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# Thematic study: Technology transfer and business innovation in the CENTRAL EUROPE Programme



**FINAL REPORT**

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## Table of Contents

Table of Contents.....	2
1. Executive Summary.....	3
2. Introduction and Methodology .....	6
2.1 Introduction.....	6
2.2 Methodology .....	7
3. Thematic Background.....	13
3.1 Policy Context.....	13
3.2 Operational Framework .....	19
4. Thematic Achievements.....	26
4.1 Analysis Framework .....	26
4.2 Analysis of Individual Projects and Results.....	28
4.2 Overview and case-studies .....	49
5. Conclusions and Recommendations .....	57
5.1 Overview of analysis results and conclusions.....	57
5.2 Recommendations.....	61
Annexes.....	65
ANNEX 1 - Full list of projects reviewed under the Thematic Study .....	66
ANNEX 2 - Definition of theme-specific terms used in the report .....	68
ANNEX 3 - List of references and bibliography consulted within the literature review..	70
ANNEX 4 - CVs of Team of Experts.....	71
ANNEX 5 - Acknowledgements .....	73





## 1. Executive Summary

“Technology transfer and business innovation” is a key topic for Europe’s competitiveness and growth. The contribution of firms to innovation is crucial, and a dynamic and innovative business sector is a key source and channel of technological and non-technological innovation. Smaller firms frequently exploit technological or commercial opportunities which are based on research breakthroughs achieved by academic organizations and bring them to market, contributing to create growth and employment. As such, technology transfer (in particular towards businesses with less or no internal research capabilities such as small and medium-sized enterprises, SMEs) and business innovation are naturally at the top of European, national and regional innovation policy priorities and are a main topic for transnational cooperation, receiving strong attention from the CENTRAL EUROPE Programme, and being addressed by several of its projects.

This study is dedicated to the analysis of the 31 projects that deal with this topic, out of the 124 projects approved by the programme in the current 2007 - 2013 period. It concludes that CENTRAL EUROPE projects in the theme of “Technology transfer and business innovation” directly address the most relevant and pressing issues related to the topic, either by fostering cooperation between regional actors for policy learning and sharing or by promoting actions directly aimed to increase innovation in regional businesses, offering solutions to the barriers to innovation faced by companies. Building on the analysis made, it recommends that further impact can be achieved in future programmes by providing more developed guidelines for the structure of the projects and clearly setting targets in terms of policy sharing on one side, and support to business innovation on the other. The highlights of these conclusions and recommendations are presented next.

***CENTRAL EUROPE projects create the framework for a fruitful policy learning process in the innovation field...***

The theme for this study is “Technology transfer and business innovation”, which is broken down in two further sub-theme: i) “*Cooperating to build better connections between regional actors*” (ST1), i.e. policy learning and sharing amongst policy makers and implementation actors and ii) “*Cooperating to increase innovation in regional businesses*” (ST2), i.e. projects that directly support small and medium enterprises to unlock their innovation potential while promoting the use of research results to create business opportunities.

The first sub-theme, policy learning, has been a traditional cornerstone of European Territorial Cooperation projects and of the CENTRAL EUROPE Programme in particular. Learning from others and learning from our own success and failures is undisputedly a key element in policy making, and especially so in such a (relatively) new area as framework conditions for innovation and business cooperation, where there are still very few certain recipes for success. Implementing effective cooperation and learning processes between regional actors for improving innovation and business support framework poses specific challenges such as:

At the level of improving local practices:

- benchmarking of existing policies and programmes, including definition of indicators and success / impact criteria for strengthening region own practices;
- implementation of formal evaluation / review mechanisms such as peer review or other external review schemes, as a way to move towards the adoption of an “evaluation culture”;

At the level of adopting external practices:

- watch mechanisms to identify successful approaches at a global scale and means to disseminate to other parties in order to implement (and adapt, when required) external good practices; a full policy learning cycle must also include screening and validation of external measures, that can be adapted to local contexts through mainstreaming;



- access to support and assistance for implementation of external good practices, such as twinning mechanisms (one-to-one) or partnering fora / platforms (one-to-many); an important and final step of a learning process consists of the implementation of new programmes and measures as a result from the learning.

The study shows that policy learning and sharing is still the most important objective of cooperation between regional actors under the programme, as shown by the fact that this sub-theme has been directly addressed by **17 out of the 31 projects** analyzed. Within these 17 projects, all the aspects of a policy learning cycle listed above have been covered, with a majority of the projects focusing on identification of good practices at local / regional level (either by benchmarking of practices within a certain topic or evaluation of a previously selected subset of measures) and on sharing and development of tools and mechanisms for implementation of such measures (in whole or in part) in other regions. While in most ST1 projects there is no systematic process of identification and review of good practices through a complete local learning cycle, this was already to be expected due to the relatively small budget of the typical CENTRAL EUROPE project which is not favourable to in-depth analysis, and also due to the bottom-up and open character of the programme, which invites projects to focus on the study or transfer of a particular practice. For some projects, part of the learning cycle may have been completed prior to the project, or during the preparation phase, when applicants screen through a number of practices in order to select only a few for future implementation. However, the lack of a more structured approach to the identification, transfer and implementation in other regions of something so uncertain as innovation practices may raise issues on the true adequacy of practices for other regions, as well as on the sustainability of such processes beyond the end of the respective projects.

*... and address the relevant barriers to innovation faced by regional businesses:*

The second sub-theme analyzed in this study deals with direct support to businesses and especially SMEs to unlock their innovation potential while promoting the use of research results to create business opportunities. This is a complex area, where before proposing solutions it is important to understand the problems. Policy actors can only intervene in order to support SMEs to innovate by creating mechanisms to help overcoming barriers to innovation, if they manage to interpret correctly what these barriers are. In the Thematic Background section of this report we will present the results of an extensive literature review that concludes with an identification of the most relevant barriers to innovation faced by SMEs in Europe:

- Shortage of own financial resources and the problem of accessing finance for innovation - a seemingly perennial problem but one certainly exacerbated following the recent global financial crisis and current economic slowdown;
- Shortage of innovation management skills - innovation processes from the generation of ideas to the generation of profits on the markets with new products / services require management;
- Insufficient marketing of innovation and of innovative products and services, namely by promoting internationalization and exploiting public procurement opportunities;
- Lack of research capabilities in most firms and in particular SMEs - collaborative research, technology transfer and innovation activities between companies and between public and private organisations;
- Weaknesses in networking and co-operation with external partners - successful innovation is very dependent on good linkages between different actors in the value-chain and as “open innovation” becomes more embedded in SME business strategies this can only increase.

In spite of its complexity, the objective of providing direct support to businesses and SME has still been addressed by **8 out of the 31 projects** under analysis, and by another 6 “blended” projects



that combine policy learning and support to regional businesses under a single project implementation cycle. The results of the present study show that even with a relatively small basis of projects (14, including “blended” projects) the approved CENTRAL EUROPE projects within sub-theme 2 offer a complete coverage of the main barriers to business innovation. Of the main five barriers identified, each is covered at least by two projects either dedicated to that topic or addressing jointly with other topics.

The most covered theme is “Shortage of innovation management skills”, which individually or jointly with other topics is addressed by 8 of the 14 projects within this sub-theme. This shows a natural trend from projects to focus on activities such as trainings and workshops, specifically targeted to address shortage of skills and relatively easy to implement at transnational level, rather than more complex and tailored activities - and that may also require stronger investment - such as funding schemes (e.g. Venture capital funds or programmes), mechanisms to foster transnational networking (e.g. vouchers), internationalization of innovation (e.g. matchmaking events) or lack of research capabilities (e.g. set-up of common research infrastructures). This indicates that CENTRAL EUROPE projects addressing business innovation are still at an early phase of experimentation of new, joint activities, with a natural focus on less complex activities and few examples of more evolved forms of collaboration. In particular there are few examples of use of the pilot investment possibility of CENTRAL EUROPE projects in order to set up infrastructure and services (albeit several projects tap on national / regional funds instead as an investment source) and also of the use of IT tools and networks to enlarge the basis of companies served. However, the examples in this field (some of which included in the Case Studies) show that the structure of the CENTRAL EUROPE Programme, if duly exploited, shows a very good potential for the experimentation of new, complex and even investment-demanding, forms of supporting innovation in regional businesses, supporting regions in their smart specialization strategies by exploiting new growth opportunities by shifting towards more innovation-intensive activities and for better positioning of regional businesses and clusters in international value chains.

***In conclusion:***

The results of this study confirm that the CENTRAL EUROPE Programme clearly presents added value and fills an existing gap within the EU policy context, by offering innovation policy makers and intermediates a unique “open framework” for development, sharing and experimentation of new innovation approaches towards technology transfer and business innovation, which cannot be found in any other programme. The two sub-themes defined within the programme for the “Technology transfer and business innovation” theme are highly complementary in terms of transnational cooperation, with a policy learning cycle being complemented by an implementation cycle with concrete measures for businesses support (this is confirmed by the relatively high number of “blended” projects that combine both approaches under one single project implementation cycle). It is however considered that current projects did not fully exploit the offered possibilities, especially in terms of innovative character of the addressed measures and experimentation. And that while it is important for the programme to maintain a bottom-up approach as until now, leaving to the projects the initiative as regards the scope and content of the projects, it is possible to further incentivise projects to better explore the possibilities of the programme by introducing some structural changes. This could be achieved by a further formalization of the sub-themes as intervention areas within the programmes, with two separate but interlocking capacity building themes, one focused on horizontal strategic capacity building (in line with ST1 in this study) and another focused on joint action and experimentation of measures towards regional businesses (in line with ST2). A “blended” approach, combining both intervention areas under one single project implementation cycle, should always be possible, especially for targeted policy areas. The advantage of such architecture would be that it would permit to continue the present broad networking activities of the programme with a greater focus on policy





learning, while allowing for more focused, practical and result-oriented cooperation paving the way for joint implementation.

## 2. Introduction and Methodology

### 2.1 Introduction

In January 2013 the CENTRAL EUROPE Programme has launched a tender for a thematic study in the field of “Technology transfer and business innovation”, as part of its thematic capitalization strategy. The goal of this study is to identify and develop the most promising results achieved by transnational projects funded within the programme allowing to exploit the knowledge capital gained from such projects for the benefit of other projects and stakeholders, while demonstrating the thematic value of the CENTRAL EUROPE Programme to stakeholders in the regions, the Member States and the EU institutions. The present report presents the conclusions of this thematic study.

#### ***The CENTRAL EUROPE Programme:***

The CENTRAL EUROPE Programme is a European Union initiative that encourages transnational cooperation among the countries of central Europe to improve innovation, accessibility and the environment and to enhance the competitiveness and attractiveness of their cities and regions. By the end of 2012, 100% of the available budget of 231 Million € was already allocated to 117 standard and seven strategic projects, with an average size of 2.5 million Euros per project. An internal study carried out in 2011 showed that project activities contribute to EU 2020 targets for smart and sustainable growth, in particular supporting the flagship initiatives Innovation Union, Industrial Policy for Globalisation and Resource-efficient Europe<sup>1</sup>. More generally, the independent on-going evaluation of the CENTRAL EUROPE Programme concluded in late 2012 that a satisfactory number of outputs and results were delivered by approved projects, building on regional assets while providing adequate answers to weaknesses of the central Europe area. These assessments show without any doubt that there is an important basis of outputs and results within the programme which offer the potential for capitalization, especially having in view the next phase (2014 - 2020) of the programme and the mainstreaming and exploiting process within the beneficiary regions.

The present thematic study has exploited such basis of results within the theme of “Technology transfer and business innovation”, extracting the most relevant cases for other running and future projects, and developing conclusions and recommendations regarding the next phase of the programme.

#### ***The “Technology transfer and business innovation” theme:***

The CENTRAL EUROPE Programme 2007 - 2013 focuses on four thematic priorities:

P1: Facilitating innovation

P2: Improving accessibility

P3: Using the environment responsibly

P4: Enhancing the competitiveness and attractiveness of cities and regions.

Target groups are regional and local authorities, development agencies, universities and research institutes, chambers of commerce, innovation centres and other relevant actors in the field of innovation, economic development and environment.

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<sup>1</sup> Contribution of the CENTRAL EUROPE Programme to the future transnational cooperation 2014+. Joint Technical Secretariat, December 2011.



Within the programme internal reflexion regarding its role and contribution to future transnational cooperation policies beyond 2014, six main intervention themes have been identified, which bring together a critical mass of CENTRAL EUROPE projects and actors working in a specific field. The theme of concern for this study is “Technology transfer and business innovation”, which is broken down in two further sub-themes:

1. Cooperating to build better connections between regional actors:

*More concretely:* projects that improve framework conditions for business cooperation so that companies can become more competitive in a globalised market, e.g. through policy learning and sharing amongst policy makers and implementation actors or through creation of development of infrastructural support, such as technology transfer centres, research facilities, incubators, etc.

2. Cooperating to increase innovation in regional businesses

*More concretely:* projects that directly support small and medium enterprises to unlock their innovation potential while promoting the use of research results to create business opportunities.

The present study encompasses both themes, from a content perspective, i.e. focused on tangible results and achievements in both sub-themes, and not on the transnational cooperation process *per se*.

***The capitalization objectives of the thematic study:***

The goal of the study will not be that of evaluating individual projects and/or results, but instead to identify, assess - on the basis of specific qualitative and quantitative criteria introduced specifically for this study - and highlight outputs, results, methods and tools produced or used by projects working in a similar theme that can impact regional / local policies and innovation systems or serve as benchmarks and inspirations for other projects and regions, as well as for the next stage of the CENTRAL EUROPE Programme. The main output of the study is a set of analysis (presented in Section 4) evidenced by Success Stories and Case Studies, supporting a final set of recommendations (in Section 5) on how to maximize the impact of the identified outputs and results, for use by the CENTRAL EUROPE Programme bodies externally towards stakeholders in the regions, the Member States and the EU institutions, and internally in the enhancement of procedures for the current and the future programme.

***The thematic study actors:***

The core actor of this thematic study is a specialized team of experts that has analyzed the projects’ features and results and identifies their added value in the concerned theme, and specifically as regards the two identified sub-themes, in close coordination with Joint Technical Secretariat officers that coordinate their work.

The experts have relied on their inside knowledge of the programme and projects within the concerned theme, but also on the inestimable cooperation of CENTRAL EUROPE project Lead partners, additional partners and other stakeholders. The overall coordination of the work has been ensured by the Joint Technical Secretariat.

## 2.2 Methodology

“Enterprises expect better innovation support from public intervention”. This statement was already an overall conclusion from the public consultation on the effectiveness of SME innovation support services in the EU<sup>2</sup>. The results from this large scale survey show that in the eyes of European enterprises, public innovation support helps, but does not solve on its own the

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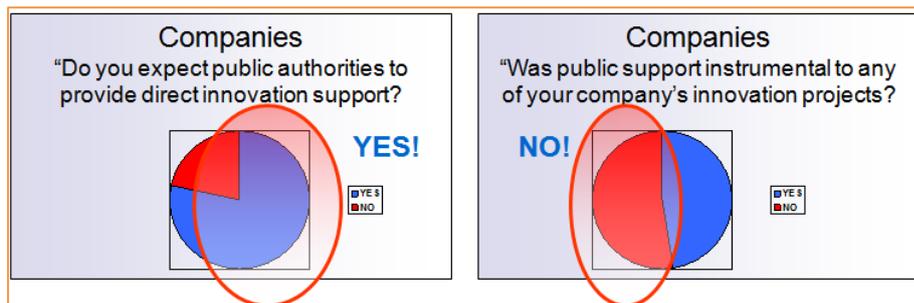
<sup>2</sup> See results in the Commission Services Staff Working Document SEC(2009)1197 of 09/09/2009 at: [http://ec.europa.eu/enterprise/policies/innovation/files/swd\\_effectiveness\\_en.pdf](http://ec.europa.eu/enterprise/policies/innovation/files/swd_effectiveness_en.pdf)



companies' problems and challenges. Innovation public support, in its current format, is considered as necessary but not instrumental by companies within their innovation strategies:



Figure 1 - The “efficiency” problem



The results of this survey can be read across the multitude of existing support programmes. Also in the CENTRAL EUROPE Programme, the Lead Partner (LP) survey carried out within the scope of the Programme on-going evaluation shows that 97% of the questioned LPs confirm that they would not have been able to start working without the assistance of ERDF channelled through the programme<sup>3</sup>. However there is no information on the number that considers that the public funding has been instrumental for achieving their objectives. The present study will focus on this “relevance” aspect.

Public innovation support to SMEs in Europe is naturally provided at different levels (regional, national, European) and by different actors, which may inevitably result in a duplication of efforts and/or in gaps in support provision. While it is clear that there cannot be a unique approach to implementation when it comes to supporting SME innovation, it is also evident, especially at such stressing times for Europe and European companies as the ones we presently face, that support mechanisms need to become more effective and build on lessons learnt to develop new, enhanced, methods of reaching and helping SMEs.

**Scope and projects addressed:**

This issue - *how to better support companies and in particular Small and Medium-sized Enterprises (SMEs) to unlock their innovation potential and improve their competitiveness* - has been the underlining question all across the present thematic study focused on the theme of “Technology transfer and business innovation”. With such a question in mind, 31 projects (submitted under the five calls of the programme - 4 standard calls plus one restricted call for strategic projects) have been reviewed under the present study.

For all the projects, the available information (application forms, reports, websites, other deliverables) has been reviewed and contacts been made with the coordinators and/or partners when found relevant. The goal in each case has been to identify and highlight relevant practices in view of enhanced support to technology transfer and business innovation towards companies, and in particular SMEs. The full list of projects reviewed, including contact details for the Lead Partner, is included in Annex 1.

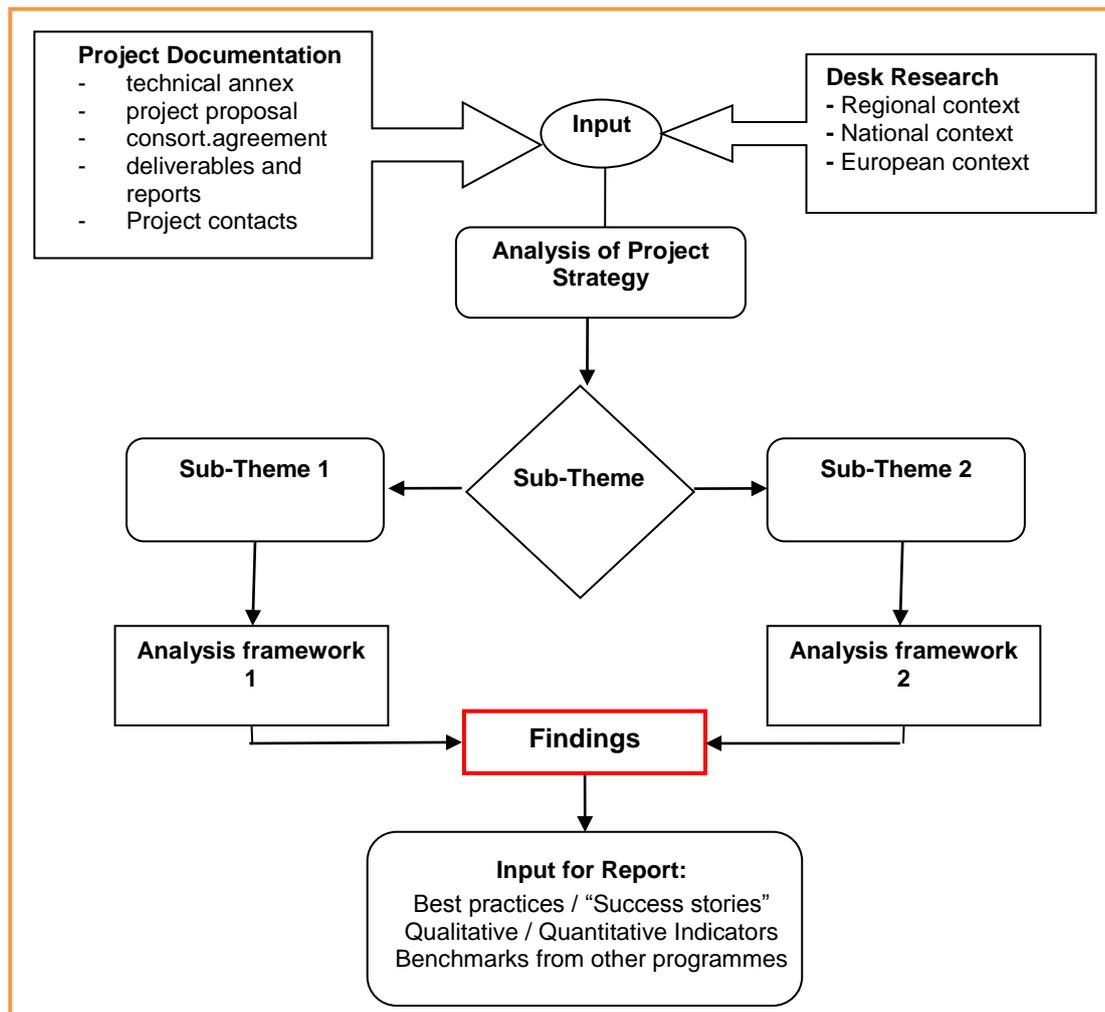
**Methodological approach:**

The overall methodological approach followed within the analysis is described in this subsection, and followed the workflow represented below:

<sup>3</sup> Final Programme Evaluation Report, Consortium Soges S.p.A. - ERAC (2012)



Figure 2 - Data collection and analysis workflow



The initial analysis of the projects' focus and strategy has been based on:

- project specific documentation received from the JTS at the start of the task;
- contacts with projects, through mail or telephone;
- other information on the projects gathered from the websites or directly from the projects;
- thorough desk research review conducted on the basis of the sources of information identified by the experts (for a full reference list, please refer to Annex 3).

