



A Regional Innovation Strategy for the South-East Region of Romania

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The Regional Innovation Strategy of South-East Region

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FOREWORD

The Regional Innovation Strategy of the South-East Region has been developed by a broad, partnership of public and private sector organisations, representing Local Administrations, Chambers of Commerce and Industry, the region's universities, research organisations, business associations and private sector organizations.

I want to thank everyone who has given time and expertise to help come up with the vision for our regional prosperity.

Innovation is an engine for economic growth and is at the heart of every successful organisation.

We need to capitalise on the opportunities that exist in the South-East region and use these to grow and prosper through innovation.

Before considering today's opportunities, we should remind ourselves about what our people have achieved in the past.

We have universities with valuable credentials and research facilities, technology centres and business incubator units to nurture our entrepreneurs. With our business support networks we have an environment that can help us achieve our ambitions.

We need to harness the resources to make our region a centre of excellence in innovation.

We must start with an enterprise culture in our schools. We must free up people and their way of thinking, expose businesses to new technology, ideas, skills and markets. In short we need to change the entrepreneurship culture in every organization in the Region.

The Innovation Strategy is built on the philosophy of sharing knowledge, exploring new ideas, products and processes and turning dreams into commercial reality.

We need to work together to help the Region exploit its resources and reach its true potential.

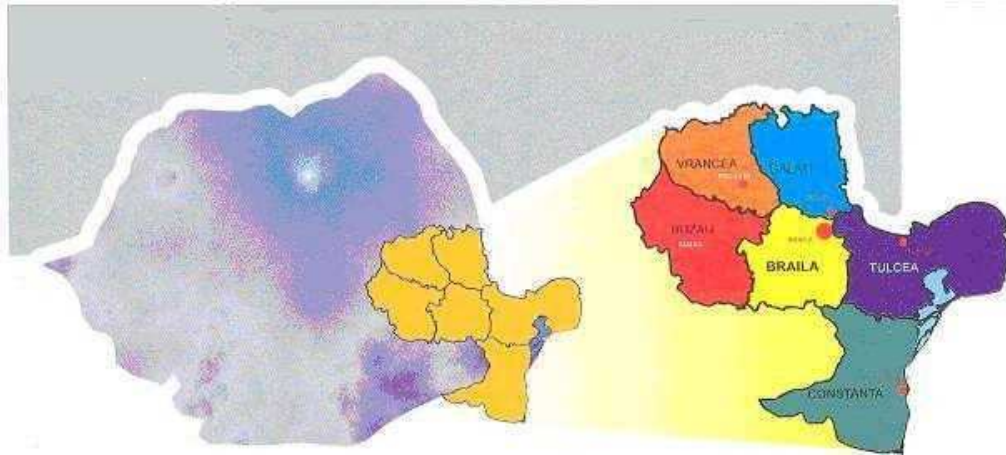
The Regional Innovation Strategy provides a framework for taking decisions on the application of key European funding.

We have come a long way with the Regional Innovation Strategy but its publication is only a starting point. We are about to implement the Action Plan by allocating resources in line with the priorities to achieve the targets we have set ourselves. These targets are not static and will need to be continuously updated.

We are confident in a long term cooperation with all the persons and institutions that have participated in the RIS process.

Luminita MIHAILOV
SE RDA GENERAL DIRECTOR,
ARISE COORDINATOR

THE SOUTH-EAST DEVELOPMENT REGION



INTRODUCTION

This report details the development of the Regional Innovation Strategy in South-east Region of Romania over the last 3 years. It defines the RIS process but more importantly highlights the achievements of the RIS project.

RIS is more than just a strategic document; this report demonstrates how the region's stakeholders are working together to share and valorise their ideas and make innovation happen.

Although this is the Final RIS Report, it is not the end of RIS but only the beginning of a mainstream process, linked directly to the South-East Regional Development Strategy.

