ClusterClusterPoliSEE

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

Output6.3
"Strategy and sustainability plan"

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1 INTRODUCTION

The **strategy** and the **sustainability plan** represents a key document for ClusterPoliSEE project. It discusses the key policy implications emerging from the analysis conducted within the ClusterPoliSEE Project and suggests related policy instruments useful for the SEE and more broadly for all European regions which aim to foster growth through cluster development.
The strategy and sustainability plan is not to be considered as a summary of the documents developed so far within the project but as complementary to them. Indeed, knowledge developed through the analyses performed within the ClusterPoliSEE project has been used to develop the policy implications included in these documents. In particular, the 'Foresight exercise - diagnosis report' so as the regional-based SWOT and foresight exercise analyses and the other subsequent documents that have analysed them collectively have been particularly useful in order to understand the major gaps in the SEE regions preventing them to fully exploit the local clusters potential. Also the 'Set of policy measures' (deliverable 5.1) has been particularly useful complement to what stated in this document, in that it lists several specific policy actions for each WG. Additional writings used to generate the strategy and the sustainability plan are produced within other European projects focused on clusters – such as TACTICS (Transnational Alliance of Clusters Towards Improved Co-operation Support) and CluStrat (boosting innovation through new cluster concepts in support of emerging issues and cross-sectoral themes) – and also by relevant institutions, such as Cluster Excellence (e.g., "Cluster organisations in Europe: insights from Bronze and Gold labels assessments", by Thomas Lämmer-Gamp, Helmut Kergel, Michael Nerger, *Input paper for the workshop "Moving forward the EU policy agenda on cluster excellence", Brussels, September 23rd, 2014*). Moreover, inputs coming from meetings of the member partners, including the recent meeting in Brussels during the Open Days (7th October 2014), have been carefully considered.
The "Joint Strategy and Sustainability Plan" is shared in two parts, organized as follows. The Joint Strategy document lays out firstly what are the main weaknesses of the SEE regions emerging from the ClusterPoliSEE project, considering the 6 Working Group Areas of the project:

- Innovation, R&D driven Cluster development (WG1)
- Sustainability through Cluster Development (WG2)
- International Cluster Cooperation and networking (WG3)
- Financial Framework Improvement (Cluster Financing) (WG4)
- Clusters and Regional Specialization (WG5)

- New skills and Jobs creation (WG6).

Then, starting from this analysis of the existing situation, based on evidence collected through the SWOT and the foresight exercise analyses, and considering the wide heterogeneity that characterized European regions, the document starts to lay out the "potential", that is the most important element to consider for the development of cluster policies.

In chapter 3, the sustainability plan takes these inputs further and lays out the main policy implications and explicit what cluster policies should consider starting from the main limitations laid out in the Joint Strategy. In particular, the documents suggest implications for policy development at regional, national and European level for each of the 6 WG areas, leveraging on the main recommendations described in the 'Foresight exercise – recommendations' document developed within the ClusterPoliSEE project. In other words, the document gives useful suggestions for the development of cluster policy within SEE regions considering each key project area, through four policy recommendations axes and a multi-level perspective axis:

1. ***Considering the variety of clusters*;** which supports the importance to consider the differences in terms of size, specialization, history, governance, stage of the life cycle across clusters in order to develop proper policies;
2. ***Entrepreneurial Cluster Management Organizations*,** which highlights the importance for the Cluster Management Organizations (CMOs) to take on an entrepreneurial character to support the development and evolution of clusters, opening up collaboration opportunities for firms;
3. ***Supporting SMEs cooperation***, which suggests that, considering the small size of the firms part of the clusters in SEE regions, cooperation and aggregation possibilities among them should be fostered[1];
4. ***Supporting innovative new ventures development*,** which posits that clusters should not only support cooperation and development of existing firms, but also the creation of new ventures, able to create new jobs and develop new markets.
5. ***Multi-level perspective***, which considers in a cross-cutting view that policies developed at cluster level have to be complemented and

[1] According to the European Legislation Small and Medium sized Enterprises (SMEs) are firms which employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million.

co-developed also by policies developed at regional, national and EU level.

The last paragraph (3.7) recaps the main policy implications and the policy actions discussed within the sustainability plan, for each WG area.

2 JOINT STRATEGY

2.1 Weaknesses and potential for cluster development through innovation and R&D (WG1)

The various analyses carried out within the ClusterPoliSEE project underlined the different policies' development stages among the participating SEE regions. While some regions have already implemented successful strategies to support innovation (within clusters and more generally within the whole region), others are still in an early stage of the process. Consequently, while in the first case the attention is placed on refine policies to make them more effective considering clusters' development and needs and the environment that surround them, in the second case actors are looking at the best practices to understand how to structure or implement policies that will result well-organized and capable to answer at the regional specificities.

In fact among the issued emerged, it has been underlined the necessity for specific policies aimed at fostering a fruitful collaboration among the various regional actors with a focus on the promotion of R&D activities and of their results. Some regions underlined the need for changes in the cultural approach to collaboration, highlighting the need for a more open approach to the knowledge sharing and for more cohesiveness and openness among the cluster members to be able to share experiences and relevant information. In this regards, it emerged that in some cases the cause of that is the lack of a common sense of cluster's membership and consequently the need for someone (a cluster manager) with leadership skills.

The low level of interaction with research centres and universities and the need for a stronger presence and collaboration emerged with these actors within the cluster to be able to carry out innovative projects. However, adequate infrastructures are needed in order to enhance the collaboration. This issue is connected to the low opportunity to collaborate with large firms able to support costs for R&D activities. In fact, because of the fact that most clusters are composed by SMEs with low economical capabilities, the availability of funds is an essential element in order to be able to support costs for innovative projects. These issues are connected at the WG4 area because the support to collaboration projects is not enough if it is not supported by funding policies that have to be applied in a long-term perspective too.

From the analysis of the documents developed within the ClusterPoliSEE project, it also emerged the lack of and need for inter-clusters collaboration, in order to achieve higher innovation level and to afford more complex R&D efforts. Within the region, in a S3 perspective, some regions lack of policies able to efficiently support the various cluster development stages (among the SEE area countries may be classified as Mature, Middle, Early) and consequently to enable them to efficiently participate and contribute at the regional strategy. In this regards among the regions participating at the project, there are examples of successful cooperation between traditional clusters and others specialized in innovative technologies aimed at implementing new, sustainable methodologies. Within an EU perspective there is the need for more inter-regional cluster collaborations opportunities aimed at sharing knowledge, experiences and ideas.
As already mentioned above, following the weaknesses emerged from the analysis, intra and inter-cluster cooperation appear as a key object to support innovation capacity development within clusters. The more such cooperation will include diverse partners and organizations – firms, knowledge intensive business services (KIBS), research centres, universities – the higher the probability that break-through innovations will take place and that local firms will be able to access high-value knowledge. Moreover, the more such cooperation will go beyond regional borders, to include other clusters or organizations located within the same regions or nations and outside it, the higher the probability to tap into relevant global flows of knowledge and to find the fit partners in order to enhance local innovation capabilities.

2.2 Weaknesses and potential for cluster development through sustainability (WG2)

Both at national and regional level, SEE regions differ in terms of strategies related to the eco-innovation and sustainability measures implemented. Moreover, as underlined in particular by Romania, Hungary, Slovenia and Slovakia, being technologies and innovation followers, cluster policy at EU level is structured based on the leaders' needs, resulting difficult to adapt to their context and by consequence, being less efficient. Additionally, firms and local institutions very often are not aware of the high potential related to the development of sustainability strategy or useful environmental technologies being already available. Alternatively, they cannot afford them

because of being too expensive to achieve or develop, especially for SMEs which represent the majority of firms in the SEE clusters and regions.
The development of green technologies and eco-innovation by one side is the result of collaborations with universities, R&D centres, or with other clusters specialized in new technologies (see paragraph 2.1); on the other side, it has to rely on the available resources in the area. These elements are essential in order to pursue sustainable growth and efficiently contribute at the regional smart specialization strategy. Starting from this awareness, the analyses performed within the ClusterPoliSEE project suggested that in some cases there is the need for the development of specific policies which have to take into account the regional diversities occurring within the same countries and clusters' development stages, targeting the financial resources available (see paragraph 2.4) and supporting specific weaknesses that could not be possible to fill up if considered from a National level perspective. On the contrary, supporting and answering to the needs of a specific area will allow clusters to use at best their resources and potentials to develop green technologies or business models that fit their specificities and by consequence to be able to better contribute at the regional and national sustainable growth.
Two main elements have to be developed in order to support the development of green capacity within SEE regions: The first one is to implement eco-innovations, being radical or incremental by mixing resources already available in the regions with new technologies coming from different industries or different regions. The second element regards the importance to increase the awareness about the market potential linked with green markets and to increase the knowledge about what are the existing elements of the cluster on which to leverage in order to develop a specific excellence within the broader sustainable innovation realm.

2.3 Weaknesses and potential for cluster development through international cooperation and networking (WG3)

The diverse level of cluster development among SEE regions by one side and the variety of experiences and specialization by the other, lead to the common awareness that this SEE heterogeneity is also a resource that have to be used to enhance clusters' development. In fact it emerged that international collaborations are considered important not only to learn from the best practices and from the other countries' effective policies, but also to start fruitful collaboration with research institutions, innovative clusters

or potential partners, pursuing common goals and expanding in new markets. However for most clusters in SEE regions the internalisation process is still at the beginning, not only in terms of new markets to be exploited but most importantly in terms of collaborations to be developed.
The analyses performed at SEE regions within the ClusterPoliSEE project supports that there is the need for specific mobility schemes for internalization strategies and for targeted funding support schemes aimed at enhancing internalisation's activities. It has also been underlined the lack of specific information aimed at clarifying the requirement to undertake international activities and supporting through the identification of potential clusters or cluster organizations for collaborations. Furthermore, it appears there is really few coordination and involvement among clusters or cluster organizations' networks to develop common projects, not only among clusters of different countries but also among clusters of the same country or region.
SMEs have a particularly low knowledge with respect to the international networking and cooperation opportunities. Consequently if by one side they need for specific funds to be invested in the research and development of international activities, on the other side SMEs and clusters look for the support of expert personnel able to help them through the internalization process.
All in all, to enhance international cooperation is needed as a way to achieve competitiveness in the market, innovate (see paragraph 2.1) and to learn about best practices developed by similar or complementary clusters in other regions. Detailed actions on how this goal can be achieved will be reported in the Sustainability plan (see Chapter 3).

2.4 Weaknesses and potential for cluster development through financial framework improvements (WG4)

Funds are considered the fuel that enable actors to carry out activities aimed at the clusters' development and consequently at fostering cooperation, innovation, development, sustainability and jobs creation. However, in the current context there are difficulties in accessing finance and, as emerged from the analyses, clusters need well-defined and predictable financial framework assimilated in the regional economic policy.
Public funds are important to implement cluster policies and programs. In this respect, among the SEE regions, issues related to the attribution of

public funds emerged. On this matter many regions underlined the need for the implementation of efficient monitoring methodologies, important to be able to ask and apply for funds support, to demonstrate the improvements achieved by the cluster and also to understand for what purpose funds are needed. Moreover due to the scarcity of resources, that at national and regional level are often considered low or insufficient to answer to the cluster's needs, attention is asked for understanding the regional or local specific clusters' necessities and capabilities in order to apply a more appropriate and efficient allocation of funds and to avoid to invest in clusters with no potentials or in worthless activities.

Another issue emerged by the analysis of the documents developed by each SEE region for the ClusterPoliSEE project, with respect to the public funds concerning the complexity of the funding regulation and process that clusters organization have to undertake to apply and obtain them. Such bureaucratic complexity (which is found at the regional, national and EU level) is considered a key constraint for cluster development in that it inhibits clusters to develop innovative and ambitious projects that require high resources.

