# Transnational Foresight for South East Europe

**Report**

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September 2014

## 1. BACKGROUND INFORMATION

In the frame of the interregional cooperation project in SE Europe “ClusterPoliSee”, participating regions have been asked to perform scenario building workshops according to a unitary foresight methodology towards shaping up cluster development processes in the broader frame of industrial policy strategies.

The current report represents the aggregation of regional foresight exercises taking up the identified conclusion to a SEE macro-regional perspective.

## 2. METHODOLOGY

The methodological approach is centered on the foresight concept and of its according tools and instruments, shortly comprising following phases:

- SWOT Analysis
- Creation of development scenarios.

Quantitative inputs have laid the base for a SEE SWOT Analysis. They have been validated in each region in the context of peer review workshops as a primary steps for creating the regional foresight scenarios.

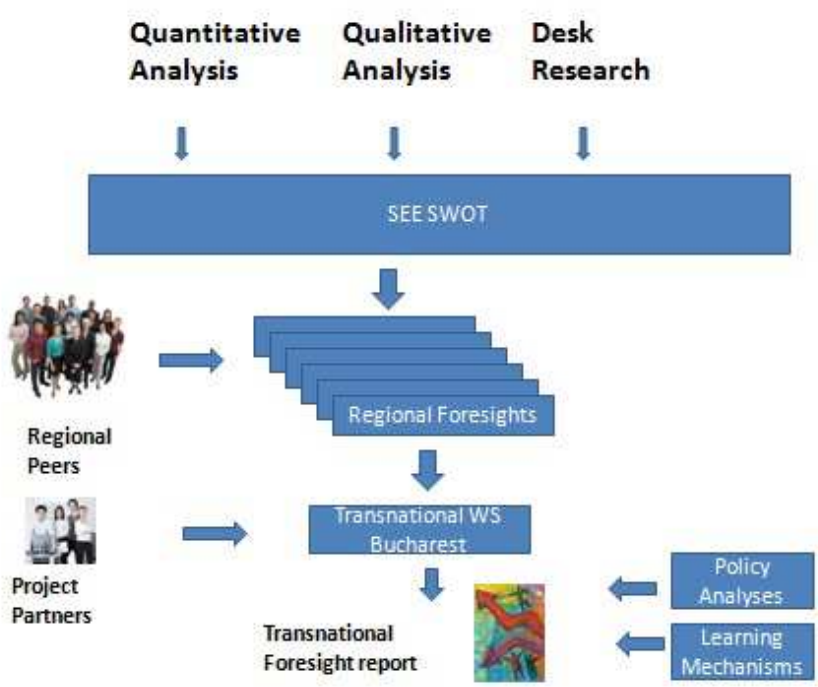
Significant input comes from the overall impact assessment of the cluster policy analyses (Wp4) as well as from the main lessons learned in analyising current situation and trends in each key thematic priority of the project (WP5):

- innovation, R&D driven cluster development;
- sustainability through cluster development;
- international cluster cooperation and networking;
- financial framework improvement;
- clusters and regional specialization;
- New skills and jobs creation.

Finally a transnational foresight workshop was organized with the aim of harmonizing the

different regional approaches into a coherent transnational foresight scenario.

The current report represents a synthesis of the findings accumulated so far within ClusterPoliSEE highlighting the most important conclusions of the intensive work done by project experts and regional peers.




## 2.1. *Capitalisation of Project Results*

Findings in WP4 and WP5 give some important information about industrial policy mechanisms which target at cluster development processes. In most cases cluster organisations analysed in SEE Area (WP4) play the double role of facilitators and central communication points for clusters. The establishment and the maintenance of an infrastructure for communication, cooperation and networking between clusters are essential for their development. State Support and trust among members are considered to be the most important success factors. One of the biggest development opportunities lies in the transfer of good practices from more to less developed regions/countries/cluster organizations. Given the huge difference in the level of cluster policy development and operations of cluster organisations, “learning by doing” ought to be considered as the most adequate learning mechanism through interaction and exchange of experience aiming to provide additional important knowledge to policy makers for the development of effective cluster policies in SEE area. The lessons learned through the transfer of good practices on cluster policies and tools will result in a set of policy measures in participating regions. (WP5). Following examples are meant to

give a broad picture:

Marche region will focus in the future on the enhancement of public managers' skills and competence for policy making activities and on fostering the cooperation between Public and Private Employment Services.

In order to improve the regional cluster financing situation, Emilia Romagna will work on establishing a medium term/multi-annual commitment/ framework agreement of regional policy makers to financially support cluster initiatives.

Istria will increase networking opportunities with cluster in neighbouring countries and will develop innovative tools to support and integrate clusters, especially in the area of sustainable development.

At its turn, Bulgaria will work on the adjustment of the Structural Funds Operational Programmes in order to ensure a sound cluster financing.

Lower Austria will tackle the problem of regional fragmentation by harmonizing regional programmes for collaborative projects

NE Region of Romania will focus its activities on the support to cluster international cooperation by making use of existing instruments at European level such as the Enterprise Europe Network and the implementation of the regional smart specialization strategy including the implementation of a regional benchmarking system.

West Pannon region seeks to ensure a more sustainable regional development through clustering.

Serbia acknowledges the need of qualification services and will focus on the creation of a cluster academy for cluster managers.

As Slovakia is concerned, international cluster cooperation within the Danube region as well as cluster financing via the Operational Programmes within the frame of Structural Funds are two of the main envisaged measures.

Greece will seek to foster innovation and R&D driven cluster development via a thorough training programme, easing the innovation gap through complementarities and partnerships among cluster members as well as between cluster members and national and international organisations including world class innovation centres of excellence.

The focus of main policy measures in each participating region and in relation to the selected key areas for cluster development is given in the following table:

| Key Area/Region | | | |
|---|---|---|---|
| Innovation. R&D cluster development | Greece | | |

| | | | |
|---|---|---|---|
| Sustainability through cluster development | IT-Marche, | West Pannon | |
| International Cluster Development | NE Romania | Slovakia | |
| Financial Framework Improvement | IT- Emilia Romagna | Bulgaria | Slovakia |
| Clusters and Regional Specialisation | Lower Austria | NE Romania | |
| New Skills and Jobs Creation | IT-Marche | Serbia | |

## 2.2. *Regional Foresight Exercises*

FORESIGHT is a systematic, participatory of catalysing future intelligence, and of creating medium or long-term vision, focused on present decisions; a process of coordinating joint actions. The innovation and research policies are based (implicitly or explicitly) on scientific, technological and social forecasts

FORESIGHT reflects the belief that the future can be created by the actions we choose to take in the present.

Each project partner from NE Region, Romania; Central Macedonia, Greece; Sofia, Bulgaria; Novi Sad, Serbia; Pula, Croatia; Trnava, Slovakia; Lower Austria, Austria; West Pannon, Hungary; Marche, Italy; Emilia Romana, Italy; Venice, Italy and Maribor, Slovenia organized foresight exercises with regional cluster stakeholders (companies, R&D institutes and universities, RDAs and other relevant public bodies, technology transfer centers, chambers of commerce, industrial associations etc.).

Although diverse both from a historical and economic perspective, the participating regions in ClusterPoliSee show remarkable similarities concerning cluster development issues: high skilled labour force, lack of sufficient cluster financing, availability of national and structural funds in the future and dependence on traditional sectors. A coherent RDI policy and an enhanced inter and intra-cluster cooperation are critical factors for the future development of clusters and cluster policy in SE Europe.

## 2.3. *ClusterPoliSEE Transnational Foresight Workshop*

The ClusterPoliSEE Transnational Foresight Workshop took place in Bucharest on the 31st of March 2014 and was attended by 70 persons represented project partners and Romanian stakeholders.

Prior to the workshop a questionnaire was submitted to policy makers, cluster managers and entrepreneurs of SEE area aiming at paving the way for the moderated discussion and was targeted at important cluster development vectors as resulted from prior regional exercises. The questionnaire is enclosed to the current report.

Briefly, **Innovation, R&D driven cluster development** and **International cluster cooperation and networking** have been considered the two most important thematic priorities on which the future cluster development policies in SE Europe should be built upon.

Participants have been divided into 4 working groups dealing with one of the most important factors influencing cluster development as derived from the regional foresight exercises, i.e. “Smart Specialisation”, “Financing”, “Economic Crisis”, “Traditional Sectors” while “Human Resources” has been discussed in plenum as an methodological example.

Results can be seen in the following tables:

| **2020** | **HUMAN RESOURCES** | | |
|---|---|---|---|
| **SITUATION IMPACT** | **What needs to happen?** | **Instruments** | **Who?** |
| - Prevent brain drain<br>- Specialisation and exploitation of know how<br>- Improvement of knowledge management at cluster lever (organizations, members) | - Cooperation between DGs in EC in benefit of innovation<br>- Calls to promote cooperation between east and west<br>- Adaptation of curricula to innovation aspects of SMEs<br>- Analysis and finding partners & complementarities<br>- Specialised departments in R&D<br>- RIS 3 with focus on SMEs<br>- Enhanced cooperation between academia and SMEs with clusters<br>- Finding the suitable program (INTERREG, ERASMUS)<br>- Training | - HORIZON 2020 (SMEs)<br>- Innovation voucher<br>- Competence mapping (matrix)<br>- Study visits<br>- Best practice exchange<br>- Knowledge intensive business services<br>- Certified technologies brokers | - European Commission<br>- Policy makers<br>- Clusters<br>- RDA, RIS, SFs<br>- Clusters managers |

| 2020 | SMART SPECIALIZATION | | |
|---|---|---|---|
| **SITUATION IMPACT** | **What needs to happen?** | **Instruments** | **Who?** |
| - New specialized sectors, product and services<br>- Mass customization<br>- Sustainability<br>- Stronger position of the clusters in the regional development | - Widening the activities/diversification of products, markets, clients, services<br>- Development of new technologies<br>- Cross-cluster/sectorial collaboration | - National & regional cluster measures with clearly defined targets<br>- European projects<br>- Technological centers<br>- Face-to-face meetings<br>- S3 platform<br>- International and interregional Networking | - EU Commission<br>- National & regional government<br>- Companies & managers & academies<br>- International networks |

| 2020 | FINANCING | | |
|---|---|---|---|
| **SITUATION IMPACT** | **What needs to happen?** | **Instruments** | **Who?** |
| - Better business environment for clusters<br>- Fewer clusters but stronger<br>- Clusters able to better attract available money from different sources<br>- Improving competitiveness (members, clusters, regions)<br>- Specialized clusters | - Better political support and legal framework<br>- Reduce administrative boundaries<br>- Increase capacity to apply for funding<br>- Focusing funding<br>- Better trained cluster management<br>- Cooperation between clusters to apply for funds<br>- Capacity for fund raising (FDI)<br>- Consolidated public-private dialogue | - Dedicated financing programs on regional/national/European level<br>- Permanent service for clusters to develop funding applications<br>- Training courses for clusters management<br>- Financial instruments tailored for clusters: e.g. venture capital, risk capital, seed capital, innovation?<br>- (Inter)national platform for financing opportunities | - National authorities<br>- Regional organizations<br>- European Commission<br>- Private funds + clusters themselves<br>- Specialized trainings service suppliers<br>- Financing companies (banks, business angels etc.)<br>- International/national/regional authorities |

| 2020 | ECONOMIC CRISIS (MACROECONOMIC, GLOBAL CHALLENGES) | | |
|---|---|---|---|
| **SITUATION IMPACT** | **What needs to happen?** | **Instruments** | **Who?** |
| - Sustainable SMEs<br>- Competitive advantage at global level<br>- High-skilled employment<br>- Leadership in new markets/improving existing ones | - Generational turnover management<br>- Develop cooperation attitude<br>- Opening new financial opportunities<br>- Focusing on core cluster activity being innovative<br>- New job opportunities<br>- Facing new markets/advanced products & services cross-fertilization. | - Financial incentives/opportunities<br>- Smart specialization (strategy + fund)<br>- Innovative training programs<br>- Improve industry-university link (internship, scholarship) at international level | - Public & private institutes & industry associations<br>- Regional & national policy makers<br>- Firms, universities, Ministry of R&D, Ministry of Education |

| 2020 | TRADITIONAL SECTORS | | |
|---|---|---|---|
| **SITUATION IMPACT** | **What needs to happen?** | **Instruments** | **Who?** |
| - Improved management skills<br>- Cross-sectorial fertilization<br>- Smart CMO<br>- Well financing policy (sectors that have been excluded from Sectorial Operational Programme) | - Maintain traditional sectors<br>- Cross-innovation<br>- Improve communication skills<br>- Aggregation<br>- Certification of product and process (e.g. agriculture product and eco-innovation rules)<br>- Basic standards in order to understand RIS3 Strategy | - Education<br>- Marketing<br>- Human Resources<br>- Adequate CVs to the new needs<br>- $ (incentives to first-movers) | - Collaborative Cluster Management<br>- Regions<br>- Universities |

# *3. Scenarios for Selected Key Areas of Cluster Policies in SE Europe*

## *3.1. Innovation, R&D driven Cluster Development*

**The analysis of the base line** shows a **considerable potential of universities** and other educational institutions in the SEE regions involved. On the other hand, the SEE area generally faces a **low level of cooperation between R&D and industry**, **lack of critical mass in SMEs with innovative products or services** and **low level of R&D**

**expenditures**.

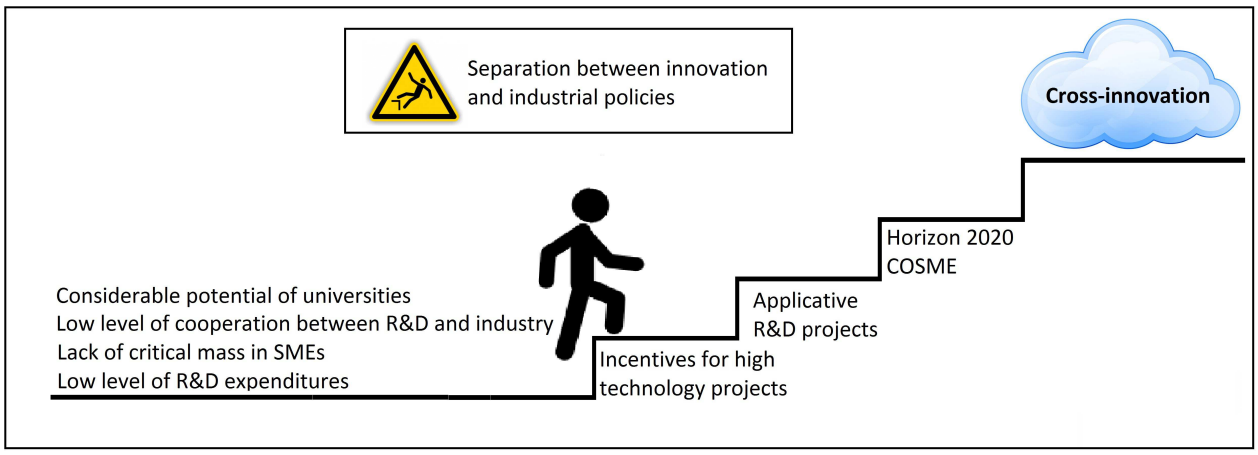
**By 2020** clusters will be the **main drivers of cross-innovation** processes. This will enable them to create or open up new markets to increase revenue, to exploit new competitive advantages in their supply chains reducing financial risks, to enhance their human capital.

In order to achieve that goal, **incentives for cooperation and networking of SMEs on high technology projects** on national and European level ought to be made available. Furthermore, **applicative R&D projects between universities and SMEs** should be kept in focus. **Access of SMEs to Horizon 2020 and COSME** shall be considerably improved.

The main failure risk of the scenario lies in **the separation between innovation and industrial policies. Thus, national and regional governments** should elaborate inclusive and cluster oriented innovation support schemes complementing the existing ones at EU level.

**Cluster organisations** are asked to play the **role of facilitators** among their members and **directly support SMEs** in accessing available funds for innovation projects especially at EU level (i.e. Horizon 2020 and COSME).

**Valuable lessons learned within ClusterPoliSEE** show that **innovation policies should be more and more market oriented** rather than technology based. A special attention should be given to **IPR**, as it becomes more and more difficult to protect innovation. A case by case approach would be advisable, i.e. an in depth analysis of patenting benefits against the costs.




### *3.2. Sustainability through Cluster Development*

**The analysis of the base line** shows the **availability of sufficient know how in clustering** processes combined with **a certain cluster tradition** in some countries. This level has been achieved through the **involvement of various SME supporting institutions**. However **decision making process** concerning cluster policies is relatively slow and the **public support is insufficient**. There is also an **insufficient critical mass of industrial leaders** animating the cluster landscape leading to the orientation of clusters towards **„low price" approaches**.

**By 2020**, clusters will be able to ensure a **sustainable regional development** based on **new specialized sectors, product and services** and **mass customization.**

In order to achieve that goal, **promotion, best practice exchange and awareness raising campaigns** have to be intensified at all levels.

The scenario is endangered by several risk factors **like the economic crisis, lack of critical mass of SMEs with development potential and last but not least by inadequate policy interventions**. Hence, **national and regional governments** should focus their interventions on the development of innovative SMEs.

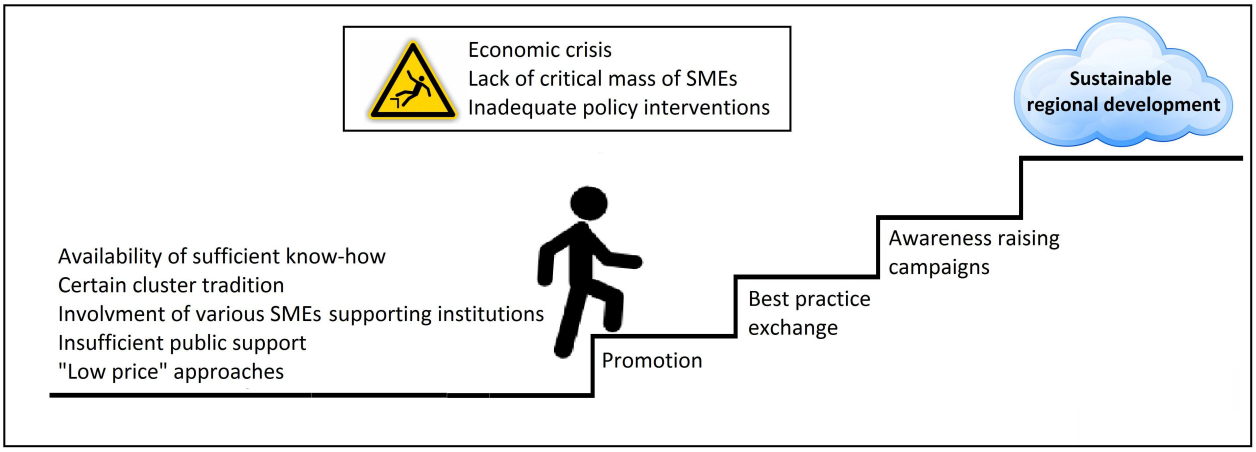
**Cluster organisations** are required to intensify their **networking** function meanwhile maintaining and developing an appropriate communication infrastructure.

**Valuable lessons learned within ClusterPoliSEE** show that measures targeting the achievement of sustainable development through clustering need to address following issues:

- regulation: strong regulation is a strong driver for eco-innovation, and large companies in such industries often face regulatory demands and tend to respond to the stricter rules much faster than SMEs,

- prices and access to materials: limited access to materials and price increase provide an important incentive for sustainable development, particularly through joint initiatives;

- networks: SMEs mainly point to the need for good business partners and good access to external information and knowledge, including technology services.




## *3.3.* International Cluster Cooperation and Networking

**The analysis of the base line** shows a **certain level of cooperation** between SMEs at European level.

By 2020, clusters in SEE will have aquired **competitive advantage at global level** and **leadership in new and existing markets.**

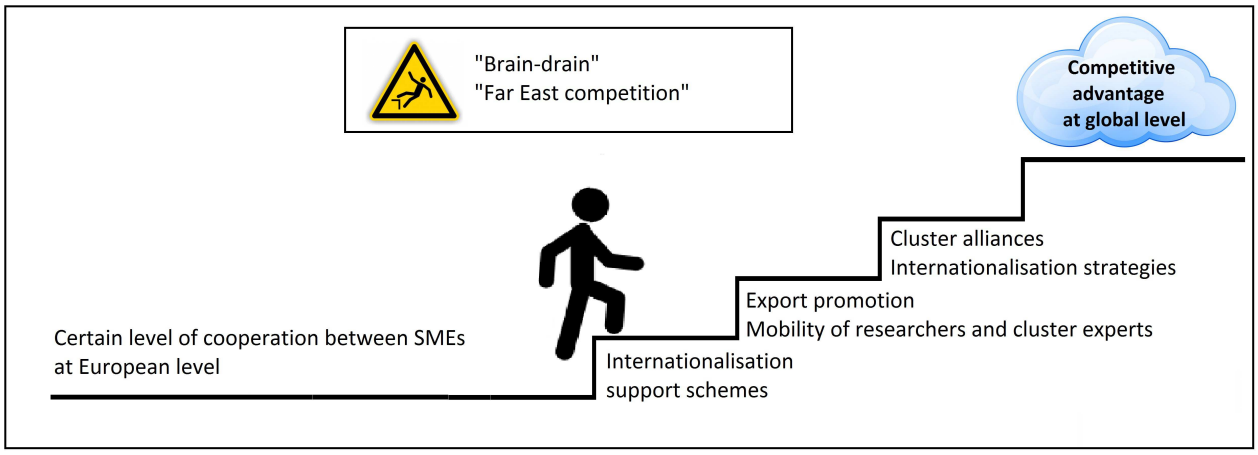
**Strong focus to internationalization support** from the regional and national governments is required. The support instruments should be made coherent with the overall EU internationalization strategies. To be noted that intra-EU cluster cooperation can no longer be regarded as internationalization.

Internationalisation means more than exports. Given its dual character as it addresses

both members of clusters and cluster management bodies, **regional and national policy makers** as well **as cluster organizations** themselves are asked to contribute to the success of the internationalization process.

A smart system of **internationalization support schemes** should be set in place combining **export promotion**, **mobility of researchers and cluster experts**, **creation of cluster alliances**, elaboration of coherent cluster **internationalisation strategies**. Internationalisation and innovation policies should be harmonized as **"brain drain"** triggered by inadequate innovation and cluster policies and the "far east competition" represent a serious risk for the success of the scenario.

Valuable lessons learned within ClusterPoliSEE show the importance of the creation of international cluster partnerships. SEE clusters are already involved in 13 such partnerships, but effort should continue especially within the Danube Strategy approach.
Concerning the export side of the internationalization process, national/regional governments should create flexible export promotion programmes with clear targets and a monitoring regime.
Coming to the cluster level, the creation of export hubs in highly active clusters which should act as a beacon for their sector and sub-sector should be encouraged and funded by regional/national support schemes.




### *3.4. Financial Framework Improvement*

The analysis of the base line shows a **general discontent with the availability of financing sources for clusters.** In addition to that, financing tends to be targeted towards institutional cluster aspects rather than to innovative development processes.

By 2020, the overall number of clusters will decrease against an **increase of specialization** and **efficient use of funds.**

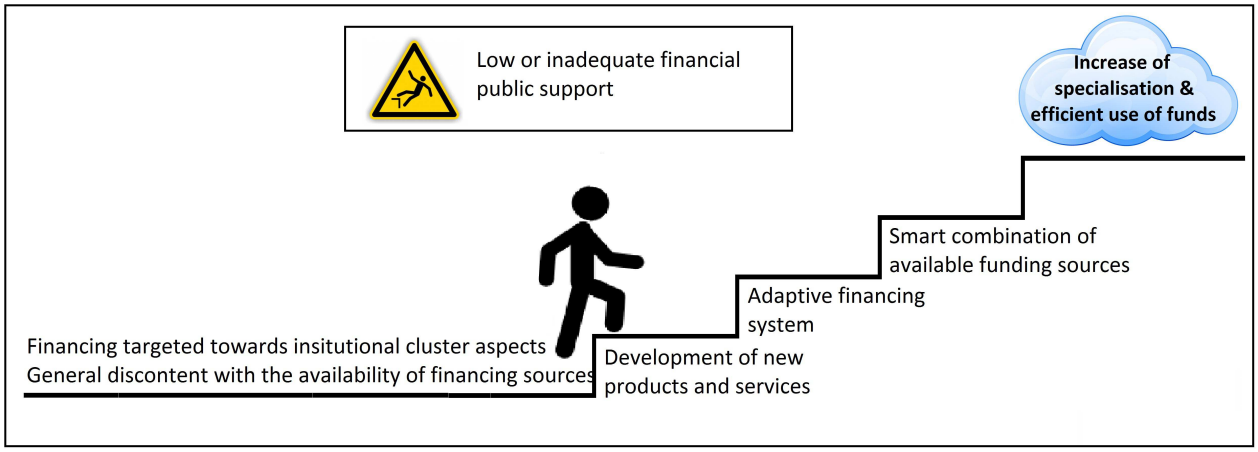
**Incentives for the development of new products and services** within clusters should slowly replace the “cluster subvention system”. This requires a smart combination of available funding sources (national, structural funds, Horizon 2020, COSME) which should be embedded in the cluster development strategies.

Cluster management organisations are the main players asked to ensure available financing resources for the cluster development process using a smart financing mix. Main allocations should go towards cross-innovation and internationalization efforts.

Although wished and proclaimed by many, sustainability of clusters will not be achieved without further public financing for clusters. Low or inadequate financial public support will be the main source of failure for the scenario.

Valuable lessons learned within ClusterPoliSee show the importance of an “adaptive financing system” taking into consideration the four stages of cluster development:

- Start-up clusters – The main goal of the subsidies is setting up and estabilising the co-operation scheme.
- Developing clusters – in the second stage a dynamically developing cluster is enabled to work towards reaching critical mass in the region and diversifying its scope of activities.
- Innovative clusters – Clusters in this stage need to be selected and closely monitored to ensure competitiveness
- Mature clusters – Funding can be scaled back, focusing on specific projects rather than global subsidies




## *3.5.* Clusters and Regional Specialisation

The analysis of the **base line** shows rather weak points, i.e. a **general negative attitude towards cooperation** in the region and still **no agreement on smart specialisation** in most analysed regions.

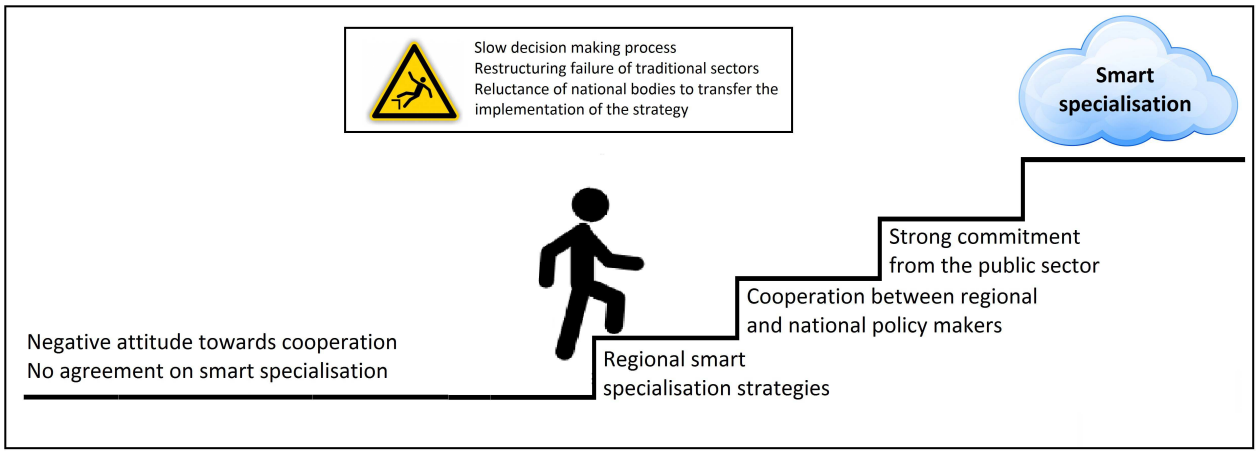
By 2020 clusters will be the main drivers of smart specialisation in regions, by means of **cross-cluster/sectorial collaboration**, **strong commitment from the public sector** and political support, **consolidated public-private dialogue,** and **cross-innovation. Sustainable construction and energy** are only 2 examples of smart sectors, as derived from the regional foresight exercises**.**

In achieving the target, the development of the **regional smart specialization strategies** is a condition sine qua non. **Regional and national policy makers as well as cluster organizations** are required to closely cooperate in elaborating a valid strategy. Of all key areas analyzed by ClusterPoliSEE this particular one bears the highest failure risks, such as: **reluctance of national bodies to transfer the implementation of the strategy towards regional development or technological agencies**, **restructuring failure of traditional sectors** (e.g. construction), unrealistic target setting, **slow decision making processes in view to legislation**.

Valuable lessons learned within ClusterPoliSEE show that:

- RIS 3 strategies should be accompanied by appropriate cluster programmes
- Cluster infrastructure should be placed a special focus upon as it can be the mechanism connecting different actors of the regional innovation system

- Embeddment of the cluster landscape into the larger economic and social tissue, i.e. cluster support programmes should accelerate the dissemination of new ideas, knowledge and technologies between different sectors of the economy.
- Long term and flexible cluster and cluster management support schemes are required
- Cluster programmes in SEE and broader RIS3 strategies need to be based on the specific context in which they operate
- Policy makers, cluster policy programme owners and those responsible for RIS3 strateg have to collaborate on the development of key performance indicators, benchmarking exercises, impact assessment tools and the evaluation of cluster policies




## *3.6.* New Skills and Jobs Creation

The analysis of the base line shows the **good quality of the labour force** in the region. Still, highly educated **young experts find it hard getting a job in SEE**, a fact that triggers a **brain drain phenomenon**.

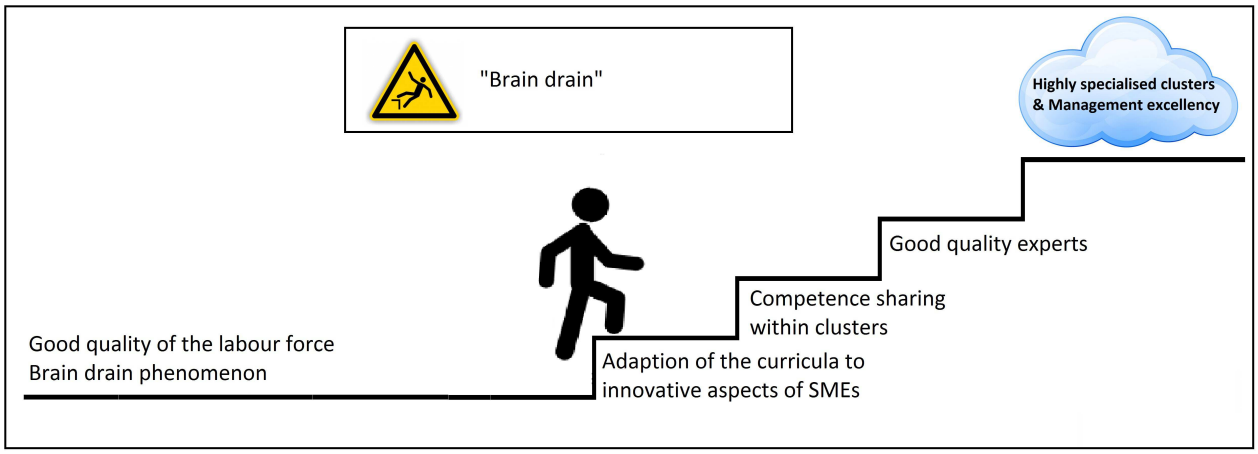
By 2020, SEE clusters will be **highly specialized** and based on the **good quality of their experts** leading also to **management excellency** both at the level of the cluster and its members.

This target can be achieved by a series of measures such as **adaptation of curricula to innovative aspects of SMEs**, **competence sharing within clusters** etc.

National and regional governments, cluster organizations and most notably universities are the main actors asked to contribute to the achievement of the goal.

**Brain drain** is the main critical factor for the success of the scenario.

Valuable lessons learned within ClusterPoliSEE show there is a high need of national coordination among various actors that can set an appropriate policy framework capable to integrate a variety of multi-level policies and improve the activities of clusters including developing of new skills through qualification in clusters. The educational system needs to be reformed and updated in order to include courses that support the development of creativity, innovation and entrepreneurial culture - young entrepreneurship. In order to create a good quality policy framework, high skills and competences are required at policy makers level too. These skills relate mainly to the capacity to analyse regional clusters' development and the capacity to identify the needs for new and specific skills that could allow a better integration among training and labour policies, between industrial, innovation and cluster policies.




## *4. Overall Scenario and Conclusions*

If cluster development will be driven by innovation, R&D, international cooperation and networking, by 2020 SEE clusters will be **highly specialized** and based on the **good quality of their experts,** leading also to **management excellency** both at the level of the cluster and its members. Clusters will be able to ensure a **sustainable regional development** based on **new specialized sectors, product and services** and **mass customization**. The overall number of clusters will decrease against an **increase of specialization** and **efficient use of funds** leading to **competitive advantage at global**

**level** and **leadership in new and existing markets.**

**Cross-cluster/sectorial collaboration**, **strong commitment from the public sector** and political support, **consolidated public-private dialogue**, **cross-innovation** are some of the main drivers in achieving cluster competitiveness.

**Intelligent financial and non-financial instruments** should be used: e.g. Horizon 2020, competence mapping, study visits and best practice exchange, use of technology brokers, other tailored financial instruments (venture capital, risk capital)

**A whole range of actors** has to be involved: European Commission, Policy Makers at national level, RDAs, specialized service providers, cluster themselves and cluster members such as universities, enterprises, public actors and catalyst institutions.