The RIS process is designed to complement and build on other regional and local initiatives which impact on the economic performance of the region.

It engages key players to support business and influence the business environment.

1. SOCIO-ECONOMIC BACKGROUND

1.1. General characteristics

South – East region is located in the southeast side of Romania, covering 35,762 sq.kms, or 15% of the total surface of the country; the region is the second by size among the 8 regions of Romania.

South-East Region includes 6 counties: Braila, Buzau, Constanta, Galati, Tulcea and Vrancea as outlined in the above maps.

Braila county lies on a flat plane: the Baragan Plain, one of the best areas for growing cereals in Romania.

Agriculture is the main economical sector in the county. Industry is almost entirely concentrated in the city of Braila.

The predominant industries in the county are:

- ❖ Food industry.
- ❖ Textile industry.
- ❖ Mechanical components industry.

In Braila there is an important harbour, once the biggest cereal harbour in Romania.

Buzau county lies in the sub-Carpathian hilly area.

The predominant industries in the county are:

- ❖ Mechanical components; railway and automotive components
- ❖ Metallurgical parts
- ❖ Glass
- ❖ Food
- ❖ Textiles
- ❖ Wood

The hilly area is well-suited for wines and fruit orchards.

Salt and oil are the main resources extracted in the county.

Constanta county stretches along the Black Sea coast. The predominant industries in the county are:

- ❖ Chemical and petrochemical industry
- ❖ Food and beverages industry
- ❖ Textile industry
- ❖ Ship building industry
- ❖ Construction materials
- ❖ Mechanical components industry

Agriculture is an important part in the county's economy having the largest irrigations systems in the country. Also, the county is famous for its wines from the Murfatlar area.

Constanta Harbour is the largest port in Romania and one of the most important on the Black Sea. It is linked with the Danube by the Danube BlackSea Channel - the widest and the deepest navigable channel in Europe, although not used to its full potential.

Galati County lies on a low plain. Galati is Romania's second harbour after Constanta with the second biggest shipyard, the Danube navigable channel allowing the passage of large sea-going ships.

The predominant industries in the county are:

- ❖ Metallurgy - 55% of Romania's steel production.
- ❖ Food industry.
- ❖ Textile industry.
- ❖ Ship building industry
- ❖ ICT

The county of Galati is also an important transport hub.

The most spectacular part of the **Tulcea County** is the Danube Delta. It covers about 1/3 of the entire surface and lies in the North-East side of the county. Before flowing into the Black Sea the Danube has three main branches - the Sulina branch (the only one navigable by large ships) in the middle, the Chilia branch in the North (the border with Ukraine) and the Sfântu Gheorghe (Saint George) branch in the South.

Agriculture and fishing are the main occupations - about 48% of the population.

Industry is concentrated in the large towns only.

The predominant industries in the county are:

- ❖ Food industry.
- ❖ Textile industry.
- ❖ Ship building industry.
- ❖ Metallurgy – aluminium.
- ❖ Chemical industry.
- ❖ Construction materials.

Vrancea county lies at the Southern end of Eastern Carpathians.

The county is famous for its wines, being the biggest wine producer in Romania. Over 11% of the county surface is covered with vines.

