ClusterPoliSEE

Smarter **Cluster Poli**cies for **S**outh-**E**ast **E**urope

Deliverable 4.4

Comparative Benchmarking Analysis

Final

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Annex 2 – Overall impact assessment dossier for regional-based policies
Annex 3 – List of cluster policy SWOT criteria
Annex 4 – Overall cluster policy SWOT report

Introduction

Fostering clusters as an instrument for enhanced innovation, growth and competitiveness is on the agenda of policy makers in all Southeast European (hereafter "SEE") countries. Taking a closer look at the region, however, reveals a very heterogeneous landscape in terms of the understanding of clusters, objectives, tools applied, expected outcomes, general collaboration culture, etc.[1]

In most SEE countries the cluster concept is rather new, apart from Italy, where there is a long history of collaboration in industrial districts. Dedicated cluster supporting programmes in SEE are even younger – with the exception of Austria, where publicly supported cluster initiatives were introduced on regional level more than 10 years ago. In many SEE countries cluster policies are tackled at national level (Hungary, Greece, Romania, etc.), in some on regional level (Austria, Italy, etc.). The approaches how to support clustering range from strictly bottom-up concepts (through e.g. competitive calls) to concepts foreseeing a stronger role of the public sector (centralised mapping of cluster potentials, implementation of cluster policies through regional development agencies, etc.). Accordingly public funding for cluster organisations in SEE countries ranges from 0% to 100%, depending not only on the age of the cluster initiative but also considerably on the main goal pursued in the cluster policy: the higher the importance of regional development and innovation capacity building, the more important public funding becomes.

The main objective of the ClusterPoliSEE project is to enhance the capacity of regional policy makers to anticipate change, developing smart specialisation strategies for cluster improvement, thus accelerating differentiation and structural change towards a knowledge-based economy in which there is a place for all SEE regions to position themselves. The project aims at defining, developing and implementing regional cluster policies, matching regional competitive advantages with international synergies, as a corollary of the pooling of resources and integration of activities along the global value chain.
Work package 4 (hereafter "WP4") of the project forms the basis for the process of reflective policy making, as precondition to develop smarter policies in support of existing and developing clusters in SEE. In particular, the objective of WP4 is to provide an in-depth assessment of the regional cluster policies in the participant countries, based on an examination of past actions, visions of the future, an analysis of current contexts as well as an understanding of and working with parallel contexts.
A matrix approach is followed throughout the project (and WP4), with the operational activities of the project addressing 6 cross-cluster development areas: innovation and R&D, sustainability, international cooperation & networking, financing framework, regional smart specialisation and new skills for jobs .

Despite the heterogeneity of the cluster policies described above, this comparative benchmarking report on regional cluster policies in SEE aims to identify challenges and derive recommendations relevant for cluster policy makers in the SEE region, if only for a better understanding of the different cluster tools and implications of challenges.

The report is based on activities of WP4, in particular:

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1 Recent literature on European cluster policy trends and cluster policy benchmarking:
Benchmarking cluster policies across Europe in "Clusters are individuals" Vol II 2012 by Lysann Müller, Thomas Lämmer-Gamp, Gerd Meier zu Kôcker, Thomas Alslev Christensen: http://www.cluster-analysis.org/analysis-of-cluster-programmes-and-policies/insights-from-cluster-programme-benchmarking
"The Cluster Initiative Greenbook 2.0" by Göran Lindqvist, Christian Ketels, Örjan Sölvell:http://www.clusterobservatory.eu/index.html#!view=documents;mode=one;sort=name;uid=a9dab110-adb2-44fe-9618-b2f8d12e2f41;id=

- the **consideration of past actions**, resulting in a quantitative and qualitative impact assessment of regional cluster policies (WP4.1),
- the carrying out of **SWOT-analyses on existing cluster policies**, leading to an improved understanding of current framework conditions (WP4.3), *as well as*
- the participation in study visits, with the **learning about and exchange of know-how regarding cluster policies** (WP4.4).

1. Key success factors, barriers, lessons learnt and implications for future cluster policy development detected in the analysis of the past

1.1. Sources

In the process of carrying out WP4.1 and analysing the past, different questionnaires were developed to gather data, amongst them a survey questionnaire addressed to cluster organisations, and cluster managers in particular (refer *Annex 1 – Survey questionnaire for regional-based policies assessment*). It consisted of 50 (open and closed) questions addressing general cluster policy issues as well as the 6 cluster development areas (innovation and R&D, sustainability, international cooperation & networking, financing framework, regional smart specialisation and new skills for jobs). The target respondent group for the survey questionnaire was 3-4 clusters per participating region that the partners deemed representative of their region/country.

Based on and in addition to the survey questionnaire, SEE cluster policy makers were asked to provide feedback on key success factors of cluster policy, barriers, lessons learned and implications (for the overall report on SEE refer *Annex 2 – Overall impact assessment dossier for regional-based policies*).

1.2. Key success factors of clusters in the SEE region

When asked for key success factors of clusters, SEE cluster policy makers and cluster managers agreed on the importance of **trust** among cluster members, **active participation and a driving role** of cluster members, a **clear cluster development strategy** and a **leader** who has a vision for a cluster's development (the leader mostly understood as being a strong cluster member, and in some cases a visionary cluster manager). Another agreed-upon key success factor was a **skilled cluster manager**, which was also mentioned as a deficit to be overcome in the future. Both cluster managers as well as cluster policy makers also mentioned the important role of **territorial as well as cluster branding**. Other key success factors which were emphasized were a cluster's access to a **strong innovation base,** the presence of a **variety of actors in the fields of production & service provision, education & training as well as finance,** and **favourable framework conditions** including the environment (natural resources), proximity to borders (heterogeneous structures of regions) and rail & road corridors.

QUESTION	No. of respon-ses	Average	1	2	3	4	5	Min	Max
In your opinion, what are key success factors of clusters? *(1 - Not at all important, 5 - Extremely important)*									
a) The geographical proximity of cluster members.	46	**3,26**	***3***	***6***	***18***	***14***	***5***	**1**	**5**
b) Successful finishing of initial joint projects.	45	**4,09**	***0***	***4***	***9***	***11***	***21***	**2**	**5**
c) Building trust among cluster members.	47	**4,49**	***0***	***2***	***4***	***10***	***31***	**2**	**5**
d) Creating a cluster development strategy.	46	**4,33**	***0***	***2***	***6***	***13***	***25***	**2**	**5**
e) State support (e.g. co-financing of joint projects).	47	**4,21**	***0***	***4***	***6***	***13***	***24***	**2**	**5**
f) A cluster office.	46	**3,98**	***0***	***3***	***11***	***16***	***16***	**2**	**5**
g) A leader who has a vision for the cluster's development.	46	**4,30**	***0***	***1***	***8***	***13***	***24***	**2**	**5**
h) Support from top management of member companies.	47	**4,34**	***0***	***1***	***6***	***16***	***24***	**2**	**5**
i) The active participation of members of the cluster.	47	**4,43**	***0***	***1***	***6***	***12***	***28***	**2**	**5**
j) Other.	4	**4,00**	***0***	***0***	***1***	***2***	***1***	**3**	**5**

Discrepancies arose with regard to the following points:

- ***Geographical proximity:*** While many cluster actors in SEE agree that physical proximity between cluster members encourages activity and hence a cluster's chances of success, there are also those who disagree on the importance of geographical proximity. On the one hand, these are cluster managers working in sectors used to long-distance collaboration, such as the ICT or the automotive sector. On the other hand, the importance of geographical proximity was ranked low by representatives from clusters that act like a national joint promotion and information platform. From a policy point of view, most cluster programmes in SEE foresee regional cluster development although there are also programmes supporting or at least allowing for national cluster development (e.g. Greece, Romania).

- **Cluster office:** While on one hand the importance of setting-up and running a cluster office for the successful development of a cluster was underlined, this was not fully agreed upon by all cluster managers and policy makers in SEE. This is partly also reflected in cluster managers' ranking regarding the role of the state: whilst financing is the key challenge for cluster initiatives in most SEE regions, cluster managers ranked "co-financing of the cluster office" only of "medium high" importance, against "co-financing of joint projects carried out in the cluster" which was ranked number 1 on the list.

- ***Openness:*** When asked about the general openness of clusters (question 20: "*Can companies that are formally not cluster members also cooperate in cluster projects?"*), 6 out of 46 cluster managers (13%) answered "no". Regarding the actual involvement in projects (question 21: "If yes, is there a company that is not a member of the cluster and which was already involved in joint projects?") even 11 of 37 cluster managers (30%) answered "no".

  On the other hand, the majority of cluster initiatives clearly encourages flexible boundaries of clusters in order to 1.) avoid interest group capture as well as lock-in effects, and 2.) allow for cross-sectorial fertilisation and the emergence of new industries. Nonetheless it is advisable for clusters to have a clear thematic focus or

specialisation, thereby providing it with a USP and differentiating it from competition; this thematic focus should be based on existing fields of strength.

Heterogeneity can also be seen in the answers regarding the topic "role of the state", please see 2.4 below.

1.3. Barriers and recommendations for improvement

The barriers identified by SEE cluster managers and policy makers which hinder cluster development can roughly be grouped into 3 main areas:

- a **lack of financial resources** (public and private financing, including banks),
- **a lack of awareness/commitment and cluster know-how** (of the business community and policy makers alike, parallel to short-term expectations facing rather mid- to long-term positive effects of clusters) and
- **difficulties regarding cooperation at different levels.**

The strongest responses of cluster managers related to barriers were as follows:

MAIN BARRIERS	Number of responses	Average	(of which)					Min	Max
What are the biggest barriers to cluster development in your country? *(1 - Not relevant, 5 - Very relevant)*			1	2	3	4	5		
1) Lack of financial resources.	45	**4,31**	*0*	*3*	*8*	*6*	*28*	*2*	*5*
2) Bank financing: lack of understanding of cluster's requirements (e.g. financing of multilateral cooperative projects).	45	**3,73**	*3*	*4*	*11*	*11*	*16*	*1*	*5*
3) Lack of knowledge about clusters and network structures, unfamiliarity.	44	**3,64**	*2*	*3*	*13*	*17*	*9*	*1*	*5*
3) The positive effects of clusters are visible only in the long run.	44	**3,64**	*2*	*4*	*9*	*22*	*7*	*1*	*5*

In order to remove barriers and to develop more effective cluster policies, the following **recommendations** were made:

Regarding **financial resources,** the recommendations strongly address the **involvement of banks** but also the **need for integrated support,** including funding from national/regional/local level, taking into account legal and infrastructural framework conditions. Here is a summary of the recommendations:

- Enable **improved access of cluster members to bank financing** through improved/more **information** and **access to financial support networks**;

- **Address the lack of national co-funding for EU projects**. One suggestion here is to set-up regional co-financing funds in collaboration with the banking system; another recommendation is to amend existing legislation concerning clusters and their financial support and ensure that cluster organisations have the right legal status so financing opportunities can be seized (e.g. from EU Structural Funds);
- **Creation of new financial instruments** (such as bank loans, guarantees, export credit insurance, ...) **for cluster organisations**;
- **Integrated approach to public cluster financing, tailored to the different levels of cluster development** and based on an **accreditation system**.
- **Improvement of physical infrastructures** (territories with suitable infrastructures, access to human capital and advanced services, etc.), with cluster policies becoming more integrated policies.

