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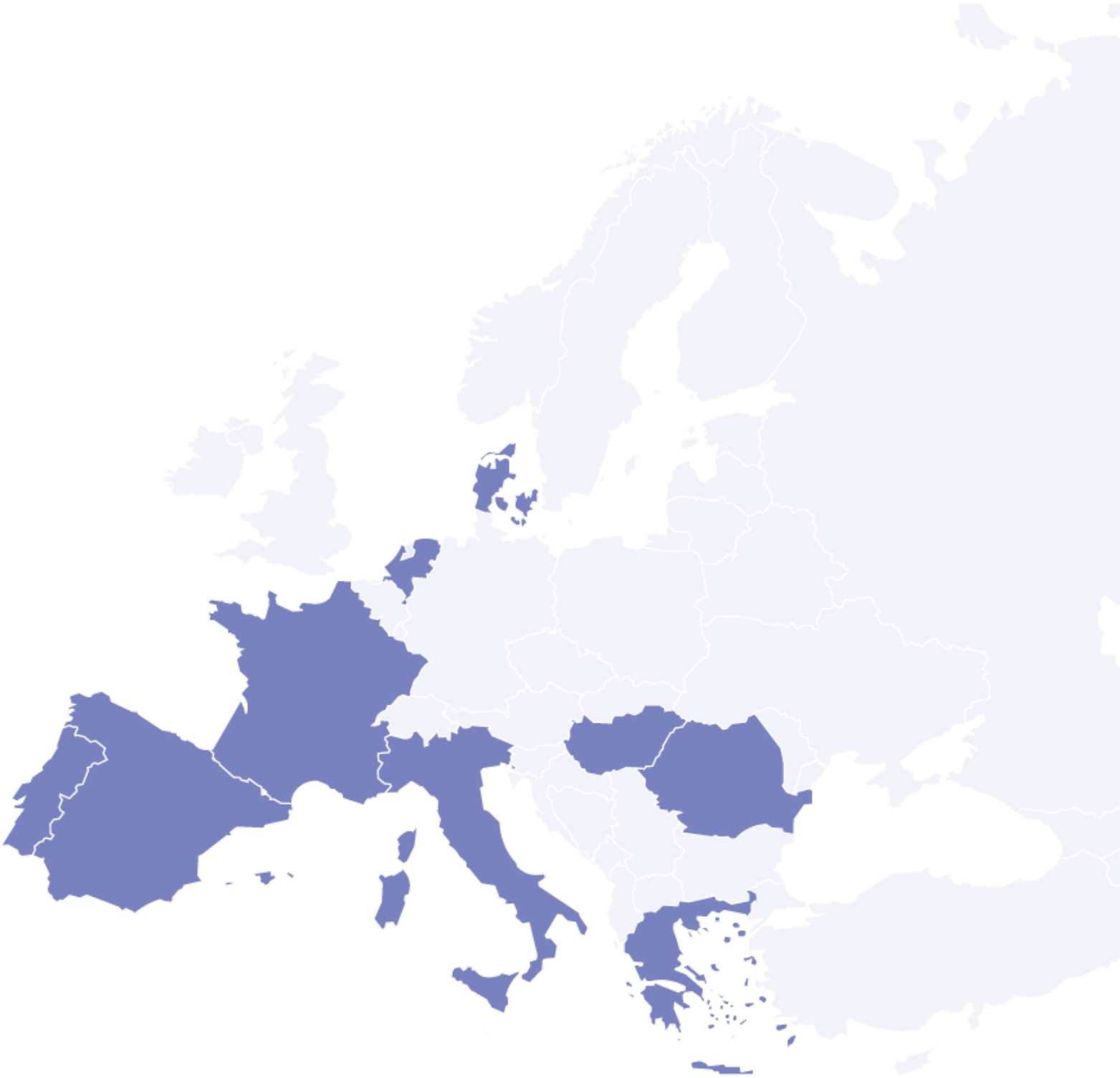
ERMIS
Effective Reproducible
Model of Innovation System

ERMIS

REGIONAL ACTION PLANS

September 2012



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Introduction

The current document provides an overview of all the best practice transfer visits that have taken place in the context of the ERMIS project and the regional action plans that have been developed on the basis of these transfers of best practice.
The Regional Action Plans are an important step to develop our Policy Recommendations document to the attention of the policy makers.

This document aims to describe what steps a region would have taken to implement a selected good practice considering the socio-economic context at the moment. We can see here what kind of decisions a territory could take to involve their regional actors for the good practice implementation in the area.

When reading this report, it is important to recognise the fact that Europe, and therefore also Europe's cities and regions, has gone through turbulent times in the running period of the ERMIS project. Although the financial as well as the economic crises were already there when ERMIS commenced in 2010, it has become clear that the true and full impact on European local and regional governments only has become apparent in the last two years.
One of the key changes in the course of the ERMIS project, as a result of the economic recession, has been its impact on government support and its capacity to implement new initiatives.
In addition, several countries have had elections with changes of government, and subsequent changes in policy directions in the course of the ERMIS project. These changes always bring uncertainties as to the continuation of existing initiatives favouring innovation in the same way.
Naturally, these crises and political changes have had an impact on the capacity of ERMIS partners to commit to transfer processes. That being said, the effect has also been a greater openness to learn and try new approaches if they bear the potential of success in them. The result has been that a relatively large number of best practices have been transferred within ERMIS and that some of the partners will be close to implementation by the end of the ERMIS project at the end of 2012.

The report briefly describes the SWOT analysis per region (and not per partner) as a basis for the selected best practices. For each region it also sets out the actions that are being planned following the transfer process. The SWOT analysis constitutes a fundamental element for this document by enabling each territory to understand its ecosystem, and forming the base to develop a governance strategy for the innovation development.
It is important to understand that this section describes a strategy/vision for the future. The ERMIS project does not demand the partners to implement anything in the course of the project. However, the partners are required to think about the steps that they would have to go through when they wish to take up (a part of) a good practice they visited.

Summarizing, what we here mean by "Action plan" is a detailed description of the steps the region has to take, in order to implement one or more best practices in the next months and years.

1. French Riviera Territory Chamber of Commerce and Sophia-Antipolis Agglomeration Community

FRANCE

Based on the SWOT analysis and visits of 9 best practices in total, the CCINCA and CASA (LP and Partner 2 in the ERMIS project) have selected a total of 4 best practices for transfer into their region.

1.1. French Riviera SWOT Analysis

On the basis of the model of an ideal ERMIS, CCINCA and CASA have, jointly, finalised the SWOT analysis of their own LIS (Local Innovation System). The ideal ERMIS model included the methodology to conduct context-specific SWOT analyses following a single harmonised process. In this way it was possible to identify best practices for fostering innovation in SME's that are likely to be implemented in similar territories.

The SWOT analysis was based on investigations of the definition of SWOT analysis reference framework; the positioning of PPs' regions; the analysis of economic performance; the model of development of SME's and of regional governance.

Below is the overall analysis with the most apparent strengths, weaknesses, opportunities and threats for the French Riviera.

Opportunities	Threats
• Dynamic industries (ICT) with potential growth levers on ancillary industries (Tourism, Support services, Healthcare, Energy) • Legal and fiscal incentives to support innovation in SMEs • Presence of world class competitive clusters (SCS, Capenergies) • Dense network of innovation management structures • A sense of urgency from local stakeholders for a coordinated innovation value chain	• Growing competition on leading industries: Business Tourism, ICT • A local tendency to shift from high tech, R&D oriented dynamic industries (micro-electronics, IT) to support services industries • Lack of local coordination of innovation policies • Dispersion of regional public funds to support administrative structures of numerous clusters • Lack of coordination between local strategic directions from public stakeholders: no "territorial flagship"
Strengths	**Weaknesses**
• mature world-class industries (Perfumes & flavors, Tourism) • dynamic transversal industries (ICT, support services) • high productivity supported by knowledge intensive activities • non-relocatable industries (Tourism, support services, energy, construction) • high level of public expenditures for R&D • local employment market (attractiveness of the region) • high density of population with university degree • high specialization in human and business sciences • high intensity of R&D of local manufacturing firms (receptivity to technology transfers)	• Low level of technological innovation • Local relative decrease of dynamic sectors (Micro-elec, ICT) • Lack of cooperation between strategic clusters • Industries of suppliers highly dependent on turbulences of upstream supplied sectors • Lack of strategic management practices among SMEs • Low level of internationalization of SMEs • Low level of cooperation of SMEs with local R&D centers • Lack of private investments in R&D • Lack of capital in SMEs • Lack of seed funds • Limited access to refinancing

Following completion of the SWOT analysis the following issues to address within the ERMIS project were found:

French Riviera: critical issues to address within ERMIS

- Cross cooperation between different strategic (ICT / Tourism) and emerging (ICT / Energy, ICT / healthcare) clusters
- Fostering local technology transfers
- Transforming fundamental research into applied research
- Attracting seed capital and refinancing capital
- Producing ICT and Energy-based academic knowledge locally
- Empowering local SME's with strategic management practice
- Stimulating international development of SME's
- Shifting from Knowledge accumulation to knowledge creation strategy

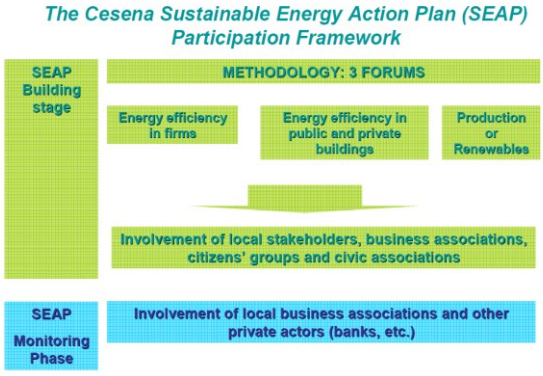
1.2. Selected Best Practices

Following ERMIS methodology of LIS territorial SWOT analysis, situation-specific good practices were identified in each partner's territory. On the basis of these situation-specific outputs, during a collective presentation of each partner's SWOTs and Best Practices in Miskolc, Hungary, partners sharing similar territorial contingencies and issues have identified Best Practices presenting a high likelihood of transferability.

After visit 9 good practices, 5 of these that fit with the SWOT analysis and that are relevant to transfer were selected.

1.2.1. Cesena Sustainable Energy Action Plan

This best practice develops tools for planning and administration to promote environmental innovation in SMEs through a policy of sustainable action.



The steering method of the CESENA Energy Plan allows a territory to achieve its goals concerning the control of the use of energy and on the development of alternative solutions. The practice measures the effectiveness of the cooperation between ICT energy and ICT construction (monitoring of smart buildings).

The system relies on a logic of a BSC (balanced score card) and allows a region to control its policies according to its strengths and the local context. We can know the impact of the public action on the criteria that the tool identified through indicators.

Methodology based on 6 indicators:

- Energy Efficiency

- Renewability
- Disposability
- Energy Density
- Cost Effectiveness
- Emission Reduction

This tool also helps to develop scenarios. The approach promotes applied research and scientific knowledge in the field of energy, promotes the link between market needs / product / research and public policy and develops the local market.

Objectives: reduce by 20% GHG emission / 1995, equivalent to 130.000 TeqCO2

Transfer conditions:

The characteristics within the French Riviera territory relevant to determine the feasibility of implementing this practice are:

Strengths / Weaknesses:

- ✓ Strong expertise of local businesses on information technology and intelligent networks
- ✓ An emerging sustainable energy cluster with high-tech companies linked with the world of computer maintenance companies and energy
- ✓ But Low level of cross-sectorial cooperation between companies
- ✓ And no common guidelines to measure local plans for sustainable energy or common monitoring of their effectiveness

Opportunities / Threats:

- ✓ Eco-Valley: Riviera sustainable land development (National Interest Program of the Var valley)
- ✓ Local incentives (financial support) for housing and sustainable construction
- ✓ But decreasing government support for sustainable energy industry.

The region has, thus far, not developed the means to measure the effectiveness of its actions on energy policy. It would be strategic and useful to develop a departmental energy observatory with a very simple tracking database access on companies "Observatory Departmental / Enterprise Energy". With the transfer of this best practice, CCINCA wishes to create such observatory of sustainable energy management.

Following the participation of representatives from The French Riviera Chamber of Commerce in this good practice transfer visit in Italy (Cesena), CCINCA had a meeting with the director of the regional administration. This was followed by a broad discussion on the potential of:

- The future presentation of this good practice to the CCINCA chairman and board members.

- Achieving the support needed by CCINCA to develop the partnership

This partnership should consist of the following entities:

- ✓ EDF (Electricité de France) In order to have access to data on the power

needed and the energy consumption by type of companies, with base line updated each month or quarter. The state requires EDF and subsidiaries to provide these statistics to communities for all public utility purposes.

- ✓ ERDF (Electricité Reseau Distribution France) in order to have access to the outputs from renewable sources installed (by type of renewable energy), updated quarterly.
- ✓ GrDF (Gaz Réseau Distribution France) to have access to date on the energy / power gas use by type of user
- ✓ ADEME (Agence de l'Environnement et de la Maîtrise de l'Energie) for data on renewable energy and other operations subsidized (type of solar thermal energy, building renovation ...)
- ✓ The national centre of the CEE (Certificate of energy-saving) to have access to data on the quantity of operations performed on the French Riviera to see if there is an evolution of the building certificate energy saving..

All in partnership with the ORE (regional observatory of energy) (and other Environmental stakeholder on our territory.

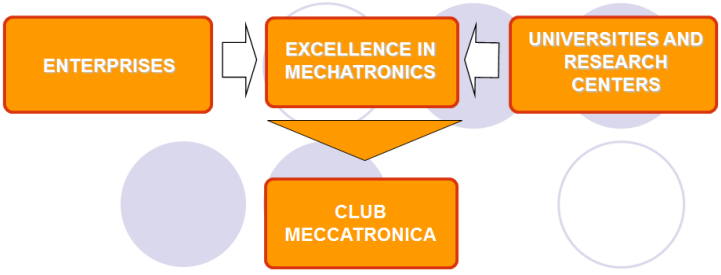
We think that this kind of tool have to be developed in our territory because such an action targeted "company" does not exist at the national level and the department will probably be interested to follow the process.

1.2.2. Mechatronic Club

Created by the industry association in the Reggio Emilia region composed by 70 companies, the Mechatronic Club aims to evolve the traditional mechanical engineering into a mechatronics cluster.

The industry sector meets in a club that plays a role of representation and also delivers services to the club members. The Chamber of Commerce and Industry oversees the various branches of the employers' organization. In addition, the university is heavily involved by publishing on its website all areas of laboratory research.

The type of organizational structure involving Employers Union, CCI and University offers an action driven power and allows a strong collaboration between companies and universities.



The mechatronic model is also interesting in its operation of a 360° "community of practice", allowing the sharing and dissemination of knowledge between previously not connected actors (industry, university, community). What's more, it allows the creation of a cluster that covers the entire value chain: prospective

(industrialists and researchers work together to define a direction), teaching and training (forming the profiles that companies need), research (cross-cooperation between research and industry), production (on the site), promotion (public actors sell the land with other actors: industry, academic centers of excellence), and internationalization.

Transfer conditions:

Strengths / Weaknesses:

- ✓ Power of local ICT clusters and competitive electronics
- ✓ The local mechanical engineering sector is strong but is positioned as suppliers of machinery for large companies
- ✓ Low level of innovation in the local mechanical engineering sector
- ✓ Low degree of inter-sectorial cooperation

Opportunities / Threats

- ✓ Local policies that promote technology transfer and cross-sectorial cooperation (creation of Société Acceleration des Transferts de Technologie)
- ✓ But economic context which may favour the concentration of consumer markets and impede the technological and organizational innovation in SMEs

Following the participation of representatives from The French Riviera Chamber of Commerce and Industry in the best practice transfer visit in Italy (Cesena), the CCINCA had a meeting with the director of the industry department.