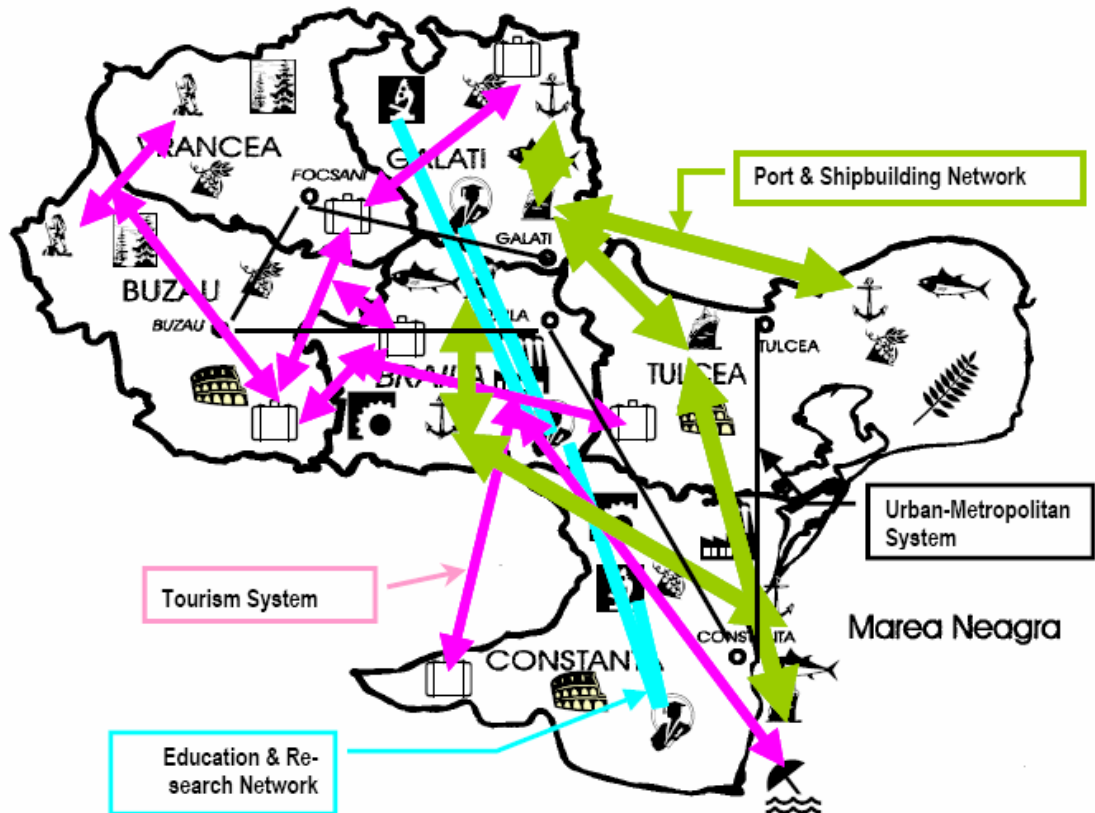
County's main industries:

- ❖ Foods and beverages;
- ❖ Textiles;
- ❖ Paper manufacturing and furniture making;
- ❖ Mechanical parts and components

South – East region has almost all relief forms: Danube water meadow, Baragan plain, Dobrogea plateau with the Macini Mountains, and the northwest side of the region comprises a part of the Curbura Carpathians and Sub-Carpathians. The whole region is crossed by Danube River, which includes the Danube Delta and is bordered in the East side by the all-Romanian littoral of the Black Sea. However, the plain relief is preponderant, with continental specific.

In 2005, the region had 2,846,379 inhabitants, meaning 13.1% out of the country population; the density of 79.6 inhab/sqkm is below the country average (90.7 inhab/sqkm). The highest density is registered in Galati County (138.9 inhab/sqkm), dominated by the industrial and commercial centre with the same name, and the lowest in Tulcea county (29.7 inhab/sqkm), where the natural and economic conditions are less favourable.

The towns and cities concentrate 55.5% of population, with diminishing trends. The process of forced industrialization after the war determined a concentration of population in Galati, Braila and Constanta.



South East Region - Sectoral-Territorial Pattern

1.2. Employment and migration

In 2005, the employed population represented 36.1% out of the total, the highest rate in services (44.5%) and agriculture (32%) followed by industry (23.5%). It can be noticed a high rate of employed population in the service sector in Constanta and Galati counties, due to the tourist resort alongside the seashore and of Constanta, Mangalia and Galati harbours. Unlikely to these, in Vrancea County, almost 49% of the employed population works in agriculture and 62% of the county population lives in the rural area.