Last but not least SEE regions have highlighted the threat represented by the scarce information about EU funding opportunities; this final aspect is also related to the WG6 area and specifically with the need for an expert CMO (Cluster Management Organization) able to find the most fitting opportunities for the cluster development.

With respect to the clusters' firms, that in EU are mostly SMEs, there is the need for private funding opportunities, because they allow them to overcome the limited financial capabilities, supporting the R&D and innovation activities. Key aspects are related to the private funds attraction and discovery. In the first case it has been underlined the positive influence of stable economic and political conditions in order to enhance private foreign investments. In the second situation it emerged, as in the case of the public funds, the need for expert and entrepreneurial managers and teams able to support firms in their research for funding opportunities; however expert personnel has to be paid and despite the cluster's members fees, extra funds may be required also in this perspective.

As emerged from the analyses of the main weaknesses advocated by the SEE regions, the actual financial framework needs to be improved in several perspectives: Firstly, by improving the awareness about funding possibilities, both within regions, nations but especially at the EU level, as well as the knowledge about how to access them; Second, by reducing the bureaucratic burden that clusters' firms shall confront in order to access

funds, when they recognize them. Finally, an improvement of funds' attribution, both in terms of efficiency and effectiveness is reported as an important improvement with respect to the current situation.

2.5 Weaknesses and potential for cluster development through regional specialization (WG5)

In a regional Smart Specialization Strategy (S3) perspective, clusters and other relevant stakeholders have to join their capabilities with a common objective in order to pursue sustainable growth. Because of the central role of clusters, attention has to be placed on providing them with the tools to develop and support the R&D and innovation activities and to enhance the involvement of all the important stakeholders.
From the analysis conducted within the ClusterPoliSEE project, it resulted that the S3 strategy implementation is at different level among the various SEE regions. Furthermore it emerged the importance of an efficient collaboration among the various stakeholders and policy makers to implement a well-structured and efficient S3 based on the regional resources and capabilities. However, in this perspective it has been underlined the need for a tighter collaboration both among clusters' members and other regional stakeholders, including universities, KIBS (Knowledge Intensive Business Services), public and private research centres (see also paragraph 3.1.2). Despite cluster are indirectly considered a key asset of the definition of the smart specialization strategy, cluster policies and regional, national and EU policy are often not coherent. The need to implement regular assessment mechanism aimed at the evaluation of the cluster policies' impact has also been highlighted.
Clearly, the policy implications emerging from this analysis to tackle the above-mentioned weaknesses need to consider strengthening the link between cluster development strategy and the regional smart specialization strategy. In doing so, the identification of the clusters' strengths will be an important starting point, which needs to be tackled with consideration regarding the other strengths available in the regions and the positioning that it wants to achieve within the broader EU context.

2.6 Weaknesses and potential for cluster development by creating new skills and jobs (WG6)

Despite the differences among SEE clusters in terms of structural characteristics and job environment conditions, there is unanimity in considering essential to count on capable and competent employees. In fact, if from one hand, clusters' development and international networking leads toward an increase of collaborations and job opportunities, on the other hand aiming to enhance innovation and R&D clusters, there is the need to rely on skilled personnel. From the analysis of the documents generated within the ClusterPoliSEE project it emerged the need to form skilled workforce able to operate with new methodologies and technologies enabling clusters to compete and collaborate internationally.

However the low rate of job opportunities at regional and national level is perceived as a risk because, as underlined by several SEE regions, it may lead to a "brain drain" problem losing both the money invested for the training activities and the opportunity to count on those human resources necessary to understand and support the innovation process. To avoid this negative trend, it is important to rely on specific policies aimed at supporting activities enhancing the creation of job opportunities and of consistent monitoring mechanisms to understand the current market workforce and the future requirements. Moreover, as underlined by SEE regions in Slovenia, Slovakia, Romania and Hungary there are not any financial schemes implemented for new jobs' and skills' creation within the clusters, but just individual isolated initiatives (which connects back to the discussion in paragraph 2.4). Furthermore, SEE regions reported the need for tightening the collaboration with universities and R&D centres, not only to cooperate at common projects but also for involving students in the cluster activities in order to come up with embedded new and highly-trained personnel. Another aspect underlined is the need to improve the knowledge and the competences of policies makers with respect to the policy measures and mechanisms to improve cluster policies and new trained and professional personnel able to support the regional specialization (see discussion in 2.5 as well).

From a cluster organization's perspective, the lack of human resources at Cluster management organizations (CMOs) able to initiate and work at projects has been highlighted and on the other side, the importance for clusters to count on an efficient cluster management team formed by trained personnel that should possess managerial skills, knowledge and

experience required to be able to support cluster members' needs and their activities related also with internalization, sustainability and innovation objectives has been mentioned. In this respect, it emerged that at regional level there is a deficiency of specific measures aimed at improving cluster managers' competences. Along this line, policies should enhance the development of efficient human resources and cluster managers able to understand the specificity of the context and of the sector in order find the right connections and opportunities.

3 SUSTAINABILITY PLAN

3.1 Innovation, R&D driven cluster development (WG1)

3.1.1 The triple-helix at the cluster-level

In the paper prepared by the IPE Team[2] are examined all the forward-looking researches financed by the European Commission between 2007 and 2014 with the main objectives of inspiring new European policies, providing fresh insights and identifying the major future societal challenges. Surprisingly, clusters are almost absent from these forward-looking exercises. This is a considerable omission given the importance of clusters' topics and their presence in the European policies. However, in this context it is more important to underline the problem hidden behind that omission: the experts who interrogate themselves about what chances Europe has with respect to the most advanced innovation frontiers, do not seem to consider clusters as a dynamic, innovative and R&D driven component of the European economy, capable to contribute at the reinforcement of those chances. To avoid this "implicit prophecy" to become reality, it is necessary to implement policies strongly oriented to increase clusters' innovation capabilities, especially among the SEE countries where they are weaker at the moment.

As we know, the innovation's processes that take place in a specific territory depend from three types of actors:

1. firms, being manufacturing or service;
2. knowledge institutions (including universities and other actors)[3];
3. policy makers, who are operative in that area or at a higher level.

Precisely, in order for the innovation capabilities to be truly strong, **such three types of actors need to interact in an effective and efficient manner**, as suggested in the triple helix model[4] together with the "twin"

[2] "Summary of Foresight Projects Results and Case Studies" and "Transnational Foresight for South East Europe", documents developed within the ClusterPoliSEE project

[3] The triple helix model originally included as knowledge institutions just universities and public research centres, whereas more recently also technology transfer centres, corporate research centres and institutional KIBS have been included.

[4] Etzkowitz H. and Leydesdorff L. (2000), "The dynamics of innovation: from National Systems and 'Mode 2' to a Triple Helix of university-industry-government relations", Research Policy, 29(2), pp. 109-123.

model of the regional innovation system (RIS)[5]. Therefore, we should ask if the triple helix model and the development and innovation policies inspired to it should be applied only at the regional level or if it should be also applied at clusters' level, having often a sub-regional extension and that by definition is highly specialized under a sectorial profile. This problem does not subsist in the case of regions usually mentioned when talking about triple helix or RIS, that is Baden-Württemberg. In fact, its industrial clusters have mainly a regional extension, include cluster-specific knowledge institutions and also participate in a regional innovation system strongly integrated due to the regional government action and to the presence of a "knowledge helix"[6] that allowed the Baden-Württemberg to become one of Germany's (and Europe's) strongest regional economies and an excellence example of regional innovation in the world. On the contrary, in most SEE countries clusters, have oftentimes not a regional but a sub-regional fimensions, moreover the institutions that are part of the knowledge infrastructure are external to clusters and the interaction among them and clusters is weak. In these situations, the triple helix model can maintain all its value if research institutions and technological transfer centres ad hoc are not created – in clusters lacking of the suitable scale –, but if effective policies are developed with the aim to overcome the scarce interaction gap between cluster's firms and the actors which are part of the knowledge helix external to the cluster. This interaction assumes well-known forms, widely applied in the most advanced regions, from R&D projects developed jointly with universities and enterprises to the recruitment of researchers in SMEs. **To remove the interaction gap in regions that are still suffering from it, it is not necessary to invent new forms of interaction**, but rather to create **the essential conditions which are:**

a. **the awareness of policy makers at regional and national level, of the gap existence and about its negative effects;**
b. **clusters' management organizations (CMOs) that become effective enablers of the interaction.**

[5] Cooke P., Gomez Uranga M. and Etxebarria G. (1997), "Regional innovation systems: institutional and organisational dimensions", Research Policy, 26(4-5), pp. 475-491.
[6] Where three names stand out, i.e. the research institutes of the Max Planck Society, those of the Fraunhofer Society, and the technology transfer centres of the Steinbeis Foundation: Cooke P. and Morgan K. (1994), "The regional innovation system in Baden-Württemberg", International Journal of Technology Management, 9(3–4), pp. 394-429.

3.1.2 The role of within-cluster knowledge-intensive business services

The knowledge helix does not includes only the institutions dedicated to the production and transfer of knowledge (universities, other research centres, technological transfer centres) but also knowledge-intensive business services (KIBS). Generally speaking, KIBS are service providers characterized by highly qualified human capital that transfer to and co-produce knowledge with their clients, playing therefore a crucial role in supporting the innovation processes taking place in the territories where they work and in particular within clusters[7]. Despite KIBS may be both private firms or institutional (public or not) organizations, in this context we focus just on institutional ones, being those entailing the higher potential for supporting innovation of cluster firms. They include, for instance, subjects that assist the enterprises in their process of quality and innovation with respect to a specific category of materials or of products. Institutional KIBS are often founded to address the demands of firms part of a local or regional cluster: the more they act as knowledge gatekeepers between the cluster and the external competitive environment, the more effective in addressing them. Several institutional cluster KIBS developed the capability to work on transnational projects on innovation. Among them, the most dynamic ones have been capable to acquire clients beyond their cluster borders, offering services to enterprises within the same sector in their own country and abroad[8].

Institutional KIBS, described above, can conduct an important role as drivers of the clusters' development. Consequently, they should represent a favoured reference point of clusters' policies at regional, national and European level. In particular, **excellent KIBS in a specific category of services and sector should be identified, accredited and the extension of their geographical scope should be promoted through cross-cluster cooperation projects conceived for this purpose.** These KIBS can be relevant actors of the platform for SEE clusters collaboration.

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[7] Studies about KIBS have had a strong development especially in Europe; for a review of these studies it may be considered: Muller E. and Doloreux D. (2009), "What we should know about knowledge-intensive business services", Technology in Society, 31(1), pp. 64-72.

[8] Studies about KIBS have had a strong development especially in Europe; for a review of these studies it may be considered: Muller E. and Doloreux D. (2009), "What we should know about knowledge-intensive business services", Technology in Society, 31(1), pp. 64-72.

3.1.3 Integrating the demand dimension in the innovation process

The Guide to Research and Innovation Strategies for Smart Specialisation or RIS3 (May 2012) states that "the perhaps most common, tripartite governance model based on the involvement of industry, education and research institutions, and government (the so-called Triple Helix model), is no longer enough in the context of smart specialisation. Innovation users or groups representing demand-side perspectives and consumers, relevant non-profit organisations representing citizens and workers should all be taken on board of the design process of RIS3" (p. 22). The quadruple helix is the approach through which the involvement of the demand side is modelled; the adding helix is composed by a set of demand actors, starting from the products and services users[9].