This was followed by:

- An intermediary role of CCINCA vis-à-vis the APPIM (association of partners to promote the Mediterranean industry) initiating a collaboration between the association and the Italian club.

- The scheduling of a future meeting to determinate which components of this good practice can be integrated in the planned French Riviera initiative.

1.2.3. United Brains

United Brains is a project from Eindhoven in The Netherlands, and is an initiative led by professors of technical university aiming to connect SME's that have identified challenges in their production with technical students that need to work on real projects. The university is strongly involved in managing the process (project director), and teachers manage the technical operations when necessary. A work on a project is fully included in the curriculum. Furthermore, the service is free for the companies participating.

The organizers and coordinators of the initiative are paid for by the university (which knows the interest in this system for the student), making this project sustainable and independent of applying companies.

Transfer conditions:

Key factors of success:

- ✓ Strong understanding of business needs by team coordinators
- ✓ Training of academics in line with the needs of clusters in the region
- ✓ Coordinators paid by the university => university support that allows companies to access rare skills and functional sustainability assurance system
- ✓ Access to complementary expertise within the university, through the organizers' network.
- ✓ Finding a team to initiate and coordinate the initiative
- ✓ Motivation and the initiator network are key elements
- ✓ Getting continued strong support from the university in financial terms and in terms of the job market listening

The United Brains program actively contributes to the spatial strategy for knowledge transfer and cross-collaboration between SME's and universities. For the CCINCA it would be appropriate to play this role of providing links between businesses and schools (Eurecom, Skema Politech ...), especially in Sophia-Antipolis territory with a focus on promoting the role of a laboratory of ideas and solutions that Sophia-Antipolis should play.

Following the participation of representatives from The French Riviera Chamber of Commerce and Industry in the Best Practice transfer visit in The Netherlands (Brainport) CCINCA had a meeting with the director of territory department.

This was followed by:

- The checklist of the universities, grandes ecoles to contact: Unice University, Eurecom, Skema, Politech…
- A discussion with the director of the Nice University to present the best practice and the relevant possibilities for the university.
- A strategy plan for CCINCA to become the link between Universities and SMEs: The platform Ecobiz through the CCINCA seemed appropriate to manage this practice. In doing so it will give the platform ECOBIZ a dimension of "service rendered" to the company as relevant as business opportunities. One can also consider using the platform Ecobiz to enable SMEs to mail the applications, the facilitator of a community is responsible for identifying curriculum of students whose teachers could contribute to the device and boost cooperation.
- CCINCA will play its role as facilitator and moderator of each sector could be involved in the process.

1.2.4. R&D and Innovation training program

The R&D and Innovation Managers Training Program is an initiative started up by the Regional Government of Castilla y León through ADEuropa Foundation, with the objective of incorporating in enterprises and SMEs in the region, human resources specialized in R&D and Innovation management that will facilitate SMEs participation in Innovation projects.

The first part of the program is a theorical-practical training 2 months long, in which 30 persons holding technical or scientific university degrees take part. This

training period is provided by a professional expert team coming from different institutions related with R&D and Innovation, so the students get a direct knowledge about the different organisms that participate in this matter. During this period, the students also attend to visits to the different agents of the regional innovation system: technological centers, university institutes, and relevant enterprises in R&D and Innovation.

Transfer conditions:

Strengths:

French Riviera economic development is embedded in strong R&D capabilities:
- manufacturing MEs belong to networks
- good level of cooperation of manufacturing SMEs with each other and with R&D centers (out of the region)
- high intensity of R&D of local manufacturing firms
- manufacturing SMEs develop both process and product innovations
- strong high tech and internet infrastructures
- direct connections with international business areas

Weaknesses:

- lack of strategic management of innovation among SMEs
- low market orientation of local SMEs
- low level of internationalization of SMEs
- low involvement of SMEs in European collaborative projects (mainly one-to-one projects)
- manufacturing SE do not belong to networks
- low level of cooperation of manufacturing SMEs with local R&D centers

Opportunities:

- national export support policy for SMEs (French Export Team)
- strong "local preference" spirit likely to support local initiatives

Treats :

lack of coordination between local strategic directions from public stakeholders: no "territorial flagship"

Relevance for the region :

This BP design a training to foster the use of the existing structural funds by SMEs. Indeed, local SMEs, do not take advantage of such opportunities for various reasons: lack of time to manage the administrative workload attached to such projects, lack of expertise to handle the related technical, fiscal and financial procedures, lack of knowledge of the various extisting tools and their respective relevent matching with the firm's innovation strategy.
The design of a vocational training or academic training adapted to the Sophia Antipolis context is not an issue considering the existence of organization specialized in pedagogic engineering of programms dedicated to innovation management (Polytech, Skema Business School, ...). For CASA organisation, main actor of the public sector in Sophia Antipolis, it would be simple to mobilize actors in its territory for this purpose.

Following the participation of representatives from CASA in the Best Practice transfer visit in Portugal (Valladolid) a meeting has been organised with the general

director of CASA and the territorial political committee the marsh 8th 2012. After agreement of this BP, some actions were taken:

- Presentation of this good practice to the economic department director
- Organisation of meeting with Skema Business school representative to prepare a first version of training adapted to Sophia Antipolis requirements
- Research of funds to finance this training and to propose it for free to selected SME's in Sophia Antipolis.

1.2.5. IPN incubator model

The Insitituto Pedro Nunes – Association for Innovation and Development in Science and Technology (IPN) is a subject of private law, non-profit and public utility institution, created in 1991 as the result of an initiative of the University of Coimbra. Assuming itself as an interface institution between scientific environment and the economical and entrepreneurial fabric, IPN connects those two worlds, promoting mutual knowledge, developing networks based on concrete projects and, most of all, transferring knowledge and technologies. IPN has as a mission to promote a culture of innovation, quality, rigour and entrepreneurship, based upon a solid connection between the university and business sector.

Transfer conditions:

Strengths:

- ✓ Entrepreneurial Climate on the French Riviera
- ✓ A high level of public spending on R&D
- ✓ A high density of expertise and knowledge intensive industries

Weaknesses:

- ✓ No public funding for projects to mature
- ✓ Low level of seed capital for projects
- ✓ Limited access to refinancing
- ✓ low level of cooperation of manufacturing SMEs with local R&D centers

Opportunities:

- ✓ Legal and tax incentives to support innovation in SMEs
- ✓ The competitiveness clusters to promote technology transfer and international cooperation (SCS Capenergies, Eurobiomed ...) and 2 incubators (IPE, Telecom Paris tech)
- ✓ A sense of urgency among local stakeholders to create a value chain innovation

Threats :

- ✓ A lack of coordination between local strategic directions from public stakeholders: no "territorial flagship"

Relevance for the region :

IPN mission is to leverage a strong university / enterprise relationship for the promotion of innovation, quality and entrepreneurship in private and public sector organizations, by acting in three complementary areas:

- Research and technological development, consultancy and specialized services;
- Business and ideas incubation;
- Highly specialized training and promotion of science and technology

CASA, the main actor on innovation and SME support issues within the public sector in Sophia Antipolis, already supports incubators, universities and business actors (financial actions) and it would be relatively easy to mobilize actors within its territory.

In March 2012, CASA launched its action plan to create a support structure such as IPN in the heart of Sophia Antipolis. To date, two buildings (2500 m2) have already been equipped to welcome two incubators, twenty start-ups, and more innovation actors. This place, called Business Pole, will be completely finished in October 2012, and ERMIS partners could visit it during the final conference in Sophia Antipolis, the 25 and 26th of October.

1.3. Actions to be taken

1.3.1. Cesena Sustainable Energy Action Plan

The local territory has not developed the means to measure the effectiveness of its actions on energy policy. It would be strategic and useful for the territory to develop a departmental energy observatory with a very simple tracking database access on companies “Observatory Departmental / Enterprise Energy”. The CCINCA through this practice like to create the observatory of sustainable energy management.

Following the participation of representatives from The French Riviera Chamber of Commerce in this good practice transfer visit in Italy (Cesena), the CCINCA had a meeting with the director of the territory department. This was followed by a discussion on the potential of:

- The future presentation of this good practice to the CCINCA chairman and board member.
- The support needed for the CCINCA - Development of Partnership:

EDF or ERDF to know the power needed and the energy consumption by type of companies, with base line updated each month or quarter. The state requires EDF and subsidiaries to provide these statistics to communities for all public utility purposes.

ERDF to know the powers renewables installed (by type of renewable energy), updated quarterly.

GrDF for the energy / power gas by type of user

ADEME for renewable energy and other operations subsidized (type of solar thermal energy, building

renovation ...)

The national center of the CEE (Certificate of energy-saving) to know the quantity of operation performed on the 06 and its evolution.

All in partnership with the regional observatory of energy (ORE), (ADEME + / REGION / DREAL), do with CGDD and DGEC, because such an action targeted “company” does not exist at the national level and the department will probably be interested to follow the process.

1.3.2. Mechatronic Club

Following the participation of representatives from The French Riviera Chamber of Commerce and Industry in the best practice transfer visit in Italy (Cesena), the CCINCA had a meeting with the director of the industry department.

This was followed by:

- The CCINCA has played its role of intermediary vis-à-vis the APPIM (association of partners to promote the Mediterranean industry) initiating collaboration between the association and the Italian club.
- A future meeting to determinate which component of this good practice has to be integrate in our related activity.

1.3.3. United Brain

Following the participation of representatives from The French Riviera Chamber of Commerce and Industry in the Best Practice transfer visit in Nederland (Brain port) the CCINCA had a meeting with the director of territory department.

This was followed by:

- The checklist of the universities, grandes ecoles to contact: Unice University, Eurecom, Skema, Politech…
- A discussion with the director of the Nice University to present the best practice and the relevant possibilities for the university.
- Strategy plan for the CCINCA to be the link between Universities and SMEs: The platform Ecobiz through the CCINCA is appropriate to manage this practice. It will give the platform ECOBIZ a dimension of "service rendered" to the company as relevant as business

opportunities. One can also consider using the platform Ecobiz to enable SMEs to mail the applications, the facilitator of a community is responsible for identifying curriculum of students whose teachers could contribute to the device and boost cooperation.

- CCINCA will play its role as facilitator and moderator of each sector could be involved in the process.

1.3.4. R&D and Innovation Training Program

Following the participation of representatives from CASA in the Best Practice transfer visit in Portugal (Valladolid) a meeting has been organised with the general director of CASA and the territorial political committee the marsh 8th 2012. After agreement of this BP, some actions were taken:

- Presentation of this good practice to the economic department director
- Organisation of meeting with Skema Business school representative to prepare a first version of training adapted to Sophia Antipolis requirements
- Research of funds to finance this training and to propose it for free to selected SME's in Sophia Antipolis.

1.3.5. IPN : Incubator Model Portugal

Since March 2012, CASA launched its action plan to create a place like the IPN in the hearth of Sophia Antipolis. To date, two buildings (2500 m2) are already equipped to welcome two incubators, twenty start-ups, and more innovation actors. This place, called Business Pole, will be completely finished in October 2012, and ERMIS partners could visit it during the final conference in Sophia Antipolis, the 25 and 26th of October.

2. Cesena Municipality and CISE

ITALY

As this region is not one traditionally focused on high tech industries such as some of the participating partners in this project, the territory of Cesena/Forlí (NUTS3) suffers somehow from a peripheral position in terms of regions' infrastructures and logistic system and this compounds a weak innovative stance of local firms due to sectoral and structural reasons. The ERMIS partnership has therefore decided to opt for four best practices, addressing local challenges by transferring four out of the best practices it visited, focusing on stimulating the networking capacity of SME's and facilitating access to financial support.

Forlì-Cesena (NUTS3) is a provincial territory within the Region Emilia Romagna, Italy. Its key sectoral specialisations are in the food, manufacturing, fashion and tourism sectors. According to the indicators used in the ERMIS SWOT analysis Region Emilia Romagna (NUTS2) and the Province of Forlì-Cesena (NUTS3) share the following challenges:

- Relative de-industrialisation over the last decade (need to tailor policies to mature sectors and emerging service sectors);
- Polarised manufacturing systems (Medium firms VS majority of small firms).

As for the city of Cesena, there has been a relative increase of high-tech firms over the last decade, but problems with the knowledge base within small firms continue to persist and this requires specific action to improve the knowledge bases and the capacity of absorption of local small firms.

2.1. Cesena SWOT analysis

Economic competitiveness: SWOT analysis for Emilia Romagna

Strengths	**Weaknesses**
• A rather balanced region with mature industries built on solid bases (Mechanics, Food, Fashion) as world-class exporters with international leading firms • A high intensity of innovation output (patents) especially in mechanics and production of machinery • High productivity • High capacity of leading mechanical firms to serve as global suppliers of world OEMs	• A major part of employment dependent on non-manufacturing industries (where innovation intensity is lower) • A low R&D intensity due to low R&D private investment (owing to prevalence of small businesses) • Lagging behind in high tech employment vis a vis leading regions in EU • No strong world-class high-tech industrial basis (limited source of technological innovation) • Divergence in knowledge bases between world class leaders and local suppliers
Opportunities	**Threats**
• Exploit leaders' knowledge bases to strengthen small firms' competitiveness through production networks • Role of growing industries (Tourism, Support services) • Percentage of workers with a a post graduate degree in science and technology • Incentives for "green conversion" for manufacturing and construction sectors	• Stagnating global demand for core products (machinery, automotive, fashion) • Risk of being locked in a medium specialization and medium tech position

Innovation Challenges for Forlì-Cesena (NUTS3)

Strengths

- Mature firms highly specialized and world class exporters

Weaknesses

- High share of micro enterprises
- Low levels of tech transfer
- Low levels of graduate workers

Opportunities

- Technopoles launched by regional policy
- Presence of University as a knowledge hub in engineering, avionics, ICT, social sciences
- Creativity and talent of local entrepreneurs

Threats

- Territory locked in a mature and low tech position

In terms of innovation policy, the region has recently launched a framework programme to set up specialised "Technopoles" as regional hubs for innovation and triple helix' dynamics. Forlì-Cesena includes regional hubs in the food and aeronautical sectors.

Innovation policy in Italy must take into consideration the evolution of the European crisis. Since the beginning of the crisis in 2008, Emilia Romagna has been one of the worst hit regions in the northern part of Italy in terms of reduced added value per worker. The severity of the crisis in the region can be attributed to the high dependence on export in the manufacturing sector, especially mechanics and automotive sectors, which has seen a drastic decline in terms of international demand over the years 2008-2010. Within Emilia Romagna, Forlì-Cesena lags behind the regional average both for export propensity of its local firms and for innovation intensity.

These two factors are considerably compounding the local crisis (mid 2012), increasing the unemployment rate, especially among young people.

The success of any regional innovation policy seems therefore to depend largely on the capacity of the policy makers to accompany the policy with measures ensuring a smooth transition from mature local sectors towards higher export and innovation intensity rates.

Given the average size of local firms (about 3 workers), the challenge implies the capacity to forge "connecting" services among firms and "tutorial" services in terms of innovation with an eye to collaborative projects with research labs and the university.

2.2. Selected best practices

In the light of the challenges presented in section 1, P3 and P4 have selected the following best practices within the ERMIS project.