The unemployment rate (6.4% in 2005) exceeds the country average (5.9%). The lay-offs in the metallurgical industry (MITTAL GROUP) are the main reasons for which Galati county registers the highest unemployment rate (8.3%), followed by Buzau (7.4%) and Braila (6.8%).

Employment structure by educational level and development region in 2005

-%-

Regions	Tertiary education	Speciality post high school or technical foreman education	High school	Vocational, complementary or apprenticeship	Secondary school	Primary or without graduated school
Romania	12.6	4.8	30.7	25.5	18.6	7.8
South East	10.4	4.6	29.6	27.1	19.3	9.0
South-Muntenia	8.9	4.4	31.5	25.5	19.8	9.9
South West	11.1	6.0	28.4	21.9	21.1	11.5
West	13.2	4.7	34.9	25.3	18.1	3.8
North West	10.7	4.9	32.1	26.4	20.3	5.6
Centre	12.1	5.8	33.5	31.9	12.2	4.5
Bucharest-Ilfov	30.2	5.1	37.3	17.5	8.9	1.0

Source: Romanian Statistical Yearbook, NIS, 2006

The lack of adequate jobs, the unattractive salary system as well as the inadequate qualification cause massive leavings of the active population towards areas of economic growth in the country and abroad. The most accentuated migration is registered in Vrancea County, especially because of the unconsolidated structure of the economy, where the young population strongly left the localities for working abroad.

Migration flow by regions, in 2005

- Number -

Regions	Out-migrants	In-migrants	Balance	Share %
ROMANIA	272,604	272,604	-	-
1. North - East	47,150	43,430	-3,720	-54.9
2. South - East	35,248	34,408	-876	-12.9
3. South- Muntenia	40,517	39,333	-1,184	-17.5
4. South - West Oltenia	29,848	29,168	-680	-10.0
5. West	23,849	25,638	1,789	+26.4
6. North - West	28,742	28,426	-316	-4.7
7. Centre	27,902	28,093	191	+2.8
8. Bucharest - Ilfov	39,312	44,108	4,796	+70.8

Source: Romanian Statistical Yearbook, 2006

1.3. Regional economy

With a GDP that represents 11.3% (2004) out of the country economy, SE Region ranks the 6th, while this indicator per inhabitant is below the national average. By 2004, the work productivity represents an average position among the country regions, with the highest level in Constanta County.

Specific to South-East Region are the disparities between the concentration areas of industrial and tertiary activities (Braila - Galati; Constanta - Navodari), isolated complex industrial centers (Buzau, Focsani), tourism areas (the sea side and Danube Delta) and extended agricultural and winegrowing areas. Illustrative for the region is the discontinuity of the industrial activities and the mixture with tertiary activities (trade, services, tourism) and agriculture. This situation is due to an intraregional specialization. Thus, Galati and Constanta have a greater population ratio occupied in industry, Buzau and Braila in agriculture, Constanta, Galati and Tulcea in constructions and services.

1.4. Regional Infrastructure

Transport

The region is crossed by significant transport corridors which ensures the links between the urban centres and the capital of the country, among which can be noticed the important European road corridors E60, E85, E87, E70, E581.

Out of the 10,856 km of regional public roads, only 19.4% is modernized, the region registering the lowest rate per country. The very low indicator of roads density in Tulcea County is attributed to the fact that the Danube Delta covers about half of its surface.

The main problems related to road infrastructure are: low quality of roads, deficient illumination and street marking systems, and the road situation in rural area is critical, the most rural localities lack stoned and asphalted roads. The floods in 2005 showed not only the insufficiency of the road infrastructure but also the lack of a strategy regarding active protection measures.

It was also proved that there are no real and economic possibilities for reserve routes, the danger existing that some areas are isolated and the links between the big regions of the country are interrupted. In this context the scarce stage of the road bridges can also be noticed.