Recommendations on how to address a **lack of understanding and know-how** regarding clusters in the business community as well as in the public administration emphasise the issue of long-term benefits *versus* short-term expectations and the need not only to inform but also involve people:

- **Detailed information** and **promotion of clustering** through information databases, information seminars, presentations of companies, dissemination of good practices, information regarding EU policies towards clustering, match-making events, introduction of cluster topics in higher education, etc.;
- Creating awareness for the **long-term nature of clusters' potential benefits** among potential cluster members and interested entrepreneurs as well as public authorities;
- **Evidence-based policies**. Improving data on clusters to enable better policies;
- Providing/improving **training for cluster policy makers and cluster management** (staff), e.g. on (international) good practices, smart specialisation and regional innovation strategies, financing, organisational issues, sales, networking, internationalisation, etc.

Recommendations related to **improved cooperation** address cooperation within and between clusters but also coordination between different policy levels:

- **Improve collaboration within the cluster** by involving cluster members' top management in the operative life of clusters, as well as enable a more transparent spread of information and support stronger links between SMEs/industry, universities and R&D support institutions (e.g. internships, practical training of students in companies);
- **Make use of synergies through strong collaboration of cluster organisations, within the same or across the regions**, e.g. the establishment of a joint back office or staff specialised in public relations & marketing or international project management, to counter the lack of (time) resources of cluster members and cluster management, or the development of joint internationalisation activities;
- **Develop and coordinate policy instruments both at regional and national level,** including an agreement between the main stakeholders regarding the future roles of clusters, to strengthen policy support from national institutes;
- **Improve the role of intermediaries** such as regional technology transfer centres to help clusters;

- **Clarify and inform on the role of major SME supporting institutions** with regard to the creation (and possibly leadership) of new cluster initiatives, including available resources these could provide.

The strongest responses of cluster managers related to the improvement of cluster policies were as follows:

IMPLICATIONS FOR FURTHER CLUSTER (POLICY) DEVELOPMENT (LESSONS LEARNT AND IMPLICATIONS)	**Number of responses**	**Average**	**(of which)**					**Min**	**Max**
Please respond to the following statements: *(1 - I fully disagree, 5 - I fully agree)*			**1**	**2**	**3**	**4**	**5**		
1) Future cluster promotion requires an integrated policy by different ministries (e.g. Ministry of Labour, Ministry of Education, Ministry of Economy, etc.).	45	**4,51**	*0*	*2*	*4*	*8*	*31*	*2*	*5*
2) Clusters and other forms of business alliances are key to improving the competitiveness of the national economy.	45	**4,49**	*0*	*0*	*5*	*13*	*27*	*3*	*5*
3) In future, the government should tailor incentives to the specific needs of each cluster.	45	**4,33**	*0*	*2*	*8*	*8*	*27*	*2*	*5*

A policy coordinated between ministries is of particular importance to enable **cross-sectorial cluster collaboration.** More flexible and **tailored support** is recommended on several occasions (see also 1.4).

1.4. Role of the state

Various aspects of the potential role of the state in cluster development were mentioned before, nevertheless the input of SEE cluster managers and cluster policy makers explicitly related to this topic is summarised here.

According to the cluster managers' answers in the questionnaire, the most important role of the state lies in the **co-funding of national and European projects of cluster members and supporting cluster internationalisation.**

IMPLICATIONS FOR FURTHER CLUSTER (POLICY) DEVELOPMENT (LESSONS LEARNT AND IMPLICATIONS)	Number of responses	Average	(of which)					Min	Max
Please indicate how important the role of the state is in promoting cluster development in certain areas. *(1 - Not at all important, 5 - Very important)*			1	2	3	4	5		
1) Co-financing of joint projects carried out in the cluster.	45	**4,51**	*0*	*0*	*3*	*16*	*26*	*3*	*5*
2) Internationalisation of clusters.	44	**4,39**	*0*	*1*	*6*	*12*	*25*	*2*	*5*
3) Participation in EU projects.	45	**4,33**	*2*	*1*	*3*	*13*	*26*	*1*	*5*

- As mentioned above, financing is the key challenge for cluster initiatives in most SEE regions. There is a **general agreement on the importance of the public role in financial support for joint projects of cluster members**. **The opinions on the role of public institutions in co-financing cluster management organisations are more controversial**. Therefore the role of the state in co-financing cluster organisations was ranked only "medium high" in the survey among cluster managers. Some answers indicated support for a very strong role of the public sphere, on the other hand one response was that the state should not interfere in the (formal/informal) set-up of clusters. Another recommendation was that public support should be tailored to the stages of cluster development and should include facilitation in the development phase (this should be long-term oriented, i.e. at least for the first 5 years of a cluster's existence), thereafter the support could be more project-oriented.

- The recommendations to **establish indicators and evaluation systems** as well as implement measures of transparency with regard to financial support are also related to the topic of financing by public authorities.

- In addition to financial support, the public authorities should provide **technical support**; this could entail education and training in the field of clusters, distribution of cluster-related information, organisation of cluster events and access to information on clusters for businesses (databases, info-centres, etc.).

- **Coordination and integration of policies related to clusters**: policy makers have an important task in coordinating and integrating cluster programmes into different policies such as industrial research and technology transfer policies promoting the technological capabilities of companies/clusters, but also policies related to start-ups, FDI, education and employment as well as eco-innovation. National level support should be implemented in a way that **different ministries work together in a co-ordinated manner**, making use of different measures for the same goal; this encourages both competition and cooperation. A special emphasis was also made on the **integration of cluster programmes in regional innovation systems** and good collaboration between national and regional levels e.g. in mapping cluster potentials.

- Regarding **infrastructure**, the state has the task of developing the general physical infrastructure (esp. transport, telecommunication, energy, etc.), but should also increase investments in research infrastructures and set up national networks of specialised centres for industrial research and technology transfer.

- Last but not least the policy makers should **foster the international competitiveness of clusters** and use clusters as a tool for **attracting foreign investments and increasing exports**. Various ways of fostering internationalisation were mentioned: promotion of the development of internationalisation strategies of clusters, and promotion of participation in EU projects in order to foster individual and institutional learning processes based on the sharing of good practices and adaptation of well-functioning models.

1.5. Selected cluster policy aspects related to the ClusterPoliSEE cross-cutting cluster development areas

The analyses of cluster policies and mutual learning activities within the ClusterPoliSEE project follow a matrix approach addressing 6 cross-cutting cluster development areas:

- Innovation and R&D;
- Sustainability;
- International cooperation & networking;
- Financing framework;
- Regional smart specialisation; and
- New skills for jobs.

This section summarises selected policy-related aspects analysed by SEE cluster managers in the questionnaire as well as identified and commented on by SEE cluster policy makers in the region-based policy assessment.

1.5.1. Innovation and R&D

About two thirds of the cluster managers that answered the questionnaire indicated that they are or have been actively involved in innovation policy development in their region and/or in their country.

QUESTION	No. of respon-ses	Yes	No
Are you (or have you been) actively involved in the preparation and / or public discussion of innovation policy and instrument creation?			
Regional level:	46	**31**	**15**
National level:	46	**30**	**16**
EU-level:	46	**16**	**30**

Cluster managers who answered “yes” to the above question tended to be more in contact or collaboration with other intermediaries in their region/country, especially with other clusters but also with technology parks, technology networks, centres of excellence, incubators and other business networks.

1.5.2. Sustainability

The share of regional/national cluster programmes in SEE setting objectives with regard to the support of eco-innovation is rather high. Only cluster managers from Bulgaria and Albania answered that there are no eco-innovation objectives in their respective regional/national cluster programmes.

QUESTION	No. of respon-ses	Yes	No
Does the regional / national cluster programme set any objectives with regard to support of eco-innovation?			
Please select	45	**33**	**12**

The same share of, but interestingly not necessarily the same cluster managers answered that their respective cluster's strategy includes eco-innovation-related objectives, irrespective of the question whether their cluster focussed on eco-innovation and green-tech or not.

QUESTION	No. of respon-ses	Yes	No
Does your cluster strategy include any objectives related to eco-innovation?			
Please select	45	**32**	**13**
If yes, is your cluster primarily focused on sustainability / eco-innovation and therefore carry out a wide range of activities related to eco-innovation?	29	**16**	**13**

The potential role of clusters to support eco-innovation can also be seen in the following table: out of a total of 47 answered questionnaires, more than two thirds of cluster managers answered that they distribute information and raise awareness about eco-innovation topics, 21 even answered that they initiate eco-innovation R&D projects.

QUESTION	No. of respon-ses	Yes	No
Please indicate what kind of activities related to eco-innovation your cluster carries out:			
a) Awareness-raising.	41	**29**	**12**
b) Distribution of information.	41	**32**	**9**
c) Training.	41	**17**	**24**
d) Support for introduction of eco-standards.	39	**20**	**19**
e) Support for investments to improve eco-friendliness.	38	**13**	**25**
f) Initiation of / participation in eco-R&D projects.	42	**21**	**21**
g) Other.	8	**3**	**5**

1.5.3. Internationalisation

As mentioned earlier on, many cluster managers as well as policy makers think that it is an important role of the state to foster the international competitiveness of clusters and promote/enable the participation in EU projects.

This corresponds to the following answers from cluster managers:

QUESTION	No. of respon-ses	Average	1	2	3	4	5	Min	Max
How important is it for the cluster to be internationalised? *(1 - Not at all important, 5 - Very important)*									
Please select	44	**4,36**	***0***	***2***	***6***	***10***	***26***	**2**	**5**

Embryonic or very small clusters consider internationalisation as not (yet) important. On the other hand, not all of the cluster managers who considered internationalisation "very important" or "important" managed a cluster with an internationalisation strategy.

Major internationalisation activities:

QUESTION	No. of respon-ses	Yes	No
Does your cluster have an internationalisation strategy?			
Please select	46	**35**	**11**
If yes, please indicate the main activities contained in this strategy:			
a) Participation of companies in international events, trade fairs, study visits, etc.	35	**33**	**2**
b) B2B matchmaking.	35	**31**	**4**
c) Participation of companies in international projects.	34	**28**	**6**
d) Participation of cluster organisation in international projects.	35	**29**	**6**
e) Inclusion of foreign companies in the cluster.	34	**15**	**19**
f) Cluster office / representation abroad.	32	**10**	**22**
g) Other.	3	**3**	**0**

1.5.4. Financing

As also mentioned earlier on, the opinions on the optimal share of private and public financing for cluster initiatives were divided. The current rate of private financing ranges from 0% to 100%.

QUESTION	No. of respon-ses	Average	Min	Max
How is your cluster (incl. activities and projects) being financed? Please specify the financing structure and indicate which financing structure would be ideal in future (enter % of total funding):				
A) Current rate of funding (in total 100 %)				
a) Own resources (brought in by members of the cluster)	37	**38%**	**0%**	**100%**
b) National funds - REGIONAL	37	**20%**	**0%**	**80%**
c) Funding from the Structural Funds and other EU-funds	37	**28%**	**0%**	**100%**
d) Sponsorships	37	**2%**	**0%**	**30%**
e) Other	37	**11%**	**0%**	**90%**
B) Ideal rate of funding (in total 100 %)				
Own resources (brought in by members of the cluster)	36	**31%**	**0%**	**80%**
National funds - REGIONAL	35	**24%**	**0%**	**60%**
Funding from the Structural Funds and other EU-funds	36	**28%**	**0%**	**55%**
Sponsorships	35	**6%**	**0%**	**30%**
Other	35	**13%**	**0%**	**70%**

Especially clusters initiatives from Romania and Slovakia but also some from Italy are 100% financed from private resources – i.e. mainly membership fees, service fees are mentioned only 3 times. The share of national/regional funds is particularly small in Hungary and Greece, where cluster initiatives rely on private financing and resources from European funds.

Comparing the current real rate with the ideal rate of funding (please refer question B) in the table above) reveals no significant differences on average, although an (ideal) maximum of 80% of private financing is indicated.