2.2.1. Connect Denmark

CONNECT Denmark (www.connectdenmark.com) is the Danish offspring of a global CONNECT organisation, emanating from San Diego in the USA, and is a private, independent, membership-based, non-profit organisation that has 300 companies and close to 900 business executives as members. The organisation is financed through sponsorships and membership fees and covers the whole of Denmark. Among its members are the best performing companies and highly valued executives. CONNECT Denmark provides free coaching to entrepreneurs from the idea stage and through the later growth stages. Furthermore, it provides matching sessions between entrepreneurs and professional board members. The activities are primarily conducted through "springboards" where entrepreneurs – selected by the organisation – receive sparring from a panel of typically 6-12 business executives selected among the members on basis of their respective qualifications in relation to the challenges faced by the entrepreneur. In addition other informative meetings and events are organized through CONNECT Denmark (currently some 190 events per year). CONNECT Denmark is a spin-off of the global CONNECT network (www.globalconnect.org).

2.2.2. Aegean Technopolis – Seed Capital

In the island of Chios, the Aegean Techno-polis, runs – among other services – a seed-capital funding local start-ups, local university spin-offs and clustering activities aimed at designing, launching and commercially exploiting innovative high-tech products, services and processes. The revolving fund consist of little less than 1.8 ml Euros and is managed by local entities. Projects to be funded are selected six-monthly by a technical board consisting of one member from academia (but with company management background), two entrepreneurs and two international cluster experts. Projects are assessed on the basis of the related business plans, which have to match specific content and layout requirements. On average, 2 projects out of 20 submitted are approved. Funding per project may be up to 200.000,00 Euros (so far funding ranged from 30.000,00 to 120.000,00 Euros). Money is transferred to the recipient on the basis of defined milestones and actual achievements. The fund co-owns and co-runs the start-up for three years, before selling its shares to the entrepreneurs (or to others if the entrepreneurs are not willing to buy). In exceptional cases the fund may be part of the ownership for additional three years.

2.2.3. United Brains

United Brains (www.unitedbrains.nl) is a cooperation scheme among university and enterprises that supports:

- Innovative ideas that have been stocked in a drawer due to lack of time or competences;

- The finding of innovative solutions to challenges submitted by SME's.

Usually, United Brains does not deal with state-of-the art challenges but more with "irritations". These are issues that may not threaten the survival of a company but that may indeed prevent its further growth of hinder its productivity. A team of professors and qualified people from large enterprises (all of them taking part in United Brains activities as a part of their job, thus not charging United Brains for their time) meet weekly to assess request from SME's and deliver them to contact persons at the university's departments for them to set up working groups of students led by one or more professors. By addressing issues and ideas by SME's students and researchers achieve first-hand experience to include in their CVs, deliver research papers and get in touch with potential employers; SME's see their problem solved in a cost effective fashion; the university offers more attractive curricula and large companies, besides exercising their CSR, may be able to spot new businesses or suppliers.

2.2.4. DEVLAB

DevLab (www.devlab.nl) was initiated by 12 technological SME's (in the field of electronics, mechatronics, embedded software and industrial design) with the objective to stimulate the flow of knowledge between universities, technical colleges and the SME members in order to create mid and long term business opportunities. The flow of knowledge enables national and international business opportunities on the long term. The demand and research definitions stem from the industry partners (knowledge/technology push), whereas the universities and other institutes facilitate the research.
By teaming up with other SME's, organizing themselves in the co-operation DevLab, the companies join strengths and create critical mass, to secure their (international) market position on the mid and long term (a position which is mostly based on specific technological knowledge and expertise) and to enable the definition of ambitious research assignments to universities, technical colleges and other research institutes. The DevLab concept also bridges the gap between theoretical research to practical applications in the SME's markets.

The participating SME's each contribute 1% of their company wages cost plus a fair amount of time and energy spend at DevLab research. So, a larger SME contributes more compared to a smaller one, but in return the larger company has more potential to benefit from the spin-off from the research programs, because it will be able to involve more people into the projects. The return on the "investment" comprises the use of gained knowledge, licenses 'free of charge' and all not patentable knowledge and skills which emerge from workshops and training sessions which take place in the research programs. The results of the projects become available for all DevLab member companies who are free to use it in their own product developments.

2.3. Action to be taken

The best practices have been selected and discussed so far to feed the construction of three specific "innovation service value chains". The first BP, inspired by the Aegean Technopolis, is meant to create a seed capital system for innovative start ups or entrepreneurial ideas. The feasibility of such a scheme will be tested in the course of 2012.

The second transfer is inspired by both Connect and DevLab, and is a combination of both and consists of generating and developing innovative product/service concepts throughout

a cooperative process where enterprise of different sizes, as well as would-be entrepreneurs get together assisted by experts. The process will be launched in the second half of 2012.

The third BP, inspired by United Brains, is meant to scan the needs for collaborative projects on the part of SME's that may involve research groups or single researchers within the university. A feasibility test will be run in early 2013.

The reason behind the choice to try and implement a **seed capital** fund to provide financial support to innovative ideas for new products and services is that, locally, funding for innovative projects is not available. Traditional banks do not provide high-risk funding and are more inclined to lend money in the form of mortgages, thus requiring relevant assets as a guarantee. On the other hand large high-risk investors do not usually "shop" in this area and may be not interested in small size projects that are not making a paradigm shift or setting a new state of the art. Yet, locally, there is a need and a will to stimulate innovation by local entrepreneurs and the settling of new and innovative firms.

The next steps that will be taken in this direction are related to

- exploring the applicable legislation and regulation to set up seed capitals;
- exploring similar initiatives by chambers of commerce;
- gathering consent among key relevant partners and identifying the sources that will feed money to the seed capital fund to start it up;
- defining the functioning of the seed capital fund (scope, management structure, project selection procedures, project management procedures, etc.).

These preliminary steps will be taken in the second half of 2012 and are expected to come to fruition at the beginning of 2013, when a comprehensive operational plan will be released. Currently, the Chamber of Commerce of Forlì-Cesena and one of the local bank foundations have been involved by CISE in early-stage discussions on the setting up of the seed capital fund.

It is widely recognised that innovation requires different viewpoints, experiences, competences and skills to get together and interact, that it requires diversity and open-mindedness. It is also well known that it requires a critical mass of resources (human and financial) and some kind of steering so that the process delivers a project (sound enough to be presented to possible investors) towards a new product or service and not just some fancy ideas. Besides, locally there is an increasing commitment by relevant stakeholders (the Chamber of Commerce, the city councils, the local foundations) to support innovation geared to improving quality of life and ensuring positive externalities.

Having this in mind, some features of DevLab and some of Connect Denmark where meshed up in a new process (**Connect@Innovation**) to stimulate innovation by supporting a group of large firms (the sponsors), SME's and would-be entrepreneurs (the participants) in generating new ideas (by means of brainstorming and design-thinking methodologies) and progressively shaping them into new product/service concepts (by means of living-lab and QFD methodologies). The process ends up with a preliminary

business plan to be presented to selected possible investors (the sponsors).

The process has two binding rules: the innovation has to have a positive impact on the quality of life and innovation has to be open along the process and with reference to its results. Participants to the working group will have the right to exploit the innovation on an exclusivity basis for 12 months from the kick-off of the process (which lasts 4 months), then the results will be made public for everybody to exploit them.

The adoption of a "**United Brains**" scheme stems from the need to bridge the gap between small and medium sized firms and university knowledge. The original scheme, witnessed in Eindhoven, will be tested first through the design of a "map" of SME's needs that will collect research and innovation questions on the part of 200 firms (through a survey supported by the chamber of commerce and developed by a local public company entrusted with the mission to support dialogue between the territory and the university, conducted during 2012). These questions will provide the basis for a pilot scheme, to be developed in 2013, whereby needs elicited by firms will be channelled, through a University Committee, to individual researchers or professors. This project will complement, and not substitute, already existing mechanisms of vocational training and apprenticeship. Participants in the project will be SME representatives and individual researchers or professors from the local university. In a further stage of the project the participation of research centres or research labs as stakeholders of the project, can be envisaged for specific but recurrent technical questions arising from firms.

There are important lessons learnt within the ERMIS project and which point to the following messages that the Italian partners would direct to regional and local policy makers:

- Diversity of the economic base can be an asset for innovation, provided it is embedded in a "smart" system where regional and local actors promote cross-fertilisation of ideas and technologies.
- Traditional cluster specialisation is not necessarily to be superseded by horizontal cross-sectoral policies, provided it does not lead to the support of lock-in situations whereby no attempt is made to stimulate the growth of new firms.
- The idea of "innovative ecosystems", witnessed in some regions within the ERMIS project, is to be pursued. In this perspective the adoption of the three mentioned best practices, under a "value chain mechanism" that could reinterpret locally these practices in a single policy, is a central recommendation to local and regional policy makers.

Local innovation policies can be cost-efficient and meaningful, only in the framework of regional and national innovation strategies. For example, the current strategy of regional technopoles should be seen as a complimentary strategy to the cluster policy at national level and should also encourage trans-regional and cross-border collaborations.

Technopoles need a governing scheme that puts firms' innovation needs top on the agenda and creates the prerequisites for collaborative projects with University labs.

Such schemes can only be built on the basis of a sound governance mechanism whereby

the mission of technopoles is clearly set and business ventures are not only encouraged but actively pursued.

Interreg IVC projects such as ERMIS represent a unique opportunity to create awareness for a place-based approach to innovation. Exchanges and visits within these projects should be seen as an institutional investment and should entail a greater participation of local policy makers along the technical staff.

3. Brainport Eindhoven Region

NETHERLANDS

This Eindhoven Regional Action Plan covers the Best Practices learned within the ERMIS project that are considered most transferable for Brainport Eindhoven Region:

- Specific Unit of Identification and Monitoring of European Consortia (SUIMEC), performed in Valladolid by ADEuropa foundation.
- CONNECT network, which is a global network initiative but the Best Practice that has been taken into account is from Denmark and Sweden.

The Regional Action plan describes the relevance of the Best Practices chosen, based on the SWOT made of Brainport Eindhoven Region. Brainport Eindhoven Region will set up two pilot projects to explore their feasibility and lay foundations for actual transfer of the two Best Practices. This is the heart of the ERMIS Regional Action Plan. First, the Best Practice SUIMEC will be elaborated including its potential for Brainport Eindhoven region and the next steps to be taken within the pilot. Second, the Best Practice CONNECT will be elaborated.

3.1. Eindhoven SWOT Analysis

Before the strengths and weaknesses were investigated, the industrial structure of Eindhoven Region was analyzed. Due to a low degree of maturity of industries in the region (there are low entry barriers and there is a high rate of entry and exit) and a high degree of specialization, the regions industrial structure is found to be dynamic. The high degree of specialization is the result of the region focusing on five spearhead sectors: High Tech Systems & Materials, Automotive, Life Tec, Design and Food. These 5 sectors account for 16% of total employment in the region.

The SWOT analysis was based on several aspects; economic competitiveness, industry structure, innovative performance, regulatory framework, human capital, access to finance, tech transfer and infrastructure. Below is the overall analysis with the most apparent strengths, weaknesses, opportunities and threats as presented in the ERMIS project in Miskolc, March 2010.

Strengths	**Weaknesses**
• High participation in **life long learning** • Strong international **knowledge base** • Unique **open innovation system** • Worldwide competitive supply chains • **Triple helix** cooperation	• Lack of **technical talent** • Low **public R&D expenditure** • Lack of **market focus** • Lack of **funds** after 'proof of concepts' • Capacity of **road infrastructure**

Opportunities	Threats
• **Internationalization** leads to new businesses and economic development • Growing need for **durability** • Increasing importance of **open innovation** and **development of technology** (complexity increases) • **Convergence of technology** (crossovers)	• Lack of **government support** • Growth of **new economies** and new markets outside Europe • **Climate** pressure • Rare **resources** • **Aging population**

After having put together the SWOT analysis, interesting issues to address within the ERMIS project were found to be the following (also presented in Miskolc, March 2010):

Critical issues to address for an ERMIS
• **International networks and the international orientation of companies** • Attracting international knowledge workers • **Policy on the access to and use of European funding** • The public authority as Launching customer to stimulate innovation

In the course of the ERMIS project, several elements of the SWOT analysis and their importance have changed. Notably, the Europe wide economic recession has had important impacts on national government support and its capacity to implement new initiatives. In the past few years there was such support for the infrastructure in the region (as initiated/planned years before the crisis took place) and therefore the road capacity has increased. However, the crisis has led to a significant downturn in public expenditure on research and development. This is a weakness that has continued and grown over time.

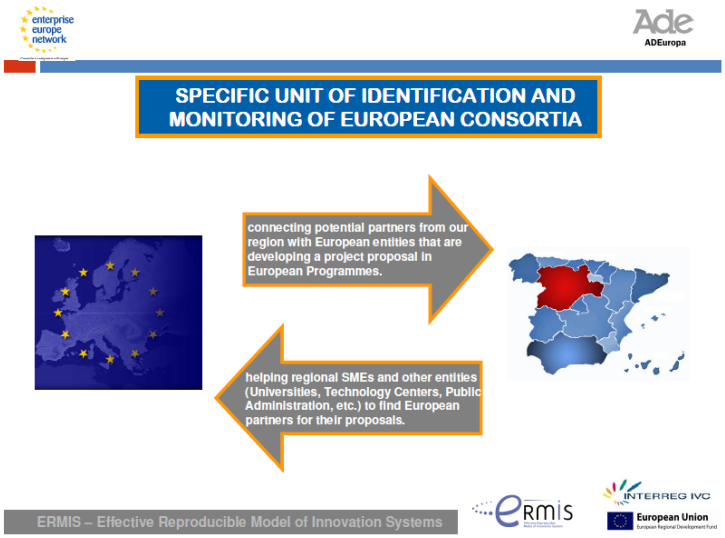
The lack of technical talent is a weakness that has become more important. In the region there continue to be too few technical graduates on all education-levels. The high need for technical employees is the result of job growth and replacement demand because of the ageing workforce. As technical vacancies cannot be fulfilled, more and more companies in the region face the urgency of this problem.

And also the above mentioned weakness of a lack of investment funds is still a relevant element. There is a high need for an appropriate capital structure for starting and fast growing innovative companies in the region.

Looking back on the critical issues for the ERMIS project formulated at the beginning of the project, most of the points are still relevant/up to date. To a large extent, the Best Practices visited do contribute to address these issues.

3.2. Selected Best Practices

3.2.1. Specific Unit of Identification and Monitoring of European Consortia



This BP offers a structure/system to provide direct access for SME companies to concrete funding opportunities (projects and partners). In order to achieve this, a dual database is developed that contains, on the one hand company-information (profiles) and, on the other hand all European funding opportunities and possibilities for project based collaboration. Afterwards, a 'manual' connection is made by a team of company advisors: a consortium-search for companies and the other way around: based on available funding schemes and project possibilities companies are approached. There are 4 people permanently working on this in an office in Brussels.

Current situation in Eindhoven and potential for SUIMEC

The basic assumption of this Best Practice is that it is not clear for SME's in a region what the possibilities are of European funding for their business. Interest by SME's in these matters is mainly related to two objectives: 1) financing and 2) cooperation with business partners or project based collaboration (find contacts, partners etc). SME companies wonder where they should be, what they can gain from it, how they can participate, how they can enter and how they can come to a decent trade-off?

The expectation is that:

- there is an increasing need for European (R&D) financing due to higher costs for research and decreasing public investments and subsidies at a national level.
- there exists a 'gap' between the European funding and collaboration opportunities and businesses, which is hard to bridge.
- SME's in Brainport Eindhoven Region need to be facilitated and guided in the 'world' of European funding and cooperation programmes, in order to be able to bridge the previously mentioned 'gap' and take advantage of the opportunities for their business.

In an interesting way, Valladolid managed to make a connection between companies and Europe as source for finance and collaboration. The Best Practice provides solid and concrete grips for companies to profit from European funds. However, it fits better in the Brainport Eindhoven Regions innovation system to take a facilitating role and to help companies make their own trade-off based on good information and contacts. This means we would show companies the way, rather than taking over the subsidy-phase.

