EUROPEAN UNION

Committee of the Regions

Fostering innovation at regional level: lessons from the European Entrepreneurial Region (EER) experience

This report was written by t33, OIR and SWECO.

It does not represent the official views of the Committee of the Regions.

More information on the European Union and the Committee of the Regions is available online at http://www.europa.eu and http://www.cor.europa.eu respectively.

Catalogue number: QG-04-15-264-EN-N
ISBN: 978-92-895-0810-0
DOI: 10.2863/728167

Table of Contents

1.Introduction

This document is the final report for the study '**Fostering innovation at regional level: lessons from the European Entrepreneurial Region (EER) experience'.** This study analyses measures implemented by EER regions to increase the capacity for innovation in Small Medium Enterprises (SMEs).

The European Entrepreneurial Region (EER) Award is an initiative of the Committee of the Regions launched in 2009 identifying and rewarding EU regions with outstanding, future-oriented entrepreneurial strategies aimed at applying the ten principles of the 'Small Business Act' for Europe[1] (SBA). Since the EER entrepreneurial policies are viewed as good practice examples thanks to their visible, credible, forward-looking and promising political vision, understanding how these regions adopt and implement strategies for fostering innovation (in particular, under Principle VIII of the SBA[2]) could provide strategic policy instruments for other EU regions.

The report has the following structure:

- **Chapter 2** describes the main concepts of innovation (Section 2.1), which are then used to construct the analysis grid (Section 2.2) for the case studies (Annex B).
- **Chapter 3** reviews results of the case study analysis and the interviews.
- **Chapter 4** summarises the main policy recommendations and conclusions.
- **Annex A** illustrates the main theoretical aspects from the ESPON study KIT[3] methodology, which is briefly discussed in Section 2.1.
- **Annex B** provides an overview of the 11 selected case studies.
- **Annex C** is the questionnaire used for the interviews.

[1] Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions — 'Think Small First' A 'Small Business Act' for Europe COM (2008) 394 final.

[2] The ten principles of the SBA are: I. Create an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded; II. Ensure that honest entrepreneurs who have faced bankruptcy quickly get a second chance; III. Design rules according to the 'Think Small First' principle; IV. Make public administrations responsive to SMEs' needs; V. Adapt public policy tools to SME needs; VI. Facilitate SMEs' access to finance and develop a legal and business environment supportive to timely payments in commercial transactions; VII. Help SMEs to benefit more from the opportunities offered by the Single Market; VIII. Promote the upgrading of skills in SMEs and all forms of innovation; IX. Enable SMEs to turn environmental challenges into opportunities; X. Encourage and support SMEs to benefit from the growth of markets.

[3] ESPON Project, *KIT – Knowledge, Innovation, Territory*, Final Scientific Report – Volume 1, 2012.

2.Innovation: concepts and assessment tools

Principle VIII 'Promoting the upgrading of skills in SMEs and all forms of innovation' is one of the ten principles of the SBA that Local and Regional Authorities (LRA) across most EU Member States apply efficiently[4]. All Member States have national and/or regional projects associated with this principle, so all the EER regions have strategies and actions supporting and enhancing SMEs in their innovation process. This principle is particularly important since its application is strictly connected with other principles of the SBA. Regional support for innovation practices helps the entire entrepreneurial environment (Principle I), eases SMEs access to finance (Principle VI), helps SMEs benefit more from opportunities offered by the Single Market (Principle VII) and from the growth of markets (Principle X), and can help turn environmental challenges into opportunities for SMEs (Principle IX)[5]. Understanding EER policies supporting innovation requires an agreed or common definition of innovation (Section 2.1 and Annex A). Based on this, an analytical grid (Section 2.2) assesses the case studies.

2.1 Definition of innovation

Innovation is a multi - dimension concept that includes the actions required to create new ideas, processes or products which, once implemented, lead to positive effective change for the business with beneficial externalities for the market, the territory and the society in which the business operates. In order for the innovation to be effective, it should also be considered as a new combination of purposes and methods[6]. Innovation can be defined according to two dimensions (Figure 2.1): **what** the object is (product/process/organisation/marke ting) and **when** in the process **it occurs** (research, transfer, realisation).

[4] *Implementation of the Small Business Act for Europe (SBA) and Entrepreneurship Policies at Local and Regional Level*, 2012, study commissioned by the Committee of the Regions and written by t33, SWECO and OIR, p. 30. See also EU (2014), *Regional Implementation of the SBA*, DG Enterprise and Industry, p.15.

[5] Section 3.2 provides concrete examples of how innovation support is linked, in particular, to principles I, VII and X.

[6] Schumpeter J. (1934), *The Theory of Economic Development*, Harvard UP, p.65-66.

Regarding '**what**', the Oslo Manual[7] identifies four categories:

1. A *product innovation* is the introduction of a good or service that is new or significantly improved in its characteristics or intended use. It includes significant improvements in technical specifications, components and materials, software, user-friendliness or other functional characteristics and can utilise new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies.

2. A *process innovation* is the implementation of a new or significantly improved production or delivery method, implying significant changes in techniques, equipment and/or software. Process innovations can decrease the unit cost of production or delivery, to increase quality, or to produce or deliver new or significantly improved products.

3. A *marketing innovation* is the implementation of a new marketing method involving significant changes in product design or packaging, placement, promotion or pricing. Marketing innovations better address customer needs, open up new markets, or newly position a product on the market, with the objective of increasing sales.

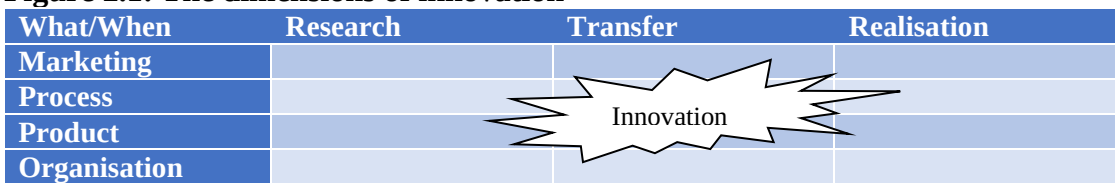
4. An *organisational innovation* is the implementation of a new organisational method in the firm's business practices, workplace organisation or external relations. Organisational innovations can increase performance by reducing administrative costs or transaction costs, improve workplace satisfaction (and thus labour productivity), gain access to non- tradable assets (such as non-codified external knowledge) or reduce the cost of supplies.

In relation to **when**, the different phases can be defined as:

- *research,* which can be basic or at the industrial level, and finishes with a phase of development;
- *technological transfer activities,* which take place when the technology/machinery is adopted;
- *realisation of the innovation,* i.e. producing a product, process, organisation, marketing.

[7] *The Measurement of Scientific and Technological Activities - Oslo Manual: Guidelines For Collecting And Interpreting Innovation Data,* Third Edition, OECD and Eurostat, 2005.

Figure 2.1: The dimensions of innovation



Source: t33 elaboration on *Oslo Manual: Guidelines For Collecting And Interpreting Innovation Data*

In these schemes, the role of the regions in dealing with innovation policies has increased in recent years and now seems to be fundamental[8]. First of all, the advent of globalisation has increased the need for endogenous sources of growth[9] and for local actions to retain and attract talent and investment in order to compete in global innovation networks. Secondly, societal and environmental challenges require regions to create incentives and solutions to boost supply, e.g. new technology, new forms of energy, new patterns of production and demand, which include new patterns of consumption and use. Finally, regions can support relationships and collaboration for local players within and outside the region, encouraging them to access global markets and opportunities.

2.2 Regional patterns

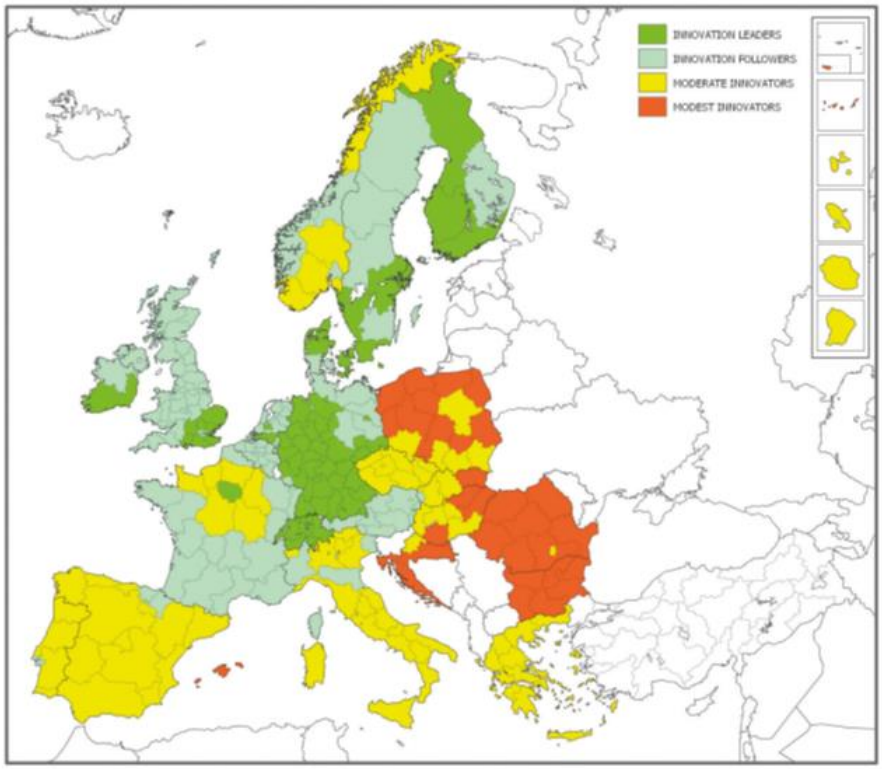
In the EU there are significant differences in regional innovation **performance,** which depends on economic and social elements and therefore on context-specific variables. The Regional Innovation Scoreboard[10] identifies the following key factors:

- Enablers: human resources, finance and support;
- Enterprise activities: investments, networking, entrepreneurship and intellectual assets;
- Outputs: innovative firms and economic effects.

Based on these key factors, the scoreboard provides a view of regional innovation performance (Figure 2.2).