1.5.5. Smart Specialization

As with the involvement in innovation policy development, about two thirds of the cluster managers who answered the questionnaire are also involved in the development and/or implementation of their region's smart specialisation strategy. However, they clearly emphasised the need for further involvement (please refer question a) in the table below).

QUESTION	No. of respon-ses	Average	1	2	3	4	5	Min	Max	Yes	No
Is your cluster (office) involved in elaborating and implementing (future) smart specialisation strategies in your region? If yes, please respond to the following statements: *(1 - Not important, 5 - Very important)*											
Please select	46									**30**	**16**
If yes, please respond to the following statements: (1 - Not important, 5 - Very important)											
a) The cluster (office) should be (more) involved in discussions, seminars and workshops regarding design and implementation of smart specialisation strategies.	30	**4,07**	***0***	***0***	***8***	***12***	***10***	**3**	**5**		
b) Further development of the regional economy, business' competitiveness and capabilities in fostering innovation will primarily depend on regionally tailored specialisation.	30	**3,97**	***0***	***1***	***6***	***16***	***7***	**2**	**5**		
c) The cluster members are convinced of the importance of collaboration; they support joint projects although such projects demand more openness and active participation.	30	**4,23**	***0***	***0***	***2***	***19***	***9***	**3**	**5**		
d) The cluster is regionally focused and its formation is based on a comprehensive SWOT analysis.	30	**3,67**	***0***	***2***	***12***	***10***	***6***	**2**	**5**		
e) The cluster is a key player of the regional innovation system.	30	**3,83**	***0***	***2***	***10***	***9***	***9***	**2**	**5**		
f) In addition, the cluster is an important player of the national innovation system.	30	**3,63**	***1***	***1***	***12***	***10***	***6***	**1**	**5**		
g) Good cooperation exists between the cluster on one hand and the business sector, research institutions and training facilities on the other hand.	30	**4,17**	***0***	***1***	***5***	***12***	***12***	**2**	**5**		
h) The cluster primarily addresses the implementation of sectorial strategies.	29	**3,59**	***1***	***5***	***7***	***8***	***8***	**1**	**5**		
i) The cluster primarily addresses the implementation of thematic-based (cross-sectorial) strategies.	29	**3,72**	***0***	***2***	***8***	***15***	***4***	**2**	**5**		
j) How important is it to strengthen cluster members' capability regarding collaboration?	30	**4,40**	***0***	***0***	***4***	***10***	***16***	**3**	**5**		
k) The cluster (office) deals with the analysis of identification and development of strengths and assets of the region (industry, tourism, culture, services, etc.).	30	**3,73**	***0***	***5***	***9***	***5***	***11***	**2**	**5**		
l) Tools for monitoring, evaluation and benchmarking are implemented for steering cluster activities.	30	**3,63**	***1***	***2***	***11***	***9***	***7***	**1**	**5**		
m) Other.											

Reflecting the important function of monitoring and evaluation in the development of regional smart specialisation strategies, it is noteworthy that "tools for monitoring, evaluation and benchmarking" are only rated rather low (please refer question l) in the table above).

1.5.6. New Skills and Jobs

More than half of the cluster managers who answered the questionnaire consider the fostering of new skills and job creation a "very important" or at least "important" objective of their cluster strategy. The table below also shows that there are clusters initiatives which do not address this issue.

QUESTION	No. of respon-ses	Average	1	2	3	4	5	Min	Max
Please indicate the importance of the objective 'new skills and job creation' with regard to your cluster strategy; is this objective part of your 3 main strategic priorities? *(1- Not at all important, 5 - Very important)*									
Please select	44	**3,95**	***1***	***6***	***9***	***6***	***22***	**1**	**5**

The main activities related to skills and jobs are information on trainings, organisation of seminars and support/motivation of young entrepreneurs.

QUESTION	No. of respon-ses	Average	1	2	3	4	5	Min	Max
How strongly does your cluster strategy focus on the following topics? *(1 - Negligible focus, 5 - Strong focus)*									
a) Informing cluster members of training and qualification programs for their staff.	44	**4,07**	***0***	***3***	***9***	***14***	***18***	**2**	**5**
b) Organisation of seminars to offer training and education to cluster members' and cluster office' staff.	44	**3,95**	***1***	***3***	***9***	***15***	***16***	**1**	**5**
c) Offering seminars on challenges regarding balancing of family and work life, changes in learning methods, labour law, etc.	44	**2,45**	***16***	***5***	***14***	***5***	***4***	**1**	**5**
d) Carrying out needs assessments to exploit job potentials for the future and support for adequate skills.	44	**2,91**	***10***	***7***	***10***	***11***	***6***	**1**	**5**
e) Awareness-raising concerning the retention of older, qualified staff in the workforce.	44	**2,32**	***14***	***12***	***11***	***4***	***3***	**1**	**5**
f) Informing of the potential of immigrant staff as well as assisting and supporting immigrant staff.	44	**1,89**	***23***	***8***	***10***	***1***	***2***	**1**	**5**
g) Promoting the hiring of disadvantaged staff.	43	**2,21**	***16***	***9***	***12***	***5***	***1***	**1**	**5**
h) Support and motivation of young entrepreneurs.	44	**3,77**	***3***	***6***	***8***	***8***	***19***	**1**	**5**
i) Promoting incentives for young entrepreneurs to take-up learning opportunities, coaching.	44	**3,48**	***6***	***7***	***6***	***10***	***15***	**1**	**5**
j) Involvement in elaborating curricular for high schools and vocational training centres.	44	**3,07**	***5***	***7***	***18***	***8***	***6***	**1**	**5**

2. Better understanding of current framework conditions through SWOT-analyses

2.1 Sources

To better understand the framework conditions which promote cluster excellence, regional-based analyses of strengths, weaknesses, opportunities and threats (SWOT) of existing framework conditions in SEE were carried out.

Partners were asked to select 3-4 cluster policy makers in their respective region/country which they deemed representative; based on guidelines how to develop a cluster policy SWOT analysis including a list of suggested criteria (*Annex 3 – List of cluster policy SWOT criteria*), the policy makers were asked to analyse strengths, weaknesses, opportunities and threats of their respective regional cluster policy and to describe the selected criteria in detail.

Based on the collected regional-based analyses, an overall analysis was carried out, identifying common strengths, weaknesses, opportunities and threats for cluster policies in SEE (regarding the overall report for SEE refer *Annex 4 – Overall cluster policy SWOT report*).
The benchmarking analysis report focusses on the topics for further discussion and/or collaboration identified in chapter *5.3.1. Elements of cluster policies suitable for interregional transfer* of the overall SWOT report.

2.2 Findings

When cross-referencing the strengths, weaknesses, opportunities and threats in the different SEE regions, the report identified criteria addressed in several regional SWOT analyses and gives some interesting **suggestions for further discussion and/or collaboration**:

2.2.1 Innovation and R&D driven cluster development

Criterion 9 and 10 – Degree, mode and form of correlation between regional innovation and cluster policies

Strengths	Weaknesses	Opportunities	Threats
Italy, Austria	Italy, Greece, Bulgaria, Serbia, Croatia, Hungary	Hungary	Romania, Croatia

Strengths:
Italy: Regional policy aimed at drawing together horizontal policies and sector-based policies: R&D, innovation and eco-innovation were conceived to support policies for cluster development and enhancement.
Austria: The Lower Austrian cluster policy is very well-integrated into the Regional Innovation Strategy (Economic Strategy 2015), the implementing body ecoplus is part of the well-defined governance system for innovation support within the region. The cluster initiatives are in line with the region's strategic priorities (innovation, cooperation, sustainability). There is also well-attuned collaboration between cluster managers and other innovation support providers (internationalization support services, start-up support services, etc.).

Weaknesses:
Italy: The degree of correlation between regional innovation and cluster policies is loose.
Greece: Loose correlation between regional innovation and cluster policies.
Bulgaria: Low correlation degree between regional policies for innovation and cluster development: The national and regional innovation programmes do not include measures aiming to support formations of clusters and their further development;
Serbia: The level of correlation between policies and regional innovation is weak.
Croatia: Currently, there are no significant efforts to achieve a base for innovation and new product development. Lack of competitiveness and innovation are one of the key issues regarding the development of clusters in Croatia.
Hungary: The degree of correlation between regional innovation and cluster policies is moderate.

Opportunities:
Hungary: Moderate correlation between Hungarian regional innovation and national cluster policies. High importance of cluster policy at national level. Innovation and cluster policies should be more harmonised in order to exploit the opportunities of the R&D sector.

Threats:
Romania: As the regionalisation process is in its infancy there is a loose level of correlation between national and regional policies. 2000 RDAs have developed strategic plans, including innovation and clustering processes. However the results could not be integrated into the policy at national level since until now financing schemes under structural funds were managed on national level and foresaw no regional differences or specific programmes. The continuation of the above described situation will lead to negative spill-over effects and loss of momentum concerning a cluster development policy.
Croatia: Unfortunately the correlation between regional innovation and cluster policies is very loose. This has to be addressed as soon as possible to achieve progress and development.

Criterion 11 - Means of linking innovation or R&D policies with cluster policy (development of research infrastructure needed by the clusters; technology transfer activities within cluster; fostering joint projects between research and industry)

Strengths	Weaknesses	Opportunities	Threats
Italy, Bulgaria, Austria	Albania, Italy		

Strengths:
Italy: Increasing collaboration between research and development centres promoting innovation. Promotion of industrial research and technology transfer from universities and public research organizations to firms through a regional network of industrial research laboratories and innovation centres organized into regional thematic platforms and located in a regional network of Technopoles. Promotion of R&D activity in firms especially SMEs, supporting of projects involving newly graduated students and encouraging collaboration between research centres. Matching clusters with the supply of industrial research platforms in the Regional Network High Technology.
Bulgaria: Bulgaria started the development of a vast technology park as base for an innovative infrastructure fostering the linking of R&D and cluster policies, and establishing a better environment for the creation of new business incubators. Cluster policy is embedded in the latest management program of the Bulgarian Academy of Science with Horizon 2016. The establishment of SofiaTech Park will link innovation and cluster policies.

Austria: 1) The cluster policy fosters strong linkages between business and research by requiring the inclusion of research institutions (within and outside the region, e.g. Vienna) in the membership of clusters themselves; and also through fostering the collaboration between cluster initiatives and Technopoles (research and education centres in Lower Austria specialized in certain technologies: agro-biotech, material sciences, human biotech). 2) Cluster initiatives foster the diversification of these technologies into the (traditional) sectors covered by clusters (plastics, mechatronics, food, green building and logistics). 3) Cluster management (encouraged by the cluster programme) enables the involvement of SMEs in international R&D projects by providing the project management of these projects.

Weaknesses:
Albania: Cluster Policy is not linked to R&D specifically.
Italy: Few facilities and low support services for small firms. High costs in service sectors; low use of ICT in advanced/higher forms; financial fragility.

Criterion 12 - Areas of correlation between the regional innovation and cluster policies (social policy, economic policy, educational policy, institutional policy, regional innovation policy, research policy, industry policy)

Strengths	Weaknesses	Opportunities	Threats
Romania, Italy	Austria		

Strengths:
Romania: In elaborating the Regional Development Plan 2014-2020, RDA NE has started a large participatory process including all relevant stakeholders in the region. In-depth analyses of existing R&D and innovation capacities, as well as industrial demand (mainly represented by clusters) represent a major focus of the regional development strategy. Examples of concrete steps undertaken by the RDA NE (North East Regional Development Agency) in this regard are its involvement in 2 of the 6 clusters (ASTRICO NR, Indagro Pol) and the coordination of a further 1 (IMAGO MOL).
Italy: Cluster policy is seen as an integrated policy dealing with education, training, industry and research policies. For this purpose, a regional planning which intends to connect industry activity, labour with education and universities was implemented. Recently, a Regional Action Plan (2012-2014) for Labour and Productive Activities was approved by the Regional Council in order to make policies effective in favour of enterprises/cluster competitiveness.

