Upgrading the Innovation Capacity of Existing Firms

ERIK ACTION
UPGRADE INNOVATION CAPACITY OF ENTREPRISES

Challenges and Opportunities for New Member States

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Present challenges to innovation in enterprises in the South-East Region of Romania

Present challenges to innovation in enterprises in SE Region

CHALLENGE	***Improvement of innovation culture,*** *as well as* ***SME cooperation*** *mainly in R&D field, and their recognition as* ***central strategic assets*** *of enterprises and regional economy*	***Increase of research and development potentials*** *by improvement and qualification of R&D infrastructure and reduction of brain-drain*	***Public administration becomes the strategic driver*** *in the triple helix for innovation (business – academia - public administration)*	***Strong increase of ICT use in SME, P.A.*** *(e-government, e-procurement), and in all educational, training and research institutions at all levels*	***Significant energy cost reduction at SME-level***
PROPOSED ACTIONS	***1****.Increase of awareness in innovation processes;* ***2****.Improvement of business networking & collaboration;* ***3****.Achievement of efficient and innovative management;* ***4****.Promotion of new access to SMEs funding* ***5****.Supporting innovative culture in education system*	***1****.Improvement of R&D infrastructure at regional level* ***2****.Reduction of migration of well trained people* ***3****.Up-dating of work force skills at the medium-high level* ***4****.Increase of investment business-oriented research* ***5****.Strengthening excellence in the R&D field*	***1.****Strengthening of the coordination role of P.A. for R&D and SME development;* ***2.****Strategic support for regional economic sectors with innovation potential;* ***3****.Strengthening of facilitating role of P.A. for international relations of regional key-actors* ***4****.Improvement of public services quality through innovation*	***1.*** *Introduction of ICT in P.A.: e-government and e-procurement* ***2.*** *Improvement of access to information on a regional scale, particularly in education and R&D institutions* ***3.****Support for the up-grading and completion of ICT-networks in the region*	***1****.Increase of awareness about alternative energy solutions;* ***2****.Implementation of pilot projects for renewable energy sources, energy saving and energy-efficiency* ***3****.Incentives for SME to introduce cost-reducing energy systems* ***4****.Increase of public administration involvement in promotion and use of renewable sources of*

Links between challenges and the Good Practices imported within ERIK ACTION project:

1. ***Improvement of innovation culture,*** *as well as* ***SME cooperation***, action "Improvement of business network and collaboration"

ERIK ACTION input "Technology Events" project from Andalucia Region - Spain

Good Practice imported by Constanta Chamber of Commerce, Industry, Navigation and Agriculture

Available resources: own resources

2. ***Public administration becomes the strategic driver*** *in the triple helix for innovation (business – academia - public administration) , action "Strengthening of the coordination role of P.A. for R&D and SME development";*

ERIK ACTION input "SIDEUM" project from Smaland och Oarna Region - Sweden

Good Practice imported by SERDA – "South-East Regional Pole of Excellence"

Available resources: own resources

Good Practice imported by the county councils - regional centres for innovation in the regional economic sectors with innovation potential, based on the regional emerging clusters(tourism, IT and shipyards)

Available resources: own resources and co-financing from Regional Operational Program

After :

- a broad analysis process of the ***demand*** (mainly small-medium sized enterprises) and the ***supply sides*** (R&D institutions, Public administrations, consultancy and expert organisations)
- the elaboration of ***in-depth SWOT analyses***, each for the main economic sectors of the region, as well as for the region as its whole

the Regional Development Agency of the South-East Region of Romania was able to formulate the Regional Innovation Strategic Framework.

- The current stage and model of development did not push Romanian SE Region enterprises towards a RD-based functioning.
- Size is the main factor that affects the profile of an innovation driver.
- There are several sources of relative advantages that small and big companies hold with respect to innovation. Large companies have better access to bank financing, and can afford better to assume risks derived from RDI activities.
- On the other hand, SMEs are more flexible, and can adapt faster to demand changes. SMEs have less inertia, and even though they are more dependent on financing and infrastructure, they play a key role as innovation drivers.

- Essentially the relative strengths of ***large companies*** lie in their resources while of small companies in their flexibility. In this case, the challenge for the management is to seek for higher flexibility in large organisations or to compensate for lower resources through clustering and cooperation for the small enterprises.
- Another possible differentiation is between start-ups and existing firms. ***Start-ups*** are by excellence innovative, as they often improve the existing production processes. New firms bring fresh business ideas, which lead to innovation. On the other hand, ***older firms*** benefit from their experience, and thus they are more mature when deciding to innovate. For an ***existing firm***, the fine-tuning of an innovation is easier, carrying fewer risks.