[8] OECD (2011), *Regions and Innovation Policy*, OECD Publishing. See also *The Role of Research in Regional Smart Specialization*, study commissioned by the Committee of the Regions and written by Progress Consulting S.r.l. and The National and Kapodistrian University of Athens, 2011.
[9] *How local and regional authorities can best support innovation and use it to restore economic growth and employment*, study commissioned by the Committee of the Regions and written by Centre for Strategy and Evaluation Services (CSES), 2010.
[10] EC (2014), *Regional Innovation Scoreboard 2014*, DG Enterprise and Industry

Figure 2.2: Regional Innovation Scoreboard



Source: EC (2014), *Regional Innovation Scoreboard 2014*, DG Enterprise and Industry, p.16.

The ESPON Study KIT[11] offers an additional and alternative prospective (see Annex A for further detail). KIT was based on a '*new interpretative paradigm […], stressing complex interplays between phases of the innovation process and spatial context or territorial conditions*[12]'. More specifically, innovation is strictly context-specific and therefore each region has its own peculiar pattern for innovation, which is defined by matching two main regional variables: the specific economic and industrial background and the knowledge asset of the region with regard to research and high education. A territorial pattern of innovation is the result of '*territorial specificities (context conditions) that are behind different modes of performing the different phases of the innovation process*[13]'. One key aspect of the innovation patterns identified by KIT[14] is the capacity of a region to exchange knowledge outside its boundaries, which is based on three preconditions (see Table A.1 and Figures A.1-A.3 in Annex A): *receptivity*, *creativity* and *attractiveness.*

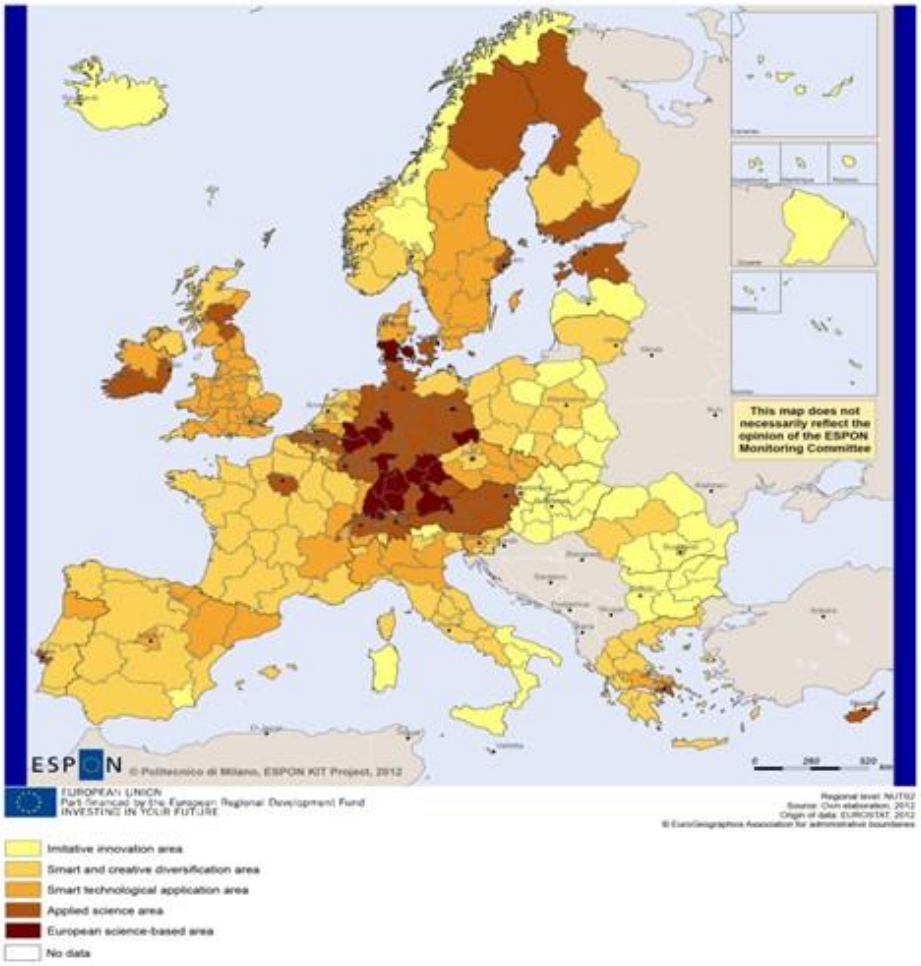
KIT also identifies five categories of regions defined as clusters (see Annex A for detail):

- European science-based;

[11] ESPON Project, *KIT – Knowledge, Innovation, Territory*, Draft Final Scientific Report – Volume 1, 2012
[12] *Ibid*, p.23
[13] *Ibid*, p. 24.
[14] See Annex A for details.

- Applied science;
- Smart technological application;
- Smart and creative diversification;
- Imitative innovation.

Figure 2.3. ESPON KIT map



Source: ESPON Project, *KIT – Knowledge, Innovation, Territory*, Final Scientific Report – Volume 1, 2012, p.41.

The ultimate goal of KIT is not ranking the territories according to a unique standard (as for example, the Regional Innovation Scoreboard), but to provide a better understanding of the regional situation. This helps develop tailored policies that leverage the potential of the territories to address specific needs.

2.3 Case study methodology

2.3.1 Overview of the selected EER Regions

The study is based on successful innovation policies in 11 of the 15 EER regions (see Annex B for detail). The regions and related examples were chosen with the

Committee of the Regions (COR) with the aim of covering a broad variety of types of good practices. These are: Brandenburg (DE)[15], Helsinki-Uusimaa (FI), Lisbon (PT), Marche (IT), the Region of Murcia (ES), Noord-Brabant (NL), Nord Pas de Calais (FR), Northern Ireland (UK), Southern Denmark (DK), Styria (AT) and the Region of Valencia (ES). Moreover, the selected 11 ERR Regions, cover all the five clusters of the KIT methodology:

Table 2.1. ESPON-KIT study Clusters

EER Region	Imitative innovation area	Smart and creative diversification area	Smart tech application area	Applied science area	European Science-based area
Brandenburg				x	x (Berlin)*
Helsinki				x	
Lisbon				x	
Marche		x			
The Region of Murcia	x				
Noord-Brabant			x		
Nord Pas de Calais		x			
Northern Ireland		x			
Southern Denmark					x
Styria				x	
The Region of Valencia		x			

* See footnote 15

Key information was collected through document review and direct interviews (Annex C). The document review was based on the main COR studies and reports on Local Regional Authorities (LRAs) supporting research, innovation and SBA implementation[16] and also on INTERREG IVc analysis of SME innovation capacity[17]. Moreover, the analysis was also based on EER application forms, activities reports and the related EER regions evaluation reports for 2011, 2012 and 2013. In addition, managers and administrators from seven selected Regions (Brandenburg, Helsinki, Marche, Nord Pas de Calais, Northern Ireland, Southern Denmark and the Region of Valencia) were directly interviewed.

[15] The selected practice, which is an inter-regional innovation strategy, concerns Berlin and Brandenburg but only Brandenburg is an EER region.

[16] *The role of research in regional smart innovation,* 2010, study commissioned by the Committee of the Regions and written by Progress Consulting S.r.l. and The National and Kapodistrian University of Athens; *How local and regional authorities can best support innovation and use it to restore economic growth and employment,* 2010, study commissioned by the Committee of the Regions and written by the Centre for Strategy and Evaluation Services (CSES); *Implementation of the Small Business Act for Europe (SBA) and Entrepreneurship Policies at Local and Regional Level,* 2012, study commissioned by the Committee of the Regions and written by t33, SWECO and OIR.

[17] *Innovation capacity of SMEs,* 2014, INTERREG IVC Analysis Report.

2.3.2 The analytical framework

Variables for assessing policy actions to foster innovation at regional level, with special focus on SMEs, can be based on three categories:

- Context and regional path for innovation. The ESPON study KIT underlined the importance of focusing support and investment on key regional priorities, challenges and needs as well as on building strategies using each region's strengths, competitive advantages and potential for excellence.
- Given the context, innovation strategy should focus on the priorities and sectors, for example, on Key Enabling Technologies, (KETs), which determine the most appropriate forms of intervention and the related types of support (and their timing).
- Finally, the third category includes the types of results, e.g. the beneficiaries and key players, the outcomes for SMEs and the effects on the overall regional system.

A template based on these categories (Table 2.2) allowed formulation of the questionnaire (Annex C) and the analysis of the case studies (Annex B). An analysis of the regional context underlined the main characteristics of the territory and its path to innovation according to the KIT cluster classification. This underlines the relevance of the specific good practice in relation to the regional needs/strengths. Coherence with regional policy is verified by an analysis of the main objectives of regional policy.

The main features and performance of the intervention is analysed using indicators for:

- the type of intervention and in which form, e.g. grant, networking, training and the anticipated approach;
- the focus areas of the intervention, i.e. sectors, KETs;
- the target beneficiaries;
- the life cycle of innovation.

Intervention impact is analysed using the results for SMEs as well as for the regional system. Here the questions concern whether the intervention had a positive impact on the income/employment/turnover of the beneficiary companies and on improved networking and cooperation at regional level.

Table 2.2. Analytical template

<table>
<tr><th colspan="2">Context: which ESPON-KIT Cluster does the region belong to?</th></tr>
<tr><td>Region's path for innovation

WHAT
• Regional characteristics and the main challenges, with special concern to innovation and R&D.
• Main regional needs/strengths in terms of innovation.

WHY
• To find relevance of the best practice and its coherence with regional policies.</td><td>Key features of the initiative:

WHAT
• Type of intervention adopted (grant, loan, services, networking, R&D facilities, financial instruments, trainings, etc.).
• Type of approach undertaken (cross-fertilization, clustering, Public Private Partnerships, etc).
• Type of input (financial, political, organizational.
• Target Area of the initiative (traditional, industrial, green economy, social innovation, social ambient living, new media, domotics, etc.).
• Target beneficiaries and key players involved (type of SMEs, research centres, universities, representatives of SME, chamber of commerce, trade union etc.).