- Preferably, this idea is linked to the existing structures for advising SME's in our region. Then, there is no need to recruit extra people, but we focus on the company advisors already active in our region. Those people should be better equipped to help companies on this topic.
- Before an approach is developed to link SME's more directly to European funding and projects, it is important in the Brainport Eindhoven Region to get more insights in the scope of the problem and the parties already concerned with this advice. Therefore, this proposal for translating the Valladolid BP to Eindhoven has an exploratory character.

Actions to be taken

Within ERMIS, Eindhoven intends to make an analysis of the currently existing landscape of SME focussed European funding advice for companies in the Eindhoven/Brainport Region. Inspiration for this analysis was found in the problem definition and results shown in Valladolid. The analysis should show the scope of the problem; whether and how large are the difficulties of SME companies in attracting European opportunities. That is, investigating the before mentioned 'gap' existing between European funding and collaboration opportunities and businesses. Moreover, the analysis should provide an overview of all parties in the region already concerned with advising companies with European possibilities; what their activities entail and how these activities are linked/related with each other. After having gathered the information, a report is written that provides a clear picture of the existing landscape, and that gives recommendation for further improvement of the advice.

The analysis encompasses:

- the needs of SME companies for European funding and consortia
- why companies cannot find/ do not make use of this information
- the experiences SME companies have gained previously with European funding and consortia
- the current regional structures:
    - which parties are already concerned with SME focussed European advice?
    - how do they see the problem? (company advisors , stakeholder, etc)
    - what advice do they provide?
    - how are these several parties/initiates linked or related to each other?
- results from previous European projects and high performing regions on this topic. What lessons can be learned from other regions?

In order to gather all the information needed for a proper analysis, the following steps will be taken:

- Preparation of the analysis (specification of the methodology and approach)
- Desk research (investigation of current structures and information and service providers with regard to European funding and consortia)
- Interviews with both companies and experts
- Drawing up a analysis report and recommendations.

Expected deliverables/result:
The expected result is a report that provides the currently existing landscape with SME focused European advice. Moreover, recommendations are included for a better utilization of the existing advice structures. In order to setup this report, interviews are held with companies, and several parties concerned with SME advice (as Syntens, Agentschap NL, Brainport Development). Desk research is necessary to get the required background information, to gain information for relevant interview questions and to find results from previous European projects.

3.2.2. Connect Network initiative

CONNECT Denmark and CONNECT Sweden are a spin off of the global CONNECT network (www.globalconnect.org). The Global CONNECT team focuses on partnering with regions seeking to build innovation capacity, accelerate technology commercialization, and build global connections. The mission of Global CONNECT is to drive the growth of technology clusters through global alliances. This is done through:

- Sharing best practices in industry-university relations
- Connecting regions to the skills, knowledge, and relationships essential to science-based business development
- Assessing innovation capacity and facilitate technology cluster development
- Accelerating region-to region collaborations

The main aim of the Danish CONNECT is to help businesses make a leap forward, overcoming obstacles for growth. It is a private and independent membership-based non-profit organisation that has 300 companies and close to 900 business executives as members. It is financed through sponsorships and membership fees and covers the whole of Denmark. Among these members are the best performing companies and highly valued executives. The goal is to create and develop more growth companies. Therefore, Connect Denmark provides free coaching to entrepreneurs from the idea stage and through the later growth stages. Furthermore, Connect Denmark provides matching between entrepreneurs and professional board members. The activities are primarily conducted through "Springboard sessions" where entrepreneurs – selected by the organisation – receive sparring from a panel of typically 6-12 business executives selected among the members on basis of their respective qualifications in relation to the challenges faced by the entrepreneur. In addition other informative meetings and events are organized through CONNECT Denmark (currently some 190 events per year).

CONNECT Sweden (Väst). In Sweden CONNECT is organised slightly differently, with a much greater role for the public sector. It has 6 regional offices and one virtual 'head' office (umbrella structure) covering the whole of Sweden. It is a public-private based non profit organisation with more than 350 partners (CONNECT VÄST has > 100) and a related network of >400 Business-Angels.

It is financed trough membership fees, sponsoring and partly by the regional development agency and the association of local authorities. CONNECT Väst has a

different model then CONNECT Denmark, although the goal is similar: to create and develop more growth companies. The CONNECT model of Sweden Väst comprises both a Springboard program and a Business Accelerator program. The Springboard program includes also mentoring, oral presentation training, the springboards session itself and follow up meetings to prepare a company for introduction to the BA network or for other activities. CONNECT Sweden Väst also offers the Accelerator program which includes more guided growth program for a company. Moreover CONNECT Sweden Väst organizes many other activities relating to venture capital (eg. investor meetings, financial forums, financial hearings, Network for VC, beginners investing course for VCs).
Current situation in Eindhoven and potential for CONNECT

Both in Denmark and in Sweden CONNECT is primarily an initiative from the industry, from businesses themselves. Although organized, managed and financed differently, both CONNECT initiatives share the same goals and, in essence, a similar way of working (methodology of the Springboard program).

Although it may seem similar to other initiatives within Europe aimed at entrepreneurship, facilitating start-ups and creating technological spin-offs from universities and knowledge institutes, there is a difference.
The CONNECT network initiative is aimed primarily at creating and developing more growth (in) existing companies by making use of the knowledge an experience available in the network. For example within CONNECT Väst in Sweden, the network consists of more than 4000 volunteers, who together delivered the equivalent of 10.000 man hours to the network and thus to helping other businesses to grow.
Being part of the CONNECT network is highly relevant for businesses. On the one hand they can tap into the knowledge of the network for their own business, on the other hand they can provide their particular knowledge and experience on business development for the network to help others (in particular SME's). The CONNECT network is not limited to one sector, a theme or a region. The expertise and knowledge that is available within the CONNECT network is broad and divers. This makes CONNECT a more relevant network initiative than other more thematic or sector-oriented networks.

Eindhoven, with its well established Brainport Foundation and Brainport Development organisation, is already well versed when it comes to stimulating and facilitating innovation and growth in the high tech business sector. The triple helix approach, combining the strengths and specific qualities of private, public and knowledge sectors to achieve a jointly developed innovation and growth agenda are tried and tested and work well. However, with CONNECT, Eindhoven-Brainport feels it could fill several existing weaknesses in our system; the lack of dedicated support to high tech SME's in the region as well as the built up of a strong informal network of business and knowledge representatives across the region. We strongly believe in the power of networking!

Moreover, building on international networks is something that the region could gain more from. This is shown by the SWOT analysis presented earlier. Therefore, this Global Connect network is interesting. Many of the existing CONNECT networks across the globe are, not surprisingly, key potential partners for actors in Eindhoven region, and becoming part of the global CONNECT network is expected to give Eindhoven important added value, again, through the development of trusted connections and networks.

The Connect network could be transferred rather directly to Brainport Eindhoven Region when there are enthusiastic parties willing to become member. And, when there is one specific party willing to become the driving force behind this network. Taking into account

the regional context, there are not many barriers for setting up a Connect initiative in Brainport Eindhoven Region. This is because there are already several networks present in the region (none with the goal of creating and developing growth companies) and the degree of trust and cooperation is high. Moreover, there is a sphere of cooperation present within the region.

Actions to be taken

Although the perspectives for transfer of this BP are good, it is necessary to explore the feasibility of such initiative in Brainport Eindhoven Region. Within the ERMIS project a pilot will be executed aimed at:

- Creating enthusiasm and commitment for the CONNECT initiative within Brainport Eindhoven Region
- Developing a 'business plan' proposal for CONNECT Brainport that can be used to get stakeholders involved in the initiative.

Creating enthusiasm and commitment
Since the Connect network is non-profit, the quality depends heavily on the contribution of its members and their level of expertise. Based on the experiences of CONNECT Denmark and CONNECT Sweden, the first step is to achieve support from major industrial service providers and engage regional business anchormen/anchorwomen in the CONNECT Brainport initiative to form a CONNECT board.

Within this framework the following activities can be defined:

- Developing a good 'pitch' presenting the CONNECT network initiative about its added value and distinctiveness to other initiatives. This also builds upon the experiences of CONNECT Denmark and Sweden about the expected impact of CONNECT for growth of companies.
- Interviews with regional anchormen/women from business, service providers and industry to engage them for CONNECT and to explore its feasibility
- Organise a real 'Springboard session' within the region (end of September/beginning October 2012) to enable people to experience the relevance of CONNECT by themselves. The Springboard session will be prepared together with CONNECT Denmark and includes experts from The Netherlands and in particular Brainport Eindhoven region (depending on the issue and business that is subject of the Springboard session). This Springboard session will have an important demonstration value within Brainport Eindhoven region.
- To organise the Springboard session several actions need to be taken e.g.: select a business case that is the subject of the Springboard, prepare this case for the Springboard (by Connect Denmark), invite experts from NL and DK to the session (to be held in Eindhoven), invite observers, practical organisation issues (venue, catering) etc.

<u>Developing a business plan proposal</u>
The commitment and engagement of stakeholders has to be made concrete. There are several options and scenarios for the CONNECT Brainport business model. These scenarios need to be elaborated and discussed within a small preparation group. Issues that need to

be addressed are for example:

- Definition of the need that CONNECT will meet in Brainport (The Netherlands)
- Formation of a CONNECT Brainport Board
- Financial structure (private, public-private or public funding)
- Dealflow of companies (channels and organisation)
- Definition of the CONNECT Brainport program (Springboard and other activities)
- Define facilitating entities for CONNECT Brainport (organisational capacity)
- Linkage to other networking initiatives (e.g. Brainport Networking Financials)

Within this framework the following actions can be defined:

- Formation of an initiating group
- Organisation of 3-4 initiating group meetings to define the business model for CONNECT Brainport
- Draw up the proposed business model for CONNECT Brainport (based on meeting of the preparation group) and a presentation to engage the proposed Board
- Organise a board meeting after the first Springboard session to engage the proposed board and decide upon a go/no go for CONNECT Brainport.
- Implementation meeting

Expected results:
The pilot phase ends with a clear go or no go for the CONNECT Brainport initiative based on the proposal for the CONNECT Brainport business model to be presented after the Spingboard demonstration session in Eindhoven (Sept/Oct 2012). The business model forms the basis for further implementation of the initiative in Brainport Eindhoven region.
Expected deliverables:

- CONNECT Brainport business model
- CONNECT Brainport board as a start of the CONNECT Brainport network

4. Central Portuguese Region : Penela Municipality / Instituto Pedro Nunes

PORTUGAL

Portugal is included in the "moderate innovators" group but also as an innovation performance growth leader. Recent studies and research evaluations have, however, pointed out that there is a big gap between technology and innovation developed and technology and innovation introduced in the form of products and services reaching markets.

Centro Region Operational Program (in the context of the European Structural Funds) has as objectives and vision to foster:

- Stimulating and promoting the firsts phases of the innovation pipeline based on the existing high level expertise available in the large number of high qualified Research and Development University Centres
- Enterprise creation capacity, supporting growth and insertion in global markets
- Conditions for internationalization and foreign direct investment attraction
- Develop a triple helix model with an effective cooperation and coordination with the regional, national and international innovation systems
- Implementation of a professional management culture of innovation oriented towards results
- Systemic reinforcement of an integrated management model of all the innovation eco-system

The leitmotiv: Coimbra University as a provider and diffusion centre of knowledge, technology and innovation for the different actors in the regional innovation systems

Centro Region has historically been one of the main sources of knowledge (University of Coimbra -1290), of raw materials (stone, ceramics and wood), for Portugal with a very diversified agriculture (wine, fruit, vegetables, meat and milk).

One of the first industrial clusters of Portugal was created in Centro Region, near the high mountains, based on wool (textile), and later on, a new cluster emerged in the tiles and bricks, in the low lands.

Today 7 major structurally coherent strategic clusters exist:

- **Wood, Paper and Forest**
- **Home Equipment and Materials**
- **Health Services and Products**
- **Moulds and Plastics**
- **Agro-Industries**
- **Energy Production**
- **ICT**

The Region is characterized as being of medium maturity by a **balance** between dynamic (Health) and relatively mature (Home, Wood and Agro-Industries.) clusters

4.1. Central Portuguese Region SWOT Analysis

The SWOT analysis was based on several aspects; economic competitiveness, industry structure, innovative performance, regulatory framework, human capital, access to finance, tech transfer and infrastructure. Below is the overall analysis with the most apparent strengths, weaknesses, opportunities and threats as presented in the ERMIS project in Miskolc, March 2010.

Strengths	Weaknesses
• **Polynucleated** organization of **urban systems** • Traditional areas of **expertise evenly distributed** • Areas of regional excellence in the fields of **health and life sciences, biotechnology and ICT;** • **R & D centers of international quality** in promising areas - robotics and automation, health sciences, biotechnology and energy	• Serious **structural weaknesses** in terms of production structure • Reduced capacity to **incorporate the results of technological innovation in business processes** • **•Lack of strategic management** practices among SME's • **Low level of cooperation** of SME's with local R&D centres • **Limited access to refinancing**.
Opportunities	**Threats**
• **Strengthening of urban networks** • **Internet broadband and the widespread use of ICT** • **Incorporation of innovation and technology in the value chain of traditional sectors with profile to export;** • **Legal and fiscal incentives to support innovation in SME's;** • **Dense network of innovation management structures.**	• **Development model based on labor-intensive activities** • **Weak presence of foreign capital and foreign investment in the region** • **Difficulties of cooperation between public and private sectors**

After having put together the SWOT analysis, critical issues to address within the ERMIS project were found to be the following (also presented in Miskolc, March 2010):

- **Cross cooperation between firms of different clusters**
- **Transforming fundamental research into applied research**
- **Attracting seed capital and refinancing capital**
- **Fostering local technology transfers**
- **Empowering local SME's with strategic management practice**
- **Stimulating international development of SME's**
- **Shifting from a Knowledge accumulation to a knowledge creation strategy**

In the course of the ERMIS project, several elements of the SWOT analysis and their importance have changed. For example, the economic recession and the financial support program that Portugal has implemented had serious impact on government support and its capacity to implement new initiatives, and enterprises and consumers have seen its revenues to decrease considerably.

All the expansion prospects and mobilization programs have been suspended or reduced dramatically, with a big impact on infra-structure development and service provision capacity, as well the SME's reduced or finished almost all their innovation and renewal projects.

The enterprise policy has been more oriented towards cost reductions by laying-off workers and cutting salaries in an effort to balance demand, and accessing some export markets based on low price strategies.

Looking back at the critical issues for the ERMIS project formulated at the beginning of the project, most of the points are still relevant/up to date. And, to a large extent, the Best Practices visited do contribute to address these issues.

4.2. Selected Best Practices

4.2.1. Creative Conversion Factory / United Brains / Accelerace

The main objective of combining elements of these three best practices in a single transfer process is the fact that they could be complementary and synergic to the major need of our economy: technology transfer from R&D to the market.

The best results will be achieved by a system creation that mobilizes and promotes the accessibility to innovation and technology and that leads to a system of SME support for technology transfer while promoting the creation and development of start-ups.

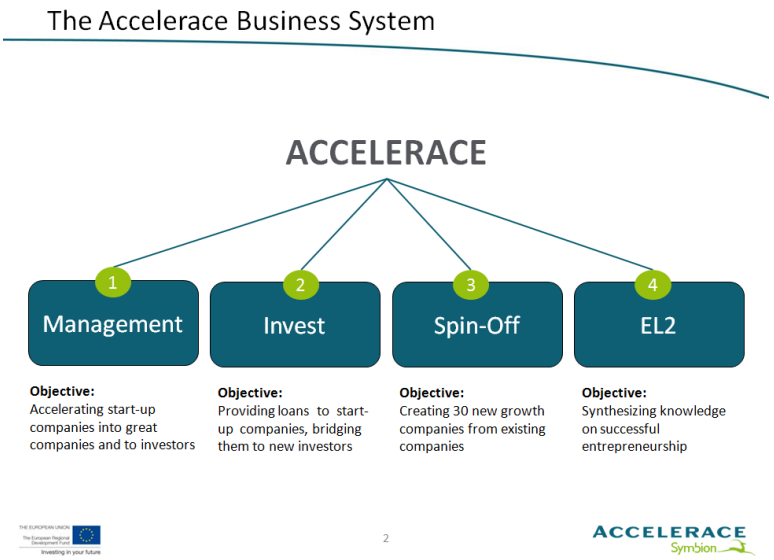
Such model would include several elements and actions of these three Best Practices.