Weaknesses:
Austria: In Lower Austria (and Austria) there is a lack of inter-linkage between support mechanisms for agriculture and economic development. This is especially a problem for the food cluster when farmers should be involved in collaborative projects with companies (e.g. food packaging).

Criterion 13 - Cluster policy in the development of innovative technologies (funding for basic and applied research; developing of specialised research facilities; supporting the development of research networks; linking industry- academy-government or developing triple helix concept)

Strengths	Weaknesses	Opportunities	Threats
	Italy	Hungary	

Weaknesses:
Italy: Regional policies for the development of innovative technologies: few link industry and research, and there is little development of specialised research facilities.
Opportunities:
Hungary: The number of cluster programmes for innovative technologies varies greatly between the regions. The dominating focus among the regional programmes is regional development, and the most prominent target group is businesses.

Criterion 21 - The ways the cluster policy provides support to enhancing regional physical infrastructure (science, technology and business parks; business incubators; land use policies; transport and communication infrastructure, …)

Strengths	Weaknesses	Opportunities	Threats
Albania	Italy	Greece, Hungary, Croatia	

Strengths:
Albania: The establishment and the development of cluster infrastructures are foreseen in the Business Innovation and Technology Strategy (business incubator) and are in the focus of the government, as well as business parks or land use.

Weaknesses:
Italy: Lack of regional physical infrastructures (science, technology and business parks, business incubators; transport and communication infrastructure).

Opportunities:
Greece: The cluster policy provides support to enhance regional physical infrastructure via science, technology and business parks and business incubators which are long established and with great efficiency and capacity. The members of the supported clusters should develop strong interactions among them, exchange know-how and expertise, enable technology transfer, develop a network, disseminate results and commonly use infrastructure and facilities in order to encourage innovation and create important preconditions for developing competitive advantage on an international level.
Hungary: The ways in which the cluster policy provides support to enhance regional physical infrastructure are via science, technology and business parks and business incubators mainly.
Croatia: The need for R&D development has been recognized, which presents an opportunity for future technology and innovation progress and understanding. There are a number of support programs in that area.

Criterion 27 - The various roles of the government in the cluster policy

Strengths	Weaknesses	Opportunities	Threats
	Greece, Croatia	Italy, Bulgaria, Austria, Greece, Croatia, Hungary	Hungary

Weaknesses:
Greece: Greek regions are characteristic of the structurally unsound Greek growth model based on domestic consumption, inefficient and costly public services and insufficient investment into knowledge intensive businesses. In addition, public procurements, innovative services and supplies that could assist the development of innovation are not catered for.
Croatia: Encouragement of innovation and new product development is still insufficient; associations focus on lobbying instead of innovation.

Opportunities:
Italy: The role of national level regarding cluster identification and development comprises the actions settled upon by the MINISTRY OF ECONOMIC DEVELOPMENT ("INDUSTRIA 2015" programme and a mapping exercise to identify and analyse Italian regional districts) and the recent call for proposal (National Decree n. 257 of 30th May 2012) granted by the ITALIAN MINISTRY FOR EDUCATION, UNIVERSITIES AND RESEARCH aimed at integrating research/training/innovation through the support of national technology clusters development. This programme represents an opportunity to create excellent collaboration at national level and for regional clusters (regional intelligent productive chains) to become national competitors. Within the framework of ROP - ERDF, the regional call for proposal (DDPF 69 of 26.07.2012) aimed at promoting "research and development in technological and productive chains" provides financial support for enterprises which intend to make an investment in R&D based on the establishment of technological-productive chains through partnership agreements and contracts for network activation, with the involvement of research actors (universities and research centres) and Innovation Transfer Centres. This regional policy is an opportunity enabling enterprises and academic sectors to work together in collaborative research and development projects, without the creation of intermediaries for network management. The recent call for proposal (National Decree n. 257 of 30th May 2012) granted by the Italian Ministry for Education, Universities and Research is an opportunity for regional clusters/districts to be included in a NATIONAL STRATEGY to increase the competitiveness of the national economic system whilst also identifying advantages for regional territories. The call for proposal is meant as an inter-institutional policy action (main target groups: universities, enterprises, public bodies, public and private research centres) aimed at integrating research/training/innovation through the support of NATIONAL TECHNOLOGY CLUSTERS DEVELOPMENT.
Bulgaria: The government should support cluster development with different tools. It should recognize cluster organizations as a subject of Bulgarian law. It should create evaluation methodologies for clusters and on this base support them financially.
Austria: The potential for fostering innovation for public procurement is not exploited yet. There is a lack of experience how to do it.
Greece: Following the financial crisis, the country is redirecting its aims and targets to the promotion of innovation as a way out of the crisis. While there are no world-class clusters in Greek regions, there are a number of mature clusters including those supported by the Corallia cluster initiative (three clusters: Nano/Microelectronics-based Systems and Applications Cluster, Hellenic Space Technologies and Applications Cluster, Innovative Gaming Technologies and Creative Content cluster) or Life Sciences clusters (for example HBio) and a number of dynamic organic clusters (pharmaceuticals, telecom/ICT, chemical products, entertainment, processed food, tourism & hospitality) that could be further developed through appropriate policies

mobilising the potential cluster actors. As a result, further effort should be made in order to support the existing clusters and promote new cluster development to exploit the most promising Greek sectors.
Croatia: CIP (Framework Programme for Competitiveness and Innovation) combines support for innovation, energy and information and communication technologies in a common framework. The sub-program ""Entrepreneurship and Innovation"" supports horizontal activities, especially the ones that need to strengthen, encourage and promote innovation in SMEs. Croatia also participates in the sub-program to encourage the development of clusters (project within the Enterprise Europe Network in Croatia that is carried out by the Croatian Chamber of Economy) and two other sub-programs (Intelligent Energy Europe (IEE) and Programme Policy Support Communication Technologies (ICT Programme)).
Hungary: By creating appropriate framework conditions for innovation the government could foster cluster development.

Threats:
Hungary: The offer of public institutions (schools, universities, research institutions) should be flexible according to the needs of the industry, otherwise there will be a lack of qualified human resources and the industry cannot react properly to a changing environment.

Criterion 40 - Level of R&D involvement in the cluster programmes

Strengths	Weaknesses	Opportunities	Threats
	Serbia, Croatia, Hungary, Bulgaria,	Slovakia	Romania

Weaknesses:
Serbia: Low involvement of R&D in cluster programmes.
Croatia: The level of R&D is very low in cluster programs and R&D involvement is a big problem in the self-concept of clusters; it is not a key goal as it should be.
Hungary: The level of R&D involvement in cluster programmes is still low.
Bulgaria: The level of R&D involvement in the cluster programme is very low and limited. There are limited opportunities for the buying of equipment.
Targeted promotion of investment opportunities in industries and clusters in the regions based on their already demonstrated competitive advantages in science and education (e.g. engineering studies, natural sciences, software development) could be the solution.

Threats:
Romania: R&D represents a prerequisite of innovation. Concerning innovation, there is already a significant gap between North East Region and the national level, and between Romania and the European average. In the latest Innovation Scoreboard 92011, Romania scored as a modest innovator, with R&D expenditures in public sector at 38% of the European average while business R&D investments at only 15%. Failing to support R&D in the context of cluster development will lead to a further increase in the gap.

Opportunities:
Slovakia: The Austrian founding member of the cluster? offers numerous opportunities and has extensive experience in the field of renewable energy. Options mainly focus on the exchange of experience, training, seminars, workshops and meetings with Austrian firms that have expressed interest in entering the Slovak market. For Slovak companies there are also open opportunities to offer their products in the field of renewable energy sources (RES) to Austrian consumers.

2.2.2 Sustainability

Criterion 55 - Cluster policy tools in fostering eco-innovation (information, qualification, special calls, collaborative projects)..

Strengths	Weaknesses	Opportunities	Threats
Austria		Austria, Greece, Slovakia	Slovakia

Strengths:
Austria: Sustainability is a clear priority (1 of 6 corner pillars) of the Lower Austrian Innovation Strategy (Economy Strategy 2015). All cluster initiatives address eco-innovation (Green Building Cluster: energy efficiency; Food Cluster: efficient use of water, biogas; Logistics Cluster: reduction of empty runs, modal split; Plastics Cluster: bio-plastics; Mechatronics Cluster: energy-efficient production processes, LED technology).

Opportunities:
Austria: Further development of eco-innovation activities in the clusters (future trend).
Greece: A number of recent reports on Greece point to the large potential in emerging sectors such as waste management and recycling. Other opportunities such as urban mining or the introduction of new business models for greening transport systems offer significant potential. In short, there is a strategic opportunity for new eco-innovative solutions to green the urban environment.
Slovakia: Interest from educational institutions (high schools and universities) regarding training, workshops, seminars in the area of renewable energy. It is essential in the Trnava region to explain this subject to the general public and to integrate this topic of using renewable energy possibilities into the curriculum or other educational methods. Interest from secondary schools and universities is increasingly deepening, aiming to bring up a new generation of environmentally conscious people and creating favourable conditions for the production and consumption of electricity. At the same time it is possible to train experts and specialists in the area which are lacking not only in the Trnava region but also in Slovakia.

Threats:
Slovakia: Low interest from the general public in the use of renewable energy sources. This threat is mainly caused by high prices of many resources available on the Slovak market and no support from the Government of the Slovak Republic. In this area it is necessary to benefit from the experiences and advanced technologies of for example Austria, Germany, Scandinavia (Sweden, Norway), Iceland, etc.

2.2.3 International Cluster Cooperation and Networking

Criterion 28 - The components of internationalisation strategy in cluster policies/programmes

Strengths	Weaknesses	Opportunities	Threats
Hungary		Austria, Bulgaria, Romania, Slovakia, Hungary, Italy, Greece	Croatia

Strengths:
Hungary: 1) To develop internationally competitive sectors and to maximize the international potential of a region's science & innovation and education assets is a strong focus in our region.
2) The internationalisation strategies of clusters help to increase the international competitiveness of entrepreneurs.
3) It is necessary to develop the framework for strong research and innovation environments in order to work more systematically and strategically on international challenges.

Opportunities:
Austria: Fostering strategic international linkages and collaboration with complementary regions and clusters, development of a more structured internationalization process.
Bulgaria: 1) The development of a new national cluster strategy will allow for setting clear goals and concentrated measures for internationalization and strengthening the competitiveness of Bulgarian clusters. The revision of the cluster strategy could be focused on internationalization of cluster members. Cross-border collaboration and international activities are important drivers for economic development as they not only open access to new markets for domestic products and services, but also contribute to the exchange of knowledge and thus create an impetus for further development of products and services. The strategy should therefore also involve EU programmes and initiatives. In addition internationalisation will increase the competitiveness of entrepreneurs and enable the development of world-class clusters.
2) Targeted promotion of investment opportunities in industries and clusters in the regions based on their already demonstrated competitive advantages in science and education (e.g. engineering studies, natural sciences, software development).
3) Allocated public funds provide access to finance in form of seed, acceleration and venture capital; various programs are open to international participants; increased access to international markets through international trade promotion events.
Greece: To develop a framework for strong research and innovation environments in order to work more systematically and strategically on international challenges. Moreover, a particular focus should be given to strengthening the capacity of existing/emerging sectors/clusters to make connections to local, national and global value chains to support entrepreneurship and boost competitiveness.
Italy: To increase the international competitiveness of entrepreneurs to secure income/revenues for enterprises.
Romania: Internationalisation and access for clusters to markets outside Europe will be main foci of European support programmes in the period 2014-2020. Recently, the EU launched a call for proposals "Towards European Strategic Cluster Partnerships (ESCP)" aimed at encouraging clusters from CIP participating countries to move from networking to developing and implementing joint strategies towards third countries beyond Europe. Regional and national cluster programmes should support RO clusters in obtaining the necessary readiness to access relevant European cluster consortia.
Slovakia: The Austrian founding member of the cluster offers numerous opportunities and has extensive experience in the field of renewable energy. Options mainly focus on the exchange of

experience, training, seminars, workshops and meetings with Austrian firms that have expressed interest in entering the Slovak market. For Slovak companies also open opportunities to offer their products in the field of renewable energy to Austrian consumers. **Hungary**: 1) Increasing the international competitiveness of entrepreneurs.
2) An internationalisation strategy in cluster policies/projects enables the development of world-class clusters.