Based on the collected data and on the background knowledge gathered by the experts, the projects are analyzed and categorized according to the 2 sub-themes, i.e.:

1. Cooperating to build better connections between regional actors, i.e. projects that improve framework conditions for business cooperation so that companies can become more competitive in a globalised market, e.g. through policy learning and sharing amongst policy makers and implementation actors or through creation of development of infrastructural support, such as technology transfer centres, research facilities, incubators, etc.;
2. Cooperating to increase innovation in regional businesses, i.e. projects that directly support small and medium enterprises to unlock their innovation potential while promoting the use of research results to create business opportunities.



For both sub-themes, criteria have been applied to the screened projects leading to an initial profile of the projects, which are further explored in the next phase, and that take into account to the maximum possible extent:

- context analysis (regional, national and European);
- project objectives;
- partner expectations;
- results and achievements generated within the project;
- implementation and exploitation channels;
- means and resources available;
- market conditions and competition;

Once the analysis of the project strategy was outlined and validated the experts carried out a broader benchmark of the project, both against the other projects from the same sub-theme analyzed and the wider range of European and International projects in the field,

The following stage focuses on **developing the final report of the study**, building on the data and early analysis carried out in the previous stage in order to extract conclusions on the added-value, EU and regional relevance of the transnational cooperation and its outputs and finally producing suggestions and recommendations for future action. The main methodological steps are presented below:

**Table 1 - Methodological steps for the study development phase**

1 –	Projects are grouped according to the analysis framework results, i.e. in line with the problem(s) they address;
2 –	For each group the existence or not of an inherent transnational dimension, and the alignment with EC objectives, is analyzed, and whenever relevant, the results compared with ‘good practices’ from regional, national and European level;
3 –	The potential for improvements or modifications in the projects’ approach is reviewed, taking into account as much as possible opinions of stakeholders (partners, SMEs, other beneficiaries or policy makers) and comparing with results achieved in other instruments;
4 –	In view of the results, final answers to the following questions are given: <ul style="list-style-type: none"> <li>• What is the added value of transnational cooperation regarding the theme compared to other available EU funding instruments? How can it be improved?</li> <li>• In how far does transnational cooperation contribute to reaching EU objectives set for the theme in ways that other instruments could not? On which levels? In which ways?</li> <li>• Which actions of the current CENTRAL EUROPE Programme have proven to be relevant and successful for the sub-themes on the territorial level? Which not? Which actions could be considered in the future programme and how could they be better implemented?</li> </ul>

**Stakeholders involved:**

The analysis has involved, in one form or another, 47 stakeholders from the following groups:





Table 2 - Involved stakeholders

S1: Project Lead Partners (regional and local authorities, development agencies, universities and research institutes, chambers of commerce, innovation centres and other relevant actors in the field of innovation, economic development and environment);
S2: Project Partners (same as above, plus private organizations, including also Small and Medium-sized Enterprises);
S3: Final beneficiaries (Companies, and in particular Small and Medium-sized Enterprises, Entrepreneurs and “Would-Be” entrepreneurs, including students and young graduates);
S4: Policy makers in the regions, the Member States and the EU institutions;
S5: Policy implementation agencies and firms, including governmental or regional bodies, business centres, advisors, experts, IP attorneys and consultants;
S6: Joint Technical Secretariat of other programmes.





## 3. Thematic Background

### 3.1 Policy Context

This section introduces the policy context specific to the theme “Technology transfer and business innovation”, in terms of the current EU framework and challenges related to the topic. A definition of theme-specific terms used in the report is included in Annex 2.

***Introduction to the topic, key aspects and challenges:***

Technology transfer (namely towards SMEs) and business innovation are key topics for Europe’s competitiveness and growth. The contribution of enterprises to innovation is crucial, and a dynamic business sector is a key source and channel of technological and non-technological innovation. Smaller companies frequently exploit technological or commercial opportunities which are based on research breakthroughs achieved by academic organizations and bring them to market, contributing to create growth and employment. As such innovation potential of SMEs is naturally at the top of European, national and regional innovation policies’ priorities and a major focus for transnational cooperation activities. However, the global economic crisis immediately had a strong negative impact on innovation worldwide as revealed by OECD figures<sup>4</sup>. Total OECD-area business expenditure on research and development (R&D) declined by a record 4.5% in 2009; it declined across all major OECD R&D spenders except Korea and France. In 2010 the recovery that occurred in some countries did not always imply a return to pre-2009 R&D levels. This pattern, a dip followed by partial recovery, is confirmed by indicators such as patents and trademarks. Among the countries most active in innovation, there is a striking contrast between Sweden and Finland, which have experienced a drop in terms of R&D and patents, and Korea, which has continued its fast, steady expansion.

SMEs seem to have been mostly affected by the reduction of innovation support. The Innovation Union Scoreboard (IUS) 2011<sup>5</sup> shows that while the EU27 has experienced an improvement in its overall innovation performance over the last five years, performance has worsened in the categories “Firm investments” and “Innovators”. A high negative growth rate is in particular observed for non-R&D innovation expenditure and venture capital and, to a lesser extent, for SMEs innovating in-house, SMEs with product or process innovations and sales of new to market and new to firm innovations (see figure below).

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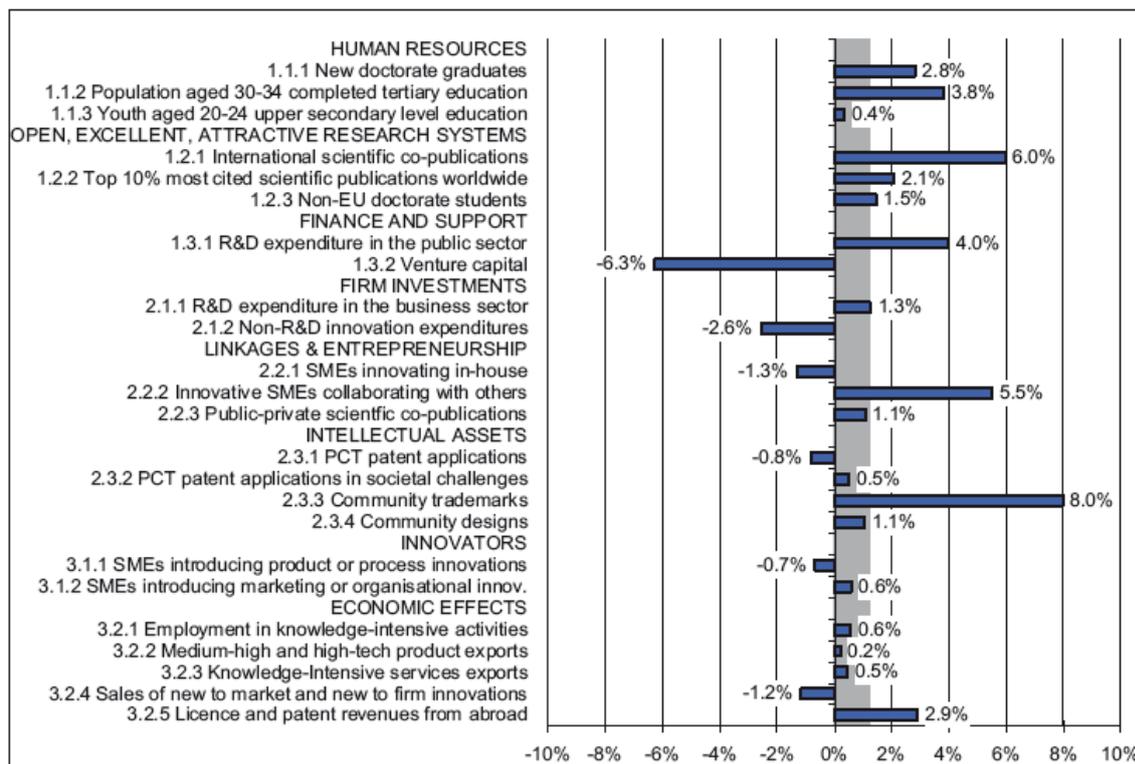
<sup>4</sup> OECD Science, Technology and Industry Outlook 2012, Highlights

<sup>5</sup> Innovation Union Scoreboard 2011, Research and Innovation Union scoreboard, EU 2012



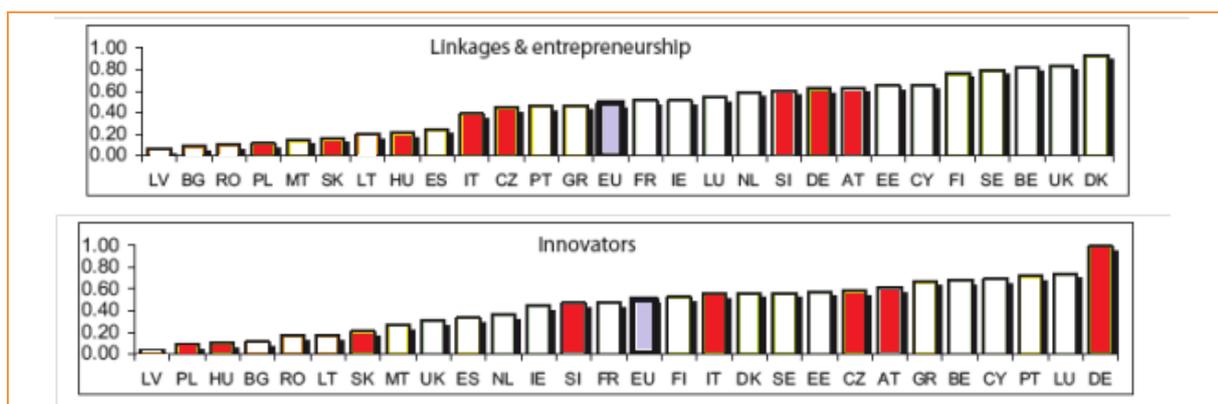


Figure 3 - Comparative Growth in EU-27 innovation indicators



Overall across Europe, the context of innovation potential of firms, and in particular SMEs is still unbalanced. The relative situation between EU countries is best reflected by the results of the IUS 2011 for the categories “Linkages & Entrepreneurship” (that includes the indicators “SMEs innovating in-house”, “Innovative SMEs collaborating with others” and “Public-private scientific co-publications” - thus mainly capturing R&D capabilities of SMEs, including technology transfer capabilities) and “Innovators” (that includes the indicators “SMEs introducing product or process innovation” and “SMEs introducing marketing or organizational innovation” - capturing the capacity of SMEs to introduce innovations in the market, i.e. business innovation), is presented next:

Figure 4 - State of play of innovation capacity of SMEs in EU/CENTRAL EUROPE, based on IUS 2011 results



Within the central European area the situation is particularly unbalanced, as the region includes top ranking countries in both technology transfer and business innovation dimensions, such as Germany and Austria, midrange countries as Italy, Czech Republic and Slovenia, and low scorers such as Poland, Hungary and Slovakia. The regions feature significant differences in the level of economic activities, specialisation of production and services, and their innovation potential in

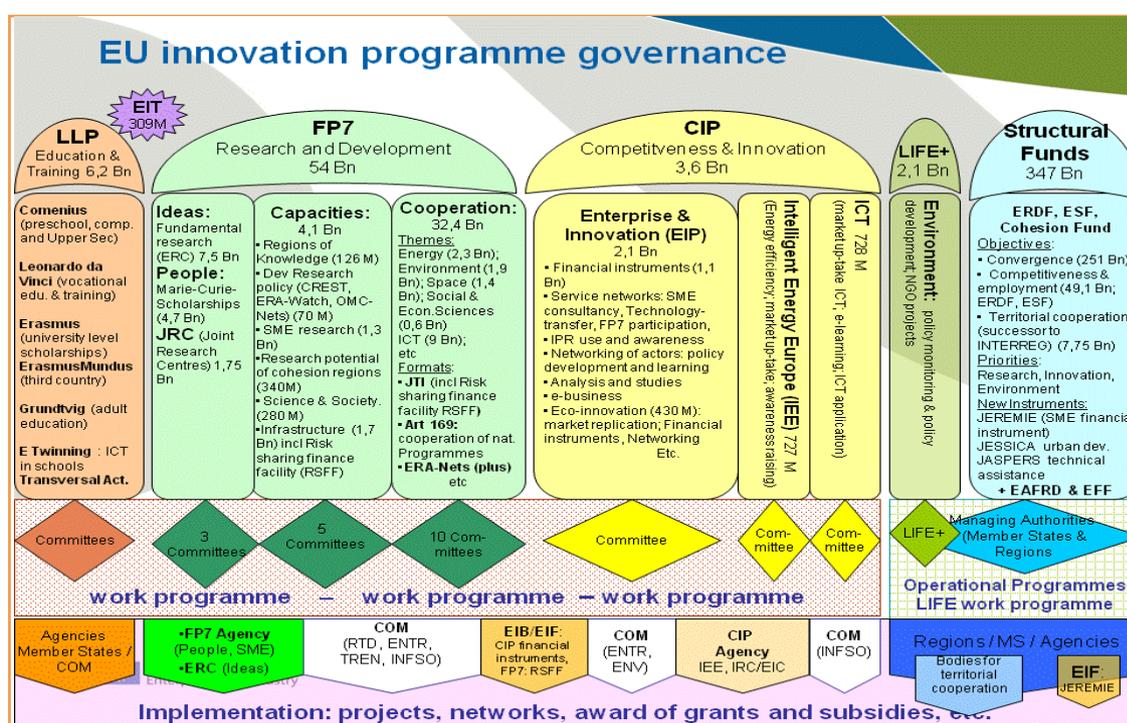


dependence on economic and enterprise structures, production costs and productivity. Besides encompassing some of Europe’s richest regions, central Europe also includes some of Europe’s poorest ones. The difference between those regions is more than tenfold: there are regions like Wien, Oberbayern and Praha with a per capita GDP of over 140% of EU average, while there are others, for instance Lubelskie and Podkarpackie in Poland with 33%. Regions in Ukraine, such as Zarkarpartie and Chernivtsi, are even below 15% of the EU average<sup>6</sup>. This heterogeneous character adds of course additional challenges to the programme in terms of effectiveness and impact of its measures and projects and territorial dimension of transnational cooperation activities.

**Current EU policy framework and overview of support programmes:**

Public funding, and in particular Structural Funds, has traditionally been used in Europe to overcome this “innovation gap” amongst regions and enhance SME innovation capacity. But the scenario of public support is very fragmented, as pictured below, and does not make it easy for the traditional SME to use and benefit from such funds.

Figure 5- EU innovation programme landscape



There are 3 main instruments available for addressing innovation, including innovation capacity of SMEs: the Framework Programme for Research & Development (currently FP7), the Competitiveness and Innovation Programme (CIP) (both mainly addressing innovation at firm level) and Structural Funds, including European Territorial Cooperation (ETC), where CENTRAL EUROPE is included, with an emphasis on the territorial dimension of innovation.

FP7 includes several action lines that can broadly be divided into those aimed at improving access to funding for SMEs undertaking research (Research for SMEs and to some extent Risk Sharing Finance Facility, RSFF - which can be compared in a broad sense with the objectives of sub-theme 2 in analysis in this study); those aimed at building greater European coherence amongst research projects in specific technologies (the Joint Technologies Initiatives (JTIs) building on the Technology Platforms); actions aimed at improving research potential at regional level (Regions

<sup>6</sup> CENTRAL EUROPE 2007-2013 Operational Programme, [http://www.central2013.eu/fileadmin/user\\_upload/Downloads/Intranet/OP\\_revision/Operational\\_Programme\\_version\\_2.1.pdf](http://www.central2013.eu/fileadmin/user_upload/Downloads/Intranet/OP_revision/Operational_Programme_version_2.1.pdf)



for Knowledge - soft measures and Research Potential for infrastructure - that can be compared with the objectives of Sub-Theme 1 in the analysis in this study); and finally a set of actions aimed at improved policy design and implementation.

Within the 2007-2013 period, CIP has been designed as a complementary programme to FP7, positioned closer to the market, on the post-research phase. The main tools CIP uses for the support of innovation activities are: Pro-INNO Europe, Europe Innova, Enterprise Europe Network, High Growth and Innovative SME Facility (GIF) (all included in the Entrepreneurship and Innovation Programme, EIP), and three thematic programmes Intelligent Energy Europe (IEE), Eco-innovation and Information and Communication Technologies - Policy Support Programme (ICT-PSP).

Particularly, Pro-INNO Europe and Europe Innova are important cornerstones of the European innovation strategy, as they aim at mobilizing innovation policy makers and intermediaries at all levels, with the view to improving existing innovation support mechanisms in Europe, notably for SMEs, and fostering transnational cooperation. Thus, the two programmes are considered complementary at policy making as well as design level. Pro-INNO is clearly focused on policy learning and experience sharing amongst policy makers at national and regional level, and as such a clear correspondence can be established with the first sub-theme in the analysis in this study, i.e. “Cooperating to build better connections between regional actors”. Pro-INNO has followed during its implementation a bottom-up approach, with the initial funding of a “learning platform” (the Inno Learning Platform, ILP project) through which innovation agencies have been mobilized to participate and define the future areas for funding, leading to 3 new calls for funding 3 projects in the fields of support to SMEs (the Inno Partnering Forum), clusters (TACTICS) and innovation in services (EPSIS). Due to its focus on policy support and infrastructure, also the CIP programme ICT-PSP corresponds to sub-theme 1.

As for Europe Innova it is focused on cooperation between innovation professionals for the development and testing of new tools and instruments in support of innovation with the view to help innovative enterprises innovate faster and better. As such it corresponds quite directly to the second sub-theme in the analysis in this study, i.e. “Cooperating to increase innovation in regional businesses”, but also IEE and Eco-Innovation programmes correspond better to this area. As regards the other CIP main initiatives, the Enterprise Europe Network offers a 'one-stop shop' to meet all the information needs of SMEs and companies in Europe, while the High Growth and Innovative SME Facility (GIF) invests in specialized funds, which provide venture capital for SME financing. The GIF is funded by the CIP but managed by the European Investment Fund (EIF) on behalf of the Commission. The GIF's objective is to improve access to finance for the start-up and growth of SMEs, and investment in innovation activities, including eco-innovation.