The idea to **integrate the demand dimension in the innovation process can constitute the qualifying aspect of cross-cluster and transnational cooperation projects to be developed in the SEE area**. For instance, an example may be the project for an innovative system of sustainable urban mobility participated by clusters specialized in the production of material or immaterial goods (such as means of transport, components, design and engineering, software, etc.) and cities interested at experimenting the new system, involved with respect to services and to the system governance. Interestingly, in projects like this are being involved both regions that host supply clusters and regions that host elective contexts under the demand profile (a city, an area with touristic vocation, and so on). Moreover, the output of this type of projects should be replicated-adapted to other contexts (internationalization) gathering in this way the policy challenge that, in the field of the INFU Foresight Exercise, is called "Smart Glocalisation": "Foster localization without localism". Unlock regional lead markets for global solutions. Support regions in the tailored transfer of their joint solutions. Support dialogue among regions and cities. Raise awareness for and build competence for low-tech solutions for global needs"[10]. To the projects that have been successful with respect to the engagement of the demand dimension should be guaranteed visibility on the SEE cluster platform, with the aim to become pioneers for further

[9] Arnkil R., Jäervensivu A., Koski P. and Piirainen T. (2010), Exploring quadruple helix: outlining user-oriented innovation models, University of Tampere, Work Research Center, Working Paper No. 85.
[10] Innovation Futures: A Foresight Exercise on Emerging Patterns of Innovation Visions, Scenarios and Implications for Policy and Practice: Final Report, 7th Framework Programme, Social Science and Humanities, Brussels, March 2012.

experiences.

3.1.4 New and innovative ventures in clusters

Innovations may be introduced from existing enterprises, which may aggregate with the aim to develop together an innovative project (see paragraph 3.3 on WG3), or from new ventures (see the Foresight exercise – recommendation document and paragraph 3.4.2). Here the attention will be focused on the last type. Naturally not all the new ventures are innovative. For instance, if we think at the most frequent mechanism through which a new enterprise is created in a cluster, that is spin-off, it may have a replicative or an innovative nature[11]. In the first case, the products, the processes and the business model of the spin-off are very similar to those of the parent firm. In the second case, the spin-off differs from the parent firm and also from the other firms of the cluster. Hence, while replicative spin-offs correspond to pure transfer of knowledge, in the innovative ones, the transfer is overlapped by the production of new knowledge. Often the process of knowledge creation that lead to the innovative spin-off, is a combinatorial type: includes more people - coming from the same or different enterprises – in which they have developed different professional experiences. In some cases, this innovative combination is developed also thanks to the connection between the new venture's founder or the founding team and an external knowledge-holder as a university research team or a knowledge-intensive business service. In any case, it is more difficult to create an innovative spin-off (and in general, an innovative new venture) and its survival is afflicted from a higher liability of newness[12].

The clusters' development and their evolution pass also through the birth of new and innovative enterprises inside them. **A policy to be pursued is the one to create a start-ups incubator of this type, at least in clusters of a certain dimension**. A business incubator sustains a small firm in the early stages, paving the way to independence. But not all business incubators are equally effective in shaping the performance of

[11] Innovation Futures: A Foresight Exercise on Emerging Patterns of Innovation Visions, Scenarios and Implications for Policy and Practice: Final Report, 7th Framework Programme, Social Science and Humanities, Brussels, March 2012.
[12] The phase that follows the birth of new ventures is characterized by a high mortality rate, as demonstrated by many past and recent empirical studies. This vulnerability owes to a well-known and widely studied phenomenon that Stinchcombe named "liability of newness": Stinchcombe A.L. (1965), "Social structure and organizations", in March J.C. (Ed.), Handbook of Organizations. Rand McNally, Chicago, pp. 142-193.

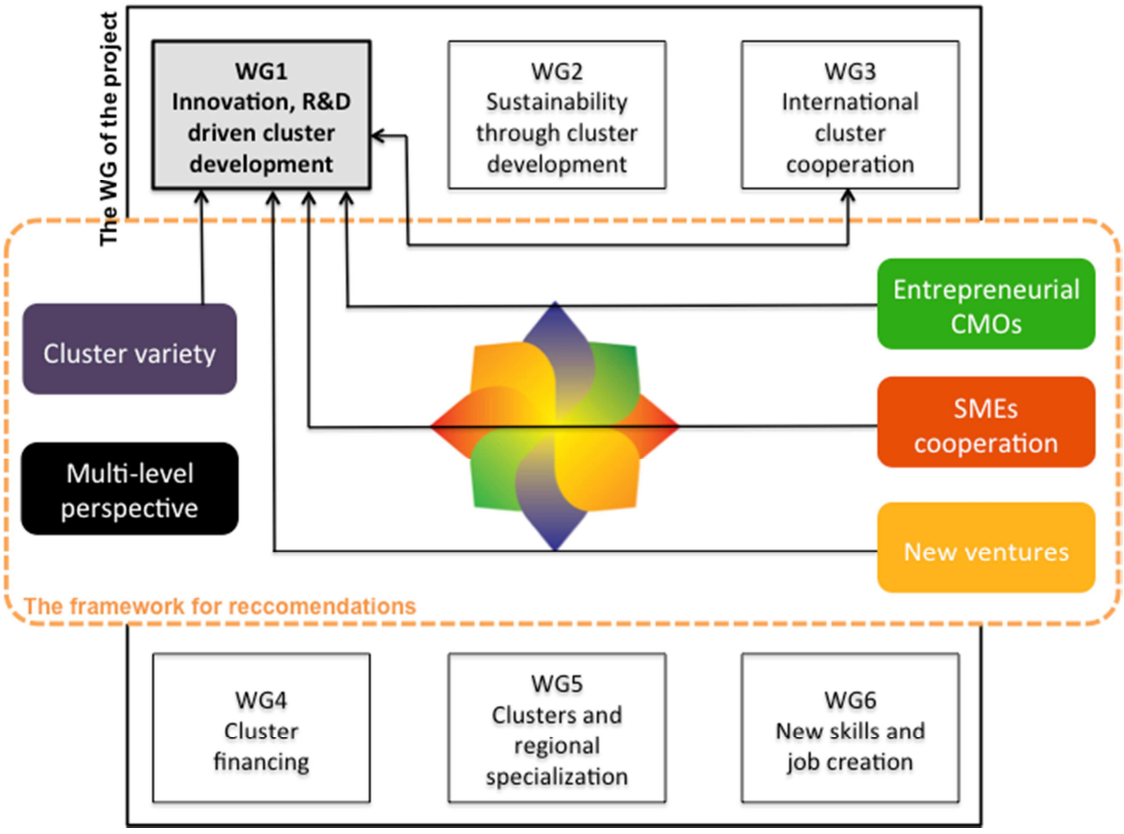
start-up companies. The model to which the SEE clusters' policies should refer is the one of the "networked incubator" as defined by Hansen et al. (2000)[13]. These authors observed that most business incubators provide office space, funding, and basic services, but few offer an extensive network of powerful business connections. They identified the networked business incubator as the most successful model in enabling start-ups to compete in their market: "A networked incubator can provide tremendous value to a start-up team through connections that help forge crucial strategic partnerships, recruit highly talented people, and obtain important advice from outside experts". According to Hansen et al. (2000), the three main characteristics of a networked business are:

1. an entrepreneurial environment;
2. economies of scale and scope in providing business support services to the incubator companies, especially obtaining good deals from top-tier service providers; and
3. organized networking that eases resource provision and allows start-ups to quickly engage in partnering with other organizations.

Figure 1 visualizes the relationship between the policy implications listed so far as far as WG1 is considered and the other WGs (the black boxes) so as the elements of the ClusterPoliSEE framework discussed in the 'Foresight exercise – recommendation' document (the coloured boxes).

[13] Hansen M.T., Chesbrough H.W., Nohria N. and Sull D.N. (2000), "Networked incubators: hothouses of the new economy", Harvard Business Review, 78(5), pp. 74-84.

FIGURE 1 - THE WG1, "INNOVATION, R&D DRIVEN CLUSTER DEVELOPMENT", WITHIN THE GENERAL CLUSTERPOLISEE FRAMEWORK



3.2 Sustainability through cluster development (WG2)

3.2.1 Developing sustainability through eco-innovations

The possibility to foster a growth model than ensure environmental and social positive impacts other than economic ones is a key priority for policy makers, especially in the EU where sustainability (especially environmental one) is a key concept that guides most policies development. In this sense, environmental policies are on the one hand punishing environmental harmful behaviours of firms, on the other hand promoting virtuous attitudes of firms. The importance of the environmental agenda for industry and policy making has been rising exponentially at the international level in recent years. On the one hand, increasing consumers' awareness on the environmental impact of their consumption choices and their willingness to reduce the ecological footprint creates new market opportunities for

companies. On the other hand, specific policies and the action of NGOs, which raises the attention on firms' polluting activities, encourage firms to control the effects of their activities on the environment to reduce reputation risks and avoid additional costs. Because of such external pressures, firms are progressively becoming aware of the environmental implications of their production and distribution activities and are implementing green practices to mitigate such impact because they are realizing that sustainability is an important path for ensuring future growth.

The way companies integrate environmental concerns into their activities is by introducing environmental innovations. Green, sustainable, environmental or eco-innovations have been defined in different ways in the literature. The definition already adopted within the ClusterPoliSEE project (see the 'Set of Policy Measure' document) is that developed by the European Commission's Environmental Technology Action Plan, in which they are described as: the production, assimilation or exploitation of a novelty in products, production processes or in management and business methods, which aims, throughout its life cycle, to prevent or substantially reduce environmental risk, pollution and other negative impacts of resources use (including energy use). This definition is purposefully very broad, including all firm-level efforts which, irrespective of their initial aim, tackle sustainability targets such as the reduction of greenhouse effects, acidification, toxic impacts on ecosystems or on humans, loss of biodiversity and consumption of resources to a higher rate with respect to natural reproduction.[14]

3.2.2 Sustainability and clusters

Clusters entail a large potential to drive green growth, which has not been explored so far in many European regions. First of all it is important to recall that, because of the high concentration of firms engaging in similar production processes, clusters represent loci where environmental problems are potentially higher. The more the number of firms present in a restricted area, in fact, the higher the environmental problems in terms of air emissions, waste generation and raw material depletion that a small community need to face. Therefore, firms located in clusters will face higher pressures from local stakeholders and policy makers to tackle

[14] Rennings, K., 2000. Redefining innovation: eco-innovation research and the contribution from ecological economics. Ecological Economics 32 (2), 319–332.

environmental issues than firms that are not located in clusters, because the scale of the environmental issues generated collectively will attract significant attention on the problems. At the same time, the high concentration of industries in a single area represents also an important opportunity to tackle collectively environmental issues and developing a leadership in green technologies. Considering that firms share the same environmental problems, in fact, they can opt to tackle them collectively, therefore reducing the costs for implementations of new processes and increasing the quality of the process achieved. Moreover, the co-location of firms in clusters can support the development of an industrial ecology approach, where the total waste of resources is minimized because what represent a waste for one firm can be reused as a resource by another, also by converting by-products into new products or resources. Last but not least, clusters may be elective places for the transmission of best practice form one firm to the other, both because there is higher awareness of environmental problems, and because of the higher knowledge exchange possibilities enabled within clusters, especially those that resemble the 'Marshallian industrial district' variant (see paragraph 2.2 in the 'Foresight exercise – recommendations' document by the ClusterPoliSEE project). **Considering for the above mentioned consideration, cluster policies should allow and support the development of collective projects to tackle collectively environmental problems of the clusters.**

Positive examples are described in the literature. For example the Sassuolo tile district and the Arzignano leather district have been able to successfully promote, plan and act on sustainable strategies for the local area, gaining a leadership in sustainability processing at the local firms, integrating through a bottom-up approach different actors[15]. The high homogeneity of industrial processes and the widespread technological bases, the relational dimension and the flexible collaboration and competition among firms, the role of leading firms and the institutional support proved to be elements that characterize the district model and can also be relevant in facing sustainability challenges with a bottom-up and common approach.

[15] Da Ronch B., Di Maria E. (2013) "Clusters Go Green: Drivers of Environmental Sustainability in Local Networks of SMEs" International Journal of Information Systems and Social Change 4(1) 37-52.