Threats:
Croatia: Lack of competitiveness as a result of non-internationalization is a threat to the overall economic growth and development of the Republic of Croatia.

Criterion 29 - The contents of international activities at the national/regional cluster policies

Strengths	Weaknesses	Opportunities	Threats
Slovakia		Albania, Austria, Hungary, Croatia, Greece	

Strengths:
Slovakia: 1) First, an international cluster in the area of RES - EnCC - was founded as one of the main outputs of the project CBC Slovak Republic - Austria 2007 - 2013, entitled "Intelligent Energy". As an integrated participant of the international association CENTROPE it can use all the resources and information of this European institution. 2) An international cooperation between the Trnava region (TTSK) and Burgenland Offensive Technologies (TOB): the founders of EnCC are TTSK and TOB. In particular, TOB and the whole of Austria respectively are one of the leaders in Europe in the use of renewable energy. Thanks to the mutual transfer of know-how, exchanging of experiences, exchanging of lecturers in the field of education, and learning opportunities for Austrian secondary schools and universities, EnCC is becoming one of the sources of RES development in Slovakia.
3) Experience as lead partner in international projects. The Automotive Cluster has been a lead partner in large international projects (budget approx. 2 million EUR), with networking aimed at improving the innovation capacity in the region as well as improving the transfer of technology and knowledge.
4) Existing partners´ contacts. The Automotive Cluster, through international projects, has built a rich partner base across Europe.

Opportunities:
Albania: 1) Learn from best practices of management and implement accordingly.
2) Participate in activities and presentations of successful clusters.
Austria: 1) Bring technological know-how to the region through enhanced collaboration with research institutions abroad (e.g. in the CENTROPE region) but also in Austria (Vienna, etc.).
2) (Further) improvement of the collaboration with Ecoplus international offices (Budapest, Prague, Bratislava, Temesvar, Sofia, Moskow) and with the Chamber of Commerce offices all over the world.
Hungary: Improve moderate correlation between Hungarian regional innovation and national cluster policies.
Croatia: The Central Office for Development Strategy and Coordination of EU Funds performs technical and administrative tasks related to the development strategy of Croatia, which should lead to the main goal, and that is to increase exports in general.
Greece: New structures for transnational cooperation in research and development are currently under development due to new funding.

Criterion 56 - Forms of international cooperation identified in the cluster policy

Strengths	Weaknesses	Opportunities	Threats
	Greece	Bulgaria	

Weaknesses:
Greece: Limited international cooperation: There is no specific strategy in the cluster policy leading to internationalization and networking of businesses and organizations. At the same time the policies implemented at national and regional level on the development of innovation and entrepreneurship through clusters, do not put the objective of international cooperation and networking as the main target of the strategy. Conclusively, the Greek innovation system is largely closed and inward looking and the measures implemented have done little to encourage internationalisation of either the research system (public and higher education institutes) or the business enterprise sector.

Opportunities:
Bulgaria: Certain support tools envisaged in the existing financial schemes.

2.2.4 Financial Framework Improvement

Criterion 8 - Incentive methods employed by the local, regional and national policies for supporting the achievement of key cluster policy objectives (entrepreneurship, SMEs development, employment, territorial cohesion, regional development, international competitiveness, export led growth, SMEs internationalization, FDI (Foreign Direct Investment) attraction, innovation, science and technology, new technology based firms, start-ups, sustainable development, rural development)

Strengths	Weaknesses	Opportunities	Threats
Serbia	Italy, Greece, Serbia	Croatia	Bulgaria, Croatia, Serbia

Strengths:
Serbia: Existence of programmes for cluster development which include support for SMEs, innovation, export promotion and internationalization through cluster support.

Weaknesses:
Italy: Incentive methods provided by regional policies should be improved: enterprises/cluster have not been provided with suitable ADVANCED TERTIARY SECTOR SERVICES and with incentives for technological development, thus causing low technological-content enterprises and low levels of R&D both in public and private sectors. Innovation, R&D and SME internationalization are now weak points in the regional cluster framework, so the challenge in new programming period will be improvement policies which support R&D, specialization and SME internationalization.
Greece: There are neither incentive methods at local nor regional level. The only incentives that exist are at national level and are not adequate. That is proven by the small number of clusters in Greece. In more specific, the Regional Operational Programme ‘s (2007-2013) objectives and incentives are quite general and almost identical to the national ones; in addition, there is no clear sign that regional features and particularities are fundamentally considered of. Hence, the

priorities as described in policy documents reveal the absence of a clear vision for regional development. In respect to funding, the greatest innovation gap is to be found in private sector funding and in the past public policy has failed to mobilise private investments. As a result, a package of financial instruments and incentives should be designed and promoted, such as to fit properly to the local/ regional innovation needs and entrepreneurs profile. These opportunities should be based on the local data and facts. Thus, collection, structuring, analysis and understanding of local evidences should be followed.
Serbia: Insufficient funding for SME support through the financial support of clusters.

Opportunities:
Croatia: Regional and national policies do support most of the cluster organisations in Croatia, but there is still some room for alignment between the two.

Threats:
Bulgaria: The lack of measures for cluster support in the regional development strategies is a threat for the creation of these formations on a regional basis.
Croatia: Incentive methods by the government are insufficient, which is a threat to further cluster development. Government is the first in line to comprehend the value of cluster organizations in the context of regional development, and therefore has a responsibility to support business sectors in terms of cluster development.
Serbia: Support of a large number of clusters, lack of critical mass.

Criterion 23 - Extent to which the cluster policy provides access to finance for cluster members (low, negligible, moderate, substantial)

Strengths	Weaknesses	Opportunities	Threats
	Bulgaria, Romania	Bulgaria, Croatia	

Weaknesses:
Bulgaria: There is only one programme for cluster development. Its financial support is low, and not appropriate for development of experienced clusters. There is no direct financing for cluster members.
Romania: Until now a single call for proposals for cluster financing was launched in August 2012, under the financing schemes for competitiveness poles, financing infrastructure, innovation and soft measures. The budget of 60 million EUR (public contribution at an average co-financing rate of 50%) is expected to meet the demand of 3-5 clusters. A 2-step procedure has been foreseen. The evaluation of the strategy qualified 22 clusters for the second stage, however none from the North East Region. Thus, lack of public financial support is a major problem of the regional clusters.

Opportunities:
Bulgaria: Moderate: support of public and private R&D funding, innovation funds, support regarding the creation of business angel networks, development of seed capital, public risk guarantee for private financial institutions.
Croatia: Clusters policy of EU funding allows moderate opportunities for financing and co-financing.

Criterion 24 - The ways the cluster policy provides support to cluster members in their access to finance (provision of information and support with respect to access of finance; support to of public and private R&D funding; innovation funds; support regarding the creation of business angel networks; fostering access to venture capital…)

Strengths	Weaknesses	Opportunities	Threats
Serbia	Greece	Croatia, Hungary	

Strengths:
Serbia: Provision of information and support with respect to access of finance.

Weaknesses:
Greece: Neither regional business angel networks nor regional venture capital funds have been formed in most regions nor are they considered in the respective strategies. It is considered a main challenge for Greece to support the creation of regional business angel networks and give incentives to venture capital funds with professional standards and co-investment funds to invest in regional business opportunities[2].

Opportunities:
Croatia: After Croatia becomes an EU member, at the anticipated date of first July 2013, the Croatian entrepreneurs will be able to use structural funds of EU. The Seventh Framework Programme for Research and Technological Development (FP7) is a financial instrument that supports activities in the field of research and development for nearly all of the scientific disciplines. Croatia also has an active network of business angels.
Hungary: Provision of information and support with respect to access of finance and mainly through business angel networks fostering access to venture capital.

Criterion 46 - Financing sources of cluster programmes (national budget, regional budget, EU funds)

Strengths	Weaknesses	Opportunities	Threats
	Bulgaria, Greece, Hungary	Croatia, Hungary, Slovakia	Croatia, Slovakia

Weaknesses:
Bulgaria: There is need for bridge-financing using funds from different EU programs and the national budget. Currently mainly funds from the EU Regional Development Fund are being used.
Greece: There is no regional budget for financing cluster programmes. The creation of a specific regional policy for cluster activities is considered a main challenge. In Greece there are financing programmes for clusters mainly on national level, such as national funds under the National Strategic Reference Framework (NSRF), the Operational Programme Competitiveness and Entrepreneurship, the Regional Operational Programmes, etc.
Hungary: The financing of cluster activities is based largely on EU projects.

[2] Reid A., N. Komninos, J-A. Sanchez-P. P Tsanakas (2012) RIS3 National Assessment Greece: Smart specialisation as a means to foster economic renewal. Report for the European Commission, Directorate-General for Regional Policy, Brussels.

Opportunities:
Croatia: The cluster policy and stimulus policy for SMEs receive the greatest support from the Ministry of Economy. In addition to the state, significant incentives for the development of clusters are provided by regional development agencies.
Hungary: Financing from own resources, adapting international examples.
Slovakia: Use of EU funding programmes (e.g. INTERREG Cross Border programme)

1) Automotive: The Auto-Cluster participated and still participates in several EU projects supported by INTERREG Central Europe, South East Europe, CBC Hungary-Slovakia, CBC Slovakia – Austria and CBC Slovakia – Czech Republic (project examples: SIMATIC, EPISTEME, INNOVMAT, AUTOCLUSTERS, Autonet, Clusters Without Borders, AC CENTROPE, AUTOPLAST).
2) Renewable energy: EnCC currently acts as project associate partner in the project of cross-border cooperation "REACT" (the OP CBC Slovak Republic - Austria 2007 - 2013). Further calls are expected in this area
3) Electronics: The Elektroklaster features in several projects using e.g. the Slovakian Operational Program Employment and Social Inclusion (Regional Innovative Centre Trnava).

Threats:
Croatia: The business sector should have an elaborate scheme of financing, otherwise this could lead to faulty thinking that all means should be financed from EU funds.
Slovakia: Non-existing sources of cluster program funding from the state budget of the Slovak Republic - In times of crises government does not support clusters from the state budget.

Criterion 59 - Cluster financing and self-financing models in the cluster policy

Strengths	Weaknesses	Opportunities	Threats
Romania	Greece, Serbia, Slovakia	Bulgaria, Serbia	Austria

Strengths:
Romania: Romanian clusters are mainly based on self-financing, as no national public funding dedicated to clusters has been available so far. They have developed innovative financing schemes, including the resorting to other easier-to-access European programmes (cross-border cooperation programmes, FP7), ESF programmes etc. and private contributions from the members.

Weaknesses:
Greece: Limited self-financing in some clusters. Cluster financing based mainly on national and European financial support. Clusters access to financing is very limited, especially under the influence of the severe economic crisis in Greece.
Serbia: The level of funding in support of clusters is very low.
Slovakia: The lack of cluster funding (excluding membership fees) in the model of self-financing strategy of EnCC. The cluster is young and lacks funding needed to develop its business.