Creative Conversion Factory - Meeting place and source of knowledge

A workplace for the development of new creative media products, a meeting place, and a source of knowledge for the creative industry in Eindhoven and surrounding region. "It's an environment in which new technology is exhibited in a specific application of a one-off prototype. The next stage is when people from various

disciplines start doing research into the other possibilities of these products. Technical engineers, marketeers, production specialists.

The Factory facilitates this process, right from the idea through to the concrete product. Students and researchers are allowed a period of up to one thousand days to work out their applications. We hope that in this way more prototypes are taken into production than is the case now."



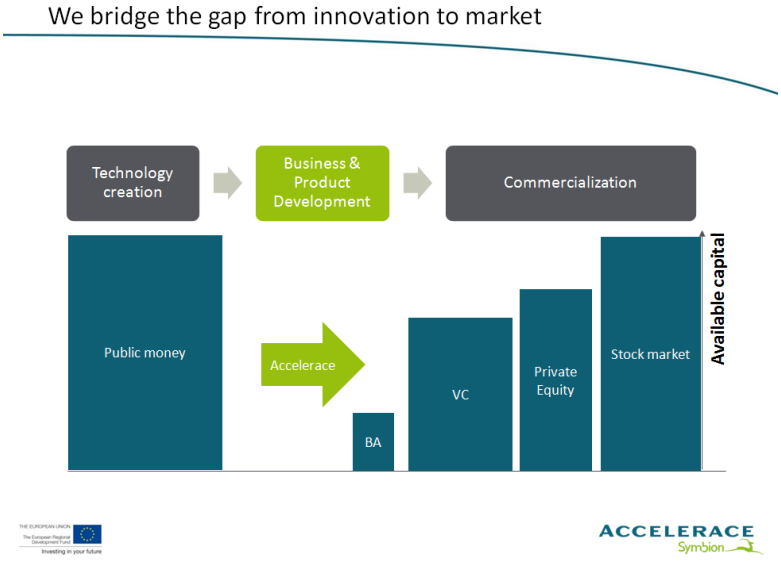
United Brains

This practice is a network of specialists that are able to solve the difficulties in any process or technology addressed by SME's, using the Academia or other technicians in a process of open inquiry to the network.

Accelerace

Accelarace is a model for supporting the creation of new start-ups and their entrance into the market.

Current situation in Centro Region and potential for CREATIVE CONVERSION FACTORY / UNITED BRAINS / ACCELARACE



i. Centro Region has a wide range of infra-structures for Universities, Polytechnic Institutes, Research and Development Laboratories, Incubator and Enterprise support Facilities.

ii. Centro Region, with three Universities with more than 50.000 students and more than 5.000 teachers and researchers, has a great potential and has achieved a very good reputation in terms of Research.

iii. Also, the incubator network and enterprise support facilities are widespread in the region, with different levels of capabilities and services, including Instituto Pedro Nunes, which was recognized as "World Best Technological Incubator" in 2010. Instituto Pedro Nunes has also been granted the BIC logo, and is providing support to the community and other companies, municipalities and

incubators to develop their capabilities on regional and local economic development policies.

iv. In terms of financing, Centro Region has developed a large number of Venture Capital Funds and Business Angels firms that are looking for the best projects and entrepreneurs for investment. The capital available in these tools exceeds 20 million Euros.

v. IPN is developing a new infra-structure to support the pos incubation phase of start-ups, fostering their internationalization and competitiveness in the global market.

vi. Finally Centro Region, with the support of CEC has developed a Network of Incubators that develops common projects and strategies throughout the region, creating critical mass for marketing, training and tooling investment.

So the three best practices selected are relevant for reinforcing the high value chain that is in place, namely:

CREATIVE CONVERSION FACTORY: Developing contact points for creativity and early phase technology development in Aveiro, Coimbra and Covilhã Universities and Research Centres (i, ii)

UNITED BRAINS: Promoting a technology and process transfer "desk" for all the enterprises in the region (i, ii, iii)

ACCELERACE: Connecting the available technology, capital, entrepreneurs and support infra-structures to develop winners in the global marketplace (iii, iv, v, vi)

Combining these practices will make best use of existing strengths within the region and, thus achieve the best possible results:

- Areas of regional excellence in the fields of **health and life sciences, biotechnology and ICT;**
- **R&D centers of international quality** in promising areas - robotics and automation, health sciences, biotechnology and energy

And it would reduce the limitation of financing for development of new and existing enterprises.

Some opportunities could be taken up with greater success, such as the incorporation of innovation and technology in the value chain of traditional sectors with profile to export, and using the existing dense network of innovation management structures.

The synergies and complementarities offered by these Best Practices will help to address some of the critical issues pointed out by our ERMIS SWOT analysis:

- Cross cooperation between firms of different clusters

- Transforming fundamental research into applied research
- Fostering local technology transfers
- Shifting from a Knowledge accumulation to a knowledge creation strategy

4.2.2. CONNECT DENMARK

CONNECT Denmark is a spin off of the global CONNECT network (www.globalconnect.org). Global CONNECT™ is an applied research and technical assistance consultancy within the University of California, San Diego (UCSD). The Global CONNECT team focuses on partnering with regions seeking to build innovation capacity, accelerate technology commercialization, and build global connections.

The mission of Global CONNECT is to drive the growth of technology clusters through global alliances. This is done through:

- Sharing best practices in industry-university relations
- Connecting regions to the skills, knowledge, and relationships essential to science-based business development
- Assessing innovation capacity and facilitate technology cluster development
- Accelerating region-to region collaborations

CONNECT Denmark is one of several worldwide "CONNECT's". Other initiatives have sprung up in several of the Nordic countries, South America as well as Taiwan.

CONNECT Denmark is a private membership-based non-profit organisation that has 300 companies and close to 900 business executives as members. It is a non-profit, independent network organization, financed through sponsorships and membership fees and covers the whole of Denmark. Among these members are the best performing companies and highly valued executives. The goal is to create and develop more growth companies. Therefore, Connect Denmark provides free coaching to entrepreneurs from the idea stage and through the later growth stages. Furthermore, Connect Denmark provides matching between entrepreneurs and professional board members. The activities are primarily conducted through "springboards" where entrepreneurs – selected by the organisation – receive sparring from a panel of typically 6-12 business executives selected among the members on basis of their respective qualifications in relation to the challenges faced by the entrepreneur. In addition other informative meetings and events are organized through CONNECT Denmark (currently some 190 events per year).

Current situation in Centro Region and potential for CONNECT

Coimbra University and Instituto Pedro Nunes are well versed when it comes to stimulating and facilitating innovation and growth in the high tech business sector. The triple helix approach, combining the strengths and specific qualities of private, public and knowledge sectors to achieve a jointly developed innovation and growth agenda have been tried and tested and work well.

Transferring this best practice, Centro Region, and its R&D Centres and Universities (Coimbra, Aveiro and Beira Interior) could fill several existing weaknesses in the dedicated support to high tech SME's in the region as well as the built up of a strong informal network of business and knowledge representatives across the region.

The CONNECT Denmark BP addresses the weakness of limited capacity to incorporate the results of technological innovation in business processes in the previously presented SWOT analysis. In the Centro Region, entrepreneurs are mainly producing traditional products with low level of innovation incorporation. Therefore, matching these traditional entrepreneurs with experienced innovators and marketers could help them setting up profitable businesses. Moreover, building on international networks is something that the region could gain more from. Therefore, this Global Connect network is interesting. Since the Connect network is non-profit, the quality depends heavily on the contribution of its members and their level of expertise.

There will be some difficulties to select a partner to support this transfer, but University of Coimbra Department of Technology Transfer, or Instituto Pedro Nunes, could be some of the potential partners as well the CEC- Conselho Empresarial do Centro (Centro Entrepreneurial Association)

Taking into account the regional context, there are not many barriers for setting up a Connect initiative in Centro Region. This is because there are already several networks present in the region (CEC has already take the option to promote the network of incubators and entrepreneurship in Centro Region) and the degree of trust and cooperation is high.

We also consider that, many of the existing CONNECT networks across the globe are key potential partners for actors in Centro region, and becoming part of the global CONNECT network is expected to give to Coimbra and the Centro Region an important added value, again, through the development of trusted connections and networks.

4.3. Actions to be taken

Following the Best Practice visits made by Penela Municipality and Instituto Pedro Nunes, and the selection of a set of three best practices combined for taking out all the technological transfer potential of the Region some actions should be implemented:

i. Integration of concepts of Creative Conversion Factory, United Brains and Accelarace in IPN/University of Coimbra Network

ii. Integrating the Enterprise Europe Network and Incubator Network of Region Centro with Connect Denmark at CEC

iii. Develop an efficient model of technology transfer from Academia and R&D Centres to Entreprises and Start-ups in Centro Region

These actions should address some of the innovation and technology transfer to the economy, and promote the competitiveness of traditional and technological start-ups in the global marketplace.

In terms of innovation, Portugal is 30th among 52 countries, evidencing a bad performance in the transfer of basic and applied research towards economic and social benefits.

Another objective to be addressed should be the reduction of the unemployment rate in the Region, notably among youngsters, as the European Commission also identifies in its strategy on stability, growth and jobs: ***"the Commission has taken important decisions that set out the further action that needs to be taken both at national level by each of our Member States and at the EU level to enhance our competitiveness, boost growth and jobs, and to strengthen decisively our economic and monetary union. They reflect the Commission's vital role at the heart of Europe's economic government. Our recommendations are tailored for each Member State, but form part of a coherent approach to rebalancing the European economy. Yet much greater action is needed across the EU to unlock our growth potential, create opportunities for business development, and unleash the job-creating potential of the services and energy sectors and the digital economy."***

5. Miskolc, North Hungarian Region

HUNGARY

Miskolc city and its surrounding region have an economy that is still to an important extent based on agriculture, although there is a recent strong growth of an innovative technological sector. The basis for the selection of the Best Practices to be transferred has been the respect for this traditional economic basis and the opportunities for innovation that SME's may obtain in the field of sustainability.

5.1. Miskolc SWOT analysis

An analysis was carried out on the economic performance – in a microeconomic perspective – and innovation potential of Miskolc City County Authority. This analysis took account of the available physical, financial and legal infrastructure available to facilitate the innovation process. The following elements are considered crucial for reaching the innovation potential of Miskolc:

1. The economic environment of the region: Although the geographical location is favourable, decreasing population, increasing unemployment and a weak GDP per capita are key challenges characterizing and determining the region's presence and future. Creating and improved business environments as well as attracting necessary funds are crucial.
2. Industry structure and entrepreneurship performance: The human infrastructure and capabilities, the number of competitive companies are the strength of Miskolc. Contrary to this the innovation potential and intensity are low. Opportunities exist for developing dynamic industries in the region and also developing partnership between public and private sectors. Supporting SME's and establishing competitive clusters offer many opportunities.
3. Innovative performance: The analysis shows that the University of Miskolc could play a key role and act as an intermediary, facilitating the innovation potential. Exploiting the opportunities of highly skilled human resources is a key factor in creating linkages between public and private sectors needed to attract firms operating in high-tech and knowledge intensive sectors.
4. Access to finance: This is one of the most important points. A growing number of multinational firms have appeared in the region. At the same time, however, the number of those performing R&D activities is low. R&D remains an activity limited to the more significant companies. The lack of "business angels", i.e. experts specialized in helping and launching enterprises, further weakens the region. The already accessible European Union funds and the Hungarian Innovation Fund being launched soon will provide further financing opportunities in the region.

	Economic competitiveness of the region	Entrepreneurship performance	Innovative outcomes	Quality of infrastructure
S	Prosperous geographical location. High density of population, strong population potential in the region.	Strong human capabilities (intensive role of the University of Miskolc, strong educational system). Local values – notable cultural potential. Active international relationship of the city.	Important role of the University of Miskolc, as knowledge centre. High number of researchers, publications in scientific journals.	The majority of the inhabitants and the SME's have large band access. The cost of living in Miskolc is low, the quality of transport is good. There is a new industrial park in Miskolc with large band net.
W	Decreasing number of inhabitants, adverse migration potential. Weak GDP potential in the country. High unemployment rate and relatively low level of active population. Unsatisfied level of wages, lower productivity rate.	Lack of competitive enterprises in the region. Adverse R&D intensity of local enterprises. Low level of innovation potential.	Low level of innovation potential. Relatively low rate of high tech companies, slow evolution phases. Low rate in number of high tech patent applications per inhabitant, lack of incubators.	There is no airport (but in Debrecen and in Kosice there is).
O	Improve the attractiveness of the city in order to observe the population. Creating attractive economic environment for the entrepreneur.	Increasing growth of academic research-industry collaborations. Strengthening the role of dynamic industries, ICT sector. Increasing growth of public-private partnership, knowledge intensive activities. Ensuring the framework for supporting small and middle size enterprises. Highlighting the networking potentials in many sectors. Establishing competitive clusters.	Fostering transversal and vertical innovation. Better innovation opportunities of firms.	Thanks to the EU funds the road infrastructure will be renovated and developed. There is a new infrastructure of geoenergy, which generate RnD activities and less living costs. The new round of EU and national funds are able to develop more intensively the infrastructure.
T	Continuously decreasing number of inhabitants. Few possibilities, lack of funds for creating more attractive environmental terms.	Lack of local coordination of innovation policies. Dispersion of regional public funds.	Lack of coordination between the sectors. Lack of funds for improving innovative terms of environment.	The development of Miskolc has already behind of Hungary, and because of the crisis, might be worse.