WHY
• To analyse the main features of the initiative and its performance.</td></tr>
<tr><td colspan="2">Main Achievements:

WHAT
• Results at SME level (increase of income, employment, turnover, increase in R&D, new patent, new product or process, competence building).
• Results at SME Regional system (enhancement of networking and cooperation between SMEs and universities, increase in general awareness of innovation, increase of joint international projects including SMEs, change in policy/delivery/policy programming.
• How the intervention changed the behaviour of the beneficiaries and stakeholders in terms of networking, innovation capacity and policy vision.

WHY
• To measure the impacts of the intervention in terms of innovation enhancement.
• To highlight lessons learnt which could serve as examples for others EU regions.</td></tr>
</table>

3.Lessons from the EER experience

This section provides a general overview of the innovation path taken by 11 European regions with the EER label. The regional contexts are briefly summarised, taking into account the basic KIT assumptions on clusters and patterns of innovation (section 2.2 and Annex A) and the key elements originating from the desk research and interviews (Annex B). Following that, the region's different policy visions, types of intervention and policy instruments as well as results at SME and territorial level are examined.

3.1 The starting point: challenges and approaches

The 11 regions are very different from each other; thus each innovation process has been tailored to respond to individual territorial needs, through addressing specific challenges and exploiting endogenous comparative advantages. However all the regions share a common willingness to foster SME innovation processes to strengthen their competitive position at national and international levels. Moreover, innovation strategies are commonly perceived as an efficient and effective policy tool to overcome difficulties and bottlenecks caused by the economic crisis in the regional economies.

The sample of the EER regions, according to Table 2.1, which covers the five KIT clusters, and Annex A, which summarises the main characteristics of the five KIT clusters, can be divided into two main groups.

- The first, 'Group A' includes regions in the 'Imitative innovation area' and in the 'Smart and creative diversification area,' which base their innovation strategy on addressing a regional need or weakness in order to improve regional creativity and attractiveness. These regions – Marche, Northern Ireland, the Region of Valencia, Nord Pas de Calais and the Region of Murcia – have a prevalence of traditional sectors. They historically tend to lack a strong relationship between universities and SMEs, have low R&D expenditure and low interest in innovation compared to the EU average. In order to overcome these deficiencies the EER regions focused on two different (but complementary) initiatives. One is creating and supporting university-firm clusters, such as EuraTechnologies in Nord Pas de Calais or Marche's Cluster for Innovation. The other is improving human capital and innovation culture as well as supporting business initiatives, as seen in the PYME+I Programme in the Region of Murcia, and the iOTA Programme in Northern Ireland. The Business Innovation Centres in the Region of

Valencia, instead, combine elements from both types of initiatives, as they also link universities to businesses.

- The second one, 'Group B', includes regions in the 'Smart tech application area', 'Applied science area' and 'European science-based area,' whose innovation strategies reflect their structural strengths. These regions - Brandenburg, Helsinki-Uusimaa, Lisbon, Southern Denmark and Styria - are comparatively better endowed with advanced clusters, research centres, a high level of R&D expenditure and an endogenous capacity of knowledge creation and receptivity, compared to the EU average. The innovation initiatives exploit comparative advantages to: (a) increase the most innovative firms' level of competition, i.e. Helsinki and Lisbon; (b) strengthen KET development, i.e. environmental and green tech in Styria or health tech in Southern Denmark; or (c) achieve specific regional goals, i.e. putting social innovation at the heart of economic development in Noord-Brabant or encouraging the interregional transfer of innovation from the scientific to the productive sector in Brandenburg.

3.2 Policy vision

The EER regions' innovation policy vision has some key features which are sometimes transversal to the entire regional sample.

- First of all, they foster or address the 'culture of innovation'. EER strategies emphasise the importance of innovation in stakeholders.

  Regions in Group A encourage SMEs to innovate and invest in R&D as well as create stronger cooperation between the research sector and the productive sector. In Marche, innovation activities mainly rely upon tacit knowledge and SME innovation capacity, which has to be nurtured and stimulated by external knowledge, to raise competitiveness. In Northern Ireland, innovation activities are mainly led by the private sector and the public sector's awareness of the importance of innovation needs to be improved. In the Region of Valencia, human capital is underused, there are many over-qualified individuals and a low level of R&D spending which, combined with few entrepreneurs, calls for the promotion of innovation and support for innovative companies to diversify the industrial structure.

  In Group B, the higher level of innovation culture and initiatives means competitive sectors and clusters are more relevant: (a) Noord-Brabant puts social innovation at the heart of its regional economic development; (b) Styria fosters innovation to boost green growth and exploit the regional

environmental and green tech areas; (c) Southern Denmark encourages the 'Design-Thinking' approach, which makes a business strategy of matching people's needs with what is technologically viable to health innovation and assisted living.

- The second aspect concerns the adoption of the 'bottom-up' approach. In order to stimulate R&D and raise awareness about the importance of innovation, both groups have focused on involving the relevant stakeholders from the start. This approach not only ensures that needs and strengths are taken into consideration, but also increases the creativity level of the territory through constantly and constructively building up new ideas and solutions. Murcia's innovation path involves stakeholders in shaping regional policies to ensure co-ownership of innovation. Since the beginning of the programme, Southern Denmark has created a citizen-empowered health and care system and in Lisbon, the Start-Up initiative originated directly from citizen (this project was one of the most highly favoured by the citizens of Lisbon in the 2009/2010 Participatory Budget). In addition, this partnership-based approach is usually part of a larger governance strategy for innovation, as for example in the case of the Quintuple Helix in Lisbon (Q-Helix), where public administration, universities, NGO´s and organized civil society, private sector and individuals, are engaged and empowered in developing policy, creating programs, improving services, and tackling systemic change.

- Another aspect is related to the common willingness of all the EER regions to improve and support the relationship between universities or research centres and SMEs.

  This is particularly evident for Group A regions which often have weaker relationships. As shown in Figure A.3 (Annex A), they lack a strong link between knowledge created by the local education system and the entrepreneurship and innovation processes implemented in local firms. Linking firms and the research sector stimulates territorial creativity and attractiveness. In Marche a system of open and collaborative innovation also creates new job opportunities for researchers in the production system. The Region of Valencia based its initiative on coordination between universities and technological institutes to facilitate SME innovation and growth. Group B regions already benefit from the knowledge creation of excellent universities and research institutions (Figures A.1, Annex A). But also these regions, as Brandenburg or Noord-Brabant with the social innovation model, sometimes need to transfer innovation from the knowledge sector to the production sector and therefore transform ideas into new business opportunities.

- A fourth characteristic, which is common to both groups, is the idea that each policy initiative for innovation should enhance human capital. All the EER projects in the sample include tailored training programmes for entrepreneurs to foster creativity, transform their innovative solutions into business opportunities and to reap commercial reward from their ideas. The iOTA programme in Northern Ireland, for example, offers innovation clinics held by specialist innovation practitioners for individuals and SMEs to identify their needs and strategies and to guide them towards an innovation action plan to expand their businesses. The BICs in the Region of Valencia also provide free monthly seminars for entrepreneurs to learn new tools to manage their businesses, especially with regard to administration and training courses to assist them in setting up and implementing businesses. In Helsinki, the initiative is also based on the Business Acceleration Programme and the Business Development Coaching Package to assist entrepreneurs start businesses and become internationally successful.

- The fifth element of the EER regions' policy vision is creating new market opportunities for SMEs through innovation initiatives. The tenacity of the crisis calls for new solutions and opportunities for firms, in particular by focusing on international markets. This is the case with: (a) the NewCo Factory in Helsinki, where enterprises operate mostly in the domestic market and need to raise their level of internationalisation, which is too low with respect to business opportunities; (b) the Lisbon Incubators Network, which stimulates innovation, creativity and entrepreneurship by supporting internationalisation and therefore enhancing competitiveness at a global level; and (c) the Eco World Styria project, which has a very strong chamber of commerce with foreign trade commissioners interested in clean technology and which can provide companies with excellent market opportunities.

- The sixth and last characteristic is a structured and comprehensive innovation policy in which initiatives and projects are implemented. Most EER regions are including their initiatives under the RIS3 strategy, which guides and monitors regional innovation and entrepreneurship policies. Others have also adopted supplementary plans: (a) Lisbon adopted the regional Entrepreneurship Manifesto which has initiatives to foster entrepreneurship, R&D and innovation; (b) the 'Styria 2020 – Growth through Innovation' initiative enhances mobility; (c) the InnoBB strategy in Berlin-Brandenburg creates closer inter-regional coordination to join resources, enabling the area to improve its international competitiveness and define the future strategic and organisational framework, which better ensures the cross-border cluster development process; (d) in Nord Pas de Calais, the RIS3 is part of a broader strategy, which includes the different

programmes for entrepreneurship development, which are managed and implemented by the NFID, an entrepreneurship agency offering services for innovation development and improvement.

3.3 Types of intervention and instruments

The 11 case studies offer a list of diverse interventions and policy instruments. Most of the EER initiatives for innovation, however, propose a mix of tools including support for start-ups combined with training activities as well as financial instruments tailored to specific SME categories or implement policies for clusters under a broader inter-regional strategy or addressed with interventions that favour particular KETs, accompanied by supportive services for project planning.

One of the most implemented actions is support for start-ups, in Lisbon, Helsinki and Nord Pas de Calais. 'StartUp Lisboa' is a start-up incubator founded as a part of an urban regeneration project for the city's downtown area. It is managed by a non-profit association with three founding entities: Lisbon Municipalities, IAPME (a government institute to support SMEs) and Monteprio (a mutual savings association). The project helps companies to contact partners and obtain specialised services, to attract customers and investment, as well as to enter the global market. Target businesses are tech-based and innovative projects in commerce and tourism.

In Helsinki, the NewCo Factory proposes the Business Association Programme, to assist start-ups in their early phase through: (a) coaching and teamwork; (b) intense goal-oriented business coaching programmes of 6 to 12 months; (c) assistance in founding a company and the Business Development Coaching Package for start-ups that want to enter international markets and need support for their business development; (d) marketing strategy; (e) team dynamics and recruitment; (f) market launches and finding funding opportunities. In Nord Pas de Calais, the EuraTechnologies incubator and accelerator has developed a global network of opportunity through a pool of partners to mentor, coach and assist the region's businesses and to help entrepreneurs starting businesses in ICT, by meeting each other and other professionals to share and exchange innovative ideas.