Opportunities:
Bulgaria: There are some existing financial support schemes.
Serbia: The possibility of creating new mechanisms and support by applying for EU funds.

Threats:
Austria: Rigid interpretation of State Aid Rules: cluster initiatives fulfil various tasks ranging from joint market developing to regional innovation development (activities of preliminary private

interest to tasks of public interest) The financing structure of cluster initiatives has to take these different activities into consideration, i.e. public tasks require public funding. Limitations (rigid interpretations) of the Community Framework for State Aid for R&D&I threat public tasks of cluster initiatives.

2.2.5 Cluster and Regional Smart Specialization

Criterion 8 - Incentive methods employed by the local, regional and national policies for supporting the achievement of key cluster policy objectives (entrepreneurship, SMEs development, employment, territorial cohesion, regional development, international competitiveness, export led growth, SMEs internationalization, FDI (Foreign Direct Investment) attraction, innovation, science and technology, new technology based firms, start-ups, sustainable development, rural development)

Strengths	Weaknesses	Opportunities	Threats
	Greece, Italy		Bulgaria

Weaknesses:
Greece: There have not been incentive methods employed on regional but mainly on national level which are not considered adequate and cohesive. Greece is working towards developing the new smart specialization strategies as a basis for the 2014-20 programming of the Structural Funds. For the period 2014-20, clusters and cluster policies are being considered in the design of the national and regional strategies. As a result and according to the latest expert studies conducted[3], it is recommended to define a policy mix, based on appropriate stakeholder involvement and the organisation of the entrepreneurial discovery process of testing possible new areas, which produces synergies and cohesion between different policies and funding sources.
Italy: Innovation, R&D and SME internationalization are now weak points in the regional cluster framework, so the challenge in the new programming period will be the improvement of policies which support R&D, specialization and SME internationalization.

Threats:
Bulgaria: The lack of measures for cluster support in the regional development strategies is a threat for the creation of these formations on a regional basis.

Criterion 9 - Training Degree of correlation between the regional innovation and cluster policies

Strengths	Weaknesses	Opportunities	Threats
Austria		Serbia	

3 Reid A., N. Komninos, J-A. Sanchez-P. P Tsanakas (2012) RIS3 National Assessment Greece: Smart specialisation as a means to foster economic renewal. Report for the European Commission, Directorate-General for Regional Policy, Brussels.

Strengths:
Austria: The Lower Austrian cluster policy is very well integrated in the Regional Innovation Strategy (Economic Strategy 2015), the implementing body ecoplus is part of the well-defined governance system for innovation support within the region. The cluster initiatives are in line with the region's strategic priorities (innovation, cooperation, sustainability) -> Smart Specialization. There is also a well-attuned collaboration between the cluster managements and other innovation support providers (internationalisation support services, start-up support services, etc.).

Opportunities:
Serbia: Harmonization of cluster policy and regional policies giving clusters a significant position in smart specialization strategies.

Criterion 63 - The role of clusters and cluster policy with regard to the setting up of smart specialization Strategies

Strengths	Weaknesses	Opportunities	Threats
Hungary		Bulgaria, Italy, Romania	

Strengths:
Hungary: Clusters and cluster policy play an important role in smart specialization strategies.

Opportunities:
Bulgaria: Existing active clusters and the Association of Business Clusters in Bulgaria could play a significant role in future smart specialisation strategies.
Italy: Creating industrial and technological co-operation with other complementary clusters in the European regions.
Romania: Currently the Ministry of Education and Research finds itself in the process of developing the smart specialisation strategy at national level. An extensive and intensive analysis of the cluster landscape has been performed and included in the preliminary report. "Technical Textiles" (textile-agrofood-health-electronics) has been pre-identified as a possible smart specialisation of the region NE. The integration of clusters as backbone of regional smart specialisation represents a strong opportunity for further regional economic development.

2.2.6 New Skills and Jobs Creation

Criterion 17 - Extent of support to the availability of human capital to the cluster companies (low, negligible, moderate, substantial)

Strengths	Weaknesses	Opportunities	Threats
Albania, Italy	Austria		

Strengths:
Albania: The Cluster Program within the Albanian Business and Innovation Strategy foresees training and capacity building for staff.
Italy: Human capital is a key priority in regional policy: in order to fill the regional gap and move towards R&D activities (there are typically low levels of R&D in regional contexts), regional actions aim at increasing the qualification of human resources through VOCATIONAL

TRAINING suited to enterprises' development needs and HIGH EDUCATION focusing on technological development. E.g. in the Marche region, I.T.S. - TECHNICAL INSTITUTE FOR FASHION AND SHOES SECTORS - "New technologies for 'made in Italy'" was established in order to increase innovation and R&D in a regional traditional manufacturing district (shoes/fashion). Another example of regional action: the "AGENT FOR CHANGE AND DEVELOPMENT" was developed and tested – a professional facilitator aimed at detecting enterprises' training needs. This facilitator disposes of knowledge and competences to support innovation within enterprises/clusters, linking TRAINING ACTIVITIES TO THE EVOLUTION OF ENTERPRISES' ORGANIZATIONAL STRUCTURES, with the strategic goal to support the adaptation of the regional productive sectors to the new dynamics of the global markets.

Weaknesses:
Austria: Brain drain to Vienna: due to a lack of tertiary education institutions in Lower Austria young people leave to study in Vienna and often do not come back (lack of adequate jobs, life-style, etc.).

Criterion 18 - The ways in which cluster policy provides support to availability of human capital (fostering the development of specific programmes by existing education providers; supporting the development of internship programmes, vocational training, summer schools; promoting career perspectives within cluster sector,…)

Strengths	Weaknesses	Opportunities	Threats
Serbia, Hungary		Greece	Romania

Strengths:
Serbia: Fostering the development of specific programmes by existing education providers through the cooperation of clusters and educational institutions.
Hungary: Clusters and cluster policy play an important role in smart specialization strategies. Ways in which cluster policy provides support to the availability of human capital: 1) fostering the development of specific programmes by existing education providers; 2) vocational training. It is also relevant to mention summer schools in Hungary which promote career perspectives within the cluster sector.

Opportunities:
Greece: During the last years several relevant initiatives, such as lifelong learning and human resource development programmes, were promoted on national level through sectoral national funds, but without encountering the regional characteristics. In addition, some relevant initiatives are driven by the academic community (the »Youth Entrepreneurship Summer School« of Athens University of economics) and the clusters /business commnunity, such as the EGG programme, E-bootcamp, etc. which are some of the various initiatives launched and supported by Corallia Clusters Initiative in collaboration with the private sector for the development of innovative entrepreneurship. Some universities or specific university departments have also participated in several initiatives towards the alignment with the market needs, but further effort is needed in order to achieve substantial changes or results.

Threats:
Romania: Labour force has been identified as a main problem in all Romanian clusters. Analyses conducted on three dimensions - quantity, quality and qualification - revealed several problems, amongst them: (1) the lack of practical skills of university graduates due to the hyper-theoretical educational system and (2) lack of relevantly qualified skilled workers, which leads to further qualification costs at the expense of enterprises. Taking a closer look at the industrial

structure of the North East Region, one finds a concentration on low-skill, low-tech sectors including textiles, food, wood and metal products. Only machinery and equipment in the region can be considered high-intermediate tech. Failing to shape concrete programmes to ease the integration of graduates into the labour market will result in further losses in competitiveness.

Criterion 66 - Skills and critical know-how for cluster management in cluster policy

Strengths	Weaknesses	Opportunities	Threats
		Albania	Bulgaria, Hungary

Opportunities:
Albania: It would be very useful to participate in EU programmes to exchange knowledge and experience through training, learning and sharing during activities and presentations of successful clusters.

Threats:
Bulgaria: Skills and critical know-how for cluster management are still developing in Bulgaria. There is a relative lack of knowledge and expertise in the field especially when it comes to visionary implementation of policies for optimization and collaboration.
Hungary: Skills and critical know-how for cluster management should be developed in order to become competitive on an international scale.

Criterion 67 - Training programmes, courses and training for cluster management in the cluster policy

Strengths	Weaknesses	Opportunities	Threats
	Bulgaria	Bulgaria, Greece, Hungary	

Weaknesses:
Bulgaria: There were trainings for clusters during the PHARE project in 2008-2009. Recently there have been neither trainings nor professional courses for cluster managers. For the recommended dynamic development of the clusters in Bulgaria there are no sufficient training programmes and courses for cluster management.

Opportunities:
Bulgaria: The decisive competitive advantage for the future is knowledge and competence of managers and employees in businesses and supporting organisations of clusters. Creating favourable conditions for training of qualified cluster managers allows for the development of competitive clusters.
Greece: There are no professional training programmes for cluster management. Participation in relevant certified trainings and EU projects (e.g. SEENECO project) is more than important for the promotion of cluster management professionalism by applying advanced training and benchmarking tools.

Hungary: Training programmes, courses and training for cluster management could help clusters to become more competitive and efficient.

3. Good practices dedicated to the growth of clusters identified in the ClusterPoliSEE study visits

3.1 Sources

In order to enable partners' mutual learning and a better understanding of good practices dedicated to the development and growth of clusters, 6 study visits were organised within the framework of the ClusterPoliSEE project; these took place in:

- Sopron/Hungary (January 2013),
- Vienna/Austria (February/March 2013),
- Athens/Greece (April 2013),
- Sofia/Bulgaria (June 2013),
- Nitra/Slovakia (June 2013), and
- Novi Sad/Serbia (November 2013).

An additional study visit was organised in Chisinau/Moldova (February 2014) thanks to the (belated) involvement of the Moldavian Ministry for Economic Affairs as additional project partner.

Before the actual study visits took place, all host partners were asked to select one good practice example from their country/region for each of the 6 cross-cluster development areas (innovation and R&D; sustainability; international cooperation & networking; financing framework; regional smart specialisation; new skills for jobs). The host partners then described their respective planned study visit by providing information on the policy tools and measures they wanted to share and discuss (incl. rationale / target group / financing / implementation modality / performance indicators / output & impact / strengths & weaknesses / corrective actions / lessons learnt), and distributed this to all partners. In this way, the partners were able to identify the study visit(s) with the highest relevance to their needs.

Parallel thereto, the participating partners were asked to carefully study the information provided by the host partners and prepare questions as well as reflect on experiences from their own region, to actively participate in the study visit group discussions, thus contributing to the improvement of the measure as well as peer partners' mutual learning.

At the actual study visits, the hosts first presented a particular set of measures/good practices addressing cluster development and aiming at policy development support in detail; questions were then asked by participating partners. To enable participants to improve their understanding of a transferable and good practice, and in order to obtain feedback, the study visits further allowed for a forum for discussion and exchange (in small and interactive peer groups); this led to cross-fertilisation within the partnership as well capitalisation of the exchange of tacit knowledge among partners.

The results (e.g. highlights, detected critical aspects, learnings, potentials for transfer, follow-ups, recommendations from partners, etc.) of all the discussions were then reported in a structured manner by participating partners, and further summarised by the host partners, to arrive at overall results.

3.2 Selected good practice cases identified in the study visits

In order to demonstrate the large variety of policy tools / measures that are implemented in SEE, good practice cases showcasing different approaches to supporting R&D&I, eco-innovation, internationalisation, financing, smart specialization and new skills & jobs were selected and are shortly described below.

For more information on the study visits please refer to www.clusterpolisee.eu.