3.2.3 Eco-innovations and inter-organizational cooperation

As mentioned in the previous paragraph, sustainability is a key object for EU policy and entails an important market potential for firms in every industry thanks to the introduction of environmental sustainability. It is important to consider, however, that such innovations are often quite complex that is one of the reasons why they are not well diffused yet, especially at SMEs, which, as emerged from previous documents developed within the ClusterPoliSEE project, represent the majority of firms within SEE regions. Market and technological uncertainties increase as there are no widespread-accepted standards either in terms of specific technological solutions or of measures to evaluate the environmental performance of products and processes[16]. An important characteristics of environmental innovations is that they require a high cooperative effort and imply high complementarities with the activities performed by network partners, being typically systemic and, therefore, more cooperation-based than other types of innovations[17]. This characteristic is driven by the intrinsic complexity of green innovations, which may be addressed just by combining a variety of specialist knowledge and competences that are necessarily spread within different organizations. **The development of sustainability within clusters, therefore, has a high potential, as soon as it does mean a high cooperative effort among firms and institutions.** In this sense, the development of sustainability within clusters need to be address thanks to a cooperative effort among the cluster partners and involving other organization and institutions, especially those entailing high valuable knowledge such as Knowledge intensive business services and universities (see also paragraph 3.1.2). Considering for the specificities of environmental innovations, which require to pool different and complementary resources **the development of clusters through sustainability will require the set-up of innovation-driven cooperation among firms within the cluster and firms and institution outside the cluster having complementary competences.** The discussion of the policy implications for the WG3 in the next paragraph (3.3) and of the recommendation to support SMEs cooperation included in the 'Foresight exercise – recommendations' document are useful to identify the best ways for firms to cooperate with valuable partners based also in other

[16] De Marchi V., Grandinetti R. (2013) "Knowledge strategies for environmental innovations: the case of Italian manufacturing firms", Journal of Knowledge Management, 17(4): 569-582
[17] De Marchi V. (2012), "Environmental innovation and R&D cooperation: Empirical evidence from Spanish manufacturing firms", Research Policy, 41(3), 614–623

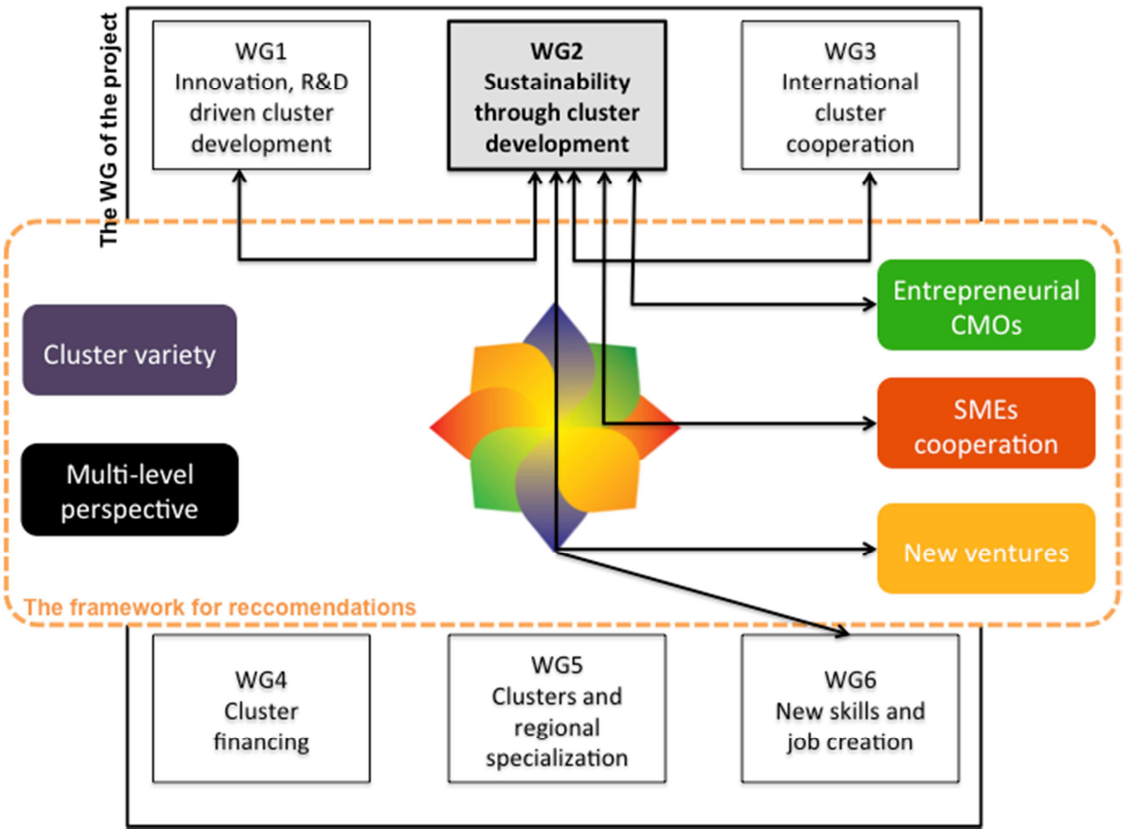
countries specialized in the same industry or in other industries (for examples materials and chemicals, that can allow the identification of less harmful materials or machinery, that can support the identification of new and less-impacting production processes). Considering the complexity of eco-innovation, in fact, which often require high investments and have returns just on the medium-long run, **supporting SMEs cooperation and aggregation** will be crucial to enable SEE clusters to achieve a leadership in sustainability, either by reducing impacts of traditional industries or to enter into sustainability-related industries (such as renewable energies, waste treatment,etc.). Other than by mean of existing companies, sustainability could be spurred within the clusters thanks to the development of new ventures, specifically targeting sustainability (see also paragraph 3.6).

3.2.4 Governing eco-innovations in clusters: the role of CMOs

Cluster Manager Organizations (CMOs) have to play a key role for the development of clusters toward sustainability industries, by supporting cooperation project toward the development of eco-innovations and by raising awareness about the business potential of environmental innovations and transferring knowledge about best practice among firms. The role of CMOs is more important the more environmental innovations to be developed are radical or the more the inclusion of sustainability issues within the cluster activities will imply the move toward new activities or even new industries. In this sense, the CMO should be responsible to identify what the potential for the cluster are considering for the local sustainability competences already in place and for the major strengths of the cluster firms and should propose possible development and value partners. Moreover, the CMOs should propose occasion for **train cluster members to increase their awareness and support the diffusion of best practices** (see also paragraph 3.6.3, which is devoted to discuss the importance of developing skills for green innovations).

Figure 2 visualizes the relationship between the policy implications listed so far as far as WG2 is considered and the other WGs (the black boxes) so as the elements of the ClusterPoliSEE framework discussed in the 'Foresight exercise – recommendation' document (the coloured boxes).

FIGURE 2 - THE WG2, "SUSTAINABILITY THROUGH CLUSTER DEVELOPMENT", WITHIN THE GENERAL CLUSTERPOLISEE FRAMEWORK



3.3 International cluster cooperation and networking (WG3)

3.3.1 Intra-cluster cooperation

In SEE clusters the most common form of collaboration among enterprises is still of informal type and is developed in a vertical direction, along the supply chain. Nevertheless, to face through the inter-firm cooperation, complex objectives such as in particular the strengthening of the internalization and the development of innovations' projects, other forms of cooperation are more appropriate. In that respect, also among SEE clusters is growing the number of formal agreements between small enterprises and the cooperation in forms of the equity type as well. In such cases, the

enterprises are often belonging to the same sector and to the same supply chain stage (horizontal cooperation) or to related sectors (lateral cooperation), like as, for instance, between a food manufacturer and a producer of modular kitchens[18]. The alliances that produce the best results are those in which partners: combine complementary resources and capabilities; develop a clear strategic project; have and/or develop during the cooperation adequate relational capabilities; through the cooperation are successful in doing something that by their-own none of them should have been able to do. That is exactly why, the partners' selection assume a crucial role for the good outcome of the cooperation. This is not a simple task: it is demonstrated by cases in which enterprises located in a cluster and interested in cooperate, have to search for missing competences outside of the cluster, or abroad[19]. With any evidence, **facilitating the inter-firm e intra-cluster cooperation have to represent a primary objective of the cluster policies**. Interestingly, through the intra-cluster cooperation the enterprises start to practice the cooperation on a larger geographical base, or in any case they develop a know-how that fosters the move to more ambitious cooperation projects.

Several projects to encourage collaboration between SMEs have been developed within the European Union. Despite the different characteristics of these projects, they all share a focus on the collaboration aspect, giving SMEs a concrete instrument to cooperate on innovation, internationalization or other relevant issues that directly related with their competitiveness. Along this vein, a cooperation form which seems particularly interesting in the context of SEE regions is the "business network contract", introduced recently in Italy through the National Law 99/2009 following the European "Small Business Act"[20]. The contract is a written, private agreement between two or more firms, which set common objectives aimed at increasing competitiveness, rights and duties. By setting up a business contract companies can share their assets and best practices, work together towards a common goal while preserving their legal independence and remaining completely independent in dealing with business activities not included in the network contract. Since the introduction of the business

[18] There are also cases of mixed combinations (horizontal-vertical), that include for instance some enterprises positioned at the end stage of the cluster value chain and some suppliers.
[19] Furlan A. and Grandinetti R. (2011), "Size, relationships and capabilities: a new approach to the growth of the firm", Human Systems Management, 30(4), pp. 195-213.
[20] Ferrari C. (2010), "The Italian 'network contract': a new tool for the growth of enterprises within the framework of the 'Small Business Act'?", The Columbia Journal of European Low Online, 16, pp. 77-83.

network contract in Italy, in 2010, the number of companies that joined a network contract has increased significantly every year, and a not negligible number of contracts are multiregional. It has to be notice that "the law does not force the enterprises to be of the same nationality, thus international networks are allowed"[21]. As a matter of fact, numerous enterprises should take this opportunity if the Italian Ministero dello Sviluppo Economico (Ministry of Economic Development) should be able to succeed in obtaining the recognition of the business network contract from the European bodies. Moreover, the business network contract or some other similar forms, should become a tool to enhance the competitive cooperation and the aggregation among small businesses also in other European countries.

3.3.2 Inter-cluster cooperation

At EU level there are many programs and projects enhancing inter-cluster collaboration that **involve actors located in different regions within the same or diverse countries**. However, in the SEE area, experiences of real cross-cluster cooperation are still few. One reason for this scarcity is the lack of clarity about the strategic motivations that should lead two or more clusters, or better their actors, to search for some form of collaboration. In this regards two preconditions should be underlined: i) first, the inter-cluster cooperation's projects are almost always selective, in the sense that in general they can involve only a limited number of actors (enterprises and institutions) of each cooperating cluster; ii) second, is naïve and meaningless searching for the cooperation among clusters "perfectly" competitive or that differ only for the level of upgrading with respect to the quality of the products or from other sources of competitive advantage.

At the basis of a good cross-cluster cooperation project there has to be the identification of those complementarities between clusters (starting from the cluster variety) and about how to combine them accordingly to a reciprocal interest. For instance, it is possible to promote the development of supply relationships among clusters that occupy positions at least on average different in a global value chain. Moreover, it may be possible to match clusters specialized in different

[21] Villa A. and Bruno G. (2013), "Promoting SME cooperative aggregations: main criteria and contractual models", International Journal of Production Research, 51(23-24), pp. 7439-7447.

products, that are made though different process and technologies but that share the same context of use; specially if the aim is rethinking the same context under an innovative perspective: for example home furnishing, appliances and building materials in innovative projects related to the sustainable housing. At paragraph 3.1.1, in which it has been written about the quadruple helix framework, it has been underlined a possible extension of this type of projects, because in those cases the collaboration involve manufacturing clusters and regions that enter in the project as fourth helix. Other cross-cluster cooperation projects have been mentioned – in the WG1 analysis – talking about KIBS that have reached a high level of specialized skills inside a cluster and can provide services or transfer know-how to other clusters (paragraph 3.1.2). On the same line, it is possible to develop projects about technological transfer or of co-innovation that involve SEE clusters and research centres – located in different European countries and placed inside and outside clusters – specialized in one of the key enabling technologies (KETs) associated with the emerging industries[22].