In addition to tailored services for start-ups, some EER regions also offer service support to existing firms. Northern Ireland and the Region of Murcia have implemented projects to make SMEs more innovative, competitive and sustainable. The iOTA Programme in Northern Ireland offers a series of structured and interconnected initiatives and activities for pre-incubation support

as well as Innovation Awareness Raising and Support to Existing SMEs for individuals, micro enterprises and SMEs across the East Border region. In particular, the innovation clinics include sessions with specialist innovation practitioners that identify their needs and strategies and assist them in developing an innovation action plan for business expansion. The Business Innovation Centres (BICs) in the Region of Valencia coordinate five universities and other technological institutes to facilitate SME innovation and growth, to increase their access to scientific parks and to give them advice and professional assessment. These centres offer free business creation seminars and tools, training courses, individual counselling and financing. Among these services, the Yuzz programme deserves particular attention. It stimulates ideas that can be turned into business projects by 18 to 30 year olds, offering accommodation and infrastructure in the Business Centres during initial critical years. It also distributes awards for innovative entrepreneurial efforts.

In some regions there is direct support for clusters and KET enhancement, particularly in Marche, Styria and Southern Denmark. In Marche there are clusters for strategic sectors such as domotics, mechatronics, biotech, energy efficiency, ICT and new materials. On the other hand, Styria already has many well developed clusters and innovative enterprises, with the largest concentration of environmental enterprises in the world. The intervention, therefore, aims to further expand the innovation capacity of local firms by focusing resources on environmental and green technology areas. This should increase business opportunities in the fields of biomass, solar energy, water and wastewater treatment, increase employment in environmental engineering and double the number of Styrian technology leaders by 2015. The Eco World Styria cluster provides several services such as strategy support through consultancy tailored to individual company needs, funding support, innovation support, support for exports and links with foreign companies to boost trade relations. Southern Denmark has a strong comparative advantage, being recognised as one of the leading regions in the development and use of e-health. The Health Innovation Centre promotes innovation in the health sector, implementing telemedicine solutions, new ways to design hospitals and new cooperation models for public organisations and private companies. The centre brings together players in social services, healthcare, research and business in order to create a favourable environment for public-private partnerships and the development of welfare technologies.

In Noord Brabant the strategy redirects the regional economy towards new innovative sectors. The Tilburg Social Innovation Model (TiSIL) is a laboratory of ideas and methods, helping regional stakeholders create innovative solutions to face societal challenges. The TiSIL strategy has three programmes. The Social Innovation Initiatives Programme enhances the process of social

innovation in which either social innovation, business-development or societal changes can be carried out. The Social Innovation Dialogues Programme promotes interaction between knowledge institutions and society. The Social Entrepreneurship Programme assists social entrepreneurs who focus on social and societal issues.

EuraTechnologies in Nord Pas de Calais, instead, raises local awareness about the strengths and potential of the digital sector for the regional economy. The initiative connects investors, business angels, schools and universities to enable them to understand the challenges of digitisation and its impact on society, economically and socially and adapt their training activities towards digitisation. The initiative aims to establish an ecosystem of inter-company collaboration in order to exploit the advantages of the digital sector and increase the visibility and international attractiveness of these French start-ups.

One key aspect of the EER Regions' strategy is the use of innovative funding instruments for innovation through public and private partnerships. The most illustrative example is the Region of Murcia. The PYME+I programme provides 28 different services for companies that are trying to innovate their products and processes. Within this, the Institute of Regional Development, using ERDF funds, developed Innovation Checks (vouchers) which allow SMEs with little or no experience in innovation to cover up to 85% of the total cost of their purchase of ICT services. The innovation vouchers are not only important in terms of technology transfer and innovation but they also serve as a starting point for increasing collaboration between SMEs and knowledge or service providers, facilitating access to specialist services that would otherwise be difficult for SMEs to tap. In Lisbon, the public-private partnership has played a crucial role, especially in finding new funding instruments. In the Portuguese project there are two types of partners: the three founding organisations (Municipality of Lisbon, IAPMEI, Montepio Geral) and partners that implemented the project (private companies like KPMG, Portugal Telecom, Brandia, SBI Consulting, Lisbon MBA, SAGE, Microsoft, Cisco and others). The three founding organisations upgraded and provided the incubator building. They also manage the FINICIA fund to support the entrepreneurs' activities. The business partners (private companies) provided equipment and services to the incubator.

Finally, Berlin-Brandenburg offers an important example of an inter-regional strategy for innovation. InnoBB is a joint innovation strategy that provides closer coordination between the two states to promote clusters across the border establishing and consolidating the Berlin-Brandenburg location at the forefront of international competition. The aim is to enforce the transfer of innovation from the knowledge sector to the production sector, supporting cooperation and

networking between enterprises and universities. This enhances the internationalisation process of local enterprises, with new opportunities for improved inter-industry and inter-technology networking. The task of InnoBB is to define the strategic and organisational framework for ensuring the cross-border cluster development process, exploiting the excellent local research and technology competence in the healthcare, ICT, media and creative industries, transport, energy technology and photonics.

3.4 Main achievements

The main results both at SME and territorial level are:

- The **change in stakeholder behaviour**. All the EER experiences demonstrate important changes in stakeholder attitude towards innovation and investment in R&D. For example, the iOTA programme in Northern Ireland led to an increase in acceptance of the importance of R&D for small businesses, especially in the last four years, while 10 years ago there was reluctance to change and innovate. The improved innovation capacity of firms can be summarised in the shift from a 'have to' or 'must do' to a 'want-to-do' attitude towards innovation and R&D.

- An **increase in R&D investment**, especially among SMEs. In Marche 51 projects were financed, of which 30 were specifically in R&D. This has significantly enhanced SME investment in industrial research, machinery adaptation and innovation in products and processes. In Northern Ireland, 95% of micro-enterprises have increased expenditure in R&D by a total of 64% in the last six years; moreover, the initiative has also contributed to an increase in regional public spending in R&D.

- An **increase in employment**. Most of the initiatives favoured new job opportunities. In Marche, there are 138 more researchers employed in enterprises. In Southern Denmark, the Health Innovation Centre contributed to 800 new jobs, the NewCo Factory in Helsinki created 200, StartUp Lisboa assisted with 600 new jobs and EuraTechnologies in Nord Pas de Calais has generated about 1,000 jobs.

- **Better collaboration between the research sector (universities in particular) and enterprises**. In Marche, the initiative has established strong horizontal networks between SMEs and universities which, in turn, have favoured the consolidation of vertical networks between firms. In the Region of Valencia, five universities have been actively involved in the BICs, informing more than 2,600 people about business creation with highly

innovative content. In Southern Denmark, the initiative has created a strong network between SMEs, public organisations and universities in the field of social care. In Nord Brabant the TiSIL came about due to cooperation between four institutions of higher education (Tilburg University, Avans University of Applied Sciences, Fontys University of Applied Sciences, Breda University of Applied Sciences). These provide interdisciplinary knowledge of the social sciences and humanities to entrepreneurs and other stakeholders.

- An **increase in the number of innovative start-ups**. In particular StartUp Lisboa has supported 12 incubators, 4 fab labs, and 186 start-ups; the iOTA Programme in Northern Ireland has assisted 176 new businesses; the NewCo Factory in Helsinki has 32 start-ups in the Business Acceleration Programme and had a hand in 5 foreign start-up companies moving to Helsinki. In the Region of Valencia, the BICs have helped more than 1,100 projects through counselling and advice, which led to the creation of 104 new businesses; in Nord Pas de Calais, EuraTechnologies has incubated 20 projects since 2009, 74% of which transformed into businesses, and of these 80% are still active five years later.

- The **creation of new business opportunities.** In particular, Eco World Styria has helped regional companies develop strong export links with Russia and the USA. StartUp Lisboa has favoured the internationalisation of firms, contributing to the expansion in international markets of 20 start-ups. The InnoBB strategy not only consolidated the international competitiveness of local firms, but the innovation cheques also helped its clusters to reach impressive growth. The Region of Murcia supported 500 beneficiaries by investing in innovative projects; in Nord Pas de Calais, EuraTechnologies strongly supports the development of private start-ups in the digital sector and has made digitisation a strong vehicle for the economic development of the territory. In Southern Denmark, the Health Innovation Centre has not only favoured product and process innovation, but also organisational innovation by supporting the implementation of new work processes in telemedicine and cross-sectional ICT businesses. Nord Brabant and its TiSIL support social entrepreneurs as a new business opportunity for local economic and social development.

- **Positive externalities for the territories.** Innovation initiatives are an important policy instrument to combat the negative effects of the crisis. Innovation policies are an investment in the future, creating new jobs and new market opportunities for SMEs. In addition to job creation, they have also combatted social exclusion. Moreover, by supporting start-ups and new business opportunities, they also stimulate local and regional economic

development. In some cases the initiatives led to additional projects. The success of StartUp Lisboa led to the creation of a second incubator, StartUp Lisboa Commerce. These form a network that is central to the regional strategy for promoting entrepreneurship and attracting business. Moreover, by providing an environment for new business and entrepreneurs, the project has also contributed to regenerating the city centre. Finally single initiatives such as InnoBB for Berlin-Brandenburg, TiSIL for Nord Brabant and Eco World Styria for Styria, have contributed to re-thinking and re-designing the entire regional strategy. The whole regional economy has been redirected towards the most innovative sectors and clusters with the most growth potential.

4.Policy recommendations

- First of all, policies for innovation should be **tailor made and focused**. The EER regions demonstrate that each successful innovation initiative is first focused on specific regional needs or strengths in order to define a few important pillars such as support for particular sectors/KETs/clusters, human capital enhancement, or new market opportunities. A few strong and tailored actions achieve these (training, innovation vouchers, support for start-ups). The key goal should be the improvement of the level of territorial attractiveness, receptivity and creativity (see Table A.1, Annex A).