Cross-cluster themes	Good practice cases
Innovation and R&D	1. Pannon Mechatronics Cluster /HU *Approach: transformation of a cluster from* a sector *specific focus to a cross-sectorial focus on R&D&I* 2. The Moldovan innovation and cluster policy *Approach: Young cluster programme to promote innovation in a developing country*
Sustainability and eco-innovation	1. Food Cluster Lower Austria, FABBioGas project /AT *Approach: eco-innovation in a traditional sectors* 2. Electric Vehicles Industrial Cluster /BG *Approach: clustering in a green-tech sector*
Internationalisation	1. Bulgarian Furniture Cluster/BG Approach: Raise of a bottom-up *export initiative* 2. LISA – Life Science Austria /AT *Approach: setting up of an umbrella organisation to promote Austrian bio-tech clusters*
Financing	1. Hungarian Cluster Accreditation System /HU *Approach: assessment and accreditation of clusters as a precondition for specific funds* 2. Innovation Cluster Programme of the Greek General Secretariat for Research and Technology /GR *Approach: public finding for cluster organisations based on the community framework for state aid for R&D&I*
Smart Specialization	1. Mi-Cluster /GR *Approach: smart specialization through cluster development in a strong sector involving all stakeholders from the start* 2. The Lower Austrian Smart Specialization Strategy /AT *Approach: "innovation pyramid" - innovation support services on a broad level as well as in specialized niches, flexibility based on a sound monitoring system*
New Skills and Jobs	1. Support of the Knowledge Triangle, Plastics Cluster /SK *Approach: development of training and education programmes in international collaboration (Leonardo da Vinci programme)* 2. Connecting Academy and Industry for Developing New Skills and Jobs in the ICT Cluster Vojvodina /RS *Approach: involvement of companies in the development of demand-driven study programmes and private scholarships*

3.2.1 Innovation and R&D

Pannon Mechatronics Cluster supporting R&D and innovation projects of SMEs from the regional electronic industry /HU

Rationale:

The Pannon Electronics Cluster (PANEL) was founded on 20 March 2002 by 12 companies aiming to improve collaboration and market access for electronics companies. Due to changes in the industry the cluster had to reconsider its sectorial focus and open up to other industries such as the machinery, mechatronics and automotive industry, and increase its efforts to improve research, development and innovation. In 2005 the cluster was re-organised under the new brand Pannon Mechatronics Cluster. The cluster has meanwhile grown to 55 members. A core project of the cluster was setting-up a Technology Centre in Zalaegerszeg providing analysis equipment and services. The main role of the cluster management is to act as an interface between the technology-supply side and the demand of local companies.

Learnings:

Clusters often start off as a sector-specific initiative providing information and networking opportunities to their members. In many cases these clusters struggle to develop to a more mature level of collaboration. PANEL is a good example of a cluster which – due to changing circumstances – opened up to other sectors, acknowledged interdependencies with other sectors as well as the need to develop projects along the value chain. The cluster now puts a clear focus on R&D&I in order to gain a higher added-value. In order to manage the variety of member companies, cluster management has further set up sub-groups working on specific topics.

More information:

Pannon Mechatronics Cluster: http://www.pfa.org.hu/panel

The Moldovan innovation and cluster policy

Rationale:

The very young cluster policy in Moldova is based on the national innovation strategy for 2013-2020 “Innovations for competitiveness” issued in November 2013. The goal of the strategy is to assure a consistent horizontal policy framework that will contribute to:

- enhancement of the country’s international competitiveness;
- building of a knowledge-based economy

These goals shall be accomplished through the development of human capital by building capacities of Moldovan firms to absorb, generate and disseminate innovations and their closer interconnection with university and research centers.
Objectives:
A. Adopt an open model of research and innovation governance
B. Empower the public with innovational competences
C. Guide firms towards innovation: Assure legal framework for innovational activities, facilitate innovators’ access to finance, facilitate networking and technological integration of Moldovan and foreign firms, assure state support for innovational firms
D. Apply knowledge for solving global and societal problems

E. Stimulate demand for innovational products and services

As a first cluster initiative in Moldova the ECHIM-MOLDOVA cluster emerged in the last years around the machine engineering company TOPAZ, 7 universities/research institutes and the Agency for innovations and transfer of technologies.

Learnings:

The Moldovan innovation policy focusses on cluster development in order to enhance competitiveness through valorization of innovative technologies, products, marketing and organizational innovations, increase in labor productivity and the creation of new jobs and to enhance the quality and relevance of the results of the research sector.

3.2.2 Sustainability

Food Cluster Lower Austria, FABBioGas project /AT

Rationale:

The Lower Austrian Economic Strategy 2015 is based on 6 fundamental pillars, amongst them cooperation - the basis for the Lower Austrian Cluster Programme which supports 5 cluster initiatives. Another pillar is ecological, economic and social sustainability; this horizontal principle is also reflected in the activities of the Food Cluster Lower Austria which focuses on food safety of regional products and resource efficiency. One concrete activity of the Food Cluster Lower Austria is the current Intelligent Energy Europe (IEE)-project FABBiogas, which promotes the production of biogas from organic waste in the food and beverage industry.

Learnings:

Clusters can play an important role in fostering eco-innovation in traditional industries by raising awareness, providing information, initiating collaborative projects to introduce new eco-friendly standards, etc.

More information:

Food Cluster Lower Austria: www.lebensmittelcluster-noe.at
FABBioGas project: http://www.fabbiogas.eu

Electric Vehicles Industrial Cluster /BG

Rationale:

The Electric Vehicles Industrial Cluster (EVIC) was initiated in 2009 as a private non-profit organisation. It combines companies operating in the fields of design and production of components, spare parts and services for the conversion and production of electric vehicles, as well as organisations and experts specialised in variety engineering, industrial and non-production sectors from different regions of the country.

The main activities of the cluster are the development of a necessary legal framework and providing/securing the business environment; promoting and enhancing R&D activities as well

as capacity building and development of HR and specialised education and enhancing business-to-business (B2B) activities. The cluster has been involved in the development of national strategies for electric mobility (e.g. EVIC initiated the creation of the "National Programme for Electric Mobility - Bulgaria 2025") and related higher /vocational education and training.

Learnings:

Cooperation between clusters and public authorities is possible and brings mutual benefits and benefits to society.
The “Green Agenda” may indeed provide good business/development opportunities to companies/clusters/government authorities who are willing to take some risks. The legal framework should gradually be changed to promote the usage of green technologies and environmentally-friendly products.
Eco-innovation is also feasible in less-developed economies.
Electric Vehicles Industrial Cluster is also a good practice example regarding the attraction of members from other countries, internationalisation and financial sustainability without state aid.

More information:

Electric Vehicles Industrial Cluster: http://www.emic-bg.org/content/item/1

3.2.3 Internationalisation

Bulgarian Furniture Cluster /BG

Rationale:

The Bulgarian Furniture Cluster has 31 members and is a nationally-based business organisation established in 2008. It has created a supply chain with the ability to produce high-quality contract furniture for international markets and is starting to achieve remarkable export results. Based on the lessons learned from 2 cluster initiatives which had failed before, the Bulgarian Furniture Cluster clearly focusses on the contract furniture business for international markets. Competitors join forces in the cluster in order to reach a competitive advantage through specialisation, joint international marketing, increased capacity for joint orders, reduced costs through common purchases, collaborative innovation, etc. Amongst others, cluster management organises member visits in order that these may get to know each other better, and establishes focus groups on marketing, design/trends, HR/education, etc.

The Bulgarian Furniture Cluster is a good practice example showing the need for product/process innovation and increased product sophistication in order to enter new markets, as well as low-level participation in EU-funded projects.

Learnings:

- Need for better use of government policies regarding innovation, regional development, etc., to better aidclusters. The role of the state and state aid in assisting in the transformation of traditional sectors through clusters is very important.
- Constant focus on competitiveness is a must; continuous innovation might prove vital; increasing internationalisation, especially in the Balkan area, is necessary.

- Cross-sectorial and cross-cluster/cross-country cooperation is increasingly important.
- Strong cluster management and collaboration among cluster members can make a difference on a highly competitive export market.
- International cluster cooperation should be based on an understanding of market demands. Intensive use of ICT tools could boost cluster cooperation, exchange of good practices and increase opportunities. IT skills and knowledge are key elements for ensuring timeliness and adequate price/quality proposals.
- The feasibility to create a privately-funded cluster and attract relevant actors is a very interesting mechanism (motivation, incentives, etc.).
- A traditional sector produced a very profitable cluster, while remaining totally independent (not supported by public funds).
- Previous relevant experiences of cluster organisations are an important factor for the successful coordination and management of a cluster.

More information: Bulgarian Furniture Cluster: http://furnitureclusterbg.com/en

LISA – Life Science Austria /AT

Rationale:

Life Science Austria (LISA) is the Austrian umbrella organisation of the regional life science clusters Technopol Krems (Lower Austria), Health Technology Cluster (Upper Austria), Life Science Vienna, Human Technology Styria and Cluster Life Sciences (Tyrol). It was launched in 2007, aiming at a higher international visibility of the Austrian life science sector. To market Austrian life sciences effectively, it needed to get all the different cluster organisations in Austria on board. Meanwhile LISA works with all five Austrian life science clusters; they are the best in knowing the companies and strengths of the respective region. The programme is co-funded by the Ministry of Economy, Family and Youth (60% of the budget is provided by the ministry, 40% by regional cluster initiatives) and is run by Austria Wirtschaftsservice, the Austrian promotional bank, within the framework of the LISA support programme. Programme management and cluster representatives meet at least 3 times a year in workshops to decide on the strategy and which fairs to be represented at.
Apart from international marketing services, the aforementioned programme comprises financing for life science start-ups, a business plan competition and tailored advice services. In addition to the key actors, LISA International Marketing works closely with the Austrian Federal Chamber of Commerce, the Austrian Business Agency (Invest in Austria) as well as other actors on federal and regional level.

Learnings:

In Austria there are 5 well-established regional life science clusters / hubs specialized in specific technological niches. In order to be marketed abroad efficiently a strong umbrella brand was necessary. In a federal country with very strong regions and regional cluster policies, collaboration of regions and the national level is very important.

More information:

LISA – Life Science Austria: http://www.lifescienceaustria.at

3.2.4 Financing

Hungarian cluster accreditation system /HU

Rationale:

The cluster accreditation scheme is embedded in the framework of the New Széchenyi Plan which is in line with the government programme 2010-2014 entitled “The Programme of National Co-operation”.
Clusters can apply for the accreditation through a call for proposal in order to acquire the label “Accredited Innovation Cluster”. The accreditation system contains two different parts:
1. Data-based evaluation of the performance of cluster members, in detail:
   - evaluation of the effect of the cluster on employment,
   - evaluation of the business performance of SME members,
   - evaluation of the export potential of member companies,
   - evaluation of the framework and content of co-operations in the cluster, and
   - analysis of R&D and innovation activities in the cluster.
2. Qualitative assessment through the evaluation of the cluster strategy.

The most important difference between the accreditation and other standard tender calls is that no direct financial support is granted to a cluster when awarding the “Accredited Innovation Cluster” label. The main advantage of holding the accreditation label is that the accredited cluster and its members are exclusively entitled to submit project proposals for calls in the framework of the New Széchenyi Plan, and they can also apply for preferential conditions in certain other calls.
The „Accredited Innovation Cluster” label has become an internationally known brand and has been recognised as a good practice by the European Commission.