The **EU Cohesion Policy** for the period 2007-2013 is implemented via the European Regional Development Fund (ERDF) and the European Social Fund (ESF), which both offer investments directly relevant to innovation since they both consider that for the promotion of sustainable development and strengthening of competitiveness it is essential to concentrate resources on research, technological development and innovation (RTDI), entrepreneurship, information society, training and adaptability of workers. The main programming tools utilized by the Structural Funds for the support of innovation are: European Regional Development Fund, European Social Fund, European Territorial Cooperation objective (where CENTRAL EUROPE is included, but also programmes such as INTERREG IVC and URBACT), the Joint European Resources for Micro to Medium Enterprises (Jeremie) and the Regions for Economic Change initiative.

According to the Evaluation of Cohesion Policy<sup>7</sup> the main change from the previous period is the increased weight given to R&D and innovation, which reflects the emphasis put on the pursuit of the Lisbon and afterwards the Europe 2020 strategy objectives. However, the economic recession

<sup>7</sup> European Commission, ‘Evaluation network delivering policy analysis on the performance of Cohesion policy 2007-2013 -Synthesis of national reports 2010’, December 2010



affected the implementation of programmes funded by the Structural Funds in most Member States. Specifically, at the end of 2009, three years into the programming period, eligible expenditures to be co-financed from the ERDF and Cohesion Fund amounted to just 7% of the total amount of funding available for the period 2007-2013. In what refers specifically to ETC, however, the level of expenditure is much higher and in particular in the CENTRAL EUROPE Programme by the end of 2012, 100% of the available budget of 231 Million € was already allocated. In all ETC programmes there is a large oversubscription in all calls for proposals which demonstrates the popularity of the mechanisms amongst stakeholders.

***Main policy trends for the 2014 - 2020 period:***

Europe 2020 is the European Union's growth strategy for the 2014-2020 forthcoming period. More than just overcoming the crisis which continues to afflict European economies, this strategy aims to address the shortcomings of Europe's growth model and creating the conditions for a different type of growth that is smarter, more sustainable and more inclusive. To render this more tangible, five key targets have been set for the EU to achieve by the end of the decade. These cover employment; education; research and innovation; social inclusion and poverty reduction; and climate/energy. The strategy also includes seven 'flagship initiatives' providing a framework through which the EU and national authorities mutually reinforce their efforts in areas supporting the Europe 2020 priorities such as innovation, the digital economy, employment, youth, industrial policy, poverty, and resource efficiency. As regards innovation, for the 2014-2020 period, is its expected that most of the current dispersed activities at EU level will be concentrated on the new **Horizon 2020** programme, that merges FP7 and CIP in a new programme with a budget in excess of 70 Billion Euro, which should also improve the complementarity and synergy with new **Cohesion and Structural Funds Policy** for the same period.

Horizon 2020 will focus on tackling major societal challenges, maximizing the competitiveness impact of research and innovation and raising and spreading levels of excellence in the research base, while Cohesion Policy will focus on galvanizing smart specialization that will act as a capacity building instrument, based on learning mechanisms and the creation of critical skills in regions and Member States. "Strengthening research, technological development and innovation" is the first of the 11 thematic objectives defined within Cohesion Policy for 2014-2020 in order to deliver Europe 2020 objectives, and "Enhancing the competitiveness of small and medium-sized enterprises" is the third. A European 'model' of development based on smart specialization, as pursued by cohesion policies and by European Territorial Cooperation programmes in particular, should emphasize the innovation and entrepreneurial opportunities available via the mobilization and energizing of the specific clusters, networks, and private-public partnerships in each region. Smart specialization, shall provide a new growth perspective for the EU by mobilizing the innovation dynamics of the regions and fostering new growth through structural change, in benefit of companies and in particular SMEs. The same path is already visible in initiatives launched recently by the European Commission, such as the call launched in March 2012 by DG Enterprise for "Clusters and entrepreneurship in support of emerging industries", with the goal to support regions to adapt and change their industrial structures to unlock the potential of clusters and entrepreneurship for regional economic development and for addressing societal challenges such as reducing CO2 emissions, improving resource efficiency and environmental protection. Through these projects it is expected to provide direct support to the development of more fertile environments in which SMEs can combine creativity with the use of new technologies and more resource efficient solutions, leading to new business opportunities and to smarter and more sustainable growth.





**An analysis of the added value of CENTRAL EUROPE Programme in relation to other initiatives:**

The table below summarizes the most relevant programmes and initiatives at European level in relation to the two sub-themes considered for the analysis of “Technology transfer and business innovation” of the CENTRAL EUROPE Programme.

**Table 3 - Relevant benchmarks at EU level**

CE Sub-themes	FP7	CIP	Cohesion Policy
Sub-theme 1: Cooperating to build better connections between regional actors	Regions of Knowledge (RoK) Research Potential for Infrastructure	Pro-INNO ICT-PSP EEN	ETC (I4C, URBACT)
Sub-Theme 2: Cooperating to increase innovation in regional businesses	Cooperation programme Research for SMEs RSFF	Europe Innova IEE Eco-Innovation EEN	Jeremie

It is clear from the above table that both sub-themes considered are largely covered at European level by other programmes and initiatives, which may raise the question of the added-value of this (and similar programmes) in relation to broader programmes with the same objectives such as FP7 and CIP (that as said above will be merged into an even broader programme, Horizon 2020, for the 2014-2020 period). However, there is a clear distinction, since programmes such as FP7 and CIP mainly addressed innovation at firm level, while CENTRAL EUROPE addresses the territorial dimension of innovation.

Also transnational cooperation programmes such as CENTRAL EUROPE include distinctive features that indeed provide them with added-value in relation to other European level programmes:

- While keeping a regional focus they are by definition transnational, with each project composed by a consortium of partners from different countries which allows to explore an outward dimension of enhancing trans-regional connectivity across borders to achieve critical mass, synergies, complementarities and spill-overs in specific sectors or cross-sectoral areas of economic opportunity (trans-regional approach to local/regional problems); by doing so CENTRAL EUROPE projects contribute to enhance the competitiveness of the regions they address through fostering of local economies, in line with the objectives defined for the Territorial Agenda of the European Union 2020<sup>8</sup>;
- They are open to all public and private actors, allowing to join policy makers and funding organisations with public knowledge providers and intermediary organizations enhancing intra-regional connectivity through complementary triple-helix cooperation (government, research, and, partly, private businesses - that while subject to limitations in most ETC programmes, are allowed in CENTRAL EUROPE and represent ca. 18% of all project partners - in the 'entrepreneurial discovery' of new growth opportunities (complementary participation);

<sup>8</sup> “Territorial Agenda of the European Union 2020 Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions” agreed at the Informal Ministerial Meeting of Ministers responsible for Spatial Planning and Territorial Development, 2011, Gödöllő (HU), [www.eu2011.hu/files/bveu/documents/TA2020.pdf](http://www.eu2011.hu/files/bveu/documents/TA2020.pdf)



- They are quite flexible in terms of approaches, methodologies and focus of projects, leaving ample room of manoeuvre for the experimentation of new channels, methods and tools, in particular with a transnational component (experimentation character).

Such differentiation aspects constitute the basis for the selection of good practices and success cases that is performed in section 4. The following sub-section further extends the criteria for these Good Practices in terms of expected results.

### 3.2 Operational Framework

Having identified the main characteristics of CENTRAL EUROPE projects that justify their added-value in comparison to other EU level initiatives (and that will be identified in specific projects along Section 4.) it is now important to frame their alignment with operational objectives in terms of impact and results for final beneficiaries.

In order to be considered as a Good Practice, it is not sufficient for a CENTRAL EUROPE project to demonstrate its added-value in terms of approach, partnership and focus (which are in fact selection criteria for the approval of projects, and that as such all funded projects should share), it is also important that implemented measures are relevant for achieving the objectives in terms of the two sub-themes identified, i.e. “Cooperating to build better connections between regional actors” and “Cooperating to increase innovation in regional businesses”. This implies that for each sub-theme, measures and actions are well aligned with the main trends and barriers to innovation in Europe, and respective benchmarks and good practices, which are reviewed next.

#### ***Barriers to building better connections between regional actors:***

Sub-theme 1 deals with ways of cooperating to build better connections between regional actors, i.e. projects that improve framework conditions for business cooperation so that companies can become more competitive in a globalised market, e.g. through policy learning and sharing amongst policy makers and implementation actors or through creation of development of infrastructural support, such as technology transfer centres, research facilities, incubators, etc.;

The recent “Feasibility study on new forms of EU support to Member States and Regions to foster SMEs Innovation Capacity” carried out by Innova Europe and the Technopolis Group for DG Enterprise of the European Commission<sup>9</sup> identifies an underlining “learning challenge” which is transversal to all barriers to innovation faced by SMEs. Learning from others and learning from our own success and failures is undisputedly a key element in policy making, and especially so in such a (relatively) new area as framework conditions for innovation and business cooperation, where there are still very few (if any) certain recipes for success.

Implementing effective cooperation and learning processes between regional actors for improving innovation and business support framework poses, according to the cited report, a number of specific challenges / barriers for which examples are provided below, including good practices:

- *Lack of effective benchmarking of existing policies and programmes, including definition of indicators and success / impact criteria for strengthening region own practices;*

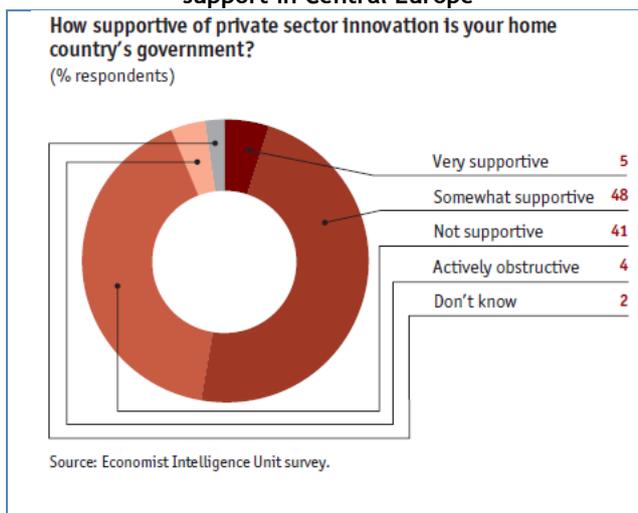
In order to implement better innovation policies, it is first necessary to effectively assess those that are in place and measure its impact against success metrics. This would be the first step of a full policy learning cycle.

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<sup>9</sup> See final report at: <http://www.proinno-europe.eu/inno-partnering-forum/newsroom/commission-explores-new-forms-cooperation-member-states-and-regions-b>



**Figure 6- Level of satisfaction with innovation public support in Central Europe**



At present in the central Europe region, there are few examples of systematic measurement and benchmarking of local policies, but most of the surveys (see figure in the left from The Economist Intelligence Unit's study on "Innovation in Central Eastern Europe"<sup>10</sup>) show that innovation users are not fully satisfied with public support policies. Part of this can be justified by the absence of clear metrics and success indicators. There is room for improvement - starting with formal benchmarking of existing policies and programmes.

Good examples of how to deal with this challenge include Regional Innovation Scoreboards and observatories.

A visible example is the Regional Innovation Scoreboard (RIS) that has been published for 2007 and 2009, including a subset of the indicators used in the IUS and presented the same rankings, now with regions. The same role is also partly accomplished by the ESPON programme, which funded projects to act as observatories addressing the socio-territorial aspects of innovation and return several benchmark and comparative analysis between regions. This is e.g. the case with the POLYCE project<sup>11</sup>- "Metropolisation and Polycentric Development in Central Europe: Evidence Based Strategic Options" that compares the characteristics of the polycentric system on regional and metropolitan level in order to identify competitive and cooperative aspects between the analysed metropolises and offers a set of suitable indicators for benchmarking policies in this area.

- *Weak implementation of formal evaluation / review mechanisms such as peer review or other external review schemes, and overall the adoption of an "evaluation culture" for innovation support;*

This is a problem highlighted all across implementation programmes in all European regions, and not only in central Europe. For central Europe, and especially for the new Member States, this lack of evaluation of innovation support measures is e.g. highlighted in the final country reports of the Expert Evaluation Network delivering policy analysis on the performance of cohesion policy 2007-2013<sup>12</sup>. A relevant role in the review and benchmark of trends in and key features of policies and programmes used by governments to support innovation in the business sector is being performed by OECD, which publishes regular reports on this issue. Its scope, however, is limited by the fact that it is focused only on a small number of top-performing countries, and on macro-economic analysis. While such countries arguably provide the best portfolio of possible measures for benchmark, the lack of a more diversified country range, that takes into account other realities and goes deeper on meso-economic and firm level analysis, could facilitate the assimilation of conclusions by a larger number of EU countries and regions (as a limited focus on top performers could contribute to a "us and them" perception that would push other countries away, instead of attracting them to the benchmarks). It appears therefore wishful to carry out similar benchmarking and review exercises in the central Europe region, with a larger impact analysis, in view of achieving the same objectives stated by the OECD<sup>13</sup> of fostering an "evaluation culture"

<sup>10</sup> [http://graphics.eiu.com/upload/ORACLE\\_INNOVATION.pdf](http://graphics.eiu.com/upload/ORACLE_INNOVATION.pdf)

<sup>11</sup> [http://www.espon.eu/main/Menu\\_Projects/Menu\\_TargetedAnalyses/polyce.html?currentPage=2](http://www.espon.eu/main/Menu_Projects/Menu_TargetedAnalyses/polyce.html?currentPage=2)

<sup>12</sup> [http://ec.europa.eu/regional\\_policy/impact/evaluation/index\\_en.cfm](http://ec.europa.eu/regional_policy/impact/evaluation/index_en.cfm)

<sup>13</sup> "Business Innovation Policies: Selected Country Comparisons, October 2011



amongst EU policy makers and implementation agencies in the region, which for the moment remains “patchy”.

- *Lack of watch mechanisms to identify successful approaches at a global scale and means to disseminate to other parties in order to implement (and adapt, when required) external good practices;*

While the measures above are focused on internal benchmarking and evaluation of local practices, a full policy learning cycle should also include screening and validation of external measures that can be adapted to local contexts through mainstreaming. The CENTRAL EUROPE 2007-2013 Operational Programme<sup>14</sup> already includes the further development of existing innovation systems (R&D infrastructure, transfer of know-how, education facilities) as an opportunity for the area that can only be grasped by identifying relevant measures for implementation. Examples of good practices in this field include “Take-it Up”, a project funded by Europe Innova, which main activity consists in the development and maintenance of a repository (an online database) of “best in class” services and tools for innovation support developed in Europe, which have undergone a process of assessment, improvement and reshaping for the purpose of their better/wider use by innovation intermediaries (through the mini-studies and through the Validation Platform). At a more macro level, the same repository approach is taken by the Inno Policy Trendchart initiative, where a policy monitoring network tracks developments in research and innovation policy measures in 61 countries (including all CENTRAL EUROPE countries with Ukraine) and the information collected is used to run and maintain the European Inventory of Research and Innovation Policy Measures<sup>15</sup>, a common database of INNO Policy TrendChart and ERAWATCH, while it also feeds into analytical reports such as the ‘Innovation Policy Trends’, the ‘Innovation Policy Funding’ and other thematic reports.

- *Weaknesses on access to support and assistance for implementation of external good practices, such as twinning mechanisms (one-to-one) or partnering fora/platforms (one-to-many);*

An important and final step of a learning process consists in the implementation in the field of new programmes and measures as a result from the learning. This is obviously a lengthy and costly process, with high transaction costs, that can be facilitated by assistance (including in-situ) from the learning provider (often from another country) to the recipient, which implies stronger transnational cooperation among innovation agents. The CENTRAL EUROPE 2007-2013 Operational Programme identifies “inefficient transnational cooperation (e.g. due to lack of financial and personnel resources) as a regional weakness, and hence this is an area that deserves special attention. A possibility is the use of joint calls, such as in ERA-NET - here, the motivation to the learning provider comes from the possibility of extending its support programmes to other countries or regions and opening the possibility of participation to its clients, thus increasing the offer both in terms of funding and services (as in this way it becomes possible to fund international cooperation). An older approach to establish a learning environment has been the Innovating Regions in Europe Network (IRE). The IRE included (i) a twinning approach in the context of the projects for ‘Regional Innovation Strategies’ (RIS) in which experienced regions directly supported counterparts in accession countries in the development of strategies and (ii) networking and peer learning among the members of the IRE-network during thematic working groups. The insight from the working groups supported both the development of the current strategies as well as the implementation of the preceding round of projects. All regions in which the development of a RIS was supported became automatically members of the IRE network. Still today, four years after the end of the IRE-/RIS- projects a significantly small network still

<sup>14</sup> [http://www.central2013.eu/fileadmin/user\\_upload/Downloads/Intranet/OP\\_revision/Operational\\_Programme\\_version\\_2.1.pdf](http://www.central2013.eu/fileadmin/user_upload/Downloads/Intranet/OP_revision/Operational_Programme_version_2.1.pdf)

<sup>15</sup> Available at : [http://erawatch.jrc.ec.europa.eu/erawatch/opencms/research\\_and\\_innovation/](http://erawatch.jrc.ec.europa.eu/erawatch/opencms/research_and_innovation/)



maintains contacts under the umbrella of EURADA (European Association of Regional Development Agencies).

Finally, the potential of IT tools and new channels such as social media is also worth exploring in policy learning and joint implementation. The growth of the social networking phenomenon across the Internet - led by social media sites like Facebook, Twitter, YouTube and LinkedIn - has altered the playing field for business of all stripes and moved social networking beyond critical mass. Social media platforms should be considered as digital infrastructures that allow organizations a new kind of networking, while it provides space for new specific services related to innovation support.

***Barriers to increase innovation in regional businesses:***

The second sub-theme deals with forms of cooperation to increase innovation in regional businesses, i.e. projects that directly support small and medium enterprises to unlock their innovation potential while promoting the use of research results to create business opportunities.

Within this “Policy Context” section, it is relevant to assess what is the current state of the art as regards the most common barriers to innovation in small and medium sized firms, as identified in most studies and surveys performed in Europe over the recent years. This will allow setting a first level of analysis framework for the content of the projects under analysis and, in presence of such framework, to identify and select the relevant content for further analysis. In order to do so an extensive literature review has been conducted resulting in the identification of the following main challenges/barriers to raising the business innovation potential of SMEs and that surely must be addressed by projects working in this field.

– *Lack of financial resources for innovation and difficulties in access to finance and innovation project funding:*

This barrier, not surprisingly, appears in all recent surveys and studies as a top concern of European SMEs. This same conclusion has in particular been reached by survey results, such as:

- The European Central Bank Consultation (2011) among 7,532 firms, of which 6,941 had less than 250 employees where “access to finance” was second ranked most pressing problem faced by SMEs in the Euro Area.
- The Public Consultation on the effectiveness of innovation support in Europe (2011) on 1,000 companies (of which a large majority were innovative micro and small enterprises) and 430 innovation intermediaries that found that:
  - Lack of access to finance is viewed by enterprises as the main factor hampering innovation activities.
  - Lack of access to finance is considered by institutional stakeholders as the principal barrier hampering enterprises bringing innovations to the market.

Innovation is a costly affair and companies, and especially SMEs, need to make choices about for which ends to use scarce resources, for which innovation is often in competition with other business functions. The problem is particularly urging in a scenario of economic crisis and shortage of bank loans to industry, as presently faced across Europe, and is a top priority for all national and regional actors involved in innovation support. In the central Europe region the problem is further aggravated by the strong differences among regions due to selective flow of foreign direct investments<sup>16</sup>.

– *Shortages in skills to manage innovation, intellectual property and knowledge:*

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<sup>16</sup> CENTRAL EUROPE 2007-2013 Operational Programme, SWOT analysis





An adequate supply of skills in the workforce is obviously necessary for conducting innovation activities within SMEs, however managerial skills play a similarly important role in order to properly manage the innovation cycle. And while the proportions of firms identifying innovation skill shortages or inadequacies vary widely over countries and over time, they unanimously rank this barrier in the top 5 of barriers to innovation in SMEs. This has been the case in the following studies from different world regions and was confirmed by the results from the Fourth Community Innovation Survey in Europe that showed that lack of qualified personnel ranked only below the costs of innovation and a perception that innovation involved excessive economic risks, in terms of firm concerns in innovation. It is shown by IMP<sup>3</sup>rove (EC, 2010) that high growth companies have a better functioning innovation management, and that a structured and systematic approach towards managing innovation is a key driver of profitable growth. In a study<sup>17</sup> comparing non-innovative firms - firms that have not introduced new (or significantly improved) products or processes over the recent years - with innovative firms, it is evidenced that those with a history of successful innovation projects, hence having functioning innovation management, are less likely to experience financial constraints in innovation projects. As a consequence there is a pressing need to improve the level of skills in innovation management of SME managers and persons responsible for innovation activities. To successfully achieve this objective, policy makers at all levels - EU, national and regional - must design support measures aimed at providing the latter with the required skills for managing their innovation activities (technical as well as non-technical). While aspects such as “innovation management” and “IT skills” are often covered, other topics such as creativity, human resource managing, IPR and assets management and funding of innovation are much less present.