Challenge 1: Improvement of innovation culture, as well as SME cooperation mainly in R&D field, and their recognition as central strategic assets of enterprises and regional economy

SMEs face many barriers such as: limited access to finance and difficulties in securing appropriate skills in the local workforce. That means entrepreneurship needs a *vision* for the strategic and most successful organisation of a work process. The necessity to innovate is therefore strictly linked to entrepreneurship.

This challenge aims to foster a dynamic and competitive SME base in the region by targeted **actions:**

- **Increase of awareness on innovation processes**
- **Improvement of business networking and collaboration**
- **Achievement of efficient, innovative management**
- **Promotion of new access to SMEs funding**
- **Supporting innovative culture in education system**

Challenge 2: Increase of research and development potentials by improvement and qualification of R&D infrastructure and reduction of brain-drain

The region needs to develop R&D capacities potential to collaborate with the business sector. High-level innovation requires collaboration between businesses and the R&D sector. Motivating academic sector to work with industry is a vital factor. It is essential to add new specialisations and build applied research centres meeting the emerging needs of industries and the business sector. A central problem of the Region is the migration of young researchers and well-trained knowledge workers to other Romanian or European regions, determining a continuous *brain drain*.

The regional universities, the SMEs and bigger companies, as well as the Public Administration need to offer to these people more opportunities in order to hold them back or even attract other from other regions.
Also the existing workforce needs to be updated with better know-how and the use of new technologies, in order to be able to imagine different and innovative solutions and to make the best out of it in the sense of efficiency.
R&D institutions should create a business friendly environment where knowledge-based economy is promoted, in order to enable the flow of available information for employees and entrepreneurs, becoming able to communicate directly and to exchange ideas and experiences.

Challenge 3: Public administration becomes the strategic driver in the triple helix for innovation (business – academia - public administration)

The Public Administration can and must play an important role under the following aspect: coordinate cluster development and management, identification and strategic support for economic sectors in the region with innovation potential, like environment, tourism, IT, agro and wood/timber industries, or also supporting the international relations of R&D and SME for collaborative research, know-how transfer and business cooperation.

The actions of this challenge are focused on:

- **Strengthening of the coordination role of P.A. for R&D and SME development**
- **Strategic support for regional economic sectors with innovation potential**
- **Strengthening of *facilitating* role of P.A. for international relations of regional key-actors**
- **Improvement of public services quality through innovation**

Challenge 4: Strong increase of ICT use in SME, P.A. (e-government, e-procurement), and in all educational, training and research institutions at all levels

E-economy provides benefits for a wide range of activities that are specific to the business environment. At companies' level, the ICT applications are essential for the corporation internal and external communication, as well as a more efficient management of resources and customers.

Development of e-business capacity, application of e-business, ICT skills and the use of ICT in business processes by SME in order to have access to international information sources are also required for services of high added-value.

The actions targeted by this challenge are:

- **Introduction of ICT in Public Administration: E-government and E-procurement**
- **Improvement of access to information on a regional scale, particularly in education and R&D institutions**
- **Support for the up-grading and completion of ICT-networks in the region**

Challenge 5: Significant energy cost reduction at SME-level, through the use of renewable energy sources, the adoption of new energy-saving and energy-efficient technologies, production processes and organisational models

More efficient energy production, transport and distribution, and end use, entail the reduction of both primary and final energy. As a direct result, final consumers would benefit from both a better quality and security of supply, implicitly leading to increased productivity. Renewable energy resources are needed for introducing into the economic system some isolated areas by using the technical potential of the country and to reduce the environmental impact by producing green energy.

The following actions are taken into consideration:

- **Increase of awareness about alternative energy solutions in P.A., education system, R&D institutions and SME**
- **Implementation and dissemination of pilot projects for renewable energy sources, energy saving and energy-efficiency**
- **Incentives for SME to introduce cost-reducing energy systems**
- **Increase of public administration involvement in identification, promotion and use of renewable sources of energy**

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What opportunities do interregional cooperation / capitalisation projects offer for regions in new Member States?

The basis of all Capitalisation projects is a ready- available stock of good practices to share. Despite the differing stages of policy development in each region, the overall character of the exchange is ‘win-win’ for the partners.

Less experienced regions as the SE Region of Romania have access to workable policy solutions whilst more experienced regions are exposed to new ideas and practices that they may not have considered.

The good practices can result from any successful policy experience at the local, regional, national or even European level. The right partnership of core actors is the key for a successful capitalisation project. It is crucial to associate all stakeholders in all activities throughout the lifetime of the project.

The main result of a Capitalisation project is a concrete action plan for each participating region, specifying how the identified practices will be implemented under the mainstream programme of these regions.

It was for the first time that SE RDA team participated in a larger network of European regions gaining a useful experience from the shared methodology of work.

The faster carrying out of the activities the more intense work performed. Our working with more experienced people in innovative environments changed not only our whole vision on interregional cooperation but also our overall behaviour in the communication with the stakeholders.