- Second, innovation policy should also focus **on how innovation should be carried out**. In order to be effective, innovation policies should adopt a holistic approach combining different fields, such as education, finance, use of resources, public-private relations and governance. An important issue is to guarantee and facilitate **constant knowledge transfer** from research to business and, to some extent, also the reverse. The research sector must be aware of the needs and goals of businesses. This means that the dialogue between science and industry should be at the centre of initiatives and there should be constant support for both vertical (between firms) and horizontal (between firms and research institutes) networks. Moreover, by improving the level of territorial attractiveness, receptivity and creativity through tailor made innovation policies, regions should favour inter-regional knowledge transfer and the exchange of best practices.

- Thirdly and strictly connected to the previous recommendations is that innovation policy should affect, especially in Group A, the **entire innovation chain**, from research activities to commercialisation. This includes research and development support, demonstration and pilot investment, regulation and standardisation, public procurement and other demand-driven activities. The strategy should transform new ideas into market opportunities for the growth and the development of SMEs and the region.

- Fourthly, initiatives for innovation should be programmed within a broader regional **strategy for innovation**. Most of the EER initiatives are implemented under the RIS3 strategy or within a regional or inter-regional plan for innovation. This allows a better focus on the goals and policy instruments to be adopted depending on the regional needs and comparative advantages.

- Finally, the adoption of innovation initiatives should be accompanied by a **partnership system** in which all the relevant stakeholders should be involved with public administrations, from designing the projects to monitoring the results. This ensures a bottom-up approach and strengthens public-private partnerships as well as both vertical and horizontal relations.

Annex A – The KIT methodological approach

The ESPON-KT study identifies 5 main areas in which European regions are categorized according to a set of selected variables which measure knowledge creation, human capital, innovation capacity and acquisition, inter-regional knowledge flows, regional settlement structure. The main characteristics of the identified areas are[18]:

- **European Science-Based Area** (Cluster 5) is composed of regions that are the most knowledge and innovation intensive. The key features of the areas are:

  - ✓ innovative attitude is well above the EU average across all dimensions (i.e. product, process, marketing and/or organizational innovation);

  - ✓ very strong knowledge orientation which is more directed to GPTs than in the other cases (and above the EU average) both in terms of amount of knowledge developed as well as in terms of specialization profile;

  - ✓ greater endogenous capacity of knowledge creation, namely the presence of highly educated population and, more importantly, the presence of scientific human capital, here measured by the share of inventors on total population;

  - ✓ the indicators of regional preconditions for innovation creation, on the other hand, do not show the highest values across EU27: in particular, these regions are less entrepreneurial than the EU average;

  - ✓ strong knowledge and innovation orientation which is primarily linked to their endogenous capacity to create new knowledge and to efficiently translate it into new products and processes as well as into managerial and/or organizational changes.

- **Applied Science Area** (Cluster 4) includes a wider group of regions which share similar characteristics with regions in cluster 5, although most of the

[18] The information contained in this Annex is taken from ESPON Project, *KIT – Knowledge, Innovation, Territory*, Final Scientific Report – Volume 1, 2012, pp. 24-42.

variables show lower mean values. The main characteristics of these regions are:

- ✓ they look more entrepreneurial, creative, attractive and with a larger capabilities potential than regions in cluster 5, albeit less than the EU average;

- ✓ they have a rather strong knowledge and innovation intensity, i.e. form a knowledge area, but, differently from the ones in cluster 5, they are less focused on General-Purpose Technologies (GPTs)[19], and, accordingly, more technologically diversified;

- ✓ they are strong knowledge producing regions, that distinguish themselves from the European science-based area for their diversified knowledge production profile.

- **Smart technological application area** (Cluster 3) are comparable to regions in cluster 4 in terms of size of the knowledge base and its characteristics (i.e. relevance of GPTs, generality and originality), show greater endowment of embedded knowledge in human capital (i.e. capabilities) but they are different in terms of innovation profile. The main key features:

  - ✓ stronger orientation towards product innovation, but somehow weaker in terms of process in innovation (albeit being more innovative than the EU average also according to this dimension) and are among the weakest performers in terms of marketing and/or organizational innovation;

  - ✓ preconditions for knowledge and innovation acquisition, namely creativity and attractiveness, are more favourable to regions in cluster 3 than to regions in clusters 4 and 5;

  - ✓ high degree of knowledge potential flows and internal preconditions to translate external knowledge into innovation, thanks to high creativity;

  - ✓ ability to efficiently translate internal and external knowledge into new specific commercial applications.

[19] General-purpose technologies (GPTs) are technologies that can affect an entire economy (usually at a national or global level). GPTs have the potential to drastically alter societies through their impact on pre-existing economic and social structures. Examples include the steam engine, railroad, interchangeable parts, electricity, electronics, material handling, mechanization, control theory (automation), the automobile, the computer, and the Internet.

- **Smart and Creative Diversification Area** (Cluster 2) is composed of regions in which innovation activities mainly rely upon tacit knowledge embedded into human capital. The main characteristics are:

  - ✓ highly entrepreneurial (the highest mean value recorded among the 5 clusters);

  - ✓ endowed with those characteristics such as creativity and attractiveness that help to absorb and to adopt innovations developed elsewhere;

  - ✓ the key advantages of these regions reside in their embedded human capital and the entrepreneurial and creative attitudes that can be wisely exploited in the pursue of upgrading innovative strategies;

  - ✓ highly fed by external knowledge, as it is the case for cluster 3, but the type of knowledge that is acquired from outside is neither basic nor applied formal knowledge;

  - ✓ they take advantages from external knowledge which is embedded in technical and organizational capabilities, in technicians and SMEs managers.

- **Imitative Innovation Area** (Cluster 1) is composed of regions that have a rather narrow knowledge and innovation profile and are the least performers in both respect but:

  - ✓ entrepreneurship, creativity, attractiveness, capabilities and innovation potentials show greater than the EU average values. Especially attractiveness is stronger than in the other clusters;

  - ✓ high level of creativity, entrepreneurship and collective learning present in thus cluster provide potential assets to turn, in an evolutionary perspective, this area into a smart and creative diversification area.

The five identified areas are associated to three different patterns of innovation. These three patterns represent the different ways in which knowledge and innovation can take place in a regional economy. Each of them represents a different way of innovating, and calls for different policy styles to support innovation. These patterns, as shown by the diagrams (Figure A.1-A.3), are differentiated in terms of *territorial receptivity, creativity and attractiveness*

(Table A.1) which determine at which level of the innovation process the knowledge flows from external regions interact with it.

Table A.1 – Preconditions for interregional exchange of knowledge and innovation

	Receptivity	***Creativity***	***Attractiveness***
Preconditions to receive	Relational capacity	Openness to innovation	Limited labour costs
Preconditions to exchange	Cognitive proximity	Sectorial proximity	Income differentials
Channels for exchange	Scientific networks, Co-patenting, Migration of Investors	Participation in industrial associations	Foreign Direct Investment

Source: reproduced from ESPON Project, *KIT – Knowledge, Innovation, Territory*, Final Scientific Report – Volume 1, 2012, p. 27.

- Pattern 1 (**Endogenous Innovative Pattern in a Scientific Network**) is associated to regions of Cluster 4 and 5. In this pattern the local conditions are all present to support the creation of knowledge, its local diffusion and transformation into innovation and its widespread local adoption so that higher growth rates can be achieved. Given the complex nature of knowledge nowadays, this pattern is expected to show a tight interplay in the creation of knowledge with other regions, and therefore being in an international scientific network. This pattern can rely upon huge mobility of professionals and skilled labour and the intense co-operative relations among local actors, and in particular customer- supplier relationships in production, design, research, and finally knowledge creation. In Pattern 1 the *territorial receptivity* connects and combines the external knowledge with the internal one.

- Pattern 2 (**Creative Application Pattern**) is associated to Cluster 2 and 3 and it is characterized by the presence of creative actors interested and curious enough to look for knowledge, lacking inside the region, in the external world, and creative enough to apply external knowledge to local innovation needs. In this innovation pattern, regions have to succeed in developing an original and unique knowledge domain, based on its productive vocations; therefore regions have to discover the research and innovation areas in which they can hope to excel. This discovery comes from firms that have to achieve combinations between technologies and various elements of the value chain, and construct very different and unpredicted specific niche competitive advantage. In this sense, this innovation pattern is supply driven, in that it depends on the creativity and recombination capability of potential innovating firms that - thanks to their

internal specific knowledge - identify a gap in a possible application of general purpose technologies, and put their creative effort in order to overcome such a gap. In Pattern 2 the *territorial creativity* connects and incorporates the external knowledge in the product and process innovations with the support of local knowledge.

- Pattern 3 (**Imitative Innovation Pattern**) is associated with Cluster 1. In this pattern actors base their innovation capacity on imitative processes that can take place with different degrees of creativity in the adaptation of an already existing innovation. This imitative pattern is not necessarily the less productive and efficient innovation pattern; regions can be creative and fast in the imitation phase, by deepening and improving productivity in existing uses, by adapting existing uses to the specific local needs, by adjusting products to local market interests, by forging innovation processes on local productive needs. Regions can also be more passive and imitate innovation from outside as conceived elsewhere. In Pattern 3 the *territorial attractiveness* incorporates the external knowledge in the internal product and process innovation process, without the support of local knowledge.