— *Insufficient marketing of innovation including poor use of public procurement and public markets from the side of SMEs and lack of information and skills to access international markets:*

In high performing companies, best practices of innovation management and marketing management are interlinked and inseparable. These organizations understand that consistent investment and strong implementations of best practice value delivery and innovation programs, brings consistently best performance across the economic cycle. However, most companies do not have the means or the knowledge to adequately market their innovations, in particular towards two essential markets for growth and maturing: public markets (through public procurement) and international markets.

The potential positive impact of innovation public procurement has been pointed out in numerous European level publications or national and regional innovation strategies that also note that public procurement of innovation is a relevant instrument to support innovation in SMEs and suppliers besides their importance in fostering more efficiency in the public sector and providing new solutions to societal challenges:

- The Europe 2020 strategy, the Commission Communication on an Integrated Industrial Policy and the Innovation Union all stress that Member States, regions and the European Commission must take actions to support procurement of innovation and, particularly, “to promote SME access”.
- According to the OECD report on demand-side innovation policies from 2011, public procurement is the most prominent tool to foster demand.
- The Aho’s report (2006) called for developing ‘Lead Markets’ policies where public procurement will be used to drive demand for innovative goods, while at the same time improving the level of public services.

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<sup>17</sup> D’Este, et al. (2009)





- The CENTRAL EUROPE 2007-2013 Operational Programme already highlights “new forms of public-private cooperation” (including innovative public procurement forms) as an opportunity for the development of the regions.

Also internationalization is a source of concern for innovative oriented SMEs. The study “Barriers to internationalization and growth of EU's innovative companies” (DG Enterprise, 2010) points out the results of the CIS-2006 survey, that show that 14.7% of all firms, 18.1% of technological innovator firms and 16.2% of non-technological innovator firms, ranked “lack of information on international markets” as the most relevant barrier to innovation.

— *Lack of internal research and technological capabilities:*

SMEs are increasingly dependent on external sources of technical activity because the process which generates new technologies is becoming more complex. However, before having access to the knowledge held by competencies centres, SMEs need to develop and structure their own capacities. One way to achieve this goal is to hire technically qualified manpower. To keep initiative and technical leadership, they need to strengthen their in-house research facilities, which is a barrier for most SMEs. The vast majority of SMEs does not carry out in-house research due to lack of adequate research and technological capabilities, but many SMEs cannot even outsource it because they are unable to express their research needs. The lack of internal research and technological capabilities, at least at a minimum level, is therefore an important barrier to innovation, as recognized in all the literature. The study “Barriers to internationalization and growth of EU's innovative companies” (DG Enterprise, 2010) showed “lack of technology domain” as one of the top 5 barriers to innovation on firms, being ranked as #1 barrier by 14.2% of all firms, 15.8% of technological innovator firms and 16.7% of non-technological innovator firms.

In the central Europe region, as pointed out in the CENTRAL EUROPE 2007-2013 Operational Programme, this barrier is aggravated by the fact that R&D and high-tech activities are highly concentrated in the core regions (universities, research institutes, R&D intensive enterprises) and firms, especially SMEs, in less favoured regions often suffer from being isolated from the best international R&D networks and research centres developing new technologies. To overcome this barrier there are two main trends: on one side the support to the creation of new internal competences, mainly through the incorporation of new research staff, e.g. through programmes to incentivize the recruitment of PhD by industry; on the other side the support to the creation of own or shared technological facilities in industry, such as labs, certification mechanisms, etc. There are also several measures and good practices to incentivize the cooperation between industries and established scientific and research organizations, but that is analyzed under the barrier “weaknesses in cooperation”.

— *Weaknesses in networking and cooperation with external parties:*

The importance of networking and cooperation with external parties is testified in several survey results that clearly stand out that, for small organisations with limited resources such as SMEs, the use of external skills and knowledge is essential for achieving innovation and competitiveness, especially in more challenging and dynamic areas. This is the conclusion from surveys such as:

- EC consultation of 792 enterprises in 2009 (European Commission, 2009b) (88% having less than 250 employees):
  - 46% indicate they have difficulties in finding partners for innovation
  - 38% indicate they have difficulties accessing knowledge networks and clusters
- McKinsey Global Survey on Innovation (2010) among 2,240 executives around the world: 2<sup>nd</sup> ranked recommendation to improve innovation performance of firms is to encourage collaboration for innovation





Networking and cooperation, and strategic partnerships in general, are expected to have significant effect on the participating organizations as well as on a larger scale. In spite of its potential and demonstrated impact, networking and cooperation is however far from being a natural process to firms, and especially to SMEs. Analysis of replies to the INNOBAROMETER 2009 show that the larger the companies the more likely they were to be engaged in strategic relationships with other companies, research or educational organisations. Therefore we can presume that such strategic partnerships and external collaborations for innovations are not yet common reality among medium and small companies. Typical ways to address this barrier in all CENTRAL EUROPE countries are largely based on the following elements: the clustering of firms in areas of traditional industrial expertise and diffusion of expertise and research results through academy - industry networking (including technology transfer).

This analysis of the main trends and barriers to innovation in Europe, and respective benchmarks and good practices, is used for the development of the analysis framework for the individual CENTRAL EUROPE projects, which is presented in the next section.





## 4. Thematic Achievements

### 4.1 Analysis Framework

The previous section highlights the main barriers to enhanced technology transfer and business innovation in Europe and as such set the framework in terms of relevance - especially in view of extracting recommendations for future developments of the programme - for analysis of the CENTRAL EUROPE projects along the two sub-themes defined.

The first sub-theme (Cooperating to build better connections between regional actors) will encompass the projects whose main focus is on policy learning and sharing and development of infrastructures at the regional level for improvement of framework conditions for business cooperation. This can include networks of regional actors, exchange of good practices or development of infrastructural support, such as technology transfer centres, research facilities, incubators, etc.

In terms of this first sub-theme, CENTRAL EUROPE projects have been analysed in terms of the contributions of the cooperation towards improving SME innovation support in the concerned region(s) through a learning process that enables:

- the improvement of internal practices of partner organisations;
- the adoption of external good practices, from another region, or from another dimension (from national to EU level or vice-versa) including, when relevant, the set-up of enhanced infrastructures and systems for innovation support;

Learning from others and learning from own success and failure is undisputedly a key element in policy making, and especially so in such a (relatively) new area as innovation support, where there are still very few (if any) certain recipes for success. Implementing effective learning processes, poses however certain sub-challenges/barriers which need to be assessed, and that will be used as analysis framework for the screened projects:

**Table 4 - Analysis Framework for sub-theme 1 (ST 1): Cooperating to build better connections between regional actors**

A1.1: How do the projects address the benchmarking of existing policies and programmes, including definition of indicators and success/impact criteria?
A1.2: How do projects address the implementation of formal evaluation/review mechanisms such as peer review or other external review schemes, and overall the adoption of an “evaluation culture” for innovation support amongst participants?
A1.3: How do projects implement watch mechanisms to identify successful approaches at a global scale and means to disseminate to other parties?
A1.4: How do projects contribute to support and assistance for implementation of external good practices, such as twinning mechanisms (one-to-one) or partnering fora/platforms (one-to-many)?

Projects falling under this category and having policy learning as their main, or one of the main, focus are analysed with regard to the questions above, bringing out relevant good practice or success stories that represent an added value under these topics and measuring impact achieved as most as possible.

The second sub-theme (Cooperating to increase innovation in regional businesses) will encompass projects that directly support small and medium enterprises to unlock their innovation potential, through intervention (trainings, technical assistance, provision of targeted support or information) or management of incentives (vouchers, venture capital).





In terms of the second sub-theme, the focus is on analysing how effectively the cooperation implemented contributed to overcome the main barriers to innovation faced by SMEs in the concerned regions. Projects falling under sub-theme 2 have been analysed in view of their focus, and impact achieved, towards overcoming one of several of the barriers below, thus unlocking SME's innovation:

**Table 5 - Analysis Framework for sub-theme 2 (ST 2): Cooperating to increase innovation in regional businesses**

A2.1: How do the projects contribute to address the shortage of financial resources and facilitate access to finance of SMEs in the concerned regions?
A2.2: How do projects address the shortage of innovation management skills in SMEs, including Intellectual Property skills, through which measures and with which impact?
A2.3: How do projects contribute to support SMEs in marketing of innovation and internationalization strategies, namely through exploiting public procurement opportunities and other lead markets?
A2.4: How do projects address the lack of internal research skills in SMEs?
A2.5: How do projects contribute to overcome SME weaknesses in networking and co-operation with external partners?

For the individual analysis of the projects, the frameworks above described have been used, with emphasis on one sub-theme or another, depending on the objectives and activities of the project, while some projects are relevant for both sub-themes. The results of the analysis are presented visually, highlighting if the focus of the main activities /outputs of each project has been targeted to a specific barrier/sub-theme or more general towards all the theme topics. The results of this analysis are described in the next sub-section.

**Figure 7- Framework Analysis Grid for Individual Projects**

Project	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	☺	☺	☺	☺	☺	☺	☺	☺	☺
Not in focus	Indicator of focus				☺	☺	☺	☺	☺



## 4.2 Analysis of Individual Projects and Results

The current analysis has focused on the 31 projects approved in the scope of the four standard calls for proposals published within the CENTRAL EUROPE, plus the restricted call for strategic projects. The full list of projects reviewed is presented in Annex 1. It should be highlighted that while the analysis framework has been the same for all projects, these are at very different stages of maturity, depending on the start of their implementation - e.g. projects from call 1 are completed while projects from call 4 have just started implementation. Therefore some projects were analysed on the basis of actual results and outputs and some others only based on the application form, since projects surveyed are from all calls.

This section briefly reviews each of these projects individually, making a first categorization per sub-theme (Sub-theme 1: Cooperating to build better connections between regional actors; Sub-theme 2: Cooperating to increase innovation in regional businesses) and then an overall analysis of content in face of the framework defined in the previous section.

### **ACT CLEAN - Access to Technology and Know-how in Cleaner Production in Central Europe:**

**Aim:** ACT CLEAN focused on the development of a regional network for the provision of assistance to SMEs in areas of eco-innovation, building and disseminating on a portfolio of good practices (the “Clean Production Highlights”) and developing policy recommendations. While the final objective is to improve business innovation in the clean production sector, the focus is clearly on policy learning and set-up of framework conditions.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

ACTCLEAN	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	“CP Highlights”								
Not in focus									

The main added-value of “ACT CLEAN” lies in the database of relevant good practices on clean production technologies (CP Highlights) that have been collected by partners and then disseminated towards SMEs by the established network of “National Contact Points” (NCP Network). In this sense it offers an integrated path for implementation of new, external practices, paving the way for the deployment of concrete support measures (that would partially take place within the scope of a follow-up project by the same partnership, PRESOURCE, approved within the 4<sup>th</sup> call, with a focus on the related topic of resource efficiency).

### **CENTROPE Capacity:**

**Aim:** The CENTROPE Capacity project has carried out a detailed strategic-economic analysis of the CENTROPE region, especially having in mind its innovation and growth potential and challenges. The project is focused on governance issues within the region (including the promotion of its business potential) and as such it is clearly focused on policy learning issues (ST1).





*Sub-theme:* ST1 (Cooperating to build better connections between regional actors)

*Analysis:*

CENTROPE Capacity	Sub-Theme 1				Sub-Theme2			
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities
Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Focus report Innovation						
Not in focus								

CENTROPE Capacity brings relevant data about the CENTROPE region’s potential, including a benchmarking of the region in terms of innovation indicators in the “Focus report on R&D and innovation”, with an emphasis on specific sectors with a potential to enhance local competitiveness (life sciences, renewable energies, and automotive industry). It also maps the regional actors and initiatives for developing future transnational cooperation activities in areas such as energy, the automotive sector or the promotion of entrepreneurship (the CENTROPE alliances). These results constitute valuable tools for policy makers and represent a starting point for new, future policy initiatives such as a concrete evaluation of existing schemes or implementation or new ones, which are outside the scope of this project.

**centrope\_tt: Tools for Transnational Innovation Support in Centrope:**

**Aim:** centrope\_tt is clearly aimed at providing direct support to innovation in businesses (ST2), with a focus on innovation support to SMEs and including innovative measures such as the “centrope\_tt voucher”, a Europe-wide innovation since for the first time such an innovation cheque was implemented in a transnational region, and the “centrope\_tt Academy” where for the first time the already existing ECQA-certification<sup>18</sup> was adopted on a training with transnational content.

*Sub-theme:* ST2 (Cooperating to increase innovation in regional businesses)

*Analysis:*

centrope_tt	Sub-Theme 1				Sub-Theme2			
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities
Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		centrope_tt Academy				centrope_tt voucher		
Not in focus								

centrope\_tt main activities include, in addition to the creation of a web-based *centrope\_tt database* with more than 1.500 profiles of R&D providers in the CENTROPE region (which is more framework conditions) a number of transnational implementation measures aimed directly to

<sup>18</sup> European Certification and Quality Association, more info on [www.ecqa.org](http://www.ecqa.org)



businesses such as the *centrope\_tt Academy* which offers EU certification as "Transnational RTI Manager" and the development and testing of a transnational cooperation scheme for cooperation between enterprises and R&D providers, the so called "*centrope\_tt Innovation Voucher*", which allows SMEs to enter in cooperation with service provider organizations from another country for a service contract of up to 5,000 Euro. Such projects can also have impact at the level of internationalization of SMEs, as they allow (through transnational cooperation/support only possible via ETC) to break the "vicious circle" of local (national/regional) support schemes that often confines SMEs to local markets only and limited growth (focus on domestic markets → lack of (great scale) resources → application to national voucher mechanisms → confinement to local network partners → focus on domestic markets). Furthermore the project implemented a high number of activities of more general dissemination level targeted at connecting closer different actors of the CENTROPE innovation systems: publications, cooperation events, XING platform or panel discussions. The project is presented as a case study at the end of this section.

**CERIM - Central Europe Research to Innovation Models:**

**Aim:** The CERIM project is focused on the self-assessment and exchange of processes on technology transfer practices and on the assessment of internal research results from a network of research and technology transfer organisations. It aims at improving the technology transfer framework in the addressed regions through building the capacity on the side of the research offer.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

CERIM	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Bench-marking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus			Self-assessment Tool (SAT)						
Not in focus									

CERIM's main focus is on the Self-assessment of research/technology transfer (TT) organizations through a specific tool (Self-Assessment Tool, SAT) that allows TT organizations to assess their capacity and to encourage organisational change for improving current practices and structures as well as organisational and managerial effectiveness. The tool has been developed by a private company (partner in the project) and used by the partners during project implementation. However, its access beyond the end of the project is limited to external users, as it is a commercial tool that needs to be bought. A set of additional tools (handbooks, guidelines) have been developed for facilitating the subsequent improvement of local processes and facilitate its eventual transfer and use by other intermediate organizations.

**FREE - From Research to Enterprise:**

**Aim:** FREE is focused on the development of a repository of regional research offers, the R&D Yellow Pages, set up in the form of a website with a multifunctional search tool. This online database allows visitors to browse in three categories: research organisations, technologies and services, and innovation mediators. A network of innovation mediators, trained through the project, should contribute to proactively facilitate the transfer of such





research results to companies. The focus is on policy learning and sharing and set up of infrastructure.

*Sub-theme:* ST1 (Cooperating to build better connections between regional actors)

*Analysis:*

FREE	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	R&D Yellow Pages		Network of innovation mediators						
Not in focus									

FREE aims to improve the technology transfer framework by improving the availability of and access to information on research results (the “R&D Yellow Pages”) and capacitating a large, informal, network of innovation mediators to support the transfer process. The innovation mediators have a generalist character, without a specialization focus, and their intervention is limited to the duration of the project. The two main outputs of the project (R&D Yellow Pages and Network), together make a coherent and integrated strategy for the implementation of new, external innovation practices which should be followed by concrete support measures towards SMEs.

**13SME: Introducing Innovation Inside SMEs:**

*Aim:* 13SME’s main goal was to establish a network of facilitators addressing SMEs (through visits and trainings) in order to identify innovation good practices which could be disseminated and shared with other regions. The focus is clearly on policy sharing.

*Sub-theme:* ST1 (Cooperating to build better connections between regional actors)

*Analysis:*

13SME	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	Local Network of facilitators		International Network of facilitators						
Not in focus									

13SME seeks to identify and benchmark local success cases through a local network of facilitators visiting and assessing local companies, and then share these practices with companies in other regions through the link of the different national networks into an international network. The sharing and transfer of good practices is done mainly through decentralized one-to-one direct assistance, as opposed to centralized provision of information (e.g. via databases and websites). This approaches favours networking and promotes bilateral contacts which may be fruitful when



both parts are motivated, but increases sustainability issues and makes measurement of success more difficult, due to the absence of a tangible infrastructure.

**CNCB: Cluster and Network Cooperation for Business success in Central Europe:**

**Aim:** The goal of the CNCB project is to help clusters and cluster managers to improve their management skills in order to optimize their resources and to find new development and cooperation opportunities in central Europe. CNCB’s approach to cluster management focuses on three pillars i.e.: cluster manager training (through the development of curricula and implementation of training sessions), cluster optimization and cluster internationalization. The approach is well fitted with sub-theme 2 (ST2).

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

CNCB	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Bench-marking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Cluster Management / Optimization training activities					Cluster internationalization survey		
Not in focus									

CNCB puts together a set of actions directly targeted mainly at cluster management organizations and cluster collaborative partners, aiming at the enhancement of innovation management skills (management and optimization areas) and internationalization of clusters. Six clusters were selected outside the partnership for concrete pilot actions, participating in the project as cooperation partners. Three of them have started the activities for optimisation, guided by project partners and external experts, in the pre-defined areas of optimisation to identify gaps and potentials for improvement. The other three clusters were selected as suitable cooperation partners who dispose of the necessary maturity level, organizational structure and general cluster strategy (among other factors) to be “internationalized”.

**FLAME: Future Laboratory for the Diffusion and Application of Innovation in Materials Science and Engineering:**

**Aim:** FLAME is working on the training of facilitators and development of “future labs” to foster concrete collaboration between actors from business and science with different aims such as bringing products to market, integrating innovations into SME value chains, commercialization of products/innovation, and exchange of know-how. The focus is clearly on policy sharing and creation of infrastructure (ST1).

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

FLAME	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Bench-marking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					



In focus	Local Good Practices				Facilitating coaches, MS&E future labs			
Not in focus								

FLAME is seeking to improve the business innovation framework in the specific topic of materials engineering, by reviewing and identifying local good practices in this field (and setting up a repository), qualifying and training regional facilitation coaches to assist SMEs and setting up assistance centres for SMEs (the “Materials Sciences & Engineering, MS&E Labs”). The project builds strongly on existing competences, knowledge and activities of partners (as opposed to external practices) adding a transnational dimension as a way to further enhance their service offer and improve their capacity to assist local SMEs.

**IDEA: Innovative Development of European Areas by Fostering Transnational Knowledge Development:**

**Aim:** IDEA is a project with an emphasis on policy learning (ST1) for safeguarding human capital for the innovation process, with an approach focused on identifying, sharing and implementing good practices. The main output will be a strategy to secure the human capital in the different regions for the innovation process.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

IDEA	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Bench-marking / Definition of success	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	Local Analysis & Good Practices								
Not in focus									

IDEA is focused on policy learning, following a typical approach of analysis of local situations in the different regions involved (in this case on the topic of matching of Human Resources profiles between university offer and SME/industry needs), identification of good practices and dissemination through the project network. According to the proposal, the local analysis is carried out also by peer review schemes. The project focuses on all levels of education: secondary, tertiary, vocational, and their relation to industry were tackled in the pilot actions and results elaborated in the final strategy. Results should be used to address innovation needs of SMEs in terms of qualified staff and the main novelty lies in the use of YouTube videos for the dissemination of the “Trainee of the Day” measure within the Styria region by the Austrian partner, which is a good example of using a new platform to reach a wider audience.