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.

In 2005 the railway network had a total length of 10,948 km, out of which 1,750 km are in the South-East Region (only 477 km, representing 27.2% are electrified). The density of railways is of 45.9km/1000 km²

Public Utilities

The public utilities in the region are not properly developed. The available data clearly indicate that there are significant disparities between the counties related to the development of the public networks of natural gas, hot water and drinking water. According to the statistical data, at the end of year 2005, in terms of percentage of localities having access to natural gas (6,9 % in the country), the region was ranking 6th among the Romanian regions (together with South-East region), and 8th with respect to the length of natural gas pipelines, possessing 6,6 % of the pipelines of the country. The percentage of localities that have access to drinking water in the region is higher than the average at national level. At the end of 2005 the region occupied the second place at national level regarding the simple length of water supply networks (17.4 % of the country's total) and the second place regarding the number of localities having access to drinking water supply networks (17.8 % of the country's total). There are still localities without drinking water supply and in many localities these installations are characterised by an advanced degree of wear.

The length of public roads in SE Region in 2005 was 10.856 km, which ranks the region IVth at national level. As regards the percentage of roads that have been modernised (19,4 %), the Region is ranked the last among the Romania regions. The very low indicator of roads density in Tulcea county is attributed to the fact that about half of its surface is covered by the Danube Delta.

As far as the regional road network condition and functionality is concerned, the lack of highways, the poor lighting and the improper signing system in the roads has to be emphasised. Furthermore, in the majority of rural areas the existing interconnecting road system is not paved and in its greater part is composed by sandy roads.

Education

At regional level, in the university year 2005/2006, in public education system there were 570 kinder gardens, which had to face the increasing number of children registered during the last years. For the primary and secondary education, there were 1,000 schools and 176 high schools. To these can be added 9 technical vocational schools and 11 post-high school units. Their good functioning is essential in order to ensure the labour market with skilled persons in fields.

In order to have a well qualified labour force, absolutely necessary for the region development is essential the well functioning of the 9 universities with 58 faculties in the region, from which the most important are the ones in Constanta and Galati.

Health

As regards the number of hospitals, the Region ranked 6th at national level having only 47 hospitals (11.1 % of the total at national level), all the hospitals being public. In the Region also operate 13 polyclinics, 33 health units, 9 health centres, 704 pharmacies. There are 1.325 family doctors medical cabinets, 1.107 dental surgeries, 102 medical laboratories, 82 dental laboratories.

The health infrastructure is constrained comparing to the other regions and the majority of the medical units are poorly equipped. In the rural areas the number of specialised medical staff is limited, especially that of higher education. Social services focusing on socially and economically vulnerable parts of population are limited, the main cause being the lack of funds necessary for the development of such services.

1.5. Development potential

The South East region disposes of natural resources, which capitalized adequately, can play an important role in the socio-economic development. Out of these natural resources the most important are the oil and natural gas reserves (Buzau Sub Carpathians, the West of Braila County and the South of Galati County), the stone carriers (Muntii Macinului), salt, etc.

Another advantage that might be capitalized within the region is represented by Constanta port, followed by the Danube ports Galati, Braila and Tulcea. Their links with the great ports of the world, can be used both for ensuring the raw material necessary for the economic development of the region and for exporting goods produced in region and in the rest of the country.

Tourism resources represent the most important potential for regional development:

- The Black Sea shore comprises 13 resorts, with accommodation units, treatment and entertainment (hotels, motels, villas, camping) alongside the 70 km of coast between Navodari and Mangalia;
- The Danube Delta, which represents a scientific attraction and a high touristic potential, especially after its including in 1990, together with other adjacent areas, in the Danube Delta Biosphere Reservation;
- The region benefits from a special spa heritage, with an old tradition: Techirghiol Lake (Eforie Nord) (healing mud with similar properties to the one in the Dead Sea);
- Also, there are promising conditions for the agro-tourism development in all the Region with important resources for the entertainment tourism development;
- The mountain area in Vrancea and Buzau presents tourist and rural tourism interest through Soveja and Lepsa resorts, and unique tourist areas in the country, such as: Vulcanii Noroiosi (Berca), the caves from Bozioru, Focurile Vii;
- The cultural – historic patrimony of the region: getic, Roman, Greek, Byzantine fortress and monastery places, most of the them being located in Tulcea and Constanta Counties

