on the fact that enterprises often go bankrupt because of low level of experience and knowledge in business issues (such as management, logistics, customer services etc.) and with the intention of improving competencies and experience of entrepreneurs.

The target group of this initiative are the Universities and educational institutions, Regional governmental bodies and Entrepreneurship support institutions and the work plan is defined considering five stages:

1. Promotion of need for entrepreneurial education among entrepreneurs.
2. Creation of Common Regional Advisory and Consulting Agencies
3. Preparation of studying materials
4. Organising courses and training for entrepreneurs
5. Technical Assistance

RDCIP is an initiative promoted by Bay-Logy which wants to generate a technology platform in order to co-ordinate the R&D&I activities on the determining or perspective areas, the completion of the strategic plan of the different areas and in order to collaborate with other European technological platforms from the viewpoint of the newly joined countries' economic development.

With this platform initiation the aim for the members is the utilisation of next benefits: companies, academies and/or universities and government. The technology platform action plan follows the next stages:

1. Building Platform Management;
2. Insuring a communication surface;
3. The industrial actors set up and define the strengths and harmonise their developments;
4. Creation of a competence map for giving the opportunity for the nations and regions to place themselves on it or to mark the lacks if there are any;
5. Accomplishment of sectoral analyses in the interest of the strategy creation ;
6. The completion of a sectoral strategic and operative plan concerning the additional researches;
7. Further aim is to strengthen the already existing contacts, to get new contacts;
8. Preparation of development and innovation projects.

MOBILITY has been promoted by North Great Plain from its Regional Development Agency. This initiative pursues to enhance regional R&D&I capacity by establishing and facilitating the linkage of private sector with researchers, by increasing researchers' mobility.

The target group of Mobility initiative are mostly SMEs, knowledge centres and researchers, and R&D personnel.
The initiative is divided in several stages:

1. Demand side: Measuring and mapping the concrete need of regional SMEs and enterprises.
2. Supply side: Measuring and mapping the researchers and PhD students profile
3. Matching of the demand and supply side; Preselections of the pilot projects, International matching for the gaps with the participating regions
4. Implementation of 10 pilot projects per region
5. Evaluation of the programme
6. Source funding and process implementation for national funds
7. Continuous dissemination

CABAN is an initiative promoted from Technology Innovation Centre, Ltd in Zlín region. The initiative is focused on the establishment of a contact place for Business Angels Network in the Zlín Region with aim to bring this kind of financing opportunities to the region and to increase access of innovative companies to the financial resources necessary to their development.

The objectives pursued with this initiative are:

1. Creating an international network and database of potential investors (BA)
2. Increasing awareness of this kind of financing,
3. Increasing number of SMEs using this kind of financing,
4. Stimulating innovation activities of SMEs in COGNAC regions

The target group of this initiative are providers of contact places (e.g. Business Incubators, Technology Parks, Innovation Centres) and SMEs and BA networks

Co-operation platform will be formed by contact places for Business Angels Network from involved regions whose activities will be following:

1. Contact with SMEs and explaining them possibilities of BA financing for realization of their innovative ideas;
2. Creation and maintaining the database of BA investors in particular regions;
3. Preparation of cooperation offer for particular BA and company from any of involved regions;
4. Matching of innovation offers and helping companies with elaboration of their projects and other activities.

AGROBIO promoted by Foundation CARTIF, looks forward to promoting collaboration between a traditional sector as Agro-food and biotech companies. The aim is to create a new organisation, a cluster, formed by Agro-food companies, biotech companies, research centres and universities in order to collaborate and develop new initiatives in fields as R&D activities, regional policy design and other strategic issues, as marketing, financial, training and internationalisation of common interest among the members of the cluster.

Potential partners identified could be: Companies in Agro-food sector and biotech (green biotech) industry, Research centres, Universities, Regional governmental bodies, Regional development agencies

The work plan identified four main areas:

1. Mapping the AGROBIO sector to identify potential partners in the future cluster and collect information to be used in the next step.
2. Creation of a AGROBIO Strategic Plan made on the information about needs, opportunities and interests collected from the potential partners.
3. The Cluster creation that will suppose two main steps: the engagement of members in a formal agreement, and the register of the new organization follow the administrative procedures.
4. Implementation of the strategic plan in a three years term.

As the action plan has been designed in order to its implementation in each region interested in, an analysis of responsible bodies in every COGNAC region was made. This analysis was carried out considering the responsibility matrixes of the COGNAC regions that were produced in the WP5. In these matrixes it is possible to see the bodies in charge in R&D&I fields at regional and national level in every COGNAC region. The responsibility matrixes were used in order to identify the responsible bodies with competencies in R&D&I fields, among the different government levels: regional, national and EU level, and therefore were identified the responsible bodies which are able to implement the measures established in order to tackle the R&D&I priorities Besides, overlaps and gaps in the competencies in R&D&I fields within institutional organisations in COGNAC region can be detected by

using these regional matrixes.

Therefore, using these matrixes and taking into account the themes in which the initiatives of action plan are focused, the responsible bodies which have to be involved in the implementation of a given initiative can be determined.

Along with the Action Plan a collection process of recommendations was realised among all involved parties in order to carry out the action plan.