**CLUSTERS-CORD: Clusters & Coordination for Regional Development in Central Europe:**

**Aim:** CLUSTERS-CORD’s main focus is on exchange of know-how and experiences on cluster management amongst regional partners involved in the project, which places it more in line with ST1 on policy learning issue. But the project also includes an integrated approach to implementation of the results of this learning process for the benefit of clusters, focused on support to internationalization of clusters, which fits into the sub-theme of



cooperating to increase innovation in regional businesses (ST2). As such CLUSTERS-CORD can be assessed as a “blended” project including aspects of both ST1 and ST2.

*Sub-theme:* ST1 (Cooperating to build better connections between regional actors) and ST2 (Cooperating to increase innovation in regional businesses)

*Analysis:*

Clusters-Cord	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	●	Meta-clusters concept	●	Study visits	●	E-learning training	●	Promotion of regional cooperation projects	●
Not in focus					●	●		●	●

CLUSTERS-CORD`s main aim is to create an enhanced framework for cooperation amongst clusters, paving the way for a greater internationalization of their activities. The applied approach includes elements of a “full learning cycle” with activities both at the level of local assessment and for implementation of new, external practices. At local level, it sets clear defined benchmarking targets (the meta-clusters - which would benefit from more detailed success indicators, e.g. at the level of increase in internationalization) and conducts a review of the state of play of the current main clusters in the regions. Meta-clusters were identified in the following five sectors, identified as the most promising ones for the addressed regions: information & communication technologies, food, energy and environment, tourism and health. At external level it carries out study visits to incorporate practices from other clusters (albeit not extended to clusters outside the addressed regions) and moves further to concrete implementation activities: e-learning training mechanisms for cluster managers on internationalization, and fostering of cooperation and networking among cluster members (in particular SMEs) through the promotion of regional cooperation projects with R&D institutions, resulting in six companies introducing newly developed products within regional cooperation projects. The project is a good example that within a project cycle of 36 months it is possible to combine policy learning with implementation actions, and is further detailed as a case study in this report.

**ACCESS: Accelerating Regional Competitiveness and sector based excellence through innovation management tools:**

*Aim:* The project ACCESS is focused on a policy learning process on the topic of tools and techniques of regional innovation management that might be useful to improve innovation capacities of SMEs. As such it is mainly framed within Sub-Theme 1 (ST1). But subsequent to this phase the project also directly addresses SMEs through the organization of training sessions on innovation management issues (within Sub-Theme 2) - as such this can be assessed as a blended project.

*Sub-theme:* ST1 (Cooperating to build better connections between regional actors) and ST2 (Cooperating to increase innovation in regional businesses)

*Analysis:*



Access	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Peer-review of sector-based potentials				Training curricula and local trainings			
Not in focus									

ACCESS aims at improving tools and techniques on innovation management in three innovation-intensive fields: biotech, mechatronics and agro food. It does so mainly by carrying out peer-reviews of best practices (knowledge audits - but with limited SME/private organizations involvement), which will later be used to develop training curricula on innovation management. The trained experts emerging from the course should become able to make recommendations to policy makers on how to support innovation systems (as part of the policy learning aspect). At a later stage of the project, pilot training actions built on the developed curricula have been organized in one region (Slovenia) towards local SMEs. Three pilots were carried out (in the fields mentioned above) where the tools and strategic plans were tested.

**C-PLUS: Implementing World-Class Clusters in central Europe:**

**Aim:** As it is clear from the title the aim of C-PLUS is the improvement of cluster policies and practices in central Europe, which is mainly addressed through a benchmarking exercise of cluster policies and cluster management practices (ST1).

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

C-PLUS	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	Benchmarking of regional cluster policies and practices				"Clusters Managers Club"				
Not in focus									

C-PLUS aims at benchmarking the best policies on cluster management in central Europe in order to propose new, enhanced policies and disseminate them to cluster management organizations through training actions and networking. The main focus of deliverables so far has been on the benchmarking of current policies and practices resulting in information that can be valuable for policy makers and for future projects with a focus on implementation. The project has also surveyed the SMEs of the clusters addressed by means of local mapping meetings and questionnaires, in order to analyse their level of innovation and identify the potential innovation leaders. Through European Awareness Workshops future visions were elaborated which paved the way to the Local Action Plan and the Transnational Action Plan (TAP) for world class cluster development. The TAP is finally tested in 6 pilot actions, with the help of a cluster manager.



Cluster managers are networked through the “Clusters Managers Club” which is considered a good idea of a (transnational and ICT based) forum for sharing of good practices.

**AUTONET: Transnational Network of Leading Automotive Regions in Central Europe:**

**Aim:** AutoNet aims to create a (permanent) network of business support organisations for the automotive sectors, and while it incorporates policy learning issues (ST1) - through the identification and transfer of services offered by business support actors, in many cases clusters, supporting innovation in the companies from the automotive sector - the main focus is on the deployment of match-making events and actions for the industry (ST2). Its main added-value is therefore clearly in Sub-Theme 2 (ST2) and in the direct support it may provide to businesses from the automotive sector, mainly in internationalization activities (sometimes related to internationalization of innovation) through matchmaking events.

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

AUTONET	Sub-Theme 1				Sub-Theme 2				
	Improving existing local practices / frameworks		implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus				Matchmaking events / database					
Not in focus					☺	☺		☺	☺

AUTONET’s most visible added-value service in terms of business support is the matchmaking events, where internationalization of automotive sector companies is promoted. AUTONET proposes transnational matchmaking opportunities by realizing thematic matchmaking events in each addressed region and by the development of a matchmaking database. As the “matchmaking” activities are a starting point for further cooperation and internationalization, follow-up of the opportunities generated in this event is key for the impact of the project, and calls for some type of structured, permanent support.

**CEBBIS: Central Europe Branch Based Innovation Support:**

**Aim:** The focus of this project is to benchmark and enhance technology transfer support through innovation intermediates, with an emphasis on the sharing of good practices amongst regional partners directly involved in the project. Within this component, the project is mainly a policy learning process (ST1). But within its pilot actions the project also directly addresses and serves SMEs, in line with Sub-Theme 2, thus appearing as a “blended” project.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors) and ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**



CEBBIS	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	Bench- marking of local TT practices					BDO network and activities			
Not in focus									

CEBBIS aims at capacity building of its partners (intermediate organizations) through a process of policy learning and sharing focused on technology transfer support for the ICT sector. The main output is a new model of technology transfer support that builds on the benchmark of the partners' good practices in this regard and becomes a policy instrument for enhancing the partners' activities towards local SMEs. A second output is the network of partners itself, which is expected to evolve from an informal network towards a sustainable "Business Development Organization (BDO)" network, through the process of mutual learning from each other's good practices. Pilot activities (documented in a catalogue of "Pro-innovative services") towards end-users, with a focus on addressing SMEs' lack of innovation management skills, but including also provision of technological services as rapid prototyping, have been deployed by some partners reaching some tens of companies. CEBBIS is presented as a case study at the end of this section.

**InnoTrain-IT: Innovation Training IT Central Europe:**

**Aim:** InnoTrain-IT is a focused project with tangible and concrete objectives, aiming at training over 1,000 transnational SMEs on IT Service Management (ITSM), so as to improve innovation management skills (ST2). The transnational dimension of the trainings is enhanced, as opposed to local trainings, in order to cause an impact also on internationalization and transnational cooperation of SMEs.

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

InnoTrain-IT	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus						ITSM training			
Not in focus									

InnoTrain-IT has a focused and targeted approach, with in-room training sessions towards SMEs complemented by a good use of social media tools such as Facebook, Google+ and Xing. The training programme is addressed at SME managers, including both online and face-to-face training building on real case studies and developed not on a technological perspective but on a business one: the focus is "how to develop the business through innovation building on IT tools". In consecutive one-day sessions companies are lead from the basics to the development of new products and services. The project is developed as a case study at the end of this section.



**Intramed C2C: Innovation transfer in the medical sector from clinics to companies:**

**Aim:** INTRAMED C2C aims to carry out a regional review of technology transfer policies in the field of medical research, so as to enhance the policy framework in this respect. It is as such a project clearly focused on policy learning and sharing issues (ST1).

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

INTRAMED C2C	Sub-Theme 1				Sub-Theme 2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	Local analysis / regional development plans				C2C Network				
Not in focus									

The INTRAMED C2C project is focused on capacity building of its partners in the field of innovation transfer support in the medical sector, through a policy learning and sharing process. As for other projects with similar objectives, where the development of the service capacity of partners is the main aim, the key issue is sustainability of the network, beyond the end of the project. The project started by assessing local contexts and developing regional development plans for each partner. A second important component of the project is the “C2C Network” which builds and expands the project partnership aiming to become a permanent structure for technology cooperation and transfer between R&D institutions and SMEs in the field of clinical and pharmaceutical research, but with limited involvement of SMEs/industry within the scope of the project.

**PROINCOR: Proactive Innovation Support for SMEs in the Corridor from the Baltic to the Mediterranean Sea:**

**Aim:** PROINCOR is mainly a policy learning and sharing project (ST1) focused on the review of SME support policies and innovation measures, with the nuance of being focused on the geographical area defined by the corridor from the Baltic to the Mediterranean Sea. The project also incorporates direct actions (trainings) towards SMEs, thus being considered as a “blended” project, including both ST1 and ST2 components.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors) and ST2 (Cooperating to increase innovation in regional businesses).

**Analysis:**



PROINCOR	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus			Innovation Advisors / Innovation Audits				Training sessions for SMEs	B2B match-making events	
Not in focus									

PROINCOR aims at the enhancement of the SME support framework in central Europe, or more precisely in the Baltic-Mediterranean corridor, through a policy learning and sharing process targeted at SME support organizations. The process will gather good practices through a process of innovation audits in companies (with a focus not on improving SME processes, but on extracting successful examples of policy application and measures for dissemination) conducted by a network of innovation advisors, trained within the project. As such this part of the process falls more into Sub-Theme 1. At a second level, training actions for the audited companies have been held, with the content of trainings directly reflect the main issues identified during the audits in the regional enterprises, but with an emphasis on innovation management issues. This second component of the project is aligned with Sub-Theme 2. A complementary activity of the project, directly targeted towards SMEs and businesses is the organization of B2B meetings in the involved regions. For each meeting, companies from all partner regions are invited and the focus is on matchmaking between companies and development of networking and cooperation opportunities for innovation projects.

**InoPlaCe: Improving of Key Supporting Services for Young Innovators across Central Europe:**

**Aim:** InoPlaCe is focused on the improvement of local services for young innovators /entrepreneurs through policy learning and sharing between regional partners (ST1). At the core of the project is a benchmarking exercise of current practices, which should then contribute to improve services of regional players (the partners).The project addressed objectives in terms of promotion of Entrepreneurship as well as more general objectives of promotion of regional innovation capacities.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

InoPlaCe	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Benchmarking of entrepreneurship GPs							
Not in focus									

The InoPlaCe project is a good practices transfer process, with the support of entrepreneurship (“young innovators”) as the final goal. The core of the project is the process of identifying regional good practices and the learning process is quite informal and mainly regional focused with



no structured process for its transfer/implementation to other regions. The main output of the project will be a repository of local good practices for the promotion of entrepreneurship and support to start-up/young companies (less than 3 years) valuable for policy making in these fields.

**FORT: Fostering continuous research and technology application:**

**Aim:** FORT aims at improving regional innovation systems through exchange of good practice (ST1) and implementation of transnational activities towards SMEs (ST2), addressing a large spectrum of themes from open innovation, to cooperative R&D, to technology transfer, to cluster management, all within an “innovation culture” umbrella, to be promoted by partners.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors) and ST2 (Cooperating to increase innovation in regional businesses).

**Analysis:**

FORT	Sub-Theme 1				Sub-Theme 2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Review of local innovation policies / action plans			Innovation Open House Events and Cross-Innovation Vouchers				
Not in focus									

Under the FORT project, partners are involved in relation to their capacity to influence policy making and are also the main recipients of the policy learning process. The core of the process lies on the benchmarking/review of local measures and the development of local action plans for improving the innovation support context in each partner region. Transnational implementation actions (Vouchers, Open House events for promotion of networking and cooperation) follow at a later stage of the project. At present the initial “Open House” events have already been successfully organized with the aim to bring together SMEs and public research organizations for concrete joint R&D projects and exchange of know-how in order to support open innovation. Participants, selected through a public call had the opportunity to present their business ideas to the expert jury. The best business idea in each region was awarded the cross-innovation voucher which gave the winners the opportunity to realize their innovative ideas in collaboration with one innovative SME or one research organisation in other regions involved in the FORT project or in other EU Member States.

**CentraLab: Central European Living Lab for Territorial Innovation:**

**Aim:** CentraLab addresses policy learning aspects on the topic of living labs (ST1), by enhancing the policy support and infrastructure available to support (transnational) living labs in the concerned regions. The aim is to stimulate the co-development of new applications between different organizations and end-users. The project reviews existent practices and policies and follows-up the implementation of pilot living labs run by partners.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**



CentraLab	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Pilot living labs							
Not in focus					Central European Charter				

CentraLab evaluates real case living labs, set-up prior to the project and running (with different levels of user involvement) in partner organizations and extracts policy lessons for the benefit of the partners and other organizations involved in living labs promotion. It disseminates results via policy briefings and events, as well as through a Central European Charter for the future set-up of a permanent support structure, beyond the end of the project. Main outputs are policy briefing documents and dissemination activities, contributing to policy discussion and making in the topic of living labs in the regions.

**ClusterCOOP: Enhancing Framework Conditions for an effective Transnational Cluster Cooperation in Central European Countries:**

**Aim:** The aim of ClusterCOOP is to improve regional cluster policies through policy learning and the development of action plans including new and enhanced policy measures aligned with funding opportunities (ST1). The project reviews current measures and policies and develops regional action plans for improvement that should take into account existent funding frameworks.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

Cluster COOP	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Review policies, design action plans			Matchmaking roadshow				
Not in focus									

ClusterCOOP involves a typical policy learning process that starts by reviewing policy measures and actions at local level, then sharing results amongst partners and promoting the development of regional actions plans, with an emphasis on feasibility by aligning planned actions with existent funding opportunities. Implementation (of the action plans) is mainly postponed to beyond the project completion but a transnational activity, in the form of a matchmaking road show at seven locations for supporting the establishment of links between clusters from different regions, is foreseen later in the project and can be a kick-off for more direct support actions towards clusters and cluster members.



**NANOFORCE: Nanotechnology for Chemical Enterprises - how to link scientific knowledge to the business in central Europe**

**Aim:** The project aims to improve the support and funding context for the nanotechnologies sector, through policy learning, promotion of research-industry cooperation and stimulation of funding through the development of a mediation platform as well as the development of a business plan for the (future) creation of a (private) venture capital fund of 30 Million Euro, as a way to enhance framework conditions for innovation in the sector (ST1). The project has relevant activities not directly related but very complementary to technology transfer and business innovation, such as the review on existing safety procedures and related legislation in nanotech research at EU (REACH) and national level, regarding the evaluation of nanomaterials in their use and production to achieve an actual framework of regulations currently applied in the central Europe area.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

NANOFORCE	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus									
Not in focus									

NANOFORCE is targeted mostly in the way that it addresses the nanotechnology sector for the chemicals industry, and includes relevant objectives in terms of promotion of research-industry cooperation and technology transfer. While focused on implementation, the main output is a platform for mediation between researchers and venture capital (“nanodeals generator”), strongly dependent on adherence from users. The project is one of the few under analysis to specifically address the bottleneck of funding for the creation of new technological start-ups, from a policy and tool development perspective.

**PLASTiCE: Innovative value chain development for sustainable plastics in central Europe:**

**Aim:** The aim of the project is the development of a network of four National Contact Points for awareness-raising and policy learning (through the development of roadmaps) on the industrial use of biodegradable polymers by industry, and in particular by SMEs. The focus of the project is on capacity building of its partners through policy learning and sharing and enhancement of framework conditions for SME support, as such well fitted into sub-theme 1 (ST1).

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**



PLASTiCE	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus									
Not in focus									

The partners build on their own competences, to be further enhanced by networking, to develop a network of National Contact Points (NCPs) in the four countries involved, that should act as facilitators for the promotion of R&D results towards industry, in the field of biodegradable polymers. The main role of the NCPs will consist in the development of roadmaps in each concerned region for facilitating the industrial use of biodegradable polymers by industry, and in particular by SMEs, from the technological, legislation and business perspectives.

**SMART FRAME: Smart Framework for SME’s focused on Modern Industrial Technologies**

**Aim:** SMART FRAME is targeting the development of a network to support the hi-tech manufacturing industry aiming at a push of technology transfer processes from the demand side. Concrete objectives include improving the companies’ understanding of technology applications and developing quick access information on “technology infrastructure” (R&D providers, labs). While the project is taking the “demand perspective”, the activities and outputs are developed at the side of the offer and targeting primarily intermediate organizations, with a focus on improving framework conditions for innovation (ST1).

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**

SMART FRAME	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus									
Not in focus									

The focus of the project is on improving the capacity of partners (intermediate organizations) to support manufacturing industries. The first and core output of the project is the network of projects, where local services are enhanced by the sharing of knowledge and transfer of good practices, with each partner thus becoming a “know-how hub”. At a second level, partners will engage in the joint development of tools and mechanisms to facilitate technology transfer and cooperative R&D processes towards end-users, further evolving the network offer of services with a transnational layer additional to local services.

**CENILS: Central European Network for knowledge based on Innovative Light Sources:**



**Aim:** The project is focused on the development of a transnational network of universities, laboratories and business entities, allowing a rational development and an effective use of innovative light sources (ILS) in order to establish an offer for industry and more concretely SMEs lacking research capabilities in this technological area (ST2).

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

CENILS	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus				PTG training				ILS research facilities	
Not in focus									

CENILS follows an infrastructural approach, with a strong experimentation character. The project gathers partners with existing or ILS facilities under development, in order to share resources and practices that will maximize its use by industry, and especially from a subset of targets identified at the start of the project (the “Principal Target Group”, PTG). The coverage of this group is essential for the added-value of the project. This group will be trained and assisted by partners in order to promote the use of ILS in industrial applications. The project includes pilot investment in the improvement of ILS facilities of the partners, thus contributing to enrich the innovation framework of the region in a permanent basis. The CENILS project is developed as a case study later in this section.

**Central Community: Emerging communities for collective innovation in central Europe**

**Aim:** Central Community aims to provide support to companies, and mainly SMEs, from the Life Sciences sector through the creation of an ICT operational platform (iCOMMUNITY) for establishing R&D partnerships, thus falling into Sub-Theme 2 (ST2).

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

Central Community	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus								iCommunity	
Not in focus									

Central Community has both a focused approach (on the Life Sciences sector) and a multiplying (one-to-many) coverage through the use of IT tools and social media for assisting SMEs in overcoming weaknesses in networking and cooperation with external (research) organizations,



through the iCommunity platform. While still at an early stage of the development (the project was approved in the 4<sup>th</sup> call) the iCommunity platform can be a good practice of the use of ICT tools for scalability in the provision of support to SMEs.

**PRESOURCE: Promotion of resource efficiency in SMEs in central Europe**

**Aim:** PRESOURCE is in some way the continuation of the ACT CLEAN project, and after a project more focused on policy learning, PRESOURCE is targeting direct assistance to business and in particular to SMEs for eco-innovation, mainly in the renewable energies field and in the resource efficiency issue (ST2).