1.6. Industrial potential

The industrial potential of the region is quite important and diversified. In 2003 the gross added value of this sector (including the constructions sector) was 2 bil. Euro, representing 31.3 % of the regional gross added value.

The regional industry is concentrated mainly in the urban centres:

- Petrochemical industry is represented in Navodari;
- Metallurgical industry in Galati and Tulcea;
- Equipment industry in Braila, Buzau, Constanta, Tecuci;
- Shipbuilding industry in Constanta, Galati, Braila, Tulcea, Mangalia, Midia
- Building materials industry in Medgidia;
- Textile and garment industry in Braila, Tulcea, Vrancea;
- Food industry is present in almost all the towns.

The main characteristics of the regional industry:

- It is concentrated in the big towns with a very little portion in the rural areas;
- The processing industry holds by far the first place in terms of turnover and people employed in the region, comparing to other industrial activities.

1.7. Agriculture

The agriculture is very important for the regional economy: circa 40% of employed people work in this sector, which contributes with 16% of the regional GDP. The cultivated land represents 65% of the Region's surface and represents a high potential for future development. Despite a great agricultural potential, the agricultural products processing capacity is low because of outdated technologies. The high fragmentation of the cultivated land in small parts is another obstacle for agricultural development. The low economical potential of small farms and their inefficient management determined the underdevelopment of the agricultural products processing sector.

In 2004 the region was ranking first nationwide, in terms of production of specific products, namely grapes and sunflower, and in the second place with regard to wheat, cereals and beans production. Concerning the animal-breeding and zoo-technical sector, the region is in the first place in the production of sheep and goat meat, as well as wool.

1.8. Entrepreneurial development/RDI activities

The Lisbon Strategy focuses on supporting the innovative micro-enterprises that can contribute to the economic growth and creation of new jobs.

SME regional distribution in 2004, by size

Development region	Micro	Small	Medium	Total
North East	51,098	4,023	973	56,094
South East	58,291	3,981	954	63,226
South	50,329	3,586	946	54,861
South West	38,579	2,204	478	41,261
West	41,365	3,609	929	45,903
North West	64,096	4,887	1,094	70,077
Centre	56,274	4,742	1,161	62,177
Bucharest - Ilfov	97,680	7,353	1,762	10,6795

Source: NASMEC

The SMEs demand for business advisory services is focused on consultancy in finance, marketing, production and design. The availability of support to small businesses is particularly poorly developed.

There is a lack both in the offer and the quality of expertise in these services to support successful SME development in a market economy.

On the demand side, given that the entrepreneurial culture is still weak, managers do not acknowledge enough the importance of consultancy, partnership and cooperation. As a result, not only business communities are fragmented, but also considerable synergy opportunities are not exploited.

Cluster type behaviour has started to emerge, but public intervention may be needed to bridge such market gap through stimulating more cooperative behaviour, including the support for SMEs to become long term suppliers for large companies.

The evolution of the R&D and innovation (RDI) field in SE Region is undergoing important changes. The analysis of present RDI situation reflects the political and economical efforts necessary for responding to EU requirements and for ensuring the necessary conditions to achieve the overall Lisbon objectives, thus aiming directly at increased competitiveness and growth.

The partnership in R&D activities between enterprises and universities/R&D institutions is still at a low level and mainly based on scientific collaborations. The cooperation driven by economic demand is very poor.

R&D infrastructure is obsolete and provides poor performance against similar EU infrastructures.