Learnings:

- Clusters at different levels of maturity need different forms of assistance or support.
- From a government point of view the accreditation system can be used as a relatively flexible tool to focus financial and economic resources. The accreditation of clusters can be used to „pre-filter” a large scale of companies applying for grants in the field of innovation and technology development.
- The Accreditation Committee - which takes the final decision on proposals - consists of high-level decision makers of the public and private sector, providing a strong backing the system.
- The introduction of such an accreditation tool requires at least middle term if not long-term thinking.
- Real advantages should be channelled, even if it is not so attractive for clusters themselves.
- The sole use of objective indicators is not effective for filtering clusters. Real cooperation, cluster activities and operations can be better understood through analysing strategies and by means of interviews.
- The administration costs for the functioning of such a system are rather high.

More information: The Hungarian Cluster Accreditation System:
http://www.clusterpolisee.eu/pptsopron/cluster_financing_sopron_2013.01.22_02.pdf

Innovation Cluster Programme of the Greek General Secretariat for Research and Technology /GR

Rationale:

The Innovation Cluster Programme managed by the Greek General Secretariat for Research and Technology was launched in 2011, based on good experiences with previous cluster programmes, e.g. supporting the mi-Cluster / Corallia.
The programme is co-funded by ERDF Convergence regions and was negotiated and approved by the European Commission DG Competition based on the regulations for innovation clusters in the community framework for state aid for R&D&I (regarding cluster facilitation) and the De-Minimis regulation.
The Innovation Cluster Program supports knowledge based clusters which are specialized in innovation activities of high added value and have a strong export orientation on a global marketplace.
The program finances the implementation of a pilot program of joint activities of the cluster (Phase 1) aiming at establishing networking and cooperation between the members. (A prior call for expressions of interest was published by the GSRT, which invited clusters to participate in the phase of identification/mapping of the clusters thematic area (Phase 0) aiming at the identification of the cluster's ecosystem, the existing and future needs for cluster development as well as its competitive advantage. The next step, i.e. the development of the cluster's critical mass and international visibility (Phase 2) will be supported in a future call.)
More specifically, the Innovation Cluster Program supports the implementation of the clusters' business plans for the first two years in order to support their innovation activities aiming at the participation of Greek enterprises in international markets and at the enhancement of productivity and employment on a local level.
Eligible activities include:
- Financial support of the cluster management' activities that are beneficial to the entire cluster, e.g. development of common infrastructure and co-location facilities, cluster promotion and networking, technical and legal support for patents, IPR and utilization of research results, personnel costs, operational costs, cost for developing the cluster's business plan, etc.
- Provision of funding to the cluster members, e.g. re-location to common infrastructure and facilities if required, rentals, patents' development costs, vocational education and training, participation in fairs, development of prototypes, small demonstration projects and other activities necessary for the innovation development.
The Innovation Cluster Program is not a research funding scheme. Basic or industrial research activities are not eligible for funding in the Program. Higher education institutions (HEI) and research centres are not entitled to funding unless they are the cluster facilitating organizations. However, the participation and cooperation with research centres and higher education institutions is necessary to enable the connection with the knowledge development environment.
Eligible for funding are independent companies that are legal entities of any kind and size. In case of non-independent companies participating in a supported cluster, only one of them is eligible for funding. The program supports clusters that include innovative newly established enterprises (start-ups), SMEs and large enterprises, research/academic institutions and other supportive organizations of the public and private sector (technological bodies, technology and know-how transfer organizations, financial institutions and venture capital investors, etc.)

showing geographic concentration and thematic expertise, connected in a added value chain (vertical or horizontal), based on knowledge and innovation and enhancing the presence of Greek businesses in international markets.
The members of the supported clusters should cultivate strong interactions between them, so the know-how and expertise exchange, the technology transfer, the network development, the dissemination activities and the common use of infrastructure and facilities encourage innovation and create important preconditions leveraging competitive advantage on an international level.

Learnings:

The Innovation Cluster Programme of the Greek General Secretariat for Research and Technology is one of the few programmes approved so far by DG Competition based on the regulations for innovation clusters in the community framework for state aid for R&D&I.

The programme sets ambitious key performance indicators for clusters to be supported, e.g. attraction of private investments, IPR expenditure, no. of patents/ filings for patents, no. of international trademarks.

More information:
General Secretariat for Research and Technology, www.gsrt.gr

3.2.5 Smart Specialization

mi-Cluster micro-electronics /GR

Rationale:

The nano-/microelectronics-based systems and applications cluster (mi-Cluster) is the first innovation cluster in Greece. It was initiated based on an intensive mapping exercise in 2005 (phase 0), started as a pilot cluster programme in 2006-2008 (phase1) and enlarged and further developed until to date (phase 2). Today the cluster consists of more than 130 members including innovative start-ups, SMEs and large companies, academic laboratories and research institutes, associations, financial institutions, media, as well as national and regional public stakeholders. In the period 2008-2010 the member companies exhibited an estimated growth rate of turnover of +266%, employment +63%, exports +119%, private investments +438% and patent applications +105%. It has been a role model for innovation cluster development in Greece and helped improve cluster policies and create trust in the private as well as in the public sector. The cluster is managed by Corallia, the first organisation established in Greece for the management and development of innovation clusters.
Due to the close collaboration of business, research and policy stakeholders, the very good results proven by an ambitious performance indicator system, the visionary role and high-quality cluster management of Corallia, the mi-cluster became a role model not only for cluster development but also smart specialisation in Greece.

Learnings:

Co-location: the Athens InnoCenter and the Patras InnoHub, thematic buildings that concentrate the mi-Cluster members at the same location, create a reference point for the microelectronics industry, foster cooperation and attract private investment.
Bottom-up: the private sector, all relevant regional and national agencies related to R&D, and universities / research centers need to be involved from the start to secure market-driven innovation. The development of a smart specialization strategy also requires the involvement of users ("quadruple-helix").
Sound mapping before start: an initial quantitative and qualitative mapping exercise (critical mass, pre-existing collaborations, innovation orientation, etc.) is crucial to the success of a cluster initiative and the detection of regional fields of strength (smart specialization).
Public financial support and favourable legal regulations are important. A clear and ambitious performance monitoring system and the success of the mi-Cluster as a role model for cluster initiatives in Greece helped a lot to create trust in the public sector as well as shape and improve the framework conditions.
Communication: especially for the first cluster initiatives in a region or country it is very important to have a strong communication plan, in order to gain visibility and acceptance.

More information:

mi-Cluster, www.mi-cluster.gr

The Lower Austrian Smart Specialisation Strategy /AT

Rationale:

Lower Austria, a traditionally rural area surrounding the Austrian capital Vienna, is characterised by a very small structured economy (97.5% small companies, 2% medium-sized enterprises and very few large companies), a lack of critical mass in public R&D (due to the fact that Vienna as Austria's R&D hub is located in the middle of Lower Austria but is an own province) and a highly diversified economy without strong sectorial specialisation. The main challenges of innovation policy identified in the region are: creating a critical mass in R&D and innovation in niche technologies, and fostering innovation capacity in rural areas.

The Lower Austrian innovation strategy ("Innovation Pyramid") consists of mainly 3 parts (specialisation takes place in the Technopol and the Cluster programmes):

- Technopol programme: innovation support services and support for technology infrastructure to support technology location development in very specific technological niches.
- Cluster programme: innovation support services for innovation through collaboration in 5 clusters -> specialisation within sectors.
- Technology and Innovation Partners (TIP) programme: innovation support services to improve innovation capacities of SMEs in general (no sector or technology specification).

All Lower Austrian programmes are monitored in a Balanced Scorecard with measurable and relevant indicators linked to the overall Regional Economic Strategy.

Learnings:

It is important to embed the different policy instruments in an integrated regional innovation policy and to interlink these instruments, e.g. by combining funding schemes with support services or by enabling cross-cluster collaboration in order to leverage the full innovation potential of a region.
Despite the focus on SMEs it is crucial not to forget about large companies in innovation policy instruments so that these may open their doors to SMEs, enable the involvement of SMEs in big (international) research projects and develop regional value-creation chains.
The Lower Austrian programmes are instruments of regional economic and innovation development. Services provided by Cluster and Technopol managers or the Technology & Innovation Partners acting as intermediaries between regional government and businesses cannot be left to the open market. It therefore remains necessary to provide public support for these activities.
A comprehensive monitoring and evaluation system is crucial in order to secure flexible and evidence-based policy reactions to new developments in the regional economy. It is worthwhile to utilise sufficient resources when defining the right indicators ("you get what you measure").

More information:

Regional Government of Lower Austria – Dep. Innovation and Technology
www.noel.gv.at/English/Topics-in-English.html

3.2.6 New Skills and Jobs

Support of the knowledge triangle, Plastics Cluster /SK

Rationale:

In general, the current situation of the production industry in Slovakia is characterised by a gap between the education system and required workers' competences. Further improvement of apprentices' qualifications is necessary before their deployment into the professional fields. In Slovakia only 30% of all education is devoted to practical activities in real working conditions. In order to satisfy the requirements and needs of the market it is necessary to improve the quality of vocational education and training, and to provide apprentices with the necessary skills for successful work performance.
Regards the plastics industry, education requires high investments into technology to enable practical training. Previously, there was no education for injection moulding; moreover, there were no plans for such education within the school system of the Slovak Republic.

The Slovak Plastics Cluster (EDMOULD) therefore has been participating in international projects supported by the Leonardo da Vinci programme in order to improve the quality of further education in the field of plastic processing; this has been achieved through the transfer of content, curricula and methods used by other European partners in the education regarding the setting-up of moulding machines.
The cluster managed to achieve the accreditation of the educational program „Setup of Moulding Machines" including 2 new modules - Robotics and Training of Trainers. More than

120 attendees were trained and the book „Basics of injection moulding technology" was sold 158 times in the Slovak and Czech Republics.

Learnings:

- The cooperation of companies, universities and schools, and public authorities (knowledge triangle) is important in order to develop strategies to keep talented people in the region, decrease brain-drain, etc.
- Eliminate the major obstacle to the free-flow of labour which is represented by the lack of consistent vocational education.
- Establish a consistent vocational education and training system in the region.
- Improve the quality of vocational education and training, and provide apprentices with the skills necessary for the successful performance of work.
- Better cooperation between vocational schools and employers.

More information:

Slovak Plastic Cluster: www.plasticportal.eu

Connecting academy and industry for developing new skills and jobs in the ICT Cluster Vojvodina /RS

Rationale:

In 2012, members of the Vojvodina ICT Cluster initiated a discourse on the need to increase the number of students that enrol in ICT-related study programmes at the University of Novi Sad. The main reason for this was the significant increase in demand for professionals with such educational backgrounds. The Provincial Secretariat for Science, Technological Development and Higher Education recognized this need and approved the raising of quotas for such study programmes funded from the budget by 10%.
Since then, several meetings were organized to analyse existing and needed skills of students, all for the purpose of improving the quality of education in terms of compliance with the needs of Vojvodina ICT Cluster's member organisations. A number of initiatives to change existing study programmes, create new ones and prepare specialisations in the domain of ICT originated as an outcome of these meetings. The first resulting programme was accredited and is being taught since 2013, with financial support from members of the cluster. Preparations for a new Master and specialist study programme are under way.
The creation and accreditation of study programmes was financed by national funds and EU-funded projects. The realisation of study programmes is financed by private resources of ICT companies and scholarships awarded by companies to students.

Learnings:

Cooperation between the cluster and departments / faculties of the university has presented itself as a way to realise very successful innovation and create study programmes at different academic levels, as well as courses for training and qualification of employees in the ICT sector. If the programmes are modular in nature, they can easily and frequently be changed. In this

way, the education of professionals that truly suits the needs of ICT companies can be made possible. Cooperation of the university with cluster members provides a direct feedback regarding the evaluation of the quality of study programmes and courses; at the same time it also provides a solid base for research and an opportunity for students to gain work experience through volunteering in cluster member organisations.

More information:

ICT Cluster Vojvodina: www.vojvodinaictcluster.org