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

PRE SOURCE	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus			Funding of eco-innovation				In-house capacity assistance		
Not in focus									

PRESOURCE is evolving from policy learning (as done in the ACT CLEAN project) to direct transnational support to SMEs in the field of eco-innovation, through a set of measures that should include support to development of innovation management skills (in-house capacity assistance) and financial support (mechanisms for risk sharing and for financing eco-innovations). The plan is ambitious and with good potential, completing a full learning and implementation cycle with the previous ACT CLEAN project. However, the project (selected in the 4<sup>th</sup> call) is still at a too early stage of implementation to assess its impact.

**WOMEN: Realising a Transnational Strategy against brain-drain of well-educated young women**

**Aim:** The project aims at the establishment of a network for addressing the brain drain of young qualified women, through the analysis of the current situation in target regions and the development of action plans, capitalizing on identified good practices within a classical policy learning approach that falls within Sub-Theme 1 (ST1).

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**



WOMEN	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Analysis, action plans			Training, coaching on demographic management				
Not in focus									

The WOMEN project is focused on dissemination issues, including public campaigns in the addressed regions on the issue of women entrepreneurship and qualification. The project will build on the results of the ESPON project SEMAGRA to further benchmark the concerned regions and develop action plans on the basis of identified good practices. A concerted training of demography managers will be organized in each region, as a way to raise awareness and capacity on the topic of management of women’s brain drain, followed by coaching activities towards companies to help capitalising the gained knowledge in delivering change at company-level.

**ESSENCE: Easy eServices to Shape and Empower SME Networks in central Europe**

**Aim:** The ESSENCE projects aims at improving SME networking capabilities (with clients, suppliers and business partners) by developing and promoting eBusiness, eNetworking and eLogistics services as cornerstones for SMEs competitiveness and economic development.

**Sub-theme:** ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

ESSENCE	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus					eService platform and tools				
Not in focus									

The ESSENCE project aims to promote the concept of Extended Enterprises, aiming at improving innovation and efficiency in SMEs by providing them with the necessary ICT tools for implementing and managing business networks with clients, suppliers and partners. In line with this philosophy, the ESSENCE project will develop: (a) a comprehensive business network management framework covering the needs of the target SMEs by allowing ICT models customization for different operational conditions, (b) an eService platform as management framework serving SMEs with preferred ICT functions for daily business activities, and (c) promote the access to such eServices by a number of SMEs starting from pilot cases to behave as living successful examples. Such framework, tools and platform should become market available tools after the end of the project, in the very competitive and dynamic market of ICT tools for SMEs. As such it is a project with an important component of product development.



**CEEM: Central Environmental and Energy Management as a kit for survival**

**Aim:** The CEEM project is targeted at eco-innovation, and aims to support (through a toolkit to be tested and disseminated within the project) industrial SMEs assessing environmental needs and developing business improvement and innovation activities in this field. This objective is clearly within the scope of Sub-Theme 2 (ST2), support to regional businesses). In parallel also policy learning issues will be addressed, as regional actors will cooperate (regionally in “Territorial Labs” and transnationally in a yearly “Transnational Lab”) in order to harmonize the approaches and promote better coordinated policy measures in the central Europe area in the field of support to eco-innovation.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors) and ST2 (Cooperating to increase innovation in regional businesses)

**Analysis:**

CEEM	Sub-Theme 1				Sub-Theme 2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus	Territorial Labs				Transnational Lab		3EMT tool + ECO Points		
Not in focus									

The main aim of the project is to develop and test an ICT based tool (the 3EMT tool) for self-assessment of environmental performance and energy efficiency of SMEs, in a sample of 500 central European SMEs. The tool should also provide SMEs with strategies and examples (a roadmap) of what the company could do to improve its eco-energy management and eco-efficient production, thus promoting eco-innovation. For this, SMEs will be supported by experts working at “ECO Points”, who will have the task to help SMEs managers in implementing provided suggestions in real actions leading to a concrete improvement of SMEs eco-energy performance. In parallel partners will cooperate with regional/national authorities under five “Territorial Labs”, and between themselves in one yearly “Transnational Lab”, where the environmental and energy issues in industry will be addressed transnationally in order to harmonize the approaches and promote better coordinated policy measures in the central Europe area regarding promotion of environmental and energy issues in industry, and support to eco-innovation.

**CluStrat: Boosting innovation through new cluster concepts in support of emerging issues and cross-sectoral themes (Strategic Project)**

**Aim:** Being approved within the restricted call for strategic projects, the project follows a unique top-down concept as regards both the addressed topic (clusters as a framework to support regional innovation) and the composition of the consortium, which is highly representative of the whole central Europe area. The project has a clear emphasis on policy learning (ST1) and aims to develop and test new policy approaches to upgrade the innovation capacity of clusters.

**Sub-theme:** ST1 (Cooperating to build better connections between regional actors)

**Analysis:**



CluStrat	Sub-Theme 1				Sub-Theme2				
	Improving existing local practices / frameworks		Implementing external / new practices		Access to finance of SMEs	Shortage of innovation management skills	Marketing of innovation	Lack of internal research capabilities	Weaknesses in networking and cooperation
	Benchmarking / Definition of success metrics	Evaluation and review schemes	Watch and screening mechanisms	Tools and methods for implementation					
In focus		Policy Dialogues			Interregional Pilots				
Not in focus	Expert Workshops								

The CluStrat project aims at a full learning cycle approach for the enhancement of public policies regarding clusters. The project has started to benchmark current clusters and to define evolution paths (the “Policy Dialogues” an ongoing process of exchange, discussion and learning which involves cluster policy makers at all levels in the development of new policy approaches and strategy elements), to be followed/complemented by an in-depth assessment of the potentials of clusters related to emerging industries and cross-cutting issues (the “Expert Workshops”). Implementation/experimentation of new policy approaches is supposed to be implemented through regional and especially cross-cluster/interregional pilots, but these are still at a too early stage to assess its added-value. To ensure a full (and sustainable) learning cycle is missing a sustainable watch mechanism, such as e.g. an observatory. The main output of the project will be policy recommendations and a joint action plan for the central Europe area regarding Cluster policies. The project is developed as a case study at the end of this section.



## 4.2 Overview and case studies

The following table summarizes the individual projects review including an indication of the sub-theme, the main added-value aspects and whether they were selected as a case study:

Table 6 - Summary of Individual Project Analysis

Project	Call	Sub-Theme	Added-value	Case-study
ACT CLEAN	1	ST1	External learning cycle (watch and tools for implementation)	
CENTROPE Capacity	1	ST1	Benchmarking of local practices	
centrope_tt	1	ST2	Shortage of innovation management skills/weaknesses in networking	YES
CERIM	1	ST1	Evaluation of local practices	
FREE	1	ST1	External learning cycle (watch and tools for implementation)	
I3SME	1	ST1	Benchmarking of local practices/tools for implementation of new practices	
CNCB	2	ST2	Shortage of innovation management skills/marketing and internationalization of innovation	
FLAME	2	ST1	Evaluation of local practices/tools for implementation of new practices	
IDEA	2	ST1	Evaluation of local practices/tools for implementation of new practices	
CLUSTERS-CORD	2	ST1/ ST2	Full learning cycle with implementation actions (marketing of innovation and lack of research capabilities)	YES
ACCESS	2	ST1/ ST2	Evaluation of local practices with implementation actions towards businesses (shortage of innovation management skills)	
C-PLUS	2	ST1	Benchmarking of local practices/tools for implementation of new practices	
Autonet	2	ST2	Marketing & internationalization of innovation	
CEBBIS	2	ST1/ ST2	Benchmarking of local practices with implementation of actions towards businesses (shortage of innovation management skills)	YES
InnoTrain IT	2	ST2	Shortages of innovation management skills	YES
INTRAMED C2C	2	ST1	Benchmarking of local practices/tools for implementation of new practices	
PROINCOR	2	ST1/ ST2	Evaluation of local practices with implementation of actions towards businesses (shortage of innovation management skills)	
InoPlaCe	3	ST1	Benchmarking of local practices	
FORT	3	ST1/ ST2	Benchmarking of local practices with implementation actions towards businesses (facilitate access to finance and weaknesses in networking)	
CENTRALAB	3	ST1	Evaluation of local practices/tools for implementation of new practices	
CLUSTERCOOP	3	ST1	Benchmarking of local practices/tools for implementation of new practices	
NANOFORCE	3	ST1	Tools for implementation of new practices	
PLASTiCE	3	ST1	Tools for implementation of new practices	



Smart Frame	3	ST1	Evaluation of local practices / tools for implementation of new practices	
CENILS	4	ST2	Shortage of innovation management skills / Lack of internal research capabilities	YES
Central Community	4	ST2	Weaknesses in networking	
PRESOURCE	4	ST2	Facilitate access to finance / Shortage of innovation management skills	
WOMEN	4	ST1	Benchmarking of local practices/ / tools for implementation of new practices	
Essence	4	ST2	Weaknesses in networking	
CEEM	4	ST1/ ST2	Benchmarking of local practices / tools for implementation of new practices and implementation of actions towards businesses (shortage of innovation management skills)	
CluStrat	SP	ST1	Local learning cycle (benchmarking + evaluation) / tools for Implementing new practices	YES

The case studies are presented in the following section.



### **Case study: *centrope\_tt* – Tools for Transnational Innovation Support in Centrope**

#### *The project:*

The *centrope\_tt* project, approved in the first call of the CENTRAL EUROPE Programme, shows that complementary to networking it is possible for innovation agents in different countries to cooperate on facilitating international cooperation among SMEs, through implementing transnational support actions for the benefit of local companies.

The project is also a good example for sustainability of transnational cooperation as cooperation was continued beyond the end of the funded phase. *Centrope\_tt* has been established as an international expert community for technology transfer and innovation support acting in the bordering regions of Austria, Czech Republic, Hungary and Slovakia - called CENTROPE. Following completion of the project in 2012, the network is still active.

#### *How does it work?*

As a support service for SMEs and innovative organizations in the CENTROPE area, *centrope\_tt* has developed its activities along three main axes of activities:



The '*centrope\_tt* Map' has focused on the mapping of regional research competencies and provides online access to a databank with 2,200 R&D institutes in the CENTROPE region, with the aim to facilitate links between businesses and research organizations for technology transfer or cooperative research. The '*centrope\_tt* Academy', including workshops and an e-learning platform, is a service offering training and information for institutes, companies and intermediaries about innovation management and in particular on the funding system for R&D collaborations.

The project has developed two cycles of a transnational training course "transnational RTI manager" with the possibility to receive an EU certificate at the end of the course. And through the '*centrope\_tt* Voucher' the project is directly supporting transnational technological cooperation between SMEs and between businesses and research centres. Altogether, 55 applications were submitted for support within the scheme, of which 34 were positively assessed and realised in the frame of the project, contributing to the achievement of research and technological goals, as well as to the enhancement of international links for SMEs.

#### *The results:*

The project main outputs contribute to the overall aim of interconnecting the innovation systems of the regions concerned. An online database served as basis for the *centrope\_tt* Voucher, in particular for the search for suitable R&D providers. In addition data, knowledge and know-how gathered throughout the project has been used within the *centrope\_tt* Academy. The *centrope\_tt* Academy represents a significant innovation as for the first time the already existing ECQA-certification was adopted in a training with transnational content. Also the *centrope\_tt* Voucher was innovative, with the adoption of this small scale funding instrument to a transnational region. During project implementation 34 innovation checks were issued with a maximum of EUR 5,000 for a transnational cooperation project. E.g. it funded the cooperation between the Czech SME Sobriety s.r.o. that provides services in engineering numerical simulations and the Faculty of Physics of the University of Vienna for a small-scale focused research project that provided Sobriety with a new methodology on measurement of micro- and nanostructured materials. Or between the company Green Energy Technology and Systems GmbH from Austria, which works in the field of production of alternative fuels, and the engineering company Technical Consulting s.r.o. from Bratislava: both collaborated then in a project focused on methanol production out of water and CO<sub>2</sub> by electrolysis. More important than the volume of the relatively small funding offered, these transnational voucher schemes contribute significantly to promote the internationalization of SMEs, facilitating the establishment of links abroad and opening the way to external markets.

*Pictures displayed are from the project website*



***Case study: CLUSTERS-CORD – Clusters & Coordination for Regional Development in central Europe***

*The project:*

Clusters are considered to increase the productivity with which companies can compete, both nationally and globally, and have become one of the pillars of Europe’s innovation policy. Good network and cluster management can help to systematically reduce some of the barriers to innovation and internationalization. There is ample empirical evidence that companies in networks and clusters find it easier to engage in international cooperation.



CLUSTERS-CORD` s focuses on the exchange of know-how and experiences on cluster management amongst regional partners involved in the project in order to strengthen the international cooperation among clusters from the same thematic field but a different geographical origin. The project does so through drafting five strategic cooperation plans which will result in the creation of at least three so called “meta-clusters”.

The project has brought together cluster managers, cluster representatives, as well as relevant decision makers exchanging about the creation of new services and methods as well as potential synergies, in 10 key industries which have been pre-selected for a closer analysis: mobility & logistics; professional services; ICT; automotive & aeronautics; tourism; health sciences; energy & environment; production technologies; wood industries; and food processing.

*How does it work?*

CLUSTERS-CORD` s main aim is to improve the framework for cooperation amongst clusters from different countries, thus paving the way for greater internationalization of their activities. The project starts by setting a clearly defined framework model for cluster internationalization (the meta-clusters) and conducting a review of the state of play of the current main clusters in the regions.

Starting from an initial 10 key industries observed, meta-clusters were identified in five sectors that were considered to be the most promising ones for the regions addressed: information & communication technologies, food, energy and environment, tourism and health. For these sectors, the project has organized study visits in order to incorporate good practices from other clusters and developed e-learning training mechanisms for cluster managers on internationalization. Further support activities have focused on the promotion of cooperation and networking among cluster members (in particular SMEs) through the promotion of regional cooperation projects with R&D institutions, resulting in six companies introducing newly developed products within regional cooperation projects.

*The results:*

CLUSTERS-CORD has promoted the establishment of four meta-clusters through study visits and exchanges, training and coaching activities. During CLUSTERS-CORD project lifetime five exchange forums were held and each brought together different working groups among representatives of the 32 regional clusters involved. These forums were mostly based on their discussion and supported by representatives of professional organizations and project partners. At the end of the project the members of the meta-clusters established signed future cooperation agreements that define the main goals for the future development and set the framework for sustainable cooperation.



*Pictures displayed are from the project website and the CENTRAL EUROPE publication “PORTRAITS” (2013)*



### ***Case study: CEBBIS – Central Europe Branch Based Innovation Support***

#### *The project:*

The CEBBIS project aims at removing bottlenecks in the diffusion and application of innovations to ensure a more efficient access to knowledge. Concretely, it improves the transfer of research results and new technologies to SMEs by intervening mainly at the context level, aiming to enhance cooperation and networking between regional innovation intermediaries, addressing the professionalization and training of staff from intermediaries and thus improving framework conditions for effective innovation support to SMEs.



CEBBIS partners from Austria, Czech Republic, Germany, Hungary, Italy, Poland and Slovenia represent regional and national decision makers, and intermediaries like technology parks, competence centres and business organizations with previous experience in transnational projects and of innovation support to small and medium-sized Enterprises (SMEs).

While the project's main focus is on capacity building of its partners through a process of policy learning and sharing focused on technology transfer support for the ICT sector, the project has also developed direct services to companies and involved SMEs in pilot actions for testing services like rapid prototyping, lean manufacturing or product design (with the purpose of supporting SMEs to develop their innovative ideas).

#### *How does it work?*

CEBBIS has implemented a policy learning process through the initial benchmarking and identification of regional best practices in technology transfer and the establishment of an ICT-based network of innovation intermediaries and of a set of tools for intermediaries to intensify cooperation between business and research.

In a second stage, innovation intermediaries have benefited from the knowledge and tools developed within the project, to deploy enhanced services to local SMEs. Some of these services have clearly benefited from the transnational character of the project and supported network, e.g. the establishment of transnational consortia, involving SMEs from different regions and countries, to apply for European Union funding programmes for research & innovation. Others have focused on local needs, e.g. assistance for rapid prototyping, lean manufacturing or product design issues.

#### *The results:*

The CEBBIS project has contributed actively to the improvement of business support practices of its 11 partners, with an ultimate impact on over one hundred assisted companies in their regions. CEBBIS also directly assisted about 80 SMEs in developing partnerships for research and innovation projects or in addressing technological issues.

A report on barriers for an improved transfer of knowledge between research and industry in each of the seven covered countries has been developed by the project and made available to policy makers and practitioners.

And a catalogue of innovative services (pictured on the right), including the services and ICT tools developed within the project by teams of experts (gathering researchers and consultants around a specific theme), has been published as part of the final outputs, ready to be used by innovation agents across central Europe in their services to local SMEs.



*Pictures displayed are from the project website and the CENTRAL EUROPE publication "PORTRAITS" (2013)*



***Case study: InnoTrain-IT – Innovation Training IT Central Europe***

*The project:*

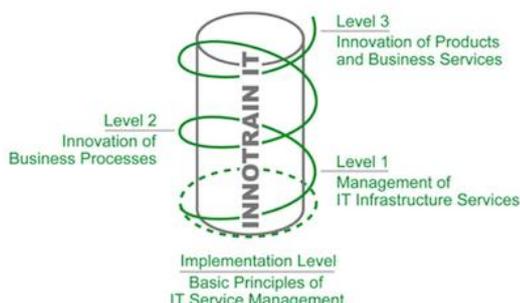
The InnoTrain-IT project builds from a concrete and tangible market demand: the difficulty of firms, and especially small and medium-sized enterprises (SMEs) to deal with the growing complexity of Information Technologies (IT) and match these with business needs.



InnoTrain-IT offers training solutions, both in-room and online, through common methods and tools made available by the 12 project partners across the range of countries covered by the project within the central Europe region that include six countries: Germany, Poland, Czech Republic, Slovakia, Austria and Hungary. During its implementation phase from April 2010 to March 2013 the project addressed 1,000 professionals within SMEs to which knowledge on IT Service Management (ITSM) has been transferred, with the final aim of empowering companies to strengthen the innovation potential of their businesses.

*How does it work?*

The InnoTrain-IT project helps SME to innovate by directly addressing the enhancement of their skills to manage their IT infrastructure and potential. The starting point of the InnoTrain-IT training sessions was to address executive managers of small companies and IT-decision makers of medium-sized companies on the basis of the everyday life challenges they want to solve with IT. Training - mainly relying on case studies - is focused on business needs and not on technology.



Through face to face (F2F) or online trainings with the experts in the partner organizations, companies are lead up the “innovation spiral”, pictured on the left. The initial level at the bottom covers principles of IT service management like the introduction of a service catalogue, a service desk, or an IT service management certification process that should result mainly in efficiency gains. This would be the entry stage for many SMEs attending the project training sessions.

From Level 1 onwards companies enter innovation processes. At level 1, the training content and associated services offered by the project partners to SMEs is focused on possible improvements based on IT Service Management or enables them to use resources which have been released by the usage of ITSM methodology. One example is the outsourcing of IT services that are not-business critical. At the second innovation level enterprises are guided to use free resources to innovate their core business processes through IT tools, from improvements of processes in manufacturing and logistics, innovative changes in internal procedures. This level ends with online stores and B2B platforms to improve the cooperation with customers and suppliers. Finally, within Level 3, companies are trained in using released resources to innovate products and services with the help of IT. One example is the extension of an existent internal service desk and to provide a paid after-sales service to customers.

*The results:*

According to an internal InnoTrain-IT survey, SMEs in central Europe that already use ITSM are up to 20% more efficient and as much as five times more innovative on a business process innovation level - and 2.5 times at product level - than others. With **759** SMEs trained throughout the project in **102 face-to-face trainings** and more than **5,000 participants in several online trainings**, with a high satisfaction ratio of over 70%, the project has provided a solid and measurable support towards business innovation in central Europe, directly contributing to overcome the shortage of innovation management skills in the region core group of small and medium-sized enterprises.