The direct involvement of industry in research activities is limited and decreasing.

The R&D human resources covers in general all thematic areas and basic sciences, with an important advantage in the field of technical and engineering sciences, but is characterized by a high age average, and a low growth rate of R&D personnel.

There are three main reasons for the low level of R&D and innovation activities in enterprises:

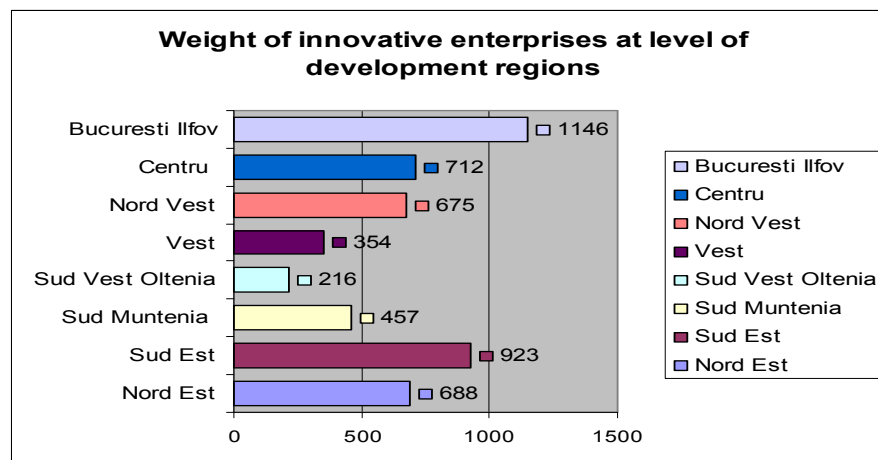
- the public research base is not oriented to the demands of the economy, and in many fields is poorly developed,
- the enterprises hesitate to increase their competitiveness based on research and innovation activities because of high market risks, and technological uncertainties, some progress was registered in the last two years through the research programmes launched by the Ministry of Education, Research and Youth through the National Agency of Research and Science
- the financial markets are not supportive enough in order to encourage research activities

In order to determine a significant increase of the volume of R&D and innovation activities developed by or for the enterprises, the government policies in the R&D and innovation field pursue the following main directions:

- stimulation of R&D activities achieved in partnership between R&D profile organisations and enterprises;
- the development of the activities and infrastructures specialized for technology-transfer and innovation.
- direct support for RDI activities in enterprises;
- investments in public, and private research infrastructures.

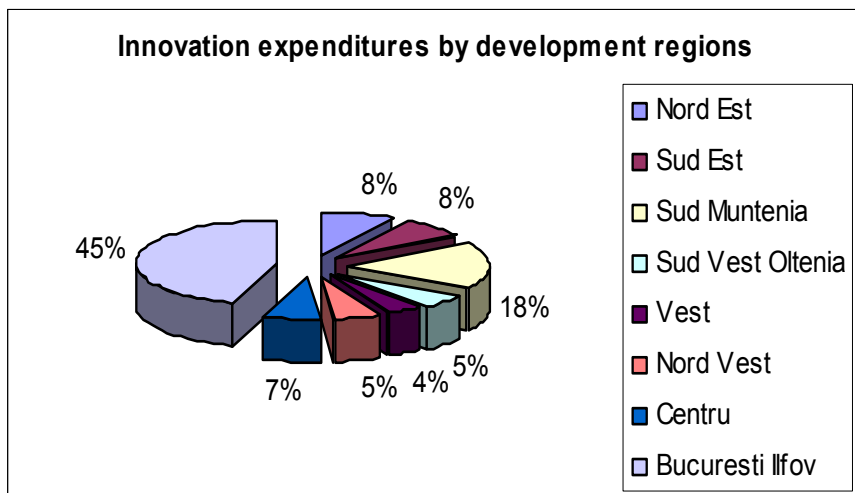