3.3.3 Glocal clusters

Despite the fact that clusters differs among each other with respect to different variables, it is possible to hold – in line with recent studies – that clusters able to reproduce themselves and to evolve in the global competition's scenario, are all part of a model or more precisely of a meta-model. In the clusters that inspired it, there is a certain number of firms that have been described as "glocal"[23] because of their dual focus: they are global enterprises in terms of their direct investments or business relations, but they maintain relations (albeit selectively) within their cluster. The glocal businesses that have attracted the researchers' attention the most are the cluster leaders, but some cluster firms that are not leaders have also proved to be glocal, including: small firms that have succeeded in occupying a sustainable niche in the global market; subcontracting firms that have responded to the threat of globalization by operating internationally themselves; knowledge institutions, and private or institutional providers of knowledge-intensive business services that have

[22] Villa A. and Bruno G. (2013), "Promoting SME cooperative aggregations: main criteria and contractual models", International Journal of Production Research, 51(23-24), pp. 7439-7447.
[23] De Marchi V. and Grandinetti R. (2014), "Industrial districts and the collapse of the Marshallian model: looking at the Italian experience", Competition & Change, 18(1), pp. 70-87.

avoided remaining captive to the local demand; and manufacturers of machine tools or other technologies. Glocal actors act as knowledge gatekeepers between the cluster, or better part of it, and the global networks where much of the knowledge relevant to the sector in which the cluster specializes is generated, circulated, and used[24]. More glocal actors, firms or institutions, are part of a cluster and more the cluster, as a system, can be qualified as glocal.

There are glocal clusters in many European countries, but they are less frequent among those located in the SEE area[25]. With any evidence, the **glocal cluster represents an evolutionary model that the SEE cluster policies can consider as a goal for those clusters that today pay for a competitive gap**. Under this perspective, a special significance is taken by those **cross-cluster cooperation projects that involve clusters respectively more far and closer to the glocal model**. Likewise important are those **cross-cluster cooperation projects that combine complementary specializations to develop innovative solutions to be proposed in the global market**, and gather the policy challenge that (not by chance) in the INFU Foresight Exercise has been called "Smart Glocalisation" (see also WG1).

3.3.4 Entrepreneurial CMOs and cross-cluster cooperation

"In several SEE regions there are no specific training measures at regional level to upgrade competences and skills of cluster managers. Indeed, the lack of appropriate skills for effective cluster management has been repeatedly identified as one of the major challenges SEE clusters and regions currently face"[26]. The point is reconsidered at the end of the section dedicated to the WG6 (paragraph 3.6). Here it is important to highlight that a crucial factor to determine the competitiveness in a cluster is the presence inside it of what we define an entrepreneurial cluster management organization (CMO). In the literature, entrepreneurship is defined as the ability to seek, identify and exploit new business opportunities[27]. Even if this term normally refers to firms, we consider appropriate to extend it also to

[24] Morrison A. (2008), "Gatekeepers of knowledge within industrial districts: who they are, how they interact", Regional Studies, 42(6), pp. 817-835.
[25] With the exception of North-Italian regions.
[26] ClusterPoliSEE, Deliverable 5.1 – Set of Policy Measures (Corallia), p. 24.
[27] Shane S. and Venkataraman S. (2000), "The promise of entrepreneurship as a field of research", Academy of Management Review, 25(1), pp. 217-226.

CMOs and suggest that they should take on the task of search, recognition and pre-exploitation, even if they are non-profit organizations and are public or publicly funded institutions. Entrepreneurial CMO should also support entrepreneurship at cluster firms and the development of the needed skills and capabilities, facilitating the emergence of strategic initiatives responding to the strategic challenges of the clusters (see also the paragraph 3.6). The idea of entrepreneurial CMO is coherent with what emerged in the joint strategy document of another European project regarding clusters, the CluStrat project (Boosting Innovation through New Cluster Concepts in Support of Emerging Issues and Cross-sectoral Themes)[28].

Entrepreneurial CMOs should be able to consider and recognize its cluster members' specificities and promote contacts and opportunities not only within the cluster but also outside and internationally, with external actors and stakeholders, recognizing and attracting opportunities that cluster members alone could have difficulties to recognize or approach. Because of the increasingly complex scenario CMOs now operating in most European clusters have to focus not only on the aspects related to inside necessities of the cluster but also on developing, creating connections and recognizing opportunity to the outside. Considering what it has been said in this section, the CMOs are essential facilitators of projects related to the intra-cluster cooperation and cross-cluster (and transnational) cooperation. Remembering what it is emerged in paragraph 3.1.1, the (entrepreneurial) CMOs allow to apply the triple helix model at the cluster level.

Nowadays cluster managers can rely on courses, certifications and support from international organizations with on line platforms that provides courses, training programme, certifications, books and reports related to and aimed at clusters and CMOs. In fact, the development of common standards for excellent cluster management is required to enhance a better mutual understanding, essential for the transnational cooperation among networks and clusters organizations[29]. Specifically, the European Cluster Excellence Initiative (ECEI) proposed 31 indicators for assessing the excellence CMO status. Excellent CMOs will be awarded with a label and also recommendations will be provided if necessary. Furthermore, as underlined

[28] CluStrat, Output 5.2.1 – Joint Validated Strategy (Regione del Veneto).

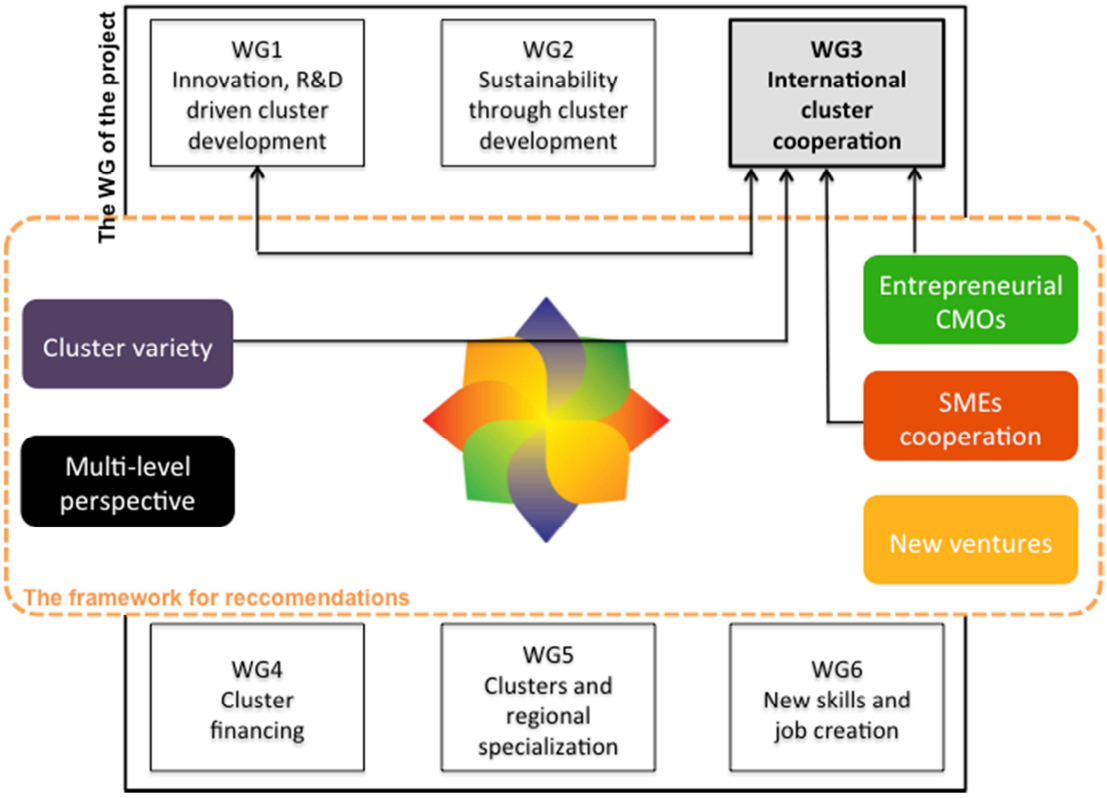
[29] Hagenauer S., Kergel H. and Stürzebecher D. (2011), European Cluster Excellence Baseline: Minimum Requirements for Cluster Organisations, http://www.cluster-analysis.org

in a document by ECEI[30] the quality label is also aimed at motivating cluster managers to improve their performance by comparing with others and learning from best practices.

In the SEE area **CMOs have to demonstrate to be capable of identifying new opportunities of cross-cluster and transnational collaboration (working with an entrepreneurial approach), creating useful occasions of face-to-face matchmaking and overall giving birth to an efficient platform for the SEE cluster collaboration.** The platform should work as a knowledge and experience community, where new projects and common initiatives arise, best practices are transferred and a collective learning process is developed. The platform should represent a useful reference point for less developed clusters and for those that cannot benefit from a CMO yet. In this regards it has to be underlined that it makes no sense to give birth to new CMOs, if they don't follow the entrepreneurial model explained above.
Figure 3 visualizes the relationship between the policy implications listed so far as far as WG3 is considered and the other WGs (the black boxes) so as the elements of the ClusterPoliSEE framework discussed in the 'Foresight exercise – recommendation' document (the coloured boxes).

[30] Hagenauer S., Kergel H. and Stürzebecher D. (2011), European Cluster Excellence Baseline: Minimum Requirements for Cluster Organisations, http://www.cluster-analysis.org

FIG. 3 – THE WG3, "INTERNATIONAL CLUSTER COOPERATION AND NETWORKING" ,WITHIN THE GENERAL CLUSTERPOLISEE FRAMEWORK



3.4 Financial framework improvement (cluster financing) (WG4)

3.4.1 An integrated set of measures for improving cluster financing

In relation to the necessity of improving the financial practices of the involved countries/regions in terms of cluster support, the set of policy measures elaborated within the WP5 of ClusterPoliSEE[31] should be remembered.

First, the document recalls the importance to ***establish a medium-term/multi-annual commitment/framework agreement of regional policy makers to financially support cluster initiatives***. Most of the

[31] ClusterPoliSEE, Deliverable 5.1 – Set of Policy Measures (Corallia), pp. 18-20.

SEE partner clusters lack a stable, coherent and predictable financial framework that is integrated with overall regional economic policy. Leading cluster practices indicate that cluster policy is considered as a well-accepted and integrated innovation policy instrument for regional development. In most leading cases there is a medium-term/multi-annual commitment/framework agreement of regional policy makers to financially support cluster initiatives, which provides for certain stability and reliability necessary to establish trust and a climate of cooperation. In addition to regional funding, cluster members usually pay membership fees to guarantee the commitment of the business sector and to provide a private share in the financing of the cluster initiative; the third share of financing is typically national/EU- funding. Flexible support for pilot activities by regional governments (i.e., funding) also helps to test new focus topics and service instruments of clusters.

As explained in the same document, it is also relevant to ***establish monitoring mechanisms and key performance indicators*****.** Cluster policies across SEE tend to lack coherence but also of mechanisms of monitoring and performance evaluation. However, performance monitoring against predefined benchmarks and targets, as well as key performance indicators are critical elements of measurement and financial decisions of successful clusters. Here the example of Lower Austria can be useful for SEE partner regions. It is important to assess whether investing public money in SEE cluster organisations has the desired impact and also to consider whether investing in cluster programmes is more beneficial than investing in other types of innovation programmes. Based on international best practices, a system for cluster evaluation, benchmarking, monitoring and impact assessment would be able to characterise the evaluation needs of cluster organisations and cluster managers, programme owners and policy makers.

Especially considering for the weaknesses summarized in paragraph 2.4 of the Joint Strategy, cluster policies for SEE regions should ***simplify funding regulations and reduce administrative burdens on clusters*****.** Complex funding regulations cause a high administrative burden on SEE cluster organisations. More specifically, the procedure for applying for funding (the European Structural Funds and other EU sources) is very complicated, long and bureaucratic and clusters may not have the necessary administrative capacity for that. The latter applies also for the project management and reporting. The simplification in funding rules, to take into account and cater for dynamic changes in the SEE economy, is an important condition to address current financing bottlenecks on cluster activities and development.