The collection process started with the study of the possible barriers and enablers affecting to the carried out action plan. Several barriers and enablers were detected in this process. On one hand, the barriers identified were classified in legal and administrative, political and finally institutional barriers. On the other hand, the enablers found out were focused on the enhancement of good relations among the involved parties.

Therefore, taking into account the enablers and barriers and based on the work already done in previous work-packages and, also, on the experiences of partners on the design, implementation and evaluation of initiatives / pilot projects / R&D&I projects, as it is possible to see next, a list of recommendations about the COGNAC Action Plan was elaborated. These recommendations were organised bearing in mind the different levels of government that can affect the design, implementation and evaluation of a transregional joint initiative. Therefore, the following regional, national and European Union recommendations were set up.

REGIONAL level recommendations

- To increase the awareness of the regional R&D&I actors about the different types of regional/national R&D&I
- systems
- Prepare and update regularly documentation/information/presentations on web portals on regional level)
- Identify adequate interlocutor in the regional R&D&I system and make them publicly visible to make sure that other institutions are able to contact them easily.
- Analyse the funding sources
- Ensure that the region is able to produce relevant R&D&I statistical information, in line with the definitions establish by the European institutions, to allow joint analysis with other regions.
- Analyse other R&D&I systems and policies of other regions, to take advantage of their experiences and good practices, to detect institutional layouts, legal frameworks or policies that had worked or are still working to foster regional R&D&I performance
- Create and develop platforms, regional networks and/or forums with involvement of all important regional R&D&I supporting actors
- In some cases, to increase the languages skills of responsible public servants of R&D&I issues and to involve regional authorities in projects
- Although the governmental bodies of the regional innovation system require modifications to accommodate a changing regional and supraregional context, the lack of stability would be a problem.
- Ensure that gaps or overlaps in the decision making model are avoid, being possible to identify without confusion responsible regional/national players
- Ensure a fluent upward dialogue among the regional and the national decision makers and/or policy makers

- Development of activities in order to search common points among different regions with the objective of making easier to carry out a joint action

NATIONAL level recommendations

- To celebrate forums and meetings at national scale, but open to other countries, to share experiences and put in common problems and needs in order to joint regions with similar interests
- Ensure a fluent dialogue among the national government and the different regional governments to build a common agenda on R&D&I issue.
- Identify adequate interlocutor in the national R&D&I system and make them publicly visible to make sure that other institutions are able to contact them easily
- Prepare documentation/brochures to show good practices of either regional/national initiatives or joint initiatives, in close collaboration with the responsible actors, and diffuse it adequately in the local language but also in other languages to ensure a greater impact
- Although the governmental bodies of the national innovation system require modifications to accommodate a changing context, the lack of stability would be a problem.
- Ensure a fluent dialogue among the players of the regional/national innovation systems, especially among experts and decision-makers
- Ensure transfer of outputs of activities concerning R&D&I issues agreed by most of regions to the responsible national level decision making bodies.

EUROPEAN UNION level recommendations

- Foster communication and exchange of experiences among more R&D&I developed regions and less developed ones to allow to share good practices, documentation
- Following setting up of definition of concepts to analysis the R&D&I systems and the R&D&I activities and policies to make easier the communication among different regional actors.
- Ensure a fluent dialogue among the European level and the different regional/national governments to build a common agenda on R&D&I issue
- Celebrate forums and meetings at European scale to share experiences and good practices and put in common problems and needs in order to joint regions with similar interests
- Prepare documentation to show and to describe concrete examples (success stories) of European joint regional initiatives
- Make an effort in order to simplify and ensure a user friendly system in administration of projects financed by state or EU level grants

Besides taking into account all previously mentioned, it can be highlighted that the transnational approach has been also considered in the case of already successful initiatives in the Cognac regions. Taking into account this viewpoint, several recommendations on the transferability of initiatives field were gathered among all involved parties in order to ease the transferability of good practices done in a past time that could be the inspiration of new transregional initiatives.

The recommendations were classified taking into consideration the nature of factors influencing the transferability process. On one hand, the elements related to the initiatives, such as their maturity or flexibility, and on the other hand, the elements linked to the context where the initiatives are transferred, for example: the differences among legal frameworks or the innovation system of the

involved regions.

These recommendations were classified according to the different government levels: regional, national and the European Union level. Some of these recommendations are:

- Regions should ensure they have channels for accessing national and European levels of government (regional recommendations)
- Ensuring that regional interests are adequately covered for national governments, especially if the level of decentralisation is low (national recommendation)
- Ensuring regional cohesion through R&D&I activities (national recommendation)
- A deeper information management on regional initiatives would be interesting, having access to more regional projects and more information about the design, implementation and monitoring issues of these projects (EU level)

Finally, thinking about the future, the designed COGNAC Action Plan is already an opportunity to foster the transregional cooperation as a way to develop the regional innovation systems in the COGNAC regions. In that sense, contacts among COGNAC partners go on to implement the planned initiatives. Besides, the set of recommendations produced by the COGNAC project can be a useful guide to ensure the adequate implementation of future transregional joint initiatives and to ease the transnational transfer of already successful regional initiatives to other COGNAC regions.

This report is the summary of the work and series of consultations in the COGNAC project. It is a practice –oriented writing with the aim to describe the process followed by the COGNAC consortium.

If interested, please visit also www.cognacproject.eu for the free downloads of public results.

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