Figure A.1 - Endogenous Innovative Pattern in a Scientific Network

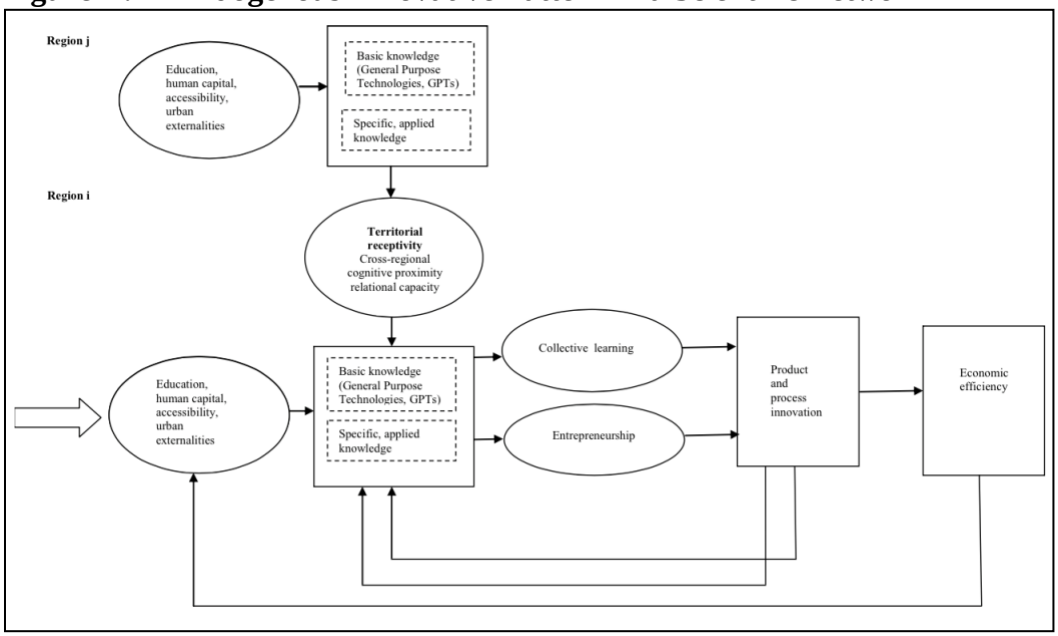


Figure A.2 - Creative Application Pattern

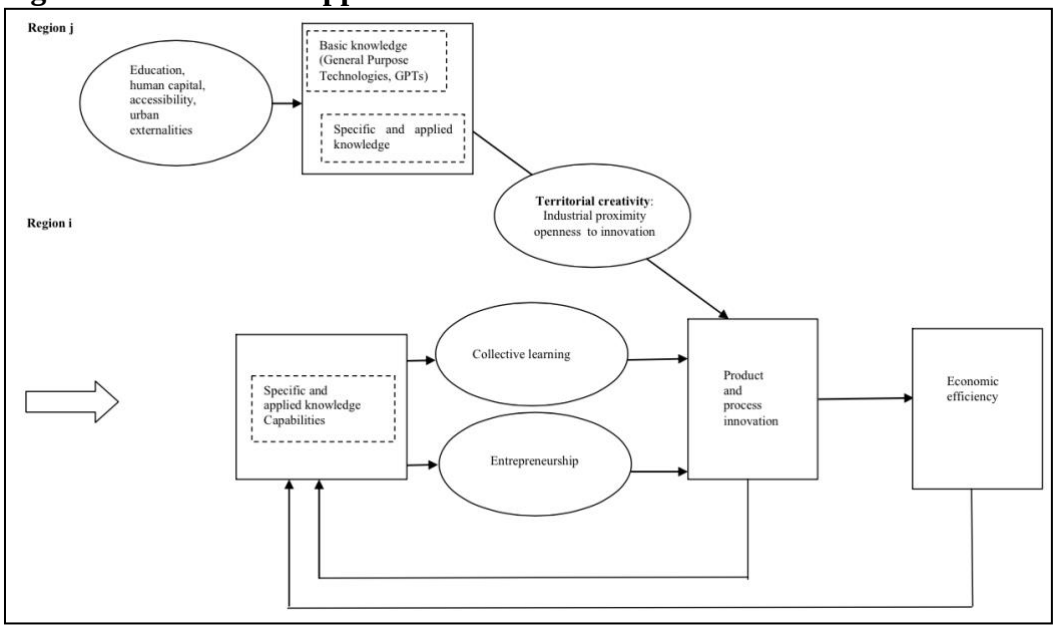
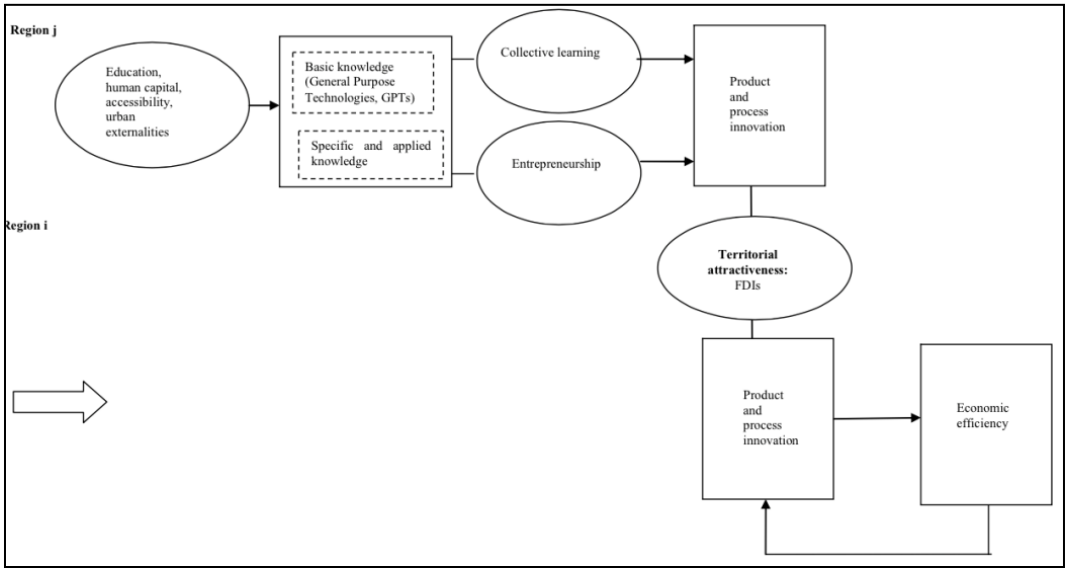


Figure A.3 - Imitative Innovation Pattern



Annex B – Case studies

InnoBB strategy – Berlin-Brandenburg (DE)

4th ESPON KIT Cluster: Applied Science Area (Brandenburg) 5th ESPON KIT Cluster: European Science-Based Area (Berlin)	
Berlin-Brandenburg's Path for Innovation • Brandenburg and the capital city Berlin have many excellent institutes of higher education and research which nurture a strong relationship between science and business and offer major development potential, above all in the clusters of healthcare, ICT, media and creative industries, transport, energy technology and photonics. • Despite the excellent variety of university and research institutions, Brandenburg lacks R&D enterprises. • Regional needs include enforcing the transfer of innovation from the knowledge sector to the production sector, enhancing cooperation and networking between enterprises and universities, enhancing internationalisation and competition on a global scale.	***Key features:*** • InnoBB is a joint regional innovation strategy, which integrates the high-tech strategies of the German federal government with the Europe 2020/Innovation Union. • InnoBB is the product of the successful cooperation of innovation policy stakeholders in the two federal states which goes back to 2007. The strategy provides for even closer coordination between the two states in order to gain an optimum position among locations competing for business. InnoBB 2011 promotes clusters across the borders of the two states and thus establishes and consolidates Berlin-Brandenburg at the forefront of international competition. • The clusters are formed by a significant number of competitive companies and institutions with high potential in research and development. InnoBB helps these clusters to come up with higher growth rates compared to other fields of industry and production. • The clusters relate to various areas and cross-cutting themes increase the efficiency of the companies involved and promote new opportunities for improved inter-industry and inter-technology networking. The task of InnoBB is to ensure efficient interaction of these themes with the clusters. • InnoBB defines the strategic and organisational framework for ensuring the cross-border cluster development process and both states use their political room for manoeuvre to achieve this goal. • The strategy use only public financial resources (including ERDF).
Main Achievements: • InnoBB strategy allows active monitoring for cluster management and funding providers. • There is a transparent monitoring process of cluster management and economic impacts. • New collaborations created by the clusters prompted new service products for SMEs. • Stakeholders have been involved at all levels through on-line consultation, events, workshops and consultancy studies. • Establishment of horizontal networks with universities is useful both for enterprises, with stable relationships with universities, and for universities because it offers new job opportunities for researchers and new resources for applied research. • Clusters for R&D ensure a change in company working behaviour. The company increases networks and horizontal relations and improves its human capital expertise and professionalism.	

NewCo Factory – Helsinki (FI)

4th ESPON KIT Cluster: Applied Science Area	
Helsinki's Path for Innovation •Helsinki promotes entrepreneurship and growth companies to increase jobs in the city and more investment in the region. It is considered a promising city for growth and start-up companies. • One weakness is that enterprises operate mostly in domestic markets so their level of internationalisation is too low with respect to business opportunities. • R&D investment needs to be improved. Most of the innovation development relies on the telephone sector. There is need for structural changes in industries to push them to invest in SMEs. • Need for enhancing relations between SMEs and universities.	***Key features:*** • NewCo Factory is a public service, started in 2013, to accelerate the development of companies to become internationally successful businesses. • NewCo Factory is part of a broader ecosystem where the public interacts and cooperates with private players and the knowledge sector in order to avoid competition between the two and to ensure a broader and more successful impact. • Through the Business Acceleration Programme, NewCo Factory assists start-ups in their early phase, with coaching and team work to get them set up. This includes an intense 6-12 month, goal-oriented business coaching programme; assistance in founding a company; short courses for entrepreneurs by EnterpriseHelsinki, a service centre for entrepreneurs that offers free information sessions on the core issues involved in starting a business. • The Business Development Coaching Package is addressed to start-ups with innovative and scalable business ideas looking to enter international markets. The start-ups have a personal business coach to assist them with business development, marketing strategy, team dynamics and recruitment, market launching and finding funding opportunities and partners. • The target beneficiaries are start-ups with a committed founding team with balanced skills that can develop the product or service without depending on external resources.
Main Achievements: • NewCo Factory is a nominee for 'Best Service Provider' by Nordic Startup Awards. • NewCo Factory improved employment in the region (200 new jobs created). • The innovative products, services and modes of operation created by growth companies have a great impact on the development of the whole region. • Among success stories from the first year of the NewCo Factory programme are 'Invesdor', the first equity-based crowdfunding service in Northern Europe and Tespack, in the Top 10 list for cleantech enterprises in Europe. • NewCo Factory's business accelerator customers include approximately 50 potential growth enterprises. • The innovative character of the initiative is the public-private partnership. The strength of the initiative is that it is not a typical governance service since it is combined with entrepreneurial competence and recognises the importance of a strong link with universities.	