Activities to be funded should be targeted as well, as supported in the document developed by the Corallia partner. Cluster initiatives fulfil various tasks ranging from joint market development to regional innovation development. **The financing structures of cluster initiatives have to take these different activities into consideration**, i.e. public tasks require public funding. Limitations such as rigid interpretations of the Community Framework for State Aid for R&D&I constitute a threat to public tasks of cluster initiatives. On the other hand, it is often the case that different levels and departments of government have overlapping and often conflicting priorities. The multiplicity of actors results in a serious degree of confusion and uncertainty both regarding concept of cluster, cluster policy and cluster financing.

In order to *support and consolidate more integrated and systematic interactions between science and industry, new innovative financial tools have to be developed*. Bank, institutional investors in private equity and venture capital companies are not sufficiently developed elements in financing cluster initiatives. This presents the difficult task of developing innovative financial instruments specifically created to support and consolidate the collaboration between science and industry and establish conditions of sustainable cluster stakeholder engagement.

3.4.2 Investing in cluster new ventures

It is important to recall the venture capital theme with a specific reference to the problem already approached in the analysis regarding the WG1, where it has been explained how the clusters' development and their evolution pass also through the birth of new and innovative enterprises inside them (paragraph 3.1.4). In this perspective, it should be underlined that in the SEE countries there is a chronic scarcity of private, public or mixed investors to finance the new ventures. Even the Regions that have their own financial companies finance almost exclusively the existing companies. This is true also when the regional financial company has constituted a private equity fund[32]. Under these circumstances, **ad hoc financial instruments, specifically tailored to new ventures, should be promoted by the Regions and be able to attract the interest of**

[32] Even in the case of the recent (2014) and interesting initiative realized jointly by the Region of Veneto and the Region of Friuli-Venezia Giulia (Italy). This is a company that manages a private equity fund to support the development strategies and corporate restructuring of local firms.

institutional and private investors. It would be meaningless to limit the applicability of these instruments only to clusters, but clusters should be recognized as privileged contexts for the investments.

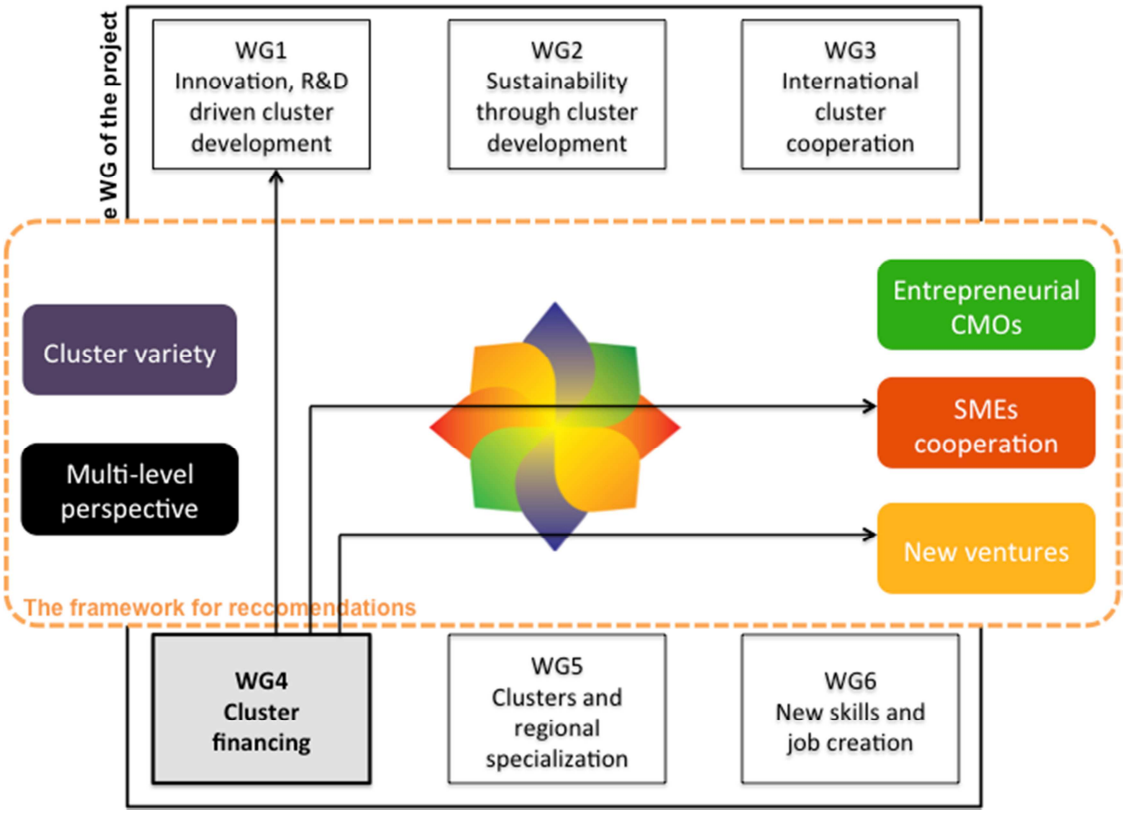
3.4.3 Investing in cluster firm aggregations

In paragraph 3.3 it has been underlined the importance of promoting the cooperation and aggregation of SEE cluster SMEs in order to strengthen their competitiveness. A case in point is the example provided by the introduction in Italy of the business network contract: a private agreement between two or more firms which set common objectives aimed at increasing competitiveness, rights and duties. In many cases, the business network contract fully corresponds to the creation of a new enterprise. Interestingly, "third parties such as financial institutions and the public administration acknowledge the effectiveness of the business network model as a substantial tool to evaluate the strength of a business venture. On the other hand, enterprises that join a network gain visibility and get the opportunity to present their projects. This is particularly relevant in a context of credit crunch, as the decision making processes of public authorities and financial institutions can rely upon detailed business plans put together by trustworthy companies. So being part of a business network and presenting the related shared business plan, allows the network's parties to validate their growth potential and be granted the financial resources that match their actual requirements. Both the public administration and the banking system value the importance of interfacing with the entrepreneurial system in a context of transparency. This is why public institutions set up numerous initiatives to favour the creation and management of business networks. Financial institutions are also creating ad-hoc tools to improve access to credit. The European Investment Bank (EIB) has set up a dedicated fund for Italian Banks to sustain business networks (pp. 2-3)[33]. **In other words, an instrument such as the business network contract or other similar forms facilitate the access to credit for the small enterprises and could suggest to the financial institutions the creation of specific financing lines.**
Figure 4 visualizes the relationship between the policy implications listed so far as far as WG4 is considered and the other WGs (the black boxes) so as

[33] RetImpresa, The business network contract, www.retimpresa.it (10th November 2014).

the elements of the ClusterPoliSEE framework discussed in the 'Foresight exercise – recommendation' document (the coloured boxes).

FIG. 4 – THE WG4, "FINANCIAL FRAMEWORK IMPROVEMENT", WITHIN THE GENERAL CLUSTERPOLISEE FRAMEWORK



3.5 Clusters and regional specialization (WG5)

3.5.1 Smart specialized clusters in a multi-level perspective

According to the Smart Specialization Strategy (S3), regions have to focus on their specific strengths. Such strengths may be defined as activities and industries well diffused in a region, which hold a competitive advantage at the global level and for which it seems appropriate to develop innovation policies aimed at supporting their competitiveness. Following the triple helix approach, a S3 comprises firms, knowledge institutions, policy makers. In order for the selected specialization to be truly smart, such three subsystems need to interact in an effective and efficient manner. The

involvement of all the three category of actors is particularly relevant for the S3 to be effective. "Smart specialisation must not be associated with a strategy of the simple industrial specialisation of a particular region in tourism or fisheries (to take two fairly low tech sectors as an example). Instead, smart specialisation is about R&D and innovation and it might suggest that such a region should specialise in R&D and innovation related to the sector of tourism or fisheries. This means that smart specialisation is a process addressing the missing or weak relations between R&D and innovation resources and activities, on the one hand, and the industrial structure of the economy, on the other"[34].

Clusters represent a fundamental resource to design and implement smart specialisation strategies, considering that they constitute a noteworthy part of the strength of the European regions, in general and in particular in the SEE area. This relevance seems confirmed by the results of various analysis conducted within the ClusterPoliSEE project. The relevance of clusters as a crucial resource for the S3 is explicitly recognized by the EU Guide to Research and Innovation Strategies for Smart Specialization. More precisely, to ensure that this resource can be effectively used in the prospect of smart specialisation, the policy makers have to bring three types of action onto the field:

- using cluster mapping to identify regional competences and assets;
- support clusters to meet the objectives of smart specialisation;
- strengthen the local and international cluster cooperation, in particular for addressing emerging industries (and their innovation potential) with the aim of making use of complementarities between regions.

A smart specialisation strategy shall therefore begin with an analysis of potential partners in other regions to avoid unnecessary duplication. In this sense, regional smart specialisation and trans-regional (trans-national) cooperation are two sides of the same coin. As the S3 approach makes evident, cluster policies and cluster development measures cannot be developed in isolation. **Cluster policies in fact, have to be realized considering for the specialization and the S3 strategy of the region so as for the complementary specialization of other regions within the same countries or other EU countries.**

It is also possible to say that the S3 approach is supportive of a need for a multi-level perspective in cluster policy development. In this sense, the

[34] Foray D., David P.A. and Hall B.H. (2011), Smart specialization: from academic idea to political instrument, the surprising career of a concept and the difficulties involved in its implementation, MTEI Working Paper.

proposed policies for SEE regions need to be framed within these three levels of analysis:

- the cluster level, being the level at which specific needs and strengths are identified and tackled;
- the regional or country level, being the level at which S3 strategies are developed;
- and the EU ones, being the benchmark level to identify the key strength of the region and where key complementary resources, being other firms, knowledge institutions or clusters are located.

In order for successful cluster policies to be realized, policies developed at the cluster level have to be complemented and co-developed considering also policies developed at the regional and EU level. If the three levels are not aligned, even the best cluster-level policies will be vain or, at best, not efficient. In the multi-level perspective are positioned two particularly important clustering strategies that are illustrated in the next two paragraphs of this section.

3.5.2 Regional clustering

As it has been said, the Guide to Research and Innovation Strategies for Smart Specialisation assigns an important role to clusters. In particular, this document states: "the use of clusters for smart specialisation may imply important political decisions regarding the development of new cluster initiatives or the use of existing ones. New cluster initiatives can be launched, provided that they are crucial for implementing the regional governments' visions and that will therefore be strongly supported in the future. Otherwise, new cluster initiatives should be avoided. "Fragmentation and proliferation of cluster initiatives often leads to dispersion of forces and financial resources as well as to less cooperation and fewer synergies between them" (p. 67).

With the aim of adhering to these guidelines, a strategy that may be worth to pursue, consists of avoiding to give birth to new clusters inherently weak on a competitive level and instead to put together "pieces" already existing to create something competitively strong. We call this policy **"regional clustering".** It **involves the collaboration among clusters specialized in the same or different sectors**, which decide to foster common projects – i.e., related to innovation or internationalization – or even to merge the existing clusters in order to concentrate their energies on the regional strengths and to develop along the smart specialization strategy defined.

Regional clusters may stem from existing sub-regional (industry-based) clusters and potentially from businesses and institutions, which, even if not part of a cluster, still possess competences that are relevant for cross-cluster cooperation. Due to the complexity of this purpose – a competitive regional cluster – it is possible to think to a two-steps strategy: **starting with temporary and targeted initiatives, thematically-driven and flexible in their composition[35], that constitute the starting point for the formation of a new and permanent regional cluster**. The option of regional clustering is meaningful if it allows to put together existing actors (including firms, knowledge institutions, sub-regional clusters) specialized in different fields that are complementary, so that the system as a whole will have better chances than its single parts. In other words, the idea of regional clustering is based on two conditions:

1. the elements part of the regional clustering are adequate in terms of their number and quality;
2. the result of such process is to improve the chances of the cluster and its region to reach a stronger position in the competitive environment.

An implication of a regional clustering strategy is that the **possible CMOs representing single "pieces" that are part of the new cluster, merge together in a unique and more efficient/effective cluster management organization**.

3.5.3 From inter-cluster cooperation to European meta-clusters

In paragraph 3.3, the promotion of cross-cluster projects and transnational cooperation represent an extremely significant choice of the cluster policy for the SEE countries. These experiences may also constitute the embryo for the **formation of clusters on a European scale, or of meta-clusters**, in a symmetric way with respect to what it has been said before about the regional clustering topic, but at a superior level, following our multi-level perspective. The concept of meta-cluster has been introduced in a project of the European Regional Development Fund, i.e. Alps4Eu[36], where it is defined as "a trans-regional network of cluster initiatives, which focus

[35] Such non-permanent targeted innovation networks or clusters are already described as example for Finland´s cluster policy in the TACTICS publication: 'Where the cluster winds are blowing: better cluster policies and tools for implementation', by Emily Wise and Cecilia Johansson (October 2012).

[36] Alps4Eu has been co-financed by European Territorial Cooperation Programme Alpine Space 2007-2013 and coordinated by the Piedmont Region - Directorate of Industry and Productive Activities.

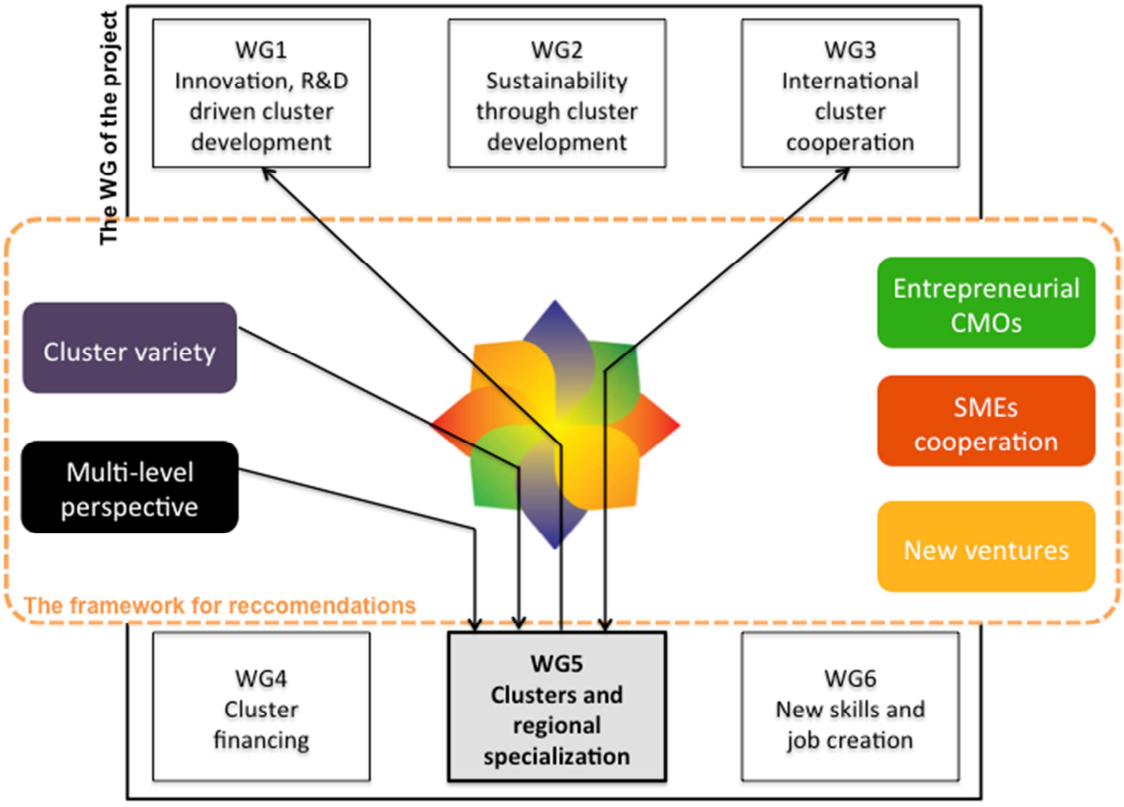
on the same or complementary specific technological field or sector. A meta-cluster consists of at least three cluster initiatives in three different regions". The objective of this project, which took place between September 2011 and March 2014, was to overcome clusters initiatives fragmentation and favour the emergence of meta-clusters (trying to get a common definition), applying a macro-regional vision and driving Alpine area clusters to be more competitive in the European scenario for the benefit of all Alpine Space's economy[37].

Cooperation across clusters at the EU perspective, among clusters located in different regions that share complementary specializations or objectives is especially useful when highly innovative and when high-tech trajectories are to be explored. Trans-regional and trans-national networking and clustering may be useful to enhance synergies and to improve innovation capabilities. Particularly important are **initiatives that create a bridge between manufacturing clusters and excellence centres specialized in research fields that are relevant for the innovation process in these clusters' industries**.

Figure 5 visualizes the relationship between the policy implications listed so far as far as WG5 is considered and the other WGs (the black boxes) so as the elements of the ClusterPoliSEE framework discussed in the 'Foresight exercise – recommendation' document (the coloured boxes).

[37] Welck H. (2012), Concept of Meta-Cluster in the Alpine Space: Overcoming the Fragmentation of Cluster in the Alpine Space, Alps4EU.

FIG. 5 – THE WG5, "CLUSTERS AND REGIONAL SPECIALIZATION", WITHIN THE GENERAL CUSTERPOLISEE FRAMEWORK



3.6 New skills and jobs creation (WG6)

3.6.1 Entrepreneurial cluster firms and dynamic capabilities

Clusters are more than just geographic concentrations of interconnected companies and institutions in a particular field. In fact, they are also rich mines of skills and competences, especially with reference to the operational capabilities, i.e. those capabilities that involve performing an activity, such as manufacturing a particular product or marketing it. However, clusters' firms – in particular among SEE clusters – appear to be weaker if we look at the dynamic capabilities, without which clusters and firms are not able to face the competitive challenges presented by the

globalization. In fact, following a classic definition[38], the dynamic capabilities build, integrate or reconfigure operational capabilities enabling companies to implement the improvements and transformations necessary to defend themselves from the threats and to take advantage of the opportunities that their competitive environment presents. Due to this definition, dynamic capabilities distinguish the entrepreneurial firms, i.e. those firms able to identify and exploit new business opportunities.

Consequently, **the managerial training, which should be organized in the clusters, should have as main objective the development of the dynamic capabilities of the cluster's firms**. Furthermore, it is important to underline that since the dynamic capabilities will never be equally distributed within a sector of a cluster or a region, **a training project aimed to the their development should be organized selecting the most promising cluster's firms characterized also by a good level of networking within their own cluster**. In this way, the firms directly involved in the training activity and the ones connected to them will both benefit from the project.

3.6.2 Absorptive capacity and knowledge codification capabilities

The opportunity that firms have, to innovate and, as a consequence, to remain competitive on a challenging scenario characterized by an high and increasing complexity is substantially dependent from what the management scholars call absorptive capacity. According to the seminal contribution by Cohen and Levinthal[39] the absorptive capacity of a company corresponds to the firm's ability to monitor, value, assimilate, and exploit external knowledge. Such an ability is twofold: it allows the firm to identify which specific external knowledge is needed for its innovation requirements, to assimilate this knowledge and to employ it effectively in its innovation process. Clearly, the absorptive capacity has a composite nature, which includes various specific capabilities. We would like to focus specifically on the knowledge codification capabilities, that are important to access at the external sources of knowledge useful to the firm and to be able to use the absorbed knowledge within the enterprise. On the other hand, the

[38] Teece D.J., Pisano G. and Shuen A. (1997), "Dynamic capabilities and strategic management", Strategic Management Journal, 18(7), pp. 509-533.
[39] Cohen W.M. and Levinthal D.A. (1990), "Absorptive capacity: a new perspective on learning and innovation", Administrative Science Quarterly, 35(1), pp. 128-152.

knowledge codification capabilities fulfil a relevant role not only with respect to the innovation process, but also to support the other activities of the value chain (marketing, supply chain management, quality management and assurance, etc.). Moreover, without these capabilities, it results difficult for a firm to increase its level of internationalization and to participate to inter-firm cooperation projects. Now, if we think at the small enterprises that are part of clusters, it is well known that most of them are accustomed to produce and to transfer tacit knowledge, but far less to codify this tacit knowledge.

An **excellent policy to strengthen clusters' competitiveness is to help clusters' firms lacking in knowledge codification capabilities, to overcome this gap through training and assistance activities aimed at the enterprises**. From a practical perspective, it may be interesting to **develop an initiative finalized at the design, realization and implementation of a knowledge management system inside the small enterprises**. This is a goal with immediate, positive repercussions on the firm's activities and at the same time is a pre-requisite to increase the number of companies able to:

1. interact with the knowledge institutions and with the knowledge-intensive business services (see also paragraph 3.1.2, 3.2.3);
2. to participate at cross-cluster cooperation projects (see paragraph 3.3).

3.6.3 Skills for green innovations

While considering the wide heterogeneity in the environmental innovations field, influential researchers point out that this kind of innovations is, on average, more complex than non-green innovations (see also paragraph 3.2). Such complexity is not necessarily related to the process or product technology but it is linked with the fact that eco-innovations represent a technological frontier in which firms are often inexperienced[40]. More precisely, such complexity may be considered as novelty, uncertainty, and variety with respect to the traditional technological or market domain where the firm usually competes. The last two dimensions have been briefly considered in the section dedicated at the WG2 area (paragraph 3.2), within this document. With respect to the novelty, creating a product or a process that reduces the impact on the environment, usually requires information

[40] See, for example: Porter M.E. and van der Linde C. (1995), "Green and competitive: ending the stalemate", Harvard Business Review, 73(5), pp. 120-134

and skills distant from the traditional knowledge base of the industry of which the firm is part. Having an adequate internal base of knowledge and skills to address environmental concerns is therefore crucial in enabling firms to realize environmentally sound products, processes, or business models. Consequently, within the policies that promote training activities and support through the experts' advices aimed at the firms of a specific cluster, wide space should be reserved to the **knowledge transfer and to the development of skills relevant to the eco-innovations specific for the industry in which the cluster works.**

3.6.4 Brain drain and brain retirement

The brain drain problem afflicts the SEE countries in general and also their clusters are suffering for this issue (see also paragraph 2.6 of the Joint Strategy). It is well known that investing in education alone is not enough to solve the problem. On the contrary, such investment should lead to the paradox of an intensification of the point in question "as educated and skilled young people explore better opportunities and futures elsewhere"[41]. To avoid this "motherhood" effect it is **indispensable to realize adequate labour policies and fiscal incentives to facilitate employment, without forgetting that the best employment policies are made by those enterprises that becoming competitive are interested in employ and are able to attract new professional skills**. For this reason in this section it has been given emphasis to the enterprises' training aimed at the development of their internal capabilities. In short, the best antidote to the brain drain disease that afflicts SEE regions and clusters, is the presence of competitive enterprises. Not less important is the birth of new competitive ventures that create new jobs and are often a driver for new skills formation. It has also to be remembered the inter-firm cooperation's projects, aimed at the competitive reinforcement of the partners, that inevitably – insofar as they have success – lead to the creation of new capabilities if compared with those available to the enterprises before the cooperation. The actions aimed at fostering the birth of new and innovative ventures (see paragraph 3.1) and those meant to support the various forms of cooperation and aggregation between SMEs (see paragraph 33) have consequently an important part in the increasing of the clusters' stock of skills and capabilities.

[41] ClusterPoliSEE, Deliverable 5.1 – Set of Policy Measures (Corallia), p. 28.

Inside this frame, should gain relevance all those **initiatives aimed at enhancing and improving the meetings and collaboration between clusters' firms and educational institutions, (inside and outside of clusters) like specific university courses responding to the cluster needs, traineeship within firms and PhD financed or co-financed from the enterprises.**

An issue symmetrical to the "brain drain" problem is the "brain retirement". In fact, due to the high companies' death rate that have concerned SEE clusters during the latest years, there has been the loss of an enormous stock of knowledge and competences embodied in specialized workers, technicians and artisan entrepreneurs (tacit knowledge). It is true that, as explained above, the global competition impose to clusters and to their enterprises the development of adequate knowledge codification capabilities. But the emphasis on codified knowledge must not lead us to imply that tacit knowledge and its development through the typical learning-by-doing processes lose their importance. On the contrary, in order to survive and prosper in the global competitive environment, cluster firms have to maintain their endogenous capacity for producing tacit knowledge and, at the same time, become stronger both in the absorption of codified knowledge, and in knowledge codification[42]. Considering this aspect, it is important to **develop specific projects aimed at recovering these knowledge and competences that otherwise risk to get lost, supporting their transfer from skilful and selected retired people to students or young employees.**

3.6.5 Entrepreneurial CMOs and firm-level capabilities

The importance of the role that the CMOs can conduct to favour the competitive development of clusters, is already emerged during the discussion the previous WG areas (see e.g., paragraph 3.2.4 and 3.3.4). In this section it should be highlighted the specific role of CMOs in fostering the acquisition, creation and improvement of clusters firms' skills. Considering the points examined earlier in this section, CMOs do not have to provide any direct training and technical assistance to the enterprises. However their role concerns the enhancement of an efficient match between

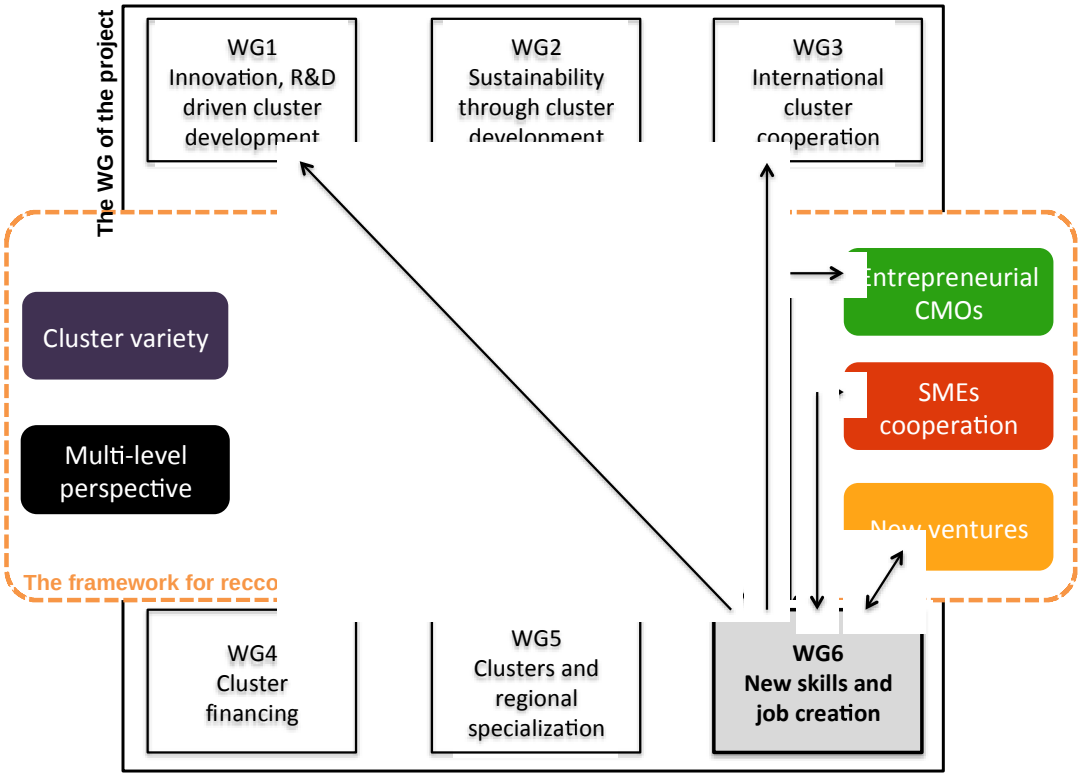
[42] Maskell P. and Malmberg A. (1999), "Localised learning and industrial competitiveness", Cambridge Journal of Economics, 23(2), pp. 167-185; Camuffo A. and Grandinetti R. (2011), "Italian industrial districts as cognitive systems: are they still reproducible?", Entrepreneurship & Regional Development, 23(9-10), pp. 815-852

the demand and the supply side of these services. In fact, from one side **they have to interact with the supply side to guarantee that the subjects that are part of it (as universities and other training institutions, knowledge intensive business services) can propose initiatives and activities truly useful for clusters and for their enterprises. Moreover, CMOs have to sensitize the demand side because to ensure that the proposals should be adequately understood, leading the enterprises to participate at the initiatives and activities targeted to them.**

This is not a simple task that asks for CMOs conceived and managed as entrepreneurial organizations. Under this profile, among the capabilities that have to be developed within clusters, there are also those related to the CMOs and their human resources (see the double arrow in Figure 6). With respect to the SEE clusters, a project should be developed with the aim to **promote a period of training, for cluster managers or potential cluster manager, in CMOs that have been accredited for the quality of their work method.**

Figure 6 visualizes the relationship between the policy implications listed so far as far as WG5 is considered and the other WGs (the black boxes) so as the elements of the ClusterPoliSEE framework discussed in the 'Foresight exercise – recommendation' document (the coloured boxes).

FIG. 6 – THE WG6,"NEW SKILLS AND JOB CREATION", WITHIN THE GENERAL CLUSTERPOLISEE FRAMEWORK



3.7 A recap the main policy implications and suggested actions for each WG

In the following, we report the main policy implications and suggestions for policy actions discussed in more detail in the previous paragraph of the Sustainability Plan, organized by WG area of the ClusterPoliSEE project.

INNOVATION, R&D DRIVEN CLUSTER DEVELOPMENT (WG1)

- ☐ *To improve the interaction between firms, knowledge institutions and policy makers, essential conditions are:*
  - o *the awareness of policy makers at regional and national level, of the gap existence and about its negative effects;*
  - o *clusters management organizations (CMOs) that become effective enablers of the interaction.*
- ☐ *Excellent KIBS in a specific category of services and sector should be identified, accredited and the extension of their geographical scope should be promoted through cross-cluster cooperation projects conceived for this purpose.*
- ☐ *Integrate the demand dimension in the innovation process can constitute the qualifying aspect of cross-cluster and transnational cooperation projects to be developed in the SEE area.*
- ☐ *A policy to be pursued is the one to create incubators of innovative start-ups, at least in clusters of a certain dimension.*

SUSTAINABILITY THROUGH CLUSTER DEVELOPMENT (WG2)

- ☐ *Cluster policies should allow and support the development of collective projects to tackle collectively environmental problems of the clusters.*
- ☐ *The development of sustainability within clusters, therefore, has a high potential, as soon as it does not prescind from a high cooperative effort among firms and institutions (KIBS and universities) being located within or outside the cluster and having complementary competences.*
- ☐ *CMOs should raise awareness about the business potential of environmental innovations, transfer knowledge about best practice among firms and support cooperation project toward the development of eco-innovations.*

INTERNATIONAL CLUSTER COOPERATION AND NETWORKING (WG3)

- ☐ *Facilitating the inter-firm e intra-cluster cooperation have to represent a primary objective of the cluster policies, allowing the involvement of actors located in different regions within the same or diverse countries.*
- ☐ *At the basis of a good cross-cluster cooperation project there has to be the identification of those complementarities between clusters and about how to combine them accordingly to a reciprocal interest.*
- ☐ *"Glocal" cluster represents an evolutionary model that the SEE cluster policies can consider as a goal for those clusters that today pay for a competitive gap.*
- ☐ *Entrepreneurial CMOs should be able to consider and recognize its cluster members' specificities and promote contacts and opportunities not only within the cluster but also outside and internationally, with external actors and stakeholders, recognizing and attracting opportunities that cluster members alone could have difficulties to recognize or approach.*
- ☐ *CMOs have to be capable of identifying new opportunities of cross-cluster and transnational collaboration (working with an entrepreneurial approach), creating useful occasions of face-to-face matchmaking and overall giving birth to an efficient platform for the SEE cluster collaboration.*

FINANCIAL FRAMEWORK IMPROVEMENT (CLUSTER FINANCING) (WG4)

- ☐ *Establish a medium-term/multi-annual commitment/framework agreement of regional policy makers to financially support cluster initiatives.*
- ☐ *Establish monitoring mechanisms and key performance indicators.*
- ☐ *Simplify funding regulations and reduce administrative burdens on clusters.*
- ☐ *The financing structures of cluster initiatives have to take different activities into consideration*
- ☐ *In order to support and consolidate more integrated and systematic interactions between science and industry, new innovative financial tools have to be developed.*
- ☐ *Ad hoc financial instruments, specifically tailored to new ventures, should be promoted by the regions and be able to attract the interest of institutional and private investors.*
- ☐ *Creating specific financing lines connected to cooperation schemes such as the 'Business Contract'.*

CLUSTERS AND REGIONAL SPECIALIZATION (WG5)

- ☐ *In order for successful cluster policies to be realized, policies developed at the cluster level have to be complemented and co-developed considering also policies developed at the regional and EU level.*
- ☐ *Support a "regional clustering" approach, that involves the collaboration among clusters specialized in the same or different sectors and located in the same region. Starting with temporary and very targeted initiatives, thematically-driven and flexible in their composition, that constitute the starting point for the formation of a new and permanent regional cluster*
- ☐ *'New' clusters formed through a regional clustering approach should have a unique and more efficient/effective cluster management organization.*
- ☐ *Support the formation of clusters on a European scale, or of meta-clusters, when this allows greater possibilities.*
- ☐ *Support initiatives that create a bridge between manufacturing clusters and excellence centres specialized in research fields that are relevant for the innovation process in these clusters' industries.*

NEW SKILLS AND JOBS CREATION (WG6)

- ☐ *The managerial training, which should be organized in the clusters, should have as main objective the development of the dynamic capabilities of the cluster's firms.*
- ☐ *Training project should be tackling just the most promising cluster's firms, being characterized also by a good level of networking within the cluster.*
- ☐ *Support clusters' firms lacking in knowledge codification capabilities by providing specific training and assistance activities such as initiative finalized at the design, realization and implementation of a knowledge management system inside SMEs.*
- ☐ *Enable knowledge transfer and the development of skills relevant to the eco-innovations specific for the industry in which the cluster works.*
- ☐ *Realize adequate labour policies and fiscal incentives to facilitate employment, without forgetting that the best employment policies are made by those enterprises that becoming competitive are interested in employ and are able to attract new professional skills.*
- ☐ *Develop initiatives aimed at enhancing and improving the meetings and collaboration between clusters' firms and educational institutions, (inside and outside of clusters) like specific university courses responding to the cluster needs, traineeship within firms and PhD financed or co-financed from the enterprises.*
- ☐ *Develop specific projects aimed at recovering tacit knowledge and competences that otherwise risk to get lost, supporting their transfer from skilful and selected retired people to students or young employees.*
- ☐ *CMO should ensure that universities and other training institutions and knowledge intensive business services can propose initiatives and activities truly useful for clusters and for their enterprises and leading the enterprises to participate at the initiatives and activities targeted to them.*
- ☐ *Promote a period of training, for cluster managers or potential cluster manager, in CMOs that have been accredited for the quality of their work method*