*Pictures displayed are from the project website*



***Case study: CENILS – Central European Network for knowledge based on Innovative Light Sources***

*The project:*

While innovation is not only research, it is certain that research is a necessary source of innovation. And while not all research implies sophisticated and complex laboratorial infrastructure - far beyond the reach of the common small and medium-sized enterprises (SMEs) - some does. Innovative light sources (ILS) are powerful tools for exploring the inner properties of matter, with several applications in different industries. ILS can promote cutting-edge innovation in a twofold way: through their construction and development (which involve state-of-the-art technology), and through the use of the light they generate (for exploring the composition of any kind of material).

The CENILS project specific objective is to create a transnational network of universities, laboratories and business entities, which will promote an effective use and a rational development of ILS by the business sector in the CENTRAL EUROPE Programme area. The project partnership involves public laboratories, universities and research institutions, at the junction between fundamental science (e.g. physics, medicine, biology, chemistry), state-of-the-art technology (e.g. optics, electronics, high-precision mechanics), high-level education and training (both at academic and post-doctoral levels), and business sectors (close link with industries and SMEs, generation of spin-offs and patents).



*How does it work?*

The CENILS project, approved in the 4th and final call of the CENTRAL EUROPE Programme, has started its activities in late 2012 and aims at promoting business innovation in several ways: by promoting SMEs to use research equipment available at institutes hosting ILS, developing collaborative research-industry research projects (at national and transnational level), facilitating technology transfer of research results towards industry and training and qualifying industry staff in ILS technologies. Considering the cutting edge nature of ILS, the focus is on a “Principal Target Group (PTG)” of users, representing a significant sample of the regional organizations and human capital that could take advantage from and benefit to the development and use of innovative light sources (ILS) and that are identified and selected through a survey of the state-of-the-art of ILS in the region carried out close to universities, laboratories and industries active or interested in this field. In order to create the conditions enabling the achievement of these objectives, CENILS is one of few CENTRAL EUROPE projects that are making use of the programme support to infrastructural pilot investments. Of the approximately 1 Million Euro budget of the project, over 220 Thousand Euro will be invested in new ILS equipment and facilities for the central Europe region.

*The results:*

While CENILS is still at an early stage of implementation, it is already possible to extract positive results that demonstrate the well founded of investing in research infrastructures. Since the start of the project in 2012 several PhD positions have been opened at partner organisations and networking with SMEs has been intensified, through specific events or continuous activities. The project goals are those of directly addressing SMEs (an average of 20 SMEs per country belonging to the CENTRAL EUROPE Programme Area), involving them in ILS research activities and promoting innovation in a minimum of 180 firms.

*Pictures displayed are from the CENTRAL EUROPE publication “PORTRAITS” (2013)*



**Case study: CluStrat - Boosting innovation through new cluster concepts in support of emerging issues and cross-sectoral themes (Strategic Project)**

*The project:*

In addition to the four standard calls, one additional, restricted call for “Strategic Projects” was published by the CENTRAL EUROPE Programme in 2010. Unlike the standard calls that followed a traditional bottom-up approach, the methodology for this call was top-down, with a pre-identification of project concepts, topics and potential partners through the programme. The objective was to address areas considered relevant for the development of all the Programme areas. As such, the concept of the innovation project was defined in line with the Europe 2020 strategy for smart, sustainable and inclusive growth and focused on promoting cluster strategies. The selected project CluStrat includes

partners from all nine countries participating in the CENTRAL EUROPE Programme and aims to develop and test new policy approaches to upgrade the innovation capacity of clusters.



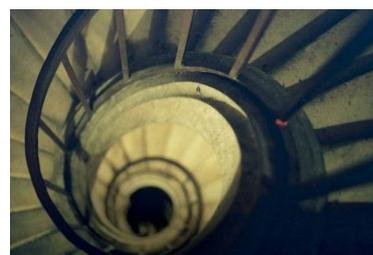
# CLUSTRAT

*How does it work:*

Cluster strategies are at the very core of Europe’s innovation strategies, and are fundamental in achieving scale and critical mass for placing Europe in a front position worldwide in leading edge sectors as in traditional manufacturing sectors. CluStrat seeks to generate new strategic knowledge for innovation and cluster policy makers by exploring the assets and growth potentials of central European regions. The partners test cross-cluster collaboration between traditional and emerging industries clusters and draft policy measures needed to support cross-fertilization between traditional sector clusters and cross-sector technologies & services. In line with the smart specialisation concept, CluStrat looks at the potentials of each project region with a view to selected Emerging Industries, before exploring how the given assets and know-how of different regions can be brought together to enable necessary cross-industry innovations. CluStrat deploys these activities through a process of “Policy Dialogue” involving exchange, discussion and learning among cluster policy makers at all levels in the development of new policy approaches and strategy elements. At the same time, sectoral experts, cluster practitioners and members will be involved in CluStrat for their expertise and hands-on experience contributing through Expert Workshops and cross-cluster/interregional pilots. The aim is to develop policy recommendations and complete a joint action plan for a Cluster Innovation Strategy in central Europe.

*The results:*

CluStrat was initiated in October 2011 and is currently half way through its implementation. A first Transnational Policy Dialogue event on December 2011 in Stuttgart brought together experts from key-enabling technologies and smart specialisation, helping the project partners and policy makers from the respective regions to define their priority areas with regard to the emerging industries and cross-cutting issues. The focus of the project in terms of emerging industries is on active ageing, green economy and sustainable/ intelligent mobility, while favoured cross-cutting issues will be knowledge and technology transfer, internationalization and gender in innovation, including diversity aspects. Presently, policy dialogue is gaining momentum in all regions, leading to the policy recommendations and joint action plan in 2014, which should contribute to shape innovation in central Europe in view of the Europe 2020 challenges.



*Pictures displayed are from the project website and the CENTRAL EUROPE publication “PORTRAITS” (2013)*



## 5. Conclusions and Recommendations

### 5.1 Overview of analysis results and conclusions

This section offers an overview of the aggregated data compiled in the previous section from which conclusions and recommendations are extracted, starting with the balance between Sub-Themes.

#### **Overall aggregated analysis:**

The breakdown of the individual projects (a total of 31 projects) per Sub-Theme for the whole programme and a breakdown per call are presented below:

**Table 7: Breakdown of projects per Sub-Theme**

Topic	N° of projects (% of total projects)
Sub-Theme 1 (Cooperating to build better connections between regional actors)	17 (55%)
Sub-Theme 2 (Cooperating to increase innovation in regional businesses)	8 (26%)
Sub-Theme 1 and Sub-Theme 2 (“Blended” projects)	6 (19%)
	<b>31 (100%)</b>

**Table 8: Balance between Sub-Themes (ST) per call**

Call	ST1	ST2	ST1+ST2	Total
Call 1	5 (83%)	1 (17%)	–	6 (100%)
Call 2	4 (36%)	3 (28%)	4 (36%)	11 (100%)
Call 3	6 (86%)	0 (0%)	1 (14%)	7 (100%)
Call 4	1 (17%)	4 (66%)	1 (17%)	6 (100%)
Strategic Call	1 (100%)	–	–	1 (100%)
	<b>17</b>	<b>8</b>	<b>6</b>	<b>31 (100%)</b>

The data above allows extracting some initial conclusions:

- There is an unbalance in terms of distribution of projects per Sub-Themes, with 2 times more projects addressing policy learning and infrastructure issues (ST1) than direct support to regional businesses for overcoming barriers to innovation (ST2) (without considering “blended” projects). This trend has been especially visible in the first and third calls and was to be expected as the programme targets public actors on the regional level, which often include policy making organizations. But this trend is much less obvious in the second call and especially in the fourth (where it is even reversed with more ST2 than ST1 projects) although this last call was only open to Area of Intervention 1.3 (“Fostering knowledge development”), which has certainly enhanced the submission of projects in Sub-Theme 2. One may argue that over the course of the programme, as policy learning becomes completed (in the sense of ST1 projects being implemented in earlier calls) some of the actors start to turn their attention and actions towards policy implementation in the field, through measures directly targeting businesses (ST2). In such reading, the trend towards a predominance of ST1 projects would be naturally reduced or reversed but this cannot be fully confirmed by the data above. This evolution is nevertheless at least evident in the projects “ACT CLEAN” (submitted in Call 1 with a focus on policy learning, and more exactly on the implementation at local level of external measures) and its successor “PRESOURCE”, submitted by the same core partnership in Call 4, but now with a focus on direct support to businesses for the development of eco-innovation strategies.



- The present study therefore highlights two important aspects:
  - i) that the two Sub-Themes defined for the “Technology transfer and business innovation” priority are highly complementary, with a policy learning cycle being complemented by an implementation cycle focused on application of concrete measures (always at transnational level) - this is also confirmed by the relatively high number of “blended” projects that combine both approaches under one single project implementation cycle;
  - ii) that there is a possible evolution course for regional actors from one Sub-Theme towards the other within a given policy focus area.

This interpretation could be in favour of a further formalization of the Sub-Themes as intervention areas within the new programme, with two separate but interlocking capacity building themes, one focused on horizontal strategic capacity building (in line with ST1 in this study) and another focused on joint action and experimentation of measures towards regional businesses (in line with ST2). A “blended” approach, combining both sub-themes under one single project implementation cycle, should always be possible, especially for targeted policy areas (e.g. eco-innovation, as in “CEEM”). The advantage of such architecture would be that it would allow continuing to focus the bulk of transnational cooperation on policy learning, while allowing for more targeted, practical and result-oriented cooperation paving the way for joint implementation. This is also in line with European Commission recommendations for future ETC implementation<sup>19</sup>.

- It should be noted that while the openness to private law organizations is rightly considered as one of the positive differentiation factors of the CENTRAL EUROPE Programme, the participation of such organizations does not seem to have a major impact on the classification of the projects under one Sub-Theme or another. Practically all projects analysed included private law organizations (30 out of the 31 projects) and as such the balance between ST1 and ST2 of these projects remains fairly constant.

#### **Aggregated analysis per Sub-Theme:**

At a second stage, it is worth looking into more detail at the focus of the projects under each Sub-Theme. This is presented in the tables below, starting with Sub-Theme 1.

**Table 9: Breakdown of ST1 “Cooperating to build better connections between regional actors” projects (including “blended projects”)**

Topic	N° of projects (% of total projects)*
Benchmarking of local policies	12 (52%)
Evaluation and review of local policies	9 (39%)
Local learning cycle (benchmarking and evaluation of local policies)	2 (9%)
Set-up of watch/screening mechanisms for new policies	2 (9%)
Tools for Implementation of new practices	12 (52%)
External learning cycle (watch and tools for implementation)	3 (9%)
Benchmarking of local policies and tools for implementation	5 (22%)
Evaluation of local policies and tools for implementation	4 (17%)
Local learning cycle (benchmarking and evaluation of local policies) and tools for implementation	1 (4%)
Benchmarking of local policies and implementation actions towards businesses (“blended” project)	3 (13%)

<sup>19</sup> European Commission, in its proposed ETC regulation (COM(2011) 611 final/2)





Evaluation and review of local policies and implementation actions towards businesses (“blended” project)	2 (9%)
Full learning cycle (benchmarking and evaluation of local policies and set up of watch and implementation actions - “blended” project)	1 (4%)

\* Including ST1 and “blended” projects (17+6). Note that the total is higher than the number of projects in ST1, since some projects cover several topics.

- The table above shows that a majority of the projects focus on the identification of good practices at local/regional level (either by benchmarking of practices within a certain topic or evaluation of a previously selected subset of measures) and on the sharing and development of tools and mechanisms for implementation of such measures (in whole or in part) in other regions. There is one project - CLUSTERS-CORD - covering a full learning cycle (including the improvement of local practices and the implementation of external practices, through the set-up of watch mechanisms and implementation of direct actions toward businesses) while one additional project covers the full local learning cycle (CluStrat, with this project including also the development of tools for implementation measures) and two other cover the full external learning cycle (ACT CLEAN, which has then been followed by PRESOURCE on Sub-Theme 2, and FREE).
- An important output of the strong focus of ST1 projects on the development of tools for implementation of new practices, is the impact this may have on the leverage of national and regional funds. In this way, CENTRAL EUROPE projects are positioned upstream of national and regional funding, “importing” new practices into their regions as a result of transnational cooperation, which can be later disseminated and implemented towards final beneficiaries, namely SMEs, through the local funding available. In this case, instead of using the “investment” possibility offered by the CENTRAL EUROPE funding, projects opt for tapping into existing funding sources, with a greater potential reach. This is the case e.g. in projects such as FLAME and IDEA amongst others.
- While in most ST1 projects there is neither a systematic process of identification and review of good practices (through a complete local learning cycle) nor an implementation of permanent watch mechanisms for future practices, this was to be expected due to the relatively small budget size of the typical CENTRAL EUROPE project, which is not favourable to in-depth analysis. Other reasons can be found in the bottom-up approach and open character of the programme, which invites projects to focus on the study or transfer of a particular practice. For some projects, part of the learning cycle may have been completed prior to the project, or during the preparation phase, when applicants screen through a number of practices in order to select only a few for future implementation. However, the lack of a more structured approach to the identification, transfer and implementation in other regions of something so uncertain as innovation practices may raise issues on the true adequacy of practices for other regions, as well as on the sustainability of such processes beyond the end of the respective projects.
- It is considered in this analysis that the implementation of a full learning cycle brings benefits in terms of relevance and sustainability of the good practices addressed in a project, but it must be stressed that this was not the original intention of the programme, nor has it been encouraged during programme implementation. It is therefore natural that this has not been followed by most of the projects. As mentioned above, this approach can also be challenging within the budget and time limitations of the typical CENTRAL EUROPE project. At the same time the quantity and quality of the portfolio of good practices assembled within the CENTRAL EUROPE Programme, of which this study is only a sample, could favour the creation of a Capitalisation Knowledge Basis, set-up and maintained at central level (under the coordination of the Joint Technical Secretariat). This would allow regional policy makers to





jump stages, by building on the results of the benchmarking of good Practices from previous projects and to focus directly on the activities of evaluation and adaption of these good practices to local contexts and circumstances (external learning cycles).

The same analysis has been performed for Sub-Theme 2, summarised in the table below.

**Table 10: Breakdown of ST2 “Cooperating to increase innovation in regional businesses” projects (including “blended” projects)**

Topic	N° of projects (% of total projects)*
Facilitate access to financing of innovation	2 (14%)
Shortage in innovation management skills	8 (57%)
Support to marketing and internationalization of innovation	3 (21%)
Lack of internal research capabilities	2 (14%)
Weaknesses in networking and cooperation	3 (21%)

\* Including ST2 and “blended” projects (8+6). Note that the total is higher than the number of projects in ST2, since some projects cover several topics.

- The table above shows that, while with a smaller basis of projects (14, including “blended” projects) the approved CENTRAL EUROPE projects within Sub-Theme 2 offer a complete coverage of the main barriers to business innovation (and specifically in SMEs) as identified in Section 3 of this study. Each of the main five barriers identified is covered at least by two projects, either dedicated to that topic or addressing it jointly with other topics. The set of good practices addressed by CENTRAL EUROPE projects in ST2 offers a repository of pre-validated solutions, at the level of regional policies, for the barriers listed above. The good practices/measures addressed have been benchmarked by regional actors with an inside knowledge of the field, assessed in terms of impact and potential transferability to other regions and in some case enriched through pilot implementation or through contributions from other regions.
- The most covered theme is by far “Shortage of innovation management skills”, which individually or jointly with other topics is addressed by 8 of the 14 projects within this sub-theme (57%). This shows an obvious trend of projects to focus on activities such as trainings and workshops, specifically targeted to address shortage of skills, and easy to implement at transnational level. Other, more complex and tailored activities - which may also require stronger investments - such as funding schemes (e.g. venture capital funds or programmes), mechanisms to foster transnational networking (e.g. vouchers), internationalization of innovation (e.g. matchmaking events) or countering the lack of research capabilities (e.g. set-up of common research infrastructures), albeit addressed by several projects, are areas that could benefit from further transnational cooperation in central Europe.
- The figures above show that ST2 projects within the CENTRAL EUROPE Programme are still at an early phase of experimentation of new joint activities, with a natural focus on less complex activities and fewer examples of collaboration for implementation of more complex schemes. In particular there are few examples of use of the pilot investment possibility of CENTRAL EUROPE projects in order to set up infrastructure and services (only CENILS follows this path, with a pilot investment in ILS research infrastructures, albeit several projects tap on national/regional funds instead as mentioned above) and also of the use of IT tools and networks to enlarge the basis of companies served (Central Community is the most relevant example in this field). However, even these few examples show that the structure of the CENTRAL EUROPE Programme, if duly exploited, offers much potential for the experimentation of new, complex and even investment-demanding forms of supporting





innovation in regional businesses. The programme is equally relevant in view of helping regions with their smart specialization strategies by exploiting new growth opportunities by shifting towards more innovation-intensive activities and for better positioning regional businesses and clusters in international value chains.

Overall, in face of the analysis done, it is concluded that the CENTRAL EUROPE Programme is quite flexible in terms of approaches, methodologies and focus of projects, leaving ample room of manoeuvre for the experimentation of new channels, methods and tools, in particular with a transnational component (experimentation character). It is open to all public and private actors, allowing to join policy makers and funding organisations with public knowledge providers and intermediary organizations enhancing intra-regional connectivity through complementary quadruple-helix cooperation in the 'entrepreneurial discovery' of new growth opportunities. And it offers a unique territorial dimension for enhancing regional growth and competitiveness through innovation policy learning and implementation, which cannot be fully replicated in any other innovation support initiatives reviewed in Section 3.1. Finally it allows infrastructural pilot investments as an eligible expense, an item which has nevertheless been scarcely used by the reviewed projects.

Therefore it is concluded that the CENTRAL EUROPE Programme clearly presents added value and fills an existing gap within the EU policy context, by offering innovation policy makers and intermediaries with a unique "open framework" for development, sharing and experimentation of new innovation approaches towards technology transfer and business innovation, which they cannot find in any other programme. It is however considered that current projects did not fully exploit the offered possibilities, especially in terms of the innovative character of the addressed measures and experimentation. And while it is important for the programme to maintain a bottom-up approach as until now, leaving to the projects the initiative as regards the scope and content of the projects, it is also possible to further motivate projects to better explore the possibilities of the programme by introducing some structural changes that are addressed in the next sub-section.

## 5.2 Recommendations

This study highlighted that the CENTRAL EUROPE Programme offers the necessary framework for a complete policy learning sharing due to several aspects, including:

- International dimension, as each project is composed by a consortium of partners from different countries allowing to explore an outward dimension of enhancing interregional connectivity across borders to achieve critical mass, synergies, complementarities and spill-overs in specific sectors or cross-sectoral areas of economic opportunity;
- Quadruple helix nature, with the possibility to link policy making and funding organisations (such as regional governments, innovation and development cities, municipalities and other public authorities, which are the most common type of participants in interregional projects) with knowledge providers (e.g. universities), civil organisations such as innovation agents, associations, incubators, cluster management organizations, venture capitalists and banks and (as final beneficiaries), SMEs and citizens.
- Bottom-up character, as projects are quite flexible in terms of approaches, methodologies and focus of projects, leaving ample room of manoeuvre for the testing of new channels, methods and tools, and opening the door to innovation and new experiments.

Regional policy actors can build on this favourable framework of the CENTRAL EUROPE Programme, and on the good practices, tools, results and general achievements of the projects reviewed in this study to introduce further structure and shorten the cycles of their policy learning





and sharing processes. In order to further explore this path, and on the basis of the data presented above, the following recommendations for a future phase of CENTRAL EUROPE can be made:

*At Programme level:*

- 1 – **Institutionalize the breakdown of the “Technology transfer and business innovation” theme into two complementary and interlocking Sub-Themes, one in “Cooperating to build better connections between regional actors” and one in “Cooperating to increase innovation in regional businesses”;**

The present study shows the well founded division of the “Technology transfer and business innovation” Theme in two complementary and interlocked Sub-Themes, one with a focus on capacity building through policy learning and sharing, and one focused on pilot implementation and experimentation on the field and involving final beneficiaries of new support measures and mechanisms. During the present stage of CENTRAL EUROPE both Sub-Themes have been covered, but with a clear bias towards policy learning. The complementarity between both Sub-Themes has been demonstrated by projects such as “CLUSTERS-CORD” or “ACTCLEAN” and its successor “PRESOURCE”. For the future and in order to ensure a good balance between both themes, it is suggested to have separate targets for both Sub-Themes in each call, while keeping the possibility of “blended” projects that combine both approaches under a single implementation cycle, which can be recommended especially for projects targeting a focused theme (e.g “eco-innovation” or “cluster management”).