StartUp Lisboa – Lisbon Incubators Network – Lisbon (PT)

4th ESPON KIT Cluster: Applied Science Area	
Lisbon's Path for Innovation • Promote internationalisation and competitiveness on a global scale, stimulating innovation, creativity and entrepreneurship. • Create, attract and retain talent, companies, investment and strategic clusters. • Foster entrepreneurial vision and build social networks to give citizens, companies, universities, the public and non-profit organisations the chance to participate in the co-creation of ideas and projects. • For this, the region drafted the *Entrepreneurship Manifesto* in 2013 with 10 main objectives: 1. Lisbon as an "Atlantic Start-up City"; 2. Funding instruments for Start Ups and companies; 3. Access to finance; 4. Taxation for entrepreneurship; 5. Network of incubators and companies accelerators; 6. Start-ups internationalization; 7. Entrepreneurial spirit and culture; 8. Interconnections between universities and entrepreneurship; 9.Entrepreneurship as a tool of urban regeneration; 10. Entrepreneurship and regeneration.	***Key features of the initiative:*** • 'Startup Lisboa' is an incubator for start-ups founded in 2011 as part of an urban regeneration project for the downtown area of the city (Baixa). It was born out of the will of citizens. •A non-profit association with three founding entities: Lisbon municipalities, IAPMEI (a government institute to support SMEs) and Montepio (a mutual savings association). • A supportive 'ecosystem' assists the development and growth of start-ups, providing infrastructure and support services to help them attract customers and investment, and to enter the global market. • It provides cheap locations for businesses, as well as links to mentors (company founders, CEOs and/or specialists) who will help entrepreneurs with their business projects • Startup Lisboa helps the companies to contact partners, specialised services, business angels and venture capital investors. It also promotes shared knowledge between the companies through network events and activities such as workshops and training sessions for entrepreneurs. •Target beneficiaries are entrepreneurs, individual promoters of a business project and companies less than three years old. •Target sectors are tech-based, innovative projects in commerce and tourism that are start-ups, especially scalable businesses: with increasing revenue but minimum costs, allowing an increased margin, accumulating profits and generating more wealth.
Main Achievements: • There were 186 start-ups supported and 602 jobs created. • The success of the initiative led to the creation of a second incubator, 'Startup Lisboa Commerce'. These two incubators are part of a network that is central to the city's strategy for promoting entrepreneurship in the region and attracting businesses, especially for technology. • In addition to providing an environment for new business and entrepreneurs to thrive, the incubator played an important role in regenerating the city centre (Baixa), reusing old buildings and favouring social and economic dynamisation through the attraction of enterprises. • More than 20 start-ups have already expanded into international markets. • Startup Lisboa is the highest density start-up incubator in Europe. • The partnership between public and private stakeholders played a crucial role in the project. • Strong sharing of experience and knowledge among entrepreneurs, in a creative incubation environment with constant internal communication, workshops and activities as well as promotion at national and international competitions and events, presenting the projects and attracting investment.	

Clusters for R&D – Marche (IT)

<table>
<tr><th colspan="2">2nd ESPON KIT Cluster: Smart and Creative Diversification Area</th></tr>
<tr><td>Marche's Path for Innovation
• Highly entrepreneurial, significant manufacturing sector but limited R&D.
• Traditional sectors with low productivity.
• Innovation activities mainly rely upon tacit knowledge (unarticulated and experimental know-how) embedded into human capital of entrepreneurs and innovation capacity is highly fed by external knowledge.
• Creativity and attractiveness make it easier to absorb and adopt innovations developed elsewhere and to innovate with different products in different industries.</td><td>Key features of the initiative:
• Support for investment in R&D though the creation of technological clusters involving SMEs, large firms, universities and public research centres.
• Focus on strategic sectors of the region in domotics, mechatronics, biotech, energy efficiency, renewable resources, ICT and new materials.
• Enhancing regional competitiveness through the development of new products and processes.
• Cluster for R&D associates to the horizontal network a vertical network, namely the production chain between enterprises.
• New approach by using public procurement to enhance demand for innovation and make public resource efficiency-oriented.
• Use of innovation vouchers.</td></tr>
<tr><td colspan="2">Main Achievements:
• The R&D Cluster significantly impacted innovation processes in the region for industrial research, machinery adaptation, product/process innovation, regional development and organisation.
• The intervention, through EUR 68 million of ERDF Funds, has financed 51 projects, of which 30 are specifically in R&D, involving 30 clusters and 138 researchers.
• Enhanced capitalisation and innovation in traditional industries, increased investment in R&D and innovation is combined with an improved system of open and collaborative innovation.
• A horizontal network has been added to the vertical network of R&D, i.e. the production chain between enterprises.
• Enhancement of clusters involving enterprises and cooperation with scientific and research institutions offers new opportunities for researchers to get involved in the production system.
• Sustainability is considered in the continued relationship between universities and enterprises and in the type of products entering the market. The role of universities ensures continuity in technological transfer and the production of knowledge for innovation and research.
• The R&D Cluster ensures a lasting change in the internal behaviour of companies. Companies build or strengthen networks and horizontal relations and enrich human capital expertise and the level of professionalism.</td></tr>
</table>

PYME + i Service – The Region of Murcia (ES)

1st ESPON KIT Cluster: Imitative Innovation Area	
Murcia's Path for Innovation • The Region of Murcia's strategic objectives focus on the development of business and entrepreneurship through increased SME capacity; enhanced innovation, cooperation and internationalisation; and guaranteed sustainable development. • Key regional priorities are develop entrepreneurial potential; enhance a credible and forward-looking action plan; and involve stakeholders in the shaping of regional policies.	***Key features:*** • Pyme+i is an initiative of the Regional Ministry of Universities, Business and Research. • Its aims are to increase the number of innovative business in the Region of Murcia, to promote innovation in regional SMEs that lack innovation experience and culture and to re-launch the regional market of innovation services, with a new tool to increase business and create durable links between suppliers. • There are 28 different services. Companies have a catalogue of innovation services and a list of suppliers accredited by the Institute of Development Services. • The Innovation Catalogue includes 30 innovation services in five main areas: organisation and management innovation, innovation empowerment, R&D funding, technological product and process innovation and legal and tax services. • As an incentive to use these innovation services, the Institute of Regional Development uses Innovation Checks/Cheques, which are vouchers to fund up to 85% of the cost, allowing SMEs with little or no experience in innovation to begin excellent R&D. The enterprise must only pay the difference between the voucher and the total amount of the invoice. This is carried out by the service provider, not by the SME.
Main Achievements: • The Innovation Check plays a vital role in the program helping with the purchase of innovation services, the competitiveness of the Murcian business network and the consolidation of high added-value service suppliers. • Innovation Agents have helped around 400 SMEs with information on the Innovation Catalogue and Innovation Checks. • According to a preliminary forecast of the Regional Ministry, 500 Innovation Checks will be issued. • The Innovation Catalogue helps to stimulate business ties between certified suppliers and SMEs and simplifies the SME decision-making process.	

Tilburg Social Innovation Model (TiSIL) – Noord Brabant (NL)

3rd ESPON KIT Cluster: Smart Technologies Application Area	
North Brabant's Path for innovation • North Brabant has traditionally been the most industrialised province in the Netherlands. • In Brabant, there is an alliance between knowledge- intensive businesses and high-quality manufacturing, which is often a continuation of the industrial activities of the past, while tradition and technology are combined in extremely effective ways. • However, public R&D investments and related policies are under-represented in the policy mix in North Brabant. • The region places Social Innovation at the heart of its economic development. In order to enhance social innovation, the region mobilizes a unique liaison of knowledge, quality and development power.	***Key features:*** • TiSIL is a laboratory of ideas, methods and innovation, where four higher education institutions join forces to make visible contribution to the development social innovation in the region of Brabant. • The Tilburg University is involved in the initiative: working in small groups, students identify major contemporary social challenges. • The aim of TiSIL is to involve regional stakeholders to co-create innovative to face societal challenges. TiSIL aims at bringing about positive societal change and economic activity by supporting innovative ideas, methods and people. • TiSIL employs three programs to achieve its aims: Program 1, Social Innovation Initiatives which regards the enhancement of the process of social innovation in which either a social innovation, business-development or societal changes can be realized. Program 2, Social Innovation Dialogues aiming to promote interaction between knowledge institutions and society. Program 3, Social Entrepreneurship to enhance the figure of the social entrepreneur who focuses on both social and societal issues, who possess the same skills and knowledge as regular entrepreneurs, but transfer those to another context in order to reach a social goal in a professional environment.
Main Achievements: • Through the TiSIL, Nord Brabant has extended the triple helix (triple helix +) network by also attracting new, economic partners such as hospitals, transportation companies, or energy companies, and civilian groups. • In Nord Brabant an important aspect of the entrepreneurial mentality is focused on cooperation and collaboration. On a business level as well as on a social level, Brabant entrepreneurs operate in strongly embedded social networks. • Rather than hampering economic and technological innovations by setting up all kinds of rules and regulations, Nord Brabant facilitates new developments by providing knowledge, infrastructures, people, and environments that may help to increase the success rate of such developments. • The focus of the region on promoting itself as an interesting and enjoyable place to live and work have contributed to their success in attracting domestic and foreign knowledge workers.	