	Access to finance	Human capital	Technology transfer	Legal and regulatory framework
S	More and more RnD interests of multinational enterprises (e.g. Bosch).	University of Miskolc has several internationally known professors in different fields of industry. Several internationally known industrial RnDs are already done. There are several departments named and financed by multi.	There are several entities for supporting of innovation and RnD activities.	It is quite simple to start a new business.
W	Only a few enterprises presence in RnD activity. No business angels. Very low venture capital investments.	Majority of those involved in RnD are involved in the education. Only cca 40% of the students are studying RnD intensive studies **There is not enough capacity in Miskolc for the talented students.**	There are no business incubators, no spin-offs from the University (because of the legislation). There are no knowledge intensive business services.	The regulations for a SME's is problematic (cca 30 authorities are able to inspecting one SME). High taxation, the continuous analysis of the tax office is frustrating. There is no patent office, and no lawyers for patents.
O	Available EU funds for RnD activities. The multinational enterprises generate and finance RnD projects.	International co operations are good with other Universities. Because of the heritage of the Uni, the keen of cooperation between the ex- students are high. There are on-going EU funded developments for RnD activities.	There are several ongoing international projects focusing for RnD activities.	A new taxation regulation is already made by the government.
T	The effect of the crisis is still high. There are less and less SME's who have the possibility to start any RnD activities.	Because of the less RnD activity the migration of talents from Miskolc is even higher.	The entities for technology transfer and for innovation support became not active because the EU funding opportunities has finished.	There is no change in the governmental mentality and everything became more bureaucratic

5. Human capital and human capital mobility: The University of Miskolc has a considerable role in creating human capital. Teaching programs in mechanical engineering, mining and metallurgy are of high quality, which is due to internationally known teachers. The institution has taken part in developing several R&D products. There are departments bearing the name of multinational companies that finance their activity. It is a weakness that most of them are companies producing R&D products whereas 40% of the students study courses related to R&D. There is an opportunity to cooperate with other universities; the students are capable of good cooperation due to the traditions. It is a weakness that there is a high student migration due to the low level of R&D activity.
6. Technology transfer: There are many organisations that support innovation and R&D, which is a strength in the case of technological transfers. At the same time, the lack of incubator houses and the fact that, due to the legal regulation, it is impossible to fail university are weaknesses. There is opportunity in international projects aiming at R&D, however the dependence of organisations on receiving EU funds and their lack of activity after the completion of EU projects is a threat.
7. Quality of infrastructure: In terms of the quality of innovation, one of the strengths is that the SME's and the new industrial park have a broadband access. The quality of transportation and the cost of living are low. The lack of an airport in Miskolc, as opposed to Debrecen and Kosice, indicates the weakness of infrastructural quality. EU Structural Fund and Cohesion resources provide an opportunity to improve and develop the road network. The geo-energy infrastructure found here reduces the costs of living. The crisis can lead to the further weakening of the regional development already under the national level.
8. Legal and regulatory framework: Launching a new business is simple, which is a strength in the region in terms of the legal regulation. If we compare Miskolc and Kosice in terms of taxation, we find lower taxes beyond the border. A further weakness is that regulations concerning SME's cause a significant burden to them. The activity of the tax authority and further 30 controlling authorities tends to be frustrating. There are opportunities in the new tax and regulation system; however bureaucracy is still a problem of the government.
9. Questionnaire: The strengths include teaching science and technology at an appropriate level in the region. The interaction between the actors, the appropriate level of trust and openness weaken the region. A further weakness is that the level of exchange of the informal knowledge and experience with other firms and institutions is relatively low.
10. Governance and policy actions: The commitments to renewing the relatively important buildings and to establishing a new industrial park are strengths of the City. The lack of support on IPR and to SME's are weaknesses of the city. The new city management strives to improve the position of Miskolc. There are important opportunities for

cooperation with the University. The bureaucratic government and the strengthening of the position of Kosice represent a threat.

Overall, the human capabilities and the strong university training have to be highlighted as strengths of the region. The number of companies being involved in R&D is continuously growing; and the newly established industrial park can be attractive for many new investors and investments. The high rate of unemployment and the lack of capital of the SME's refer to the lack of capital. Dynamic industries like ICT may exert a good influence on the auxiliary industries. At the same time, the inefficiency of the governmental measures and the presence of the bureaucratic administration represent a threat.

5.2. Selected Best Practises

Best practises are generally-accepted methods, processes that have proven themselves to achieve given tasks. In case of the Municipality of Miskolc the selected practices form a good basis for a possible development direction concerning the sustainable development, innovation and supporting system of the small and middle enterprises.

5.2.1. The Aegean Technopolis

At the transfer visit to the Greek island of Chios several examples of efficient support activity to SME's and ways of crisis management were highlighted. The focus for Miskolc was on two best practises. Firstly, the Aegean Technopolis, operating as an industrial park association, controlled under the ministerial secretariat of research and development. The cooperation focuses mainly on technology-based companies with the objective to create conditions for them in the field of infrastructure and provide financial assistance to carry out business services (e.g. counselling resident companies, brand support, administrative activities). The Aegean Technopolis involves local and foreign investors into the local development programs in an exemplary way, improving the competitiveness of enterprises and employment ratio of the region. The presentations illustrated well how to involve elements of innovation and R&D in sectors that are mainly characterized by low value added activities. Through the internship programs there is an intensive cooperation with universities, something that could be reproduced in cooperation with the University of Miskolc and with competitive enterprises.

5.2.2. BIOBUS

The second best practise was BIOBUS (biodiversity of businesses) – keeping sustainable development in mind – which supports productive enterprises. The primary goal is making the area more attractive through strengthening the local innovative potential, which can be an attractive condition for those industries with higher value added.

Biodiversity is not just important to business, but indeed companies in many different sectors

should integrate biodiversity priorities into their management, production, processing, and development systems as part of their innovative growth, and prosperity.
Biodiversity in less developed regions provides many indirect benefits from local to global levels. At the global level, biodiversity benefits include climate stabilization, a huge store of genetic information, and a wealth of plant, animal species and microbe species. Biodiversity is a core aspect of "environment" and is included into all spheres of economic development programs and projects.

The entrepreneurs took the region's strong agricultural sector as a base – strengthening also the manufacturing sector. The model of biodiversity business development for less developed European regions is of great interest for many European regions depending on their natural resources for innovative growth, and progress. This was the main idea that we also used as a base of adopting.

The key elements followed are:

- regional economies based on knowledge and technological innovation,
- e-Europe region, to promote and support the new business developments,
- A regional identity and sustainable development.

5.3. Actions to be taken

To follow the steps that were mentioned above, a round table meeting was convened with local stakeholders in order to address the question how to start implementation of a similar type of initiative. At the Greek case the support included a range of new products and services, such as: supporting the formation of fertile soils, filtration of polluted water, stabilization of hillsides, coastlines etc. That is why, firstly, we had to find a unique product or service that could be connected with the city of Miskolc.

As discussed, in the case of Miskolc this product will be the use of thermal water for heating.
The main aim will be utilizing new knowledge and know-how related to biodiversity in order to create new businesses and networks, new business development and utilizing new resources for creating economic development. With European Union assistance the investment could growing rapidly. Now Miskolc is looking to allocate funding in order to implement the main steps of this best practise and search for the financial and legal terms for the first stages of the development.

6. Castilla y León

SPAIN

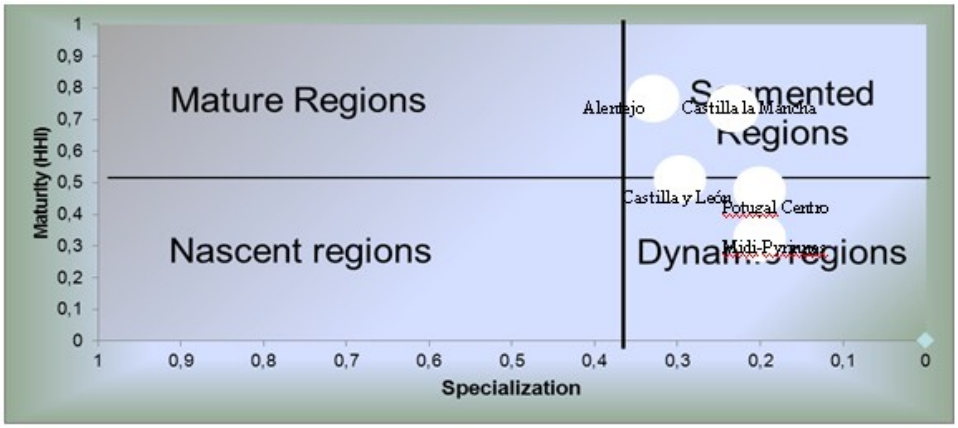
6.1. Castilla y León SWOT Analysis

In order to define the strengths and weaknesses of the Castilla y León Region, the industrial structure of the region was analyzed. Five main industrial sectors have been identified:

Sector	Employment (2008)
agro-food	38.000
automotive	30.000
ICTs	8.000
energy	6.000
chemistry	5.000

Calculate HHI= Σs_i^2= 0,3262 medium – high specialization level

And two main industries have been identified as mature industries: agro-food and automotive.



Taking this into account as the starting point, the SWOT analysis of the Castilla y León Region was based on several aspects: economic competitiveness, industry structure, innovative performance, regulatory framework, human capital, access to finance, tech transfer and infrastructure.

Below is the overall analysis with the most apparent strengths, weaknesses, opportunities and threats as presented in the ERMIS project in Miskolc, March 2011.

Strengths	Opportunities
✓ Institutional experience in R&D and Innovation policies ✓ Increasing R&D expenditure (both public and private): ✓ Strong university system in key areas for social and productive sectors → qualified human resources in R&D+I activities ✓ Improvement and availability of industrial, scientific and technological infrastructures. ✓ Strenghthening among regional Innovation System agents ✓ Evolution of the economic structure: ✓ Development of innovative/emerging sectors ✓ More innovative products in consolidated sectors. ✓ Increase of Innovative companies: 1800 ✓ Increase of Innovative companies participation in R&D National, European and International cooperation programmes	✓ Leadership of the region in future trending sectors: renewable energy, agrofood biotechnology, new mechanisms of production, etc. ✓ Globalization of the economy allows the region to promote their products or projects. ✓ Increase of resources allocated to European R&D programmes. ✓ Increasing demand of cultural and Spanish language. ✓ Development of national and European technology platforms and innovative business clusters.
Weaknesses	**Threats**
✓ Lack of big industrial groups – mostly SME's ✓ Need of transition to emerging sectors of added value ✓ Difficulties in technology transfer: University – private sector. Scientific activity is not enough oriented to businesses' needs. ✓ Need of private funding for R&D+I private activities. ✓ Need of more human resources specialized in R&D+I in the private sector. ✓ Still low internationalization of the R&D sector.	✓ Reduction of structural funds. ✓ Increasing competition for public R&D funds at European and Spanish level (as a consequence of economic globalization). ✓ The current economic situation has derived in a lack of credit facilities, which limits the development of innovative companies.

In the course of the ERMIS project, several elements of the SWOT analysis and their importance have changed. The main consequence is that the Europe wide economic recession has had serious impact on government support, and its capacity to implement new initiatives.

For example, in reference to last year, there are some relevant changes to take into account which suppose a weakness that will continue over time:

- Due to a restructuring of the Regional Government of Castilla y León, ADEuropa Foundation has been integrated in the new entity named "Agencia de Innovación y Financiación Empresarial de Castilla y León".

- In the past few years there was government support for the R&D and innovation in the region, but now, the subventions have disappeared from the services that the public

administration offers, and the current situation for helping entities to innovate is merely by means of applying for a loan from the bank in advantages conditions.

- Due to the economic situation in which we are living, regional companies have problems to obtain financial support from banks.

- The current economic crisis supposes a barrier which is very difficult to avoid, and causes a step back for the companies and the industrial structure of the Castilla y León Region.

6.2. Selected Best Practices

6.2.1. ECOBIZ

Ecobiz was designed to meet the following expectations from firms and economic development stakeholders:

- Networking, more synergies, cooperation and business exchange
- facilitate access and circulation of information
- federate initiatives dedicated to firm growth

Objectives:

- Stimulate economic development through cluster cross-fertilization
- Valorise networking throughout the whole value chain
- Strengthen networks visibility and cooperation

Positioning: ECOBIZ - the network of networks

- federate and structure communities
- host existing professional networks
- Combination of virtual and physical networking (local events, forums, business platforms, speed business meetings, ...)
- Cross-functional business intelligence
- 40 ECOBIZ networks in France hosted by chambers of Commerce and economic development stakeholders

Functioning:

- Free and secured access
- Community leaders
- Creation of news & documents for content and practice sharing (expert inputs)
- Overall visibility of all events taking place on the territory with screening and searching by multiple themes
- Member directory (by community, business, industry, expertise, territory, ...)
- Forums: direct discussions (free or confidential) between members
- Business platform: to promote products and services, look for partnerships, ...
- A meta-search engine
-

6.2.2. CAB : The Industrial Property Club

CAB was created in 2008. It was designed in cooperation with the French Agency for Industrial Property in order to foster the culture and practices of the protection of innovations in French firms and specifically in SME's. CAB is unique in France. The format and the content of CAB

services have been ex-ante designed with relevant stakeholders such as SME's, large firms, R&D centres, IP lawyers, IP specialists. All major clusters of the territory were consulted (perfumes and flavours, ICT, micro-electronics, life sciences, energy, ...).

Objectives:

- inform innovative firms about the specific practices of IP dependent on industry and firm-specific contexts
- stimulate IP policies and strategies within SME's
- sustain innovation protection strategies within SME's
- facilitate communities of practices between innovative firms, innovation management organizations and IP specialists
-

Methodology:

- Short Conferences and round tables with IP specialists and practitioners on transversal IP issues
- Debate meetings: debate moderated by an innovation specialist, involving innovation experts and CEO's. The format is designed to create communities of practice. The debate is followed by a "happy hour" cocktail to stimulate face to face discussions and cross-cooperation (17:00 to 19:30)
- Patent intelligence (automatic IP intelligence on demand of club members)
- IP individual coaching of SME's to implement IP strategy
- Patenting feasibility studies
- CAB community is hosted by ECOBIZ collaborative web platform which also provides business intelligence information and agenda of events of CAB

6.3. Actions to be taken

The idea of ECOBIZ practice, "network of networks", could be interesting in the Castilla y León Region focused on Patents and Property Rights. This is the reason that also the second practice, "Intellectual Property Club" was selected for transfer. This best practice would seize the following issues identified in Castilla y León Regional Innovation system SWOT analysis:

Strengths:

- Increase of R&D and Innovation expenditure by companies in the region in the last three years in spite of the difficult economic situation in Spain. According to the Spanish Statistics National Institute report, Castilla y León was one of the two only Spanish regions that increased their investment in innovation in year 2009 vs year 2008. In 2009 companies from Castilla y León dedicated a 20.35% of their revenues to Innovation activities, being situated at 4th position in the National Ranking.
- Increasing innovative products and innovative companies (1800) over the last few years.

Weakness: Very low level of patents, especially coming from SME's.

Opportunity: Leadership of the region in future trending sectors: renewable energy, agro food biotech, new productions technologies, etc.

Why this Best practice? The number of innovative companies in the Castilla y León Region has increased in recent years together with R&D investment; the number of patents remains very low. By the implementation of an "Industrial Property Club" in the region Castilla y León

expects to promote among SME's the importance of achieving and registering patents in order to protect their innovations and give them value.

Also, it will be easy to measure the success of the implementation of this best practice by the results obtained in the number of patents issued in the region through the Patstat data base (European Patent Office) and regional and national level databases. The success of the implementation of this best practice should be an important increase of the number of patents issued by the regional SME's comparing to the previous years.

In order to develop the Best Practice in the Castilla y León Region, it is necessary to considerer some aspects: there is no financing, it must be interesting for regional actors, and considering as starting point the French model, it is necessary to be most efficient.

The main steps to carry out are the following:

- **Raise stakeholder awareness**: Patents, as form of commercial property, can provide a basis for owners to negotiate with potential investors or other business partners while preserving their intellectual property rights. The prospect of gaining profits from this special form of protection could serve to promote research and innovation activities and to give an incentive for new investment.
- **Integration of the Best practice**. First of all it is necessary to know the starting point of the Castilla y León Region, related to patents and Property Rights, which requires an exhaustive study of the regional situation as well as who are the main potential stakeholders. The network must to facilitate access and circulation of the information in a free, quick and secure way, to create news and documents, events, forums, etc.
- **Action Plan**. According to ECOBIZ methodology, once the Steering Committee of the community has been created, workshops with public actors, experts and professional representatives must be developed.

  For this, it is necessary to identify the key professionals to make up the Steering Committee, which define the scope, objectives and the action plan, and if the budget allows it, to contract experts.

  With the purpose of stimulating the business participation, it is necessary to create dynamic groups, organize regular meetings, create social contacts and use tools to maintain links, and monitoring the participation and the level of commitment.
- **Implementation and Follow Up.** It could be by means of measure satisfaction after each event, number of patents each year, etc.

The implementation and consolidation of the Best practice in the Castilla y León Region, could be possible in one year more or less.

7. Region of North Aegean and Chamber of Commerce GREECE

The North Aegean Regional Action Plan is based on the Best Practices that were showcased by the partners of the ERMIS project. In particular, this Action Plan was developed after visiting two other partners-regions (Cote d' Azur, Eindhoven) and evaluating the transferability of the corresponding best practices.