- 2 – **While keeping the bottom-up approach, provide a better defined implementation structure as guidelines for projects in both Sub-Themes.**

One of the conclusions of the study is that at the current stage projects often suffer from a lack of a structured approach to policy learning and sharing (Sub-Theme 1) or to support to regional businesses (Sub-Theme 2), with a potential negative effect in terms of sustainability and impact. While it is considered that the current bottom-up approach through which projects define their activities should be kept, it is recommended to provide a more structured framework for projects to plan their activities along the learning or implementation cycles, following the analysis framework used in this study and including performance indicators. Within Sub-Theme 1 this would include a framework of policy learning activities along a cycle of “Improving existing policies” (including benchmarking and evaluation activities) and a cycle of “Implementing external practices (including watch mechanisms and set-up of tools, methods and infrastructure for implementation) according to which projects should plan their objectives and activities).

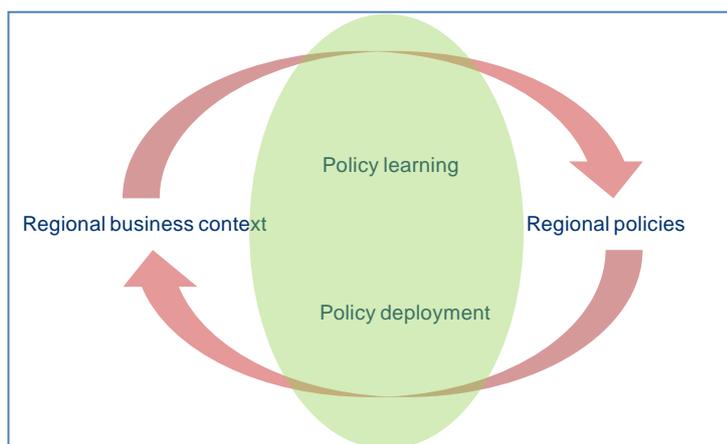
For Sub-Theme 2, this would include a framework with a clear indication of the barriers to innovation in regional businesses being addressed (including lack of funding, lack of innovation management skills, lack of marketing of innovation, lack of research capabilities or weaknesses in networking).

- 3 – **In order to further reinforce the complementarity and interconnection between both Sub-Themes, implement periodic capitalization exercises, with results of ST1 projects being used as suggested topics for future ST2 projects, and vice-versa.**

The parallel implementation of the two Sub-Themes within calls of a future CENTRAL EUROPE programme, would allow covering a full policy improvement cycle as pictured below:



Figure 7- The Policy Improvement Cycle



Sub-Theme 1 projects will build from the regional business context and through a transnational policy learning process will lead to new regional policies. Sub-Theme 2 projects will deploy (at a pilot, experimental or small-scale level) these policies in different regions, sharing results at transnational level and impacting the regional business context. In order to ensure the efficiency of the process it is important to ensure that results of ST1 projects are taken up by subsequent ST2 projects and that results of ST2 projects are used as basis for further policy learning processes. In both cases this can be done by the regular implementation of capitalization exercises and by using its results in the definition of topics for coverage in future calls, in line with the previous recommendation of providing a better defined implementation structure as guidelines for projects in both Sub-Themes.

*At project level:*

**4 – Improve internal learning and capitalization procedures, through the implementation of a baseline study and evaluation mechanisms.**

The present study has highlighted that some projects partly lack a structured approach towards policy learning or policy implementation, which should be addressed at the programme level. This is partly due to the lack of clear definition of the starting point from the side of the projects to which future achievements could be compared to, and consequently resulting added-value be highlighted. In particular, within a policy improvement process, it is important to differentiate new practices that may result from the project from the normal practices of the implementing organization. While this is partly done at the application stage (where applicants are asked to address the initial problem to be tackled, but obviously with limitations in depth and coverage of the analysis, and often too centred on the perspective of the Lead Partner), the added-value of implemented projects could be further highlighted through the introduction of the concept of a “baseline study” performed at an initial stage of the project (e.g. within the first 6 months) and assessing the initial scenarios in the areas and fields covered by the project, in order to clearly mark the starting point for all partners. This could be accompanied by the reinforcement of evaluation processes (internal or external) - e.g. after reaching mid-term, so that recommendations could still be integrated in the project implementation, and focus on the added-value and novelty, as well as the potential impact, of the progress achieved. Both aspects would also facilitate the capitalization of results at programme level.

**5 – Better use the possibilities of the programme to further explore innovative paths towards improved technology transfer and business support in central Europe.**

As discussed within the present study, ETC programmes and CENTRAL EUROPE in particular, possess distinctive features that can encourage the experimentation of innovative and novel



approaches and methods to foster technology transfer and business innovation. These features should encourage projects to take a more innovative and experimental character in their activities, either in the field of policy learning or policy implementation, tackling emerging trends and measures (some of which reviewed in Section 3.2 of this report) that have not been covered so far by the projects to date: e.g. methods to foster and better use crowdsourcing and crowdfunding within firms as a source of ideas and funding for innovation, public-private partnerships for developing business angel and venture capital funds and mentoring schemes for new firms, innovative public (and private) planning and procurement, and social innovation and promotion of a social economy, amongst others.

While such innovative character of projects could and should also be reinforced on the side of the programme by addressing the structure and evaluation criteria for the calls, the main initiative should always come from the projects, in line with the bottom-up approach of the programme.





## Annexes

- Annex 1 - Full list of projects reviewed
- Annex 2 - Definition of theme-specific terms used in the report
- Annex 3 - List of references and bibliography consulted within the literature review
- Annex 4 - CVs of Team of Experts
- Annex 5 - Acknowledgments



## ANNEX 1 - Full list of projects reviewed under the Thematic Study

Project	Call / Priority	Lead Partner	weblink
ACT CLEAN	1/ P3	Federal Environment Agency, Germany	<a href="http://www.act-clean.eu">www.act-clean.eu</a>
Centrope Capacity	1/ P1	City of Vienna, Municipal Departament 53 (Press and Information Services), Austria	<a href="http://www.centrope.com">www.centrope.com</a>
Centrope TT	1/ P1	Ecoplus. The Business Agency of Lower Austria Ltd, Austria	<a href="http://www.centrope-tt.info">www.centrope-tt.info</a>
CERIM	1/P1	PVA-MV, Germany	<a href="http://www.cerim.org">www.cerim.org</a>
FREE	1/P1	University of Debrecen, Hungary	<a href="http://free.unideb.hu/portal/">free.unideb.hu/portal/</a>
I3SME	1/P1	Province of Bologna, Italy	<a href="http://www.i3sme.eu">www.i3sme.eu</a>
CNCB	2/P1	Clusterland Upper Austria Ltd., Austria	<a href="http://www.cncb.eu">www.cncb.eu</a>
FLAME	2/P1	AREA m atyria GmbH, Austria	<a href="http://www.flameurope.eu">www.flameurope.eu</a>
IDEA	2/P1	Institute of Mechanical and Plant Engineering Chemnitz e.V., Germany	<a href="http://www.idea-strategy.eu">www.idea-strategy.eu</a>
CLUSTERS-CORD	2/P1	Regional Development Agency of Usti Region, PLC, Czech Republic	<a href="http://www.clusterscord.eu">www.clusterscord.eu</a>
ACCESS	2/ P1	South Transdanubian Regional Innovation Agency Non-for-profit Ltd., Hungary	<a href="http://www.central-access.eu">www.central-access.eu</a>
C-PLUS	2/ P1	National Confederation of Crafts and Small and Medium Sized businesses-CAN, Italy	<a href="http://www.projectc-plus.eu">www.projectc-plus.eu</a>
Autonet	2/P1	Automotive Cluster-west Slovakia, Slovakia	<a href="http://www.autonet-central.eu">www.autonet-central.eu</a>
CEBBIS (	2/P1	AREA Science Park (AREA), Italy	<a href="http://www.cebbis.eu">www.cebbis.eu</a>
InnoTrain IT	2/P1	MFG Public Innovation Agency for IT and Media, Germany	<a href="http://www.innotrain-it.eu">www.innotrain-it.eu</a>
INTRAMED	2/P1	Bayern Innovation GmbH, Germany	<a href="http://intramed-c2c.eu">intramed-c2c.eu</a>
PROINCOR	2/P1	Bautzen Innovation Centre, Germany	<a href="http://www.proincor.eu">www.proincor.eu</a>
InoPlaCe	3/P1	RERA Inc. -The Regional Development Agency, Czech Republic	<a href="http://www.inoplace.eu">www.inoplace.eu</a>
FORT	3/P1	TecnoCenter at University of Maribor d.o.o., Slovenia	<a href="http://www.project-fort.com">www.project-fort.com</a>
CENTRALAB	3/P1	E-zavod, Institute for Comprehensive Development, Slovenia	<a href="http://www.centralivinglab.eu">www.centralivinglab.eu</a>
CLUSTERCOOP	3/P1	Ministry for National Economy, Hungary	<a href="http://www.clustercoopproject.eu">www.clustercoopproject.eu</a>
NANOFORCE)	3/P1	SC-Sviluppo Chimica spa, Italy	<a href="http://www.nanoforceproject.eu">www.nanoforceproject.eu</a>
PLASTICE	3/P1	National institute of Chemistry, Ljubljana, Slovenia	<a href="http://www.plastice.org">www.plastice.org</a>
Smart Frame	3/P1	Ecoplus. The Business Agency of Lower Austria Ltd., Austria	<a href="http://www.jic.cz/en-smart-frame">www.jic.cz/en-smart-frame</a>
CENILS (	4/P1	Elettra - Sincrotrone Trieste S.C.p.A., Italy	Not available yet
Central Community	4/P1	Innovhub - Stazioni sperimentali per l'industria, Italy	<a href="http://www.central-community.eu">www.central-community.eu</a>



PRESOURCE	4/P3	Federal Environment Agency, Department III Sustainable, Germany	Not available yet
WOMEN	4/P1	Province of Mantova, Italy	Not available yet
Essence	4/P2	Marshall Office of the Wielkopolska Region, Poland	Not available yet
CEEM	4/P3	Friuli Innovazione, Research and Technology Transfer, Italy	Not available yet
CLUTSTRAT	SP/P1	Steinbeis-Europa-Zentrum of Steinbeis innovation gGmbH, Germany	<a href="http://clustrat.eu">clustrat.eu</a>



## ANNEX 2 - Definition of theme-specific terms used in the report

This annex briefly presents and develops the most relevant theme-specific terms, in order to facilitate the reading of this report.

Innovation:	<p>Within this analysis for the theme of “Innovation Capacity of SMEs”, the broader definition of innovation, as adopted by the OECD<sup>20</sup>, is followed. There is growing recognition that innovation encompasses a wide range of activities in addition to R&amp;D, such as organizational changes, training, testing, marketing and design. The latest (third, from 2005) edition of the Oslo Manual defines innovation as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. Innovation, thus defined, is clearly a much broader notion than R&amp;D and is therefore influenced by a wide range of factors, some of which can be influenced by policy, including in particular regional policy as targeted in CENTRAL EUROPE projects. Innovation can occur in any sector of the economy, including government services such as health or education. However, the current thematic analysis, the focus is solely on business innovation, and specifically to Small and Medium-sized Enterprises (SMEs).</p>
SMEs:	<p>The theme of the analysis is the capitalization of CENTRAL EUROPE results addressing the innovation capacity of Small and Medium-sized Enterprises (SMEs). In terms of regional policy, the SME concept is often taken at large to mean everything from micro companies (of only 1 employee) to large companies employing several hundred people and with a turnover of millions of Euros - basically only excluding multinational companies or large industrial agglomerates. Formally, the most common definition of SME is that of the European Commission<sup>21</sup>, defining Small companies as those with less than 50 employees and an annual turnover below 10 M EUR and Medium-sized companies as those with less than 250 employees and an annual turnover below 50 million. The same recommendation defines micro companies as those with less than 10 employees and a turnover below 2 M EUR.</p> <p>In this study, and as the focus of the assessment of results and actions is on the side of the regional policy makers (including the project partners) and not on the final beneficiaries (SMEs), we have followed the SME concept at large, without a rigorous segmentation of final beneficiaries, excluding measures specifically targeted to micro companies (that can better be assessed under the theme “Entrepreneurship”) but including e.g. actions in favor of clusters that can impact both SMEs and larger organizations.</p>
R&D	<p>While it is mentioned above that presently the innovation concept is a much broader notion than Research &amp; Development, this is still a key aspect of the innovation capacity of firms and also SMEs. For the purposes of this study the definition of R&amp;D proposed by the US Department of Defense (DOD)<sup>22</sup> that includes Basic Research, Applied Research and Advanced Technology Development, including in this last activity the stages of “Demonstration and Validation”, “Engineering and Manufacturing Development”, “Operational System Development”, “Developmental Test and Evaluation”, “Operational Test and Evaluation” and “R&amp;D Management Support” which are common practice in most firms.</p>
IPR:	<p>Economies rely increasingly on knowledge-based competitiveness, and innovation is increasingly non technological in nature. Against this backdrop, Intellectual Property Rights (IPR) - which allow for the appropriation of knowledge-based assets - are a</p>

<sup>20</sup> „Ministerial report on the OECD Innovation Strategy“, May 2010

<sup>21</sup> EU recommendation 2003/361

<sup>22</sup> DOD Financial Management Regulation (Volume 2B, Chapter 5, 2006)



topic SMEs have to deal with much more than in the past. According to the definition of the World Intellectual Property Organization (WIPO)<sup>23</sup> Intellectual property (IP) refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. IP is divided into two categories: Industrial property, which is the most relevant for SMEs and includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and Copyright, which includes literary and artistic works and is not relevant within the scope of the present study.

**PPI:** Public Procurement of Innovation (PPI) has been regarded for long as an important driver of innovation and currently re-emerging as the most sought after instrument of demand-side innovation policies in Europe, with a particular impact in SMEs. It is therefore an instrument of the foremost importance within the scope of this study, in both its two dimensions as defined by Charles Edquist<sup>24</sup> that are:

*Direct PPI* is when the procuring organization is also the end-user of the product resulting from the procurement. The buying agency simply uses its own demand or need to influence or induce innovation; this type of PPI includes the procurement undertaken to meet the ('mission') needs of the public agencies themselves. However the resulting product is often also diffused to other users. Hence, innovations resulting from PPI can be useful for the performing agencies, as well as for society as a whole.

*Catalytic PPI* is when the procuring agency serves as a catalyst, coordinator and technical resource for the benefit of end-users. The needs are located 'outside' the public agency acting as the 'buyer'. Hence, the public agency aims to procure new products on behalf of other actors. It acts to catalyze the development of innovations for broader public use and not for directly supporting the mission of the agency.

**Innovation Funding:** Funding of innovation is a core aspect of SME policies. Within this study, we refer to Innovation Funding in a broad sense, that encompasses both public funding sources (as grants and subsidies for innovation activities conceded by public agencies) and private financial instruments to foster access to finance by SMEs including "equity" and "debt" financing, as well as novel instruments such as crowd funding.

**Clusters:** Networking and partnership strategies are essential for addressing innovation capacity of SMEs, and may take several forms, of which one of the most popular, and of particular relevance for this study, is clusters. The definition followed in this study is that of the "Community Framework for State Aid for Research and Development and Innovation"<sup>25</sup> that defines innovation clusters as "*groupings of independent undertakings – innovative start-ups, small, medium and large undertakings as well as research organisations – operating in a particular sector and region and designed to stimulate innovative activity by promoting intensive interactions, sharing of facilities and exchange of knowledge and expertise and by contributing effectively to technology transfer, networking and information dissemination among the undertakings in the cluster.*"

<sup>23</sup> WIPO Intellectual Property Handbook, 2004, 2nd edition

<sup>24</sup> „Public Procurement for Innovation (PPI) as Mission-oriented Innovation Policy#, Charles Edquist, Professor CIRCLE (Centre for Innovation, Research and Competence in the Learning Economy), Lund University, Sweden, 2012

<sup>25</sup> „Community Framework for State Aid for Research and Development and Innovation“ published in the Official Journal of the European Union (2006/C 323/01) of 30.12.2006



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## ANNEX 4 - CVs of Team of Experts

### Project Leader:



**Eurico Neves**, born in Portugal, 1966, is CEO and Founder of INNOVA Europe S.A.R.L., Brussels and CEO and Founder of INOVA+ S.A., Portugal, two leading firms in innovation studies, research management and technology transfer.

He has an Msc in Engineering by University of Porto (1989) and a Master in Marketing by IEP / ESADE (1999).

Eurico Neves is one of the top European experts in business innovation, technology transfer and SME policies. Since July 2007 he has been appointed as the representative from Portugal at the Business Chamber of the Enterprise Policy Group (EPG) of the European Commission, an advisory board to Vice President Tajani. He has also been selected by the European Commission as one of the 20 members of the Expert Panel on Innovation in Services, a think tank that produced its final report in 2011, and as one of the 7 members of the European Institute of Innovation and Technology (EIT) Final Panel for the evaluation of the Knowledge and Innovation Communities (KICs) in 2009. Eurico Neves has also been involved as External expert for the evaluation of project proposals for the CENTRAL EUROPE Programme.

Other positions currently held include: Member of the Board of ANETIE - Portuguese National Association of Information Technologies and Electronic Companies, Representative of Portugal in the Technology Transfer Network of the European Space Agency, President of CEDES - Association for a Centre of Engineering on Sustainable Development, a non-profit association based in Gaia, Portugal, for technology transfer of research results into industry, Consultant for innovation issues to the National Council for the Lisbon Strategy of the Portuguese Government, Lead Expert and member of the Capitalisation group for the URBACT II - European Programme for Urban Sustainable Development, Thematic Expert for strategic projects in the framework of the ENPI CBC Mediterranean Sea Basin Programme and Member of the Sounding Board of Transnational Projects for the ESPON - European observation network for territorial development and cohesion.

Presently, Eurico Neves is also the Expert responsible for the Lot 2 - "Innovation Capacity of SMEs" within the Capitalization Exercise of the Interreg 4C Programme.

Formerly, he has been a Member of the Board and Chief Innovation Officer at Novabase, a leading ICT company in Portugal, an internal expert at DG XIII/D (Exploitation of Research results, currently DG Enterprise) of the European Commission in Luxembourg, where he participated in the conception of the Green Book on Innovation. He is also a renowned writer on the subject of innovation in his own country, having published two books on leading national publishers, and over 20 articles on the topic of innovation in international magazines.

### Expert:



**Gil Gonçalves**, received the Engineering Degree in 1993 and the M. Sc. degree in Electrical and Computer Engineering in 1996, both from Porto University. He is receiving the Ph.D. in Electrical and Computer Engineering in 2013.

Nowadays, he is the Chief Scientific Officer of INOVA+ and he is also a lecturer/researcher at Faculty of Engineering of University of Porto since 1998.

Since 2000 he participated in more than 20 R&D Portuguese and International research projects. Gil Gonçalves was a member of the team that won the Portuguese Innovation prize (CNIBES) in



2006 with the project SeaScout, and supported the project “Marine Systems and Technologies” funded by the Portuguese Innovation Agency, under the program NEOTEC (creation of technology based companies), for the creation of a high-tech spin-off based on research results from Porto University.

He (co-)authored more than 60 publications in areas related with ICT, manufacturing, robotics and control.

Presently, he is the expert responsible for the Lot 6 - “e-Government” of the on-going Capitalization Exercise of the Interreg 4C Programme.





## ANNEX 5 - Acknowledgements

The experts in charge of the study, Eurico Neves and Gil Gonçalves would like to acknowledge the contribution of the whole team at the Joint Technical Secretariat of the CENTRAL EUROPE programme, in terms of steering, feedback and providing an interface with the projects and for all the support and availability throughout the study.

The experts wish also to acknowledge the openness and availability from all the Lead Partners and Project Partners contacted in providing information and data about their projects. A word of acknowledged also to all external stakeholders contacted.