EuraTechnologies incubator – Nord Pas de Calais (FR)

2nd ESPON KIT Cluster: Smart and Creative Diversification Area	
Nord Pas de Calais' Path for innovation • Nord Pas de Calais is the fourth French region in term of economy, the youngest and densest region of the country, and has a strong comparative advantage in automotive, advance technical textiles, mechanical engineering, agro-food. • Regional innovation and entrepreneurship policies really began in 1998 with a RITTS programme, followed by the Regional Programme for Innovation and Research Valorisation in 2000. The regional programme for establishment and transfer of businesses began in 2001. In 2003 the first innovation portal for SMEs (www.jinnove.com) and the first portal for entrepreneurs (www.jecree.com) were launched. • Nord Pas de Calais, through its seven global and national competitive clusters, aims at developing the competitiveness of the economic by boosting innovation efforts, enhancing hi tech areas and start-ups, strengthening the region's attractiveness by making it more visible at the international level.	***Key features:*** • EuraTechnologies incubator is committed to serve entrepreneurs starting businesses in ITC field and early stages companies that are starting a new business unit or that need resources and services to bring strategic projects to the next level of development. • The model is based on the establishment of a true ecosystem of inter-company collaboration. • The incubator has a physical office which allows entrepreneurs to meet each other and other professionals to share and exchange ideas and to get necessary resources needed to expand their businesses. The entrepreneurs benefit from the incubator's management and administrative teams whose services are free of charge. • Once the business is launched, the company will leave the incubator and may enter the accelerator which will provide further access to services and support. • The areas that allow participants to apply for the incubator are: web-based companies, telecommunication network, information systems & software publishing, service & support companies, media companies. • The initiative supports: businesses and jobs creation; innovation (technology transfer, relationships with universities and laboratories); training; funding; clusters in the territory (Robotics, big data, cyber security, connected health); the management and development of real estate programmes adapted to the accompanied economy.
Main Achievements: • EuraTechnologies has incubated 20 projects per year and accelerated 52, generating about 1,000 direct jobs. • It has developed a global network of opportunity through a pool of partners to mentor, to coach and to assist the Region's businesses, and around the world. • It has enabled the region to become aware of its strengths in potential in the digital sector. During the last 5 years, it has created a veritable ecosystem where young and old today acknowledge that digital is a strong vehicle for economic development of the territory, and vocations can be raised. • Investors and business angels are now highly present, schools and universities invest in adapting their training to the labour market to stay competitive through initiatives such as the HubHouses present in all of Nord Pas de Calais' universities. • It has influenced the French government in the need to create local initiatives around the digital (as the French Tech initiative).	

iOTA – Northern Ireland (UK)

<table>
<tr><th colspan="2">2nd ESPON KIT Cluster: Smart and Creative Diversification Area</th></tr>
<tr><td>Northern Ireland's Path for Innovation
• Innovation is mainly led by the private and education sectors.
• The main focus is on SMEs that are outside the remit of state agencies, have no functional specialisation, few graduate employees and no strong relationship with a university.
• There is a need to raise awareness in the public sector of the importance of innovation.
• The goal of the region is to enhance local economic development. This bottom-up approach ensures that the opinions and creativity of small businesses are harnessed to increase employment and wealth.
• The economic vision for 2030 is to enhance innovation among SMEs and to have a growing economy where more firms compete in local markets.</td><td>Key features of the initiative:
• The iOTA programme offers cross-border collaboration with innovation support for SMEs and micro enterprises to help them become more innovative, more competitive and more sustainable.
• 10 local authorities in the East Border region deliver the programme.
• Target beneficiaries are individuals (third level students, graduates, employed, unemployed and underemployed people) micro enterprises and SMEs across the East Border region.
• Structured and inter-connected initiatives and activities deliver two distinct innovation strands of Innovation Awareness Raising: Strand A with Pre-Incubation Support and Strand B with Support for Existing SMEs.
• Services include: training for potential entrepreneurs on fostering innovation and creativity, developing business concepts into viable small businesses; innovation clinics with sessions and consultation for individuals and SMEs where specialist innovation practitioners identify needs and strategies as well as mentoring and assistance for beneficiaries in formulating an innovation action plan to innovate and expand their businesses.
• Face-to-face discussions included all stakeholders.</td></tr>
<tr><td colspan="2">Main Achievements:
• For Strand A, iOTA attracted 98 participants for the 10 training and innovation clinics and developed 95 Innovation Action Plans.
• Through the two strands, iOTA fostered new ideas for new or improved products, services and business processes.
• Programme participants exploited their innovative ideas in the most efficient way for their business with the help of experts and business mentors.
• Training gave participants the competence and confidence to reap commercial reward from their ideas.
• R&D expenditure among SMEs increased by 64% over six years.
• iOTA's supported innovation and reached businesses in the whole region through road shows in towns and villages.</td></tr>
</table>

Health Innovation Centre – Southern Denmark (DK)

5th ESPON KIT Cluster: European-Science Based Area	
Southern Denmark's Path for Innovation • Internationally, Denmark is recognised as a leading nation in e-health. • The region is known as an international front-runner for health innovation, telemedicine and assisted living. • EER activities, integrated into the overall Regional Development Strategy, focus on smart specialisation in three priority areas: health and welfare technology, sustainable energy, especially energy efficiency and offshore energy, and the experience economy.	***Key features:*** • Health Innovation Centre creates innovations that are used in hospitals and social institutions. It fosters job creation in the region. • Its innovative approach is based on the 'Design thinking'. • It develops innovations in health, telemedicine, hospital design and collaboration between public organisations and private companies. • Health Innovation Centre enhances collaboration with knowledge and education institutes such as the University of Southern Denmark. • Public-private partnership helped in funding projects and financing initiatives. • Stakeholders were involved through workshops and meetings. • The intervention fits into the Smart specialisation strategy for health innovation, bringing the private sector into the public world.
Main Achievements: • Direct results include new market opportunities, a new communication platform, new products such as legal guidance, tools for PPP and new university hospitals. • There were 800 new jobs created in the region. • The intervention changed stakeholder behaviour by creating a network of strong players in the field of innovation and social care. • Innovation capacity has been increased. • Public-private collaboration prompted the development of an integrated and innovative health system in Southern Denmark becoming a citizen-empowered health and care system.	

Eco World Styria – Styria (AT)

4th ESPON KIT Cluster: Applied Science Area	
Styria's Path for innovation • Styria has the best concentration of environmental technology enterprises in the world. • There are 500 cleantech companies with over 14,500 employees. • Styria developed a new economic strategy 'Styria 2020 – Growth through Innovation' with a focus on the enhancement of mobility, eco-tech and health-tech. Styria has the potential to be a comparatively small, but increasingly mature, flexible and innovative player in global competition.	***Key features of the initiative:*** • Eco World Styria is one of the largest environmental engineering clusters in Europe and the world's leading clean-tech cluster. • It supports companies with core services for innovation, expertise and new markets. • Eco World Styria focuses on environmental and green technology. Its goal is to strengthen biomass, solar energy, water/wastewater in the region. • It aims at increasing employment in environmental engineering and doubling the number of Styrian technology leaders to 20 by 2015. • In Eco World Styria, enterprises work together with research, administration and the ECO World Styria GmbH team to expand technology leadership and to increase the number of technology employees. • The cluster provides services such as support for strategy, innovation and funding as well as services related to development and industry expertise.
Main Achievements: • Eco World Styria is now one of the largest environmental engineering clusters in Europe and the world's leading cleantech cluster. • In Styria there is a very strong chamber of commerce with foreign trade commissioners interested in clean technology. Eco World Styria has therefore developed strong export links, notably with Russia and the USA, which provide companies with excellent market opportunities. • Eco World Styria managed to connect research and industry to boost green growth through regional research and an economic strategy, helping create 20 innovation projects.	

Business Innovation Centres – The Region of Valencia (ES)

2nd ESPON KIT Cluster: Smart and Creative Diversification Area	
Valencia's Path for Innovation • R&D expenditure in the Region of Valencia is 10% below the Spanish average, although R&D expenditure in higher education institutions is 18% above • The Valencian industrial network mainly consists of SMEs with limited resources to invest in R&D activities • To improve the innovation potential of SMEs, the Region of Valencia set several goals such as: promoting cooperation between scientific and technological innovation suppliers; improving training to suit the needs of business and the new knowledge society; improving implementation of innovative public policy; and promoting the development of innovative companies to encourage industrial diversification.	***Key features of the initiative:*** • To coordinate universities and technological institutes to facilitate SME innovation and growth. Companies can access scientific parks, business advice and professional advice more easily. • There are four BICs (Alcoy, Castellon, Elche, Valencia) involving five universities. • The Start Point Helpdesk places SMEs at the heart of the mission and helps them find support. This includes useful information and advice to entrepreneurs for their business model, but also includes information about company incorporation through the Single Electronic Document (DUE). • BICs' mission is to simplify administrative burden. • BIC Valencia offers SMEs Business Creation Seminars/Tools, which are free monthly seminars where entrepreneurs learn new tools to manage their businesses, such as setting it up. Other services include assistance in developing a successful business plan; training courses (face-to-face or on-line) for setting up and implementing start-ups; the Yuzz Programme, a project to stimulate business projects from 18 to 30 year olds; individual counselling and advice; financing at local or national level; workspace and infrastructure during initial critical years in the Business Centre; as well as corporate support services for the development and consolidation of projects including advice on marketing, management, internationalisation, financing, business opportunities, or innovation. There are also awards recognising entrepreneurial effort and innovative companies and their commitment to diversification, entrepreneurship and innovation.
Main Achievements: • There were 2,631 attendees at the Business Creation Seminars in 2013, which used highly creative content to help them create businesses. • In 2013 there were 13 training courses with 238 participants. • BICs assessed 1,183 projects through counselling and advice, which led to the creation of 104 new businesses. • To simplify administrative burden, BICs brought together public bodies and coordinated different organisms to provide important support and information for entrepreneurs. • Firms that work together to support entrepreneurs and companies optimise knowledge, experience and new methodologies. • Importance of local development is a key factor.	

Annex C – Questionnaire

Regional context

- Which are the regional characteristics and the main challenges, with special concern to innovation and R&D?

- Which are the main regional needs in terms of innovation?

Strategy and tools

- Which are the key features of the intervention (new methodological approach, combination of support, leverage of public sources, use of financial instruments, private partnership, etc.)?

- Did the intervention include measures specifically aimed at SMEs?

- How did you involve the stakeholders in the designing and delivering of the intervention?

- How does the intervention fit in relation to the smart specialization strategy?

Main achievements

- Which are the main types of direct results achieved by the intervention/strategy at level of single SME (new jobs, new market opportunities, new products, new processes, increase in turn over)?

- Is it possible to quantify the economic impact of the intervention on the territory?

- How the intervention changed the behaviour of the beneficiaries and stakeholders in terms of networking, innovation capacity, policy vision?

- Which is the main following up after the intervention?