Overall, the Regional Action plan reflects our future direction that best addresses the SWOT analysis findings (at an earlier stage of the project) and the ECOBIZ best practice that our region is determined to explore in detail.

7.1. North Aegean SWOT Analysis

Several of the weaknesses identified in the SWOT analysis have been further highlighted due to the crisis:

- Entrepreneurship performance - There is low degree of cooperation among the industry sectors active in North Aegean, local firms are focusing on local markets (which are small), and highly educated personnel is not offered enough opportunities to enable them to work and live permanently in the region.
- Innovative outcomes - There is low adoption of new information and communication technologies.

The threats that were identified in the SWOT analysis remain and create added pressures:

- Entrepreneurship performance - Local businesspeople and entrepreneurs find it difficult to differentiate their products and services from those offered by the competition (within and outside Greece).

The above issues exhibit increased complexity in our region, as North Aegean is a highly fragmented region, due to the multiplicity of islands that it comprises.

7.2. Selected Best Practices

7.2.1. ECOBIZ

The BP that the two partners from Greece have found as most promising for adoption is ECOBIZ (BP from the Lead Partner's region).

ECOBIZ is the network of economic networks in Cote d' Azur. One of the key reasons behind its creation was the lack of interaction among local firms because they "did not know each other". For example, a pharmaceutical company in Nice may hire an IT firm from Paris for implementing and managing its IT infrastructure, instead of partnering with a local IT firm which has the same knowhow (and potentially better pricing options). The obvious negative effect on the region's economy is that a number of local firms could be struggling for customers, highly educated personnel may move to other regions in France, local authorities could experience lower revenues, etc. Hence, a number of requirements emerge for alleviating these effects and making SME creation an attractive option in the region:

- Local SME's must cooperate more, both for helping each other in addressing their own needs as well as for jointly developing new products and services
- They should be able to easily exchange ideas and work together on business opportunities
- They should be able to be in touch with experts and entrepreneurs in other economics sectors and other professions (e.g. intellectual property lawyers, accountants, etc.)

The solution that is implemented by ECOBIZ is the creation of on-line communities of same-interests organizations rather than vertical communities of same-sector organizations. This enables cross-fertilization of ideas and increases the potential for cooperation among SME's that may have never been in contact before. These communities may be communities of interest, communities of practice or communities of project, in increasing order of collaboration.

The attractiveness of ECOBIZ for the North Aegean lies in the fact that it addresses the same core issue that this region faces: in an environment where it is difficult for SME's to physically communicate and collaborate with other organizations in the region, there is an alternative approach in the online world, through a 'Facebook for enterprises' concept that ECOBIZ embraces. The successful implementation of ECOBIZ makes it even more relevant for this region, assuming that it can adjust its key success factors to its own realities.

These key success factors are:

- Context. Admittedly, the financial and legal context of Cote d'Azur is significantly different than that of North Aegean. This, however, is not negative. It should force local actors to think about new ways of learning from the Cote d'Azur experience and to be more flexible in finding the right resources. For example, the financial capacity of the regional government for directly funding such an implementation is limited, due to budget cuts that the financial crisis necessitated. The same holds for business agencies such as local Chambers of Commerce. Instead of putting a stop on this effort, local government agencies, local business agencies and the local university could share resources (human, financial, etc.) and make this happen.
- Actors. In the Cote d'Azur, the main actor involved in ECOBIZ is the Chamber of Commerce. As mentioned above, however, the North Aegean does not have the luxury of having one local actor running everything, as multiple stumbling blocks will need to be removed by multiple and collaborating actors. A reasonable approach will entail a leading actor (e.g. the local university, as a centre of innovation), with a number of other actors supporting and working together with this actor:
    - The local university provides expertise in designing and implementing both the management and technical side of the ECOBIZ adaptation to our region. There is relevant academic personnel, as well as graduate and undergraduate students, who could undertake such development, at least in its initial stage, while keeping costs low.
    - Local government agencies identify and secure funding from non-government resources, such as EU research or regional development

projects.

- Local business agencies (e.g. Chamber of Commerce of Lesvos) may provide financial resources and should actively promote this effort to their members, so that this effort is embraced from the beginning and shows its potential for success.
- Venture capital firms who may have an interest in such an endeavour. This, of course, would affect the legal standing of this effort (i.e. it may be set up as a separate, for-profit organization from the outset).
- EU partners, such as the Chamber of Commerce of Cote d' Azur, who could provide relevant expertise and guidance.

7.2. Actions to be taken

The North Aegean action plan for the next 5 years aimed at adopting ECOBIZ (and other best practices) is comprised of the following phases (project codename: AEGEAN-BIZ):

1) Pilot Phase. The pilot phase will focus on creating a proof-of-concept prototype that will showcase both the business capabilities and the technical infrastructure needed for AEGEAN-BIZ's implementation. During this phase, we will engage in the following broad activities:

a. Pilot the development of the AEGEAN-BIZ platform, as an adaptation from ECOBIZ's approach. This should include both a proof-of-concept development of the technical infrastructure as well as of the business infrastructure (management structure, etc.). The business infrastructure may include 2-3 communities, supported by Steering Committees, Administrators, etc. The technical infrastructure may be based on open-source software, wherever possible.
b. Develop a business plan for the post-pilot viability of the AEGEAN-BIZ proof-of-concept. This should provide a blueprint for scaling up AEGEAN-BIZ to its full implementation and may include other best practices that can further enrich its services. New services may include consulting/advisory services, as exemplified by VALLOR'INNOV (LP – France) and United Brains (P5 – Netherlands). We believe that AEGEAN-BIZ communities will receive added value through such services, thus leading to higher adoption of AEGEAN-BIZ.

2) Benchmarking Phase. We will use the outcomes of the ERMIS project and the ERMIS methodology to have an initial assessment of how the Pilot Phase outcomes will affect our region's ERMIS profile of innovation. This will be also used as a key communication tool for engaging stakeholders, especially local government actors, who may have significant involvement in the following phase.

3) Implementation Phase. If the previous phases are successful and the key actors agree to provide the necessary resources, then we will proceed to full implementation and scaling up of the AEGEAN-BIZ infrastructure. Key areas to address include:

a. Communities
    i. How to create and promote communities

ii. How to develop and sustain a community's management structure (roles, incentives, required skills, etc.)

b. Technical infrastructure
   i. Technology development roadmap
   ii. Required skills and capabilities

c. Business plan
   i. Financial highlights (key assumptions, cost drivers and headline figures, revenue drivers/pricing structure and headline figures)
   ii. Key performance indicators
   iii. Offered services
   iv. Strategic alliances/partnerships approach
   v. Promoting user lock-in
   vi. Growth plans
   vii. Overall required skills and capabilities
   viii. Marketing and communications
   ix. Risks and their management
   x. Overall critical success factors

The overall success of this approach will heavily depend on the collaboration among different actors/stakeholders, as discussed in the previous section. We expect that at the end of the benchmarking phase, we will bring all relevant stakeholders around the same table to define the parameters that will govern collaboration among them:

- Overall resourcing. The business plan to be created at the end of the Pilot Phase will provide hard facts on the scale of the necessary resources that will need to be allocated. This should include financial resources, human resources, IT resources, etc.

- Organizational structure. This will depend on the type of stakeholders that will decide to participate. For example, if venture capital firms decide to (partially) fund the full implementation, then a for-profit legal entity may need to be agreed, as a governance mechanism among participating stakeholders. Or, a joint development agreement may be enough, if only the University of the Aegean and the North Aegean local government decide to proceed.

- Project management. The implementation of the project may necessitate the development of joint teams, regardless of the organizational structure. For example, business management experts from the University of the Aegean may work together with IT contractors for developing the business and IT infrastructure of AEGEAN-BIZ. Local government officials may promote the project to the central government for additional funding, in cooperation with firms participating in the AEGEAN-BIZ. Such joint teams will provide an additional collaboration governance mechanism with the hope of increased efficiency and problem-solving capacity.

Focusing on local policymakers, a key ambition is to make AEGEAN-BIZ part of their vision for the innovation future of our region. The ERMIS methodology and the results of the pilot phase will provide an 'objective' description of the current state of innovation of the region, as well as a path for developing its future. Relevant messages should include:

- We are not as innovative as we should be, compared with a number of regions

across Europe. A key determinant is the geographic dispersion of the region, which leads to fragmented markets, industry segments and economic actors in general that are isolated from each other.

- We are not alone. In facing similar types of issues, regions across Europe have tried and tested approaches and best practices that exploit online and offline services, leading to proven positive results on local economies.
- We have the right tools to move forward. The ERMIS methodology is a proven way to depict our current state and define development paths.
- We have a multiplicity of best practices to adopt. The ERMIS project exposed us to a number of innovative initiatives across Europe and the project's methodology provides a structured way in adopting such BPs. In addition, we had the chance to link with a number of experts who can provide advice and expertise going forward.
- We have a clear development path for adopting a specific BP that addresses a root cause of our lack of innovation, i.e. lack of collaboration. It is called ECOBIZ, it is successfully implemented in Cote d' Azur, we can adopt it and pilot it in North Aegean.
- You have the power to make a difference. ERMIS put in our hands a structured way to map our innovation future. It provided the tools and the BP's to kick-start the innovation process and revitalise the economy of the North Aegean. It provided the network to learn from a link into it for future help. Now it is your turn to bring all stakeholders around the same table and lead the change.

8. Iasi - North-East Region

ROMANIA

8.1. Iasi SWOT analysis

The SWOT analysis is based on several aspects: economic competitiveness of the region, entrepreneurship performance, innovative performance, access to finance, human capital, technology transfer, quality of infrastructure and regulatory framework. Below is the overall analysis with the most apparent strengths, weaknesses, opportunities and threats.

STRENGTHS:

Economic competitiveness of the region: the North-East Region is the largest of the eight development regions in Romania; the existence of a textile cluster and of a wood cluster.

Entrepreneurship performance: the highest employment growth rate in the SME sector; 7 business incubators.

Innovative performance: in terms of volume of innovation expenditure by enterprises, the North-East Region recorded a 8,45% share, ranking 3rd among developing regions in Europe; a rate of 19,7% of enterprises have been technological innovators (products and processes by introducing new or significantly improved); a percentage of 13.6% of the enterprises are non-technological innovators (implementing new methods in business practices of businesses, workplace, organization, in external relations and new marketing methods); among the technological innovators, one of eight companies has innovated a product, one of three companies has innovated a process and about one in two companies developed and implemented as both products and processes (non-technological innovators have implemented and developed more than marketing organizational innovations); there is a relatively small percentage of companies in which it was indicated the absence of innovative approaches, lower than in previous years (19,38% in 2006 compared to 21,18% in 2008); the analysis reveals that Romania is relatively efficient in transforming innovation inputs into application outputs; there is a growing concern of SME's for innovation activities (in 2009 compared with 2008); a percentage of 36,58% of SME's have the Intranet (from 21,50% in 2008), a rate of 16,20% (against 11,54% in 2008) have their own website and in the to 11,01% of the units are completed on-line transactions (compared to 6,77% in 2008); the percentage of turnover from the sale of innovative products is similar to that obtained by SME's in the European Union; several business infrastructure projects PHARE CES 2000, PHARE 2001, PHARE 2002, PHARE 2004-2006, but also some project funded by the European structural and cohesion funds.

Access to finance: authorities played a higher role in public funding of innovative enterprises; the allocation of the European structural and cohesion funds has just started.

Human capital: 45% of Romanian employees have completed a degree at an institution of higher education (at national level).

Technology transfer: 7 business incubators; 33 counselling centres; 2 industrial parks; the trend for companies to invest in machinery, equipment and software, the amount being 88.02 % of these costs, higher than the national average (which is 62.18%); a positive aspect is the bigger share of the private sector in financing R&D expenditure, compared with the other new EU member states from Central and Eastern Europe.

Quality of infrastructure: 3 airports in the region (Bacău, Iași, Suceava).

Legal and regulatory framework: improving legislation on obtaining a building authorization, on bankruptcy and insolvency regime, trading across borders, preventing abuses in closing a business and promoting the establishment of specialized courts in insolvency (the recovery rate is 33 cents to a dollar, compared to 69 cents per dollar in the developed countries - Organization for Economic Cooperation and Development).

Regional governance: n.a.

WEAKNESSES:

Economic competitiveness of the region: North-East Region is one of the poorest regions in Europe; the share of economic growth is inferior to the national level; the regional Gross Domestic Product per capita is the lowest among all regions; low percentage of SME's per capita; low rate entry companies; negative occupied population growth rate; low infrastructure.

Entrepreneurship performance: low share of SME's in the manufacturing and services; lack of specific knowledge in business development and creation of new jobs; lack of implementation of the knowledge of marketing, management, quality assurance to entrepreneurs and managers in the region; concentration of major investments especially in some cities; low level of industrialization of many sector with potential; insufficient promotion of the region's investment potential.

Innovative performance: the main source of competitiveness is the low cost, but not the degree of innovation regarding the products and the technologies; the largest share of the costs of innovation holds the purchase of machinery, equipment and software (8684.9 million); R&D expenses are small (867.6 million lei for internal R&D activities and the amount of 582.9 million lei for foreign R&D activities); smallest share of expenditure on acquisition of other external knowledge (licenses, patents, know-how etc.); Romania is below the level of countries in Central and South-Eastern Europe on R&D intensity (around 0.50% of GDP); Romania performed less well in Knowledge Creation and Intellectual Property; SME's in Romania are below the level of those of the EU Member States as percentage of investment dedicated to innovation and utilization of information technology, less than 0,50% (0,49%); new technologies come largely from imports or direct foreign investments and not from the local effort; it was recorded a low use of sources of information for innovative products from universities and other institutions of higher education (3%) and government research institutions (2%); compared with large firms, small and medium-sized firms are less innovative, six in ten large companies being innovative and only three in ten small and medium enterprises; Romanian companies do not cooperate sufficiently, only 2,7% of enterprises have cooperated to achieve innovative activities, the main cooperation partners being suppliers of equipment, materials, components or software; the rate of cooperation for innovation at national and European level, but also with other countries is low: at the national level is 12.9%, at European level is 7.6%; cooperation with United States of America is 1.4%, with China and India is 0.8% and with other countries is 0.6%; lack of cooperation between universities and innovative companies; low cooperation with universities and government or public research institutes; share of SME"s applying methods of protecting intellectual property rights is less than that of large enterprises; lack of effectiveness of *science parks* - poor cooperation with the providers of knowledge; the expenditure of public funds (62.26%) are much higher than those of companies (31.06%); a relatively low level regarding the patent applications to the EPO per million inhabitants – around 0.25.

Access to finance: according to the managers, innovation in the enterprises is constrained by being too expensive or by the limited financing opportunities.

Human capital: a relatively low level regarding the percentage of human resources in science and technology (HRST); a relatively low level of the researchers as a percentage

of persons employed (0.19% in 2006); the number of employees in research activities has decreased; increasing average age of highly qualified staff work for R&D.

Technology transfer: ineffective and inefficient functioning of industrial parks, with deficiencies at the structural level.

Quality of infrastructure: low quality of infrastructure roads between the East-West areas of region; low share of upgraded roads; low density railway lines per 1,000 sq km; the uneven distribution of electrified railways; small number of localities where there is natural gas distribution systems and thermal energy; underdeveloped telephone network in rural areas; poor development of infrastructure for recreational activities; inadequate and outdated (moral and physical) infrastructure in the food distribution systems, sewage and water treatment and waste management.

Legal and regulatory framework: Romania is ranked on one of the last places after the number of taxes to be paid by a company; worsening legislation on creating a business, closure a business, getting credits, protecting investors, enforcing contracts.

Regional governance: no ”cluster policy”.

OPPORTUNITIES:

Economic competitiveness of the region: development of a Continuous-Oriented Innovative Strategies for Economic Recovery Resources in the Nord–Est (North-East) Region of Romania; Romania's Government promoted the creation of the necessary basic infrastructure to improve the business environment in Romania and the program "Industrial Parks"; the opportunity of the European structural and cohesion funds.

Entrepreneurship performance: development of a Continuous-Oriented Innovative Strategies for Economic Recovery Resources in the Nord–Est (North-East) Region of Romania (DISCOVER NE ROMANIA); Romania has introduced a new scheme known as START, which developed entrepreneurial skills among young people and helped them access funds; support for entrepreneurship in schools and universities.

Innovative performance: implementation of the National Plan for Research, Development and Innovation 2007 – 2013, with an important role in developing science and technology in order to increase economic competitiveness, improve social quality, increase the recovery potential of knowledge and broaden the horizon of action; different invention salons (Research Fair, Inventika etc.) which award and motivates innovation activity; several diagnosis of national innovation which indicate the preoccupation in promoting and supporting the innovation activities.

Access to finance: EU funds play an important role in ensuring access to finance for SME’s in Romania; the government has introduced a National Credit Guarantee Fund for small firms; support for entrepreneurship in schools and universities; new legislation to reduce red tape for SME’s; new laws with protection against bankruptcy.

Human capital: an increased orientation of policies and funding instruments towards the consolidation of human resources and infrastructures for R&D and innovation, strengthening the links between universities, industry and R&D institutions and the participation of the private sector in R&D activities; 7% of the total number of people graduated higher education institutions.

Technology transfer: the existence of the public clusters; implementation of the National Plan for Research, Development and Innovation 2007 – 2013; Romania's government promoted the creation of the necessary basic infrastructure to improve the business environment in Romania and the program "Industrial Parks"; the existence of several research and development programs; there are numerous research units, institutions of higher education, agricultural stations and businesses; 12 Centres of

Excellence in the universities; 79 research centres; the existence of academic centres with expertise in high-potential research – development.

Quality of infrastructure: implementation of the National Plan for Research, Development and Innovation 2007 – 2013; the existence of the feasibility studies and the authorizations necessary for converting the airports of Bacău and Iași into international ones, able to satisfy the requirements of the entire region.

Legal and regulatory framework: n.a.

Regional governance: existing legislative framework in regional development; existing legislation on disadvantaged areas; existing legislation on cross-border cooperation; involving local government in regional development; existing legislation and national strategy for privatizing and restructuring state-owned firms; existing legislative framework favorable to employment and unemployed graduates of higher education and the environment; existing national legislation on spatial planning; existing border crossing points (road and rail) with Republic of Moldova and Ukraine; the existence of numerous relations of collaboration and workflow programs/projects between Romanian local governments and local governments of the regions from abroad.

THREATS:

Economic competitiveness of the region: geographical and historical conditions have left behind the Nord–Est (North-East) Region, in socio-economic terms.

Entrepreneurship performance: the less developed entrepreneurship spirit in the region; lack of functionality of legislation to encourage SME's; the fragility of the market economy, industrial structure, due to the use of obsolete technology, low productivity and economic efficiency.

Innovative performance: the economic crisis led to lower spending on research and development and innovation and/or exit from the market of many SME's; the weak collaboration between universities and companies; Romania is ranked on one of the last places in the number of taxes to be paid by a company; numerous and frequent legislative changes affecting the business sector.

Access to finance: negative factors in attracting external FDI: poor accessibility to and from the rest of Europe, the rural character of the region, insufficient quality of transport infrastructure and a difficult business environment.

Human capital: the lack of appropriate labour; at least half of SME's have encountered difficulties of lack of skilled labour (53%); labour too expensive.

Technology transfer: the weak collaboration between universities and companies in technology transfer.

Quality of infrastructure: the economic crises reduced the amount of public funds allocated to improve the quality of the infrastructure.

Legal and regulatory framework: numerous and frequent legislative changes affecting the business sector.

Regional governance: n.a.

During the implementation of the ERMIS project, over the last one – one and a half year, several elements of the SWOT analysis and their importance have changed. For example, the economic recession has had serious impact on the capacity of the Romanian government to support public policies and implement new initiatives. The social policies took the place of the public support for investment in infrastructure of the region, many projects being delayed or even cancelled. The public expenditure on research and development were low, under the

recommended level of 1% of GDP. At the same time, the private sector didn't recover completely after the crisis, its capacity to face the challenges of the market remaining low. Many companies focused on maintaining the position on the market instead of searching new ways to grow, especially through innovation. This macroeconomic situation will continue, the recovery after the crisis being a long and difficult process for the state and the companies as well. The World Bank estimates that the Romanian economy will grow with 1.2% in 2012 and with 2.5% in 2013, modest levels comparing with the potential of an emerging market as the Romanian one is. The effects of the crisis on the Nord-Est Region were stronger, the local authorities being more dependent to the central government and the business environment being less competitive than other regions.

A positive aspect of the last 12 to 18 months is the acceleration of the absorption of the European structural and cohesion funds, but also of those meant to support the development of agriculture and rural areas. Romania was not prepared in 2007 to absorb available European funds. Several more years were needed to create the institutions, train the employees and establish the right procedures etc., in order to make this process efficient. That's why the experience gained in the first years after Romania's integration in the European Union helped the Romanian authorities to improve the mechanisms, but we should not neglect the importance of the changes in public perception regarding these financing opportunities, people becoming more confident and the results of the projects approved in the first years being more obvious. We can mention some relevant aspects regarding this issue: the significant value of the projects toward the development of the human capital (doctoral and postdoctoral grants, trainings, new study programs, entrepreneurship initiatives, professional reconversion, etc.), the special axis within the Operational Program "Increase of Economic Competitiveness" designed in order to finance project in research and development, and the ability of the local authorities (villages, towns and counties) to demand funding for infrastructure at the maximum level available for the programming period 2007-2013.

At the same time, we can mention a few more specific changes in the Nord-Est Region, with influence on the image created by the SWOT analysis. In Suceava there is a new emerging regional cluster, a touristic one, in the context of the touristic potential of the region (cultural, religious, historical, agro-tourism, bathing, etc). There were initiated two more business incubators, one in Bacău and one in Dorohoi, and there were made rehabilitation and upgrading works to all the three airports of the region (Bacău, Iaşi, Suceava). The new law of education (February 2011) imposed a process of evaluation of all the Romanian public and private universities, which confirm the quality and the high standards of the academic activity in Iaşi. For example, 3 of the 12 advanced research and education universities are located in Iaşi: „Alexandru Ioan Cuza" University of Iaşi, „Gr. T. Popa" Medical and Pharmacy of Iaşi and „Gheorghe Asachi" Technical University of Iaşi. The regional impact of these institutions can be proven, for instance, by the project implemented by the „Alexandru Ioan Cuza" University of Iaşi, „Integrated Center for Environmental Studies in the North-East Region", co-funded by the European Regional Development Fund, the total value of the project being more than 6 million EUR.

Looking back at the main aspects relevant for the ERMIS project formulated at the beginning of the project, most of the considerations are still relevant/up to date. And, to a large extent, the Best Practices analyzed address to these issues.

8.2. Selected Best practices

8.2.1. VALOR'INNOV

VALOR'INNOV is a collective program dedicated to the detection, structuring and implementation of innovative "sleeping" projects in SME's. It addresses the problem of low level of innovation of SME's due to their lack of critical mass (see *European Observatory for SME's*, EU, 2009) and the difficulty for SME managers to devote the time necessary to analyze the real feasibility and innovative potential of the project, reconfigure the organization to foster the implementation of the project and lead change within the firm to implement it. In a 360 degree approach, covering all external (market forces, influencing factors, key success factors) and internal dimensions (degree of novelty of innovation, strategy, organizational configuration, strengths and weaknesses) of the company, is analyzed the level of risk of the project, are identified the gaps to valorize the project, are optimized the operational processes impacted by the project, and is implemented an approach to change management and launch of the project. The program is a mix of individual diagnostics and coaching with training (strategic management, change management) and cross-fertilization seminars, gathering groups of 10 firms.

VALOR'INNOV is dedicated to detect innovative projects (technological or non technological innovations) in small firms that might not be implemented properly or in due time, validate the potential novelty and marketability of the innovation, align the organizational configuration of SME's with strategic choices addressed by the project, initiate the implementation of the project to put SME's "on track". With an average cost per SME of 16.000 EUR, French Riviera Chamber of Commerce has organized the coaching of 40 firms through VALOR'INNOV, the improvement in business environment consisting in: 1/3 of SME's have ultimately launched a new legal structure dedicated to the development of the innovative project; on average, sales related to the project have increased global sales by 10 to 15% after 18 months, and generated 2 to 3 recruitments during the same period; operational effectiveness has been increased according to satisfaction survey conducted with SME's' CEO; numerous cross-cooperation between firms participating to the program as well with other clusters or research centers; the initiative has also enabled firms to formulate the business plan related to their project. This formulation has proved useful for discussion with public and private investors.

i. Why is the Best Practice interesting/useful – which weakness/threat could it address?

The Best Practice is interesting and could be useful for the business environment of P15 - Iaşi Municipality, because its objectives - increasing the competitiveness of SME's, and creating possible bridges between technologies and activities of firms from different clusters – answer to some of the most important problems of the SME's sector in the Nord-Est Region of Romania. At the same time, the implementation of this Best Practice could be facilitated by the existence of the technological and scientific parks that could stimulate the

cooperation between firms and by the opportunities offered by the European structural and cohesion funds, which finance also the actions stimulating the entrepreneurship and increasing the economic competitiveness.

ii. Why does the receiving region feel the BP can be implemented in the own region. In other words how does the practice, or parts of it, address a weakness or threat?

First of all, the specific conditions of the business environment and the opportunities offered by the European funds make possible the implementation of the Best Practice. But, what is the most important, this initiative would address to some weaknesses of the business environment, such as the low rate of SME's survival, the lack of collaborative research programs with academic research centers and other businesses, the lack of implementation of the knowledge of marketing, management, quality assurance to entrepreneurs and managers in the region, the insufficient promotion of the region's investment potential etc., the results in terms of economic competitiveness being obvious. At the same time, the Best Practice diminishes the influence of some potential threats, such as the lack entrepreneurial culture, the lower entrepreneurship spirit in the region, the lack of functionality of legislation to encourage SME's, the fragility of the market economy etc.

iii. How does the receiving region intend to implement the BP?

The receiving region, P15 – Iaşi Municipality, Romania, will implement the Best Practice using the experience of the transferor partner, the Lead Partner - French Riviera Chamber of Commerce and Industry Nice, France, by creating the appropriate structure according to the objectives of the initiatives and designing the procedures in correspondence with the specific conditions of the business environment. The information provided will be adjusted to the specific needs of the Romanian SME's and to the recent evolution of the Romanian economy. Also, the organization of activities will take into account the differences between the French economy and the Romanian one, in terms of organizational culture, business experience, risk attitude, education etc.

8.3. Actions to be taken

- Forming a managerial team in charge with the implementation of the BP, based on the experience gained by implementing the ERMIS project and the study of the specific Best Practice of the Lead Partner - French Riviera Chamber of Commerce and Industry Nice, France;
- Completing the necessary local partnerships. Because of the complexity of the project proposed, it is very important to involve all the interested parts during the initiation and implementation of the project: the County Councils from the Nord-Est Region (Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui), The Regional Development Association North-East Piatra Neamţ, County Chambers of Commerce and Industry (Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui), Employers' associations, Universities (the most relevant are „Alexandru Ioan Cuza" University of Iaşi, „Gheorghe Asachi" Technical University of Iaşi, but there are also other institutions in Iaşi, Suceava, Bacău, Galaţi etc.), National Institute of Inventions Iaşi, and other similar organizations, experts with different specialization and professional experience, SME's located in the North-East Region as beneficiaries of the action etc.;
- Making a study concerning the specific needs of the local SME's of the Nord-Est Region, being obvious that the local SME's have specific problems and

different needs compared to the companies located in France. That's why it's very important to identify these particular aspects, in order to assure the maximum efficiency of the project;

- Forming the team of experts which will analyze the results of the study and will decide the specific information provided during the activities addressed to the SME's. In this stage, there will be involved many experts, with specialization and professional background in different fields, to cover all the potential needs of the local SME's;
- Designing the product in accordance with the specific conditions, including, as the French partner, individual and group activities;
- Searching for a financing opportunity for this project (such as The Operational Program Human Resources Development – Entrepreneurship etc.);
- Informing the potential beneficiaries located in the NE Region, by using the specific communication channels (mass media, events, mail etc.) and the chambers of commerce and industry, the employers' associations, etc. The managing team will assure the access of all potential beneficiaries to the information regarding this opportunity, covering all the counties, the rural and the urban areas, all the industries, etc.;
- Selecting the beneficiaries of each round, by a methodology made and discussed in collaboration with experts, in order to maximize the positive effects of the project;
- Effective implementation of the BP, by organizing the activities included in the project, according to the experience of the French partner and using the results of the previous stages described above. This is necessary because of the specific conditions of the Romanian economy in general, and of the Nord-Est Region in particular;
- Evaluating the results of the action. This is a very important step of the project, offering us the premises to see if the best practice is well implemented in the Nord-Est Region (Romania) and if are achieved the objectives proposed.

Involved actors in implementing the Best Practice

Because of the complexity of the proposed project, many different actors will be involved, starting from the preparation phase of the project and continuing with the implementation and evaluation of the activities.

- Iaşi Municipality – the coordinator of the process of implementing the Best Practice;
- County Councils (Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui);
- The Regional Development Association North-East Piatra Neamţ;
- County Chambers of Commerce and Industry (Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui);
- Employers' associations;
- Universities (the most relevant for the project are „Alexandru Ioan Cuza" University of Iaşi, and „Gheorghe Asachi" Technical University of Iaşi, but there are also other institutions in Iaşi, Suceava, Bacău, Galaţi etc.);
- National Institute of Inventions Iaşi;
- Experts with different specialization and professional experience;
- SME's located in the North-East Region – beneficiaries of the project.

CONCLUSION

The Regional Action Plans aims to show what will be the best practices susceptible to be implemented by each ERMIS Regions into their territory to foster innovation in SMEs.

This figure below illustrates the 14 good practices that should be undertaken by the ERMIS Region's policy makers in the coming years.

Good Practice's Region	Good Practices selected	Actions will be taken by
France	BP1 Valor'Innov	Romany
	BP2 Ecobiz	Spain Greece
	BP3 Club Action Brevet	Spain
Italy	BP4 Cesena Sustainable Energie Action Plan	France
	BP10 Mecatronic Club	France
Netherlands	BP11 Creative Conversion Factory	Portugal
	BP12 Holst Center & Devlab	Italy Portugal
	BP13 United Brains	France
Portugal	BP15 IPN Model	France Italy
Spain	BP18 Specific Unit of Identification and Monitoring of European and International Consortia	Netherlands
	BP19 R&D and Innovation Managers Training Programme	France
Greece	BP20 Aegean technopolis	Italy Hungary
	BP21 Biobus	Hungary
Denmark	BP23 Connect Denmark	Italy Netherlands Portugal

The regions through these action plans expressed their will to go further with ERMIS good practices to foster their territories. Indeed, we could understand what will be the first steps for the policy makers to implement these good practices.

In conclusion, after having designed and experienced a common methodology for context-specific SWOT analysis of their territories and after exchanged the practices' knowhow. The ERMIS model leads to an appropriation of the method and the analysis by the policy makers represented by this Regional Action Plans. The ERMIS Policy Recommendations document reviews the ERMIS process, analysis and method to enable the policy makers to move toward innovation governance based on the ERMIS Model.

ERMIS
Effective Reproducible
Model of Innovation System