At the regional level we've been catalysers mainly between the triple helix stakeholders in the GP transfer process. We fostered the process of consensus building. Even transferring and adapting part of a GP meant an improvement and an added value to the private sector involved.

At the interregional cooperation level we benefitted from joining the existing network to participate in other projects. In transferring the GPs we learned from the weaknesses and obstacles met by the exporter regions as well as the successful aspects in their implementation.

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What have been the lessons learned from capitalisation in this field for your region?

Establishing effective institutional means of communication between the academic and social-economic environment, also comprising other stakeholders involved in this initiative: state institutions and individuals

At present, the communication process seen as the basis of a sustainable partnership of the parties involved in the academic process is scarce, unstructured and lacking effectiveness.

One can notice a large gap between the extent to which universities are connected to the realities of the social-economic environment and it is for this reason that the establishing of institutions and mechanisms able to remedy this situation is strongly encouraged1.

The communication difficulties existing between the parties are manifested at all levels: organisational culture and specific language, motivation (needs, interests, activities, requirements etc.), institutional availability. The challenge consists in developing an institutional framework able to go beyond these difficulties.

Increasing the technological transfer capacity of universities

In the case of knowledge and technology transfer, the support infrastructure in universities consists of: intellectual property offices; technological transfer offices; technological transfer centres, technological information centres; business incubators, spin-offs, applied research centres and platforms (providing consultancy, running research-development and innovation projects for the economic environment).

Practically, in almost all Romanian universities, one can find one or more of these types of innovation infrastructures. The consultancy is provided by qualifies staff. However, analysts appreciate that their mission-based efficiency is low.

The effective integration of these infrastructures in the national network of innovation and technological transfer is only at the beginning now, and the operation itself of the network should still be improved. It is considered that first, it would be necessary to develop the culture of the innovation in all interested parties and then to develop the infrastructure for innovation. The universities technological transfer capacity was and has been tightly connected to the evolution of the business environment in Romania. An important aspect lies in supporting innovative businesses, based on the research outcomes, such as outcomes spin-offs.

Participation of universities in cluster and PPP developments

For Romania, the notion of cluster is relatively new. The Ministry of Economy initiated a project in 2008 with the purpose of promoting clusters at regional level and identifying the potential for strong clusters developed in Romania following models of collaboration between research institutions and education, public authorities, consultancy companies, chambers of commerce and professional associations.

In the South-East Region: Shipyards, IT, Tourism

Shipyards: Two essential elements favour the water transports of the regions: the Danube River and the Black Sea**.** The maritime port of Constanta, is the biggest port in the Black Sea and the 4th in Europe, providing services of all transport types (auto, rail, maritime, air, pipes transport), and being endowed with warehouses and terminals for all types of goods. It is situated at the crossroads of the TEN-T corridors IV and VII – Danube through the Danube–Black Sea Channel.

IT: The main contribution of the ICT sector to economic growth is mainly sustained through the companies' uptake. The ICT usage stimulates extensive and intensive growth for goods and services production. Concerning the extensive growth, ICT provides, for the Romanian companies, the opportunity to access new regional and global markets and to promote and commercialize goods and services inland by electronic means. An intensive development is also due to the decrease of production, administration and marketing costs, deriving from ICT use, which can determine a significant increase of productivity.
E-economy provides benefits for a wide range of activities that are specific to the business environment. At companies' level, the ICT applications are essential for the corporation internal and external communication, as well as a more efficient management of resources and customers.

Tourism: Due to its geographical position, SE Region has an important tourism potential with its large diversity of cultural and natural resources, harmoniously distributed, which can provide opportunities for various forms of tourism, from classical ones (mountain, seaside, wellness and spa, cultural tourism), to the latest trends like rural tourism, ecotourism and adventure tourism.

Developing a culture of innovation

The innovation culture can be developed by training and education. As a process, innovation goes beyond creativity, invention and invention protection as it comprises all aspects in connection with the commercial valorisation of an invention or know-how. In this sense, the training for innovation should begin as early as primary school, continue in high school, university and then all lifetime. In order to develop a proper innovation culture one needs a whole population level training for innovation.

The innovation topics have been relatively recently included in the subjects taught in Romanian higher education. The training and education for innovation in primary and secondary education is scarce. Significant lacks in the culture for innovation can also be found within economic operators.

This has a negative influence upon their market competitiveness. It is considered that, in future, innovation has to become one of the main subjects to be taught in schools and universities, and that in companies, it will have to play a role as important as quality, if not even more important, to provide them competitiveness on the market.

THANK YOU!

Luminita MIHAILOV
General Director
South-East Regional Development Agency

Phone: +40 339 40 10 19
Fax: +40 339 40 10 17
E-mail: adrse@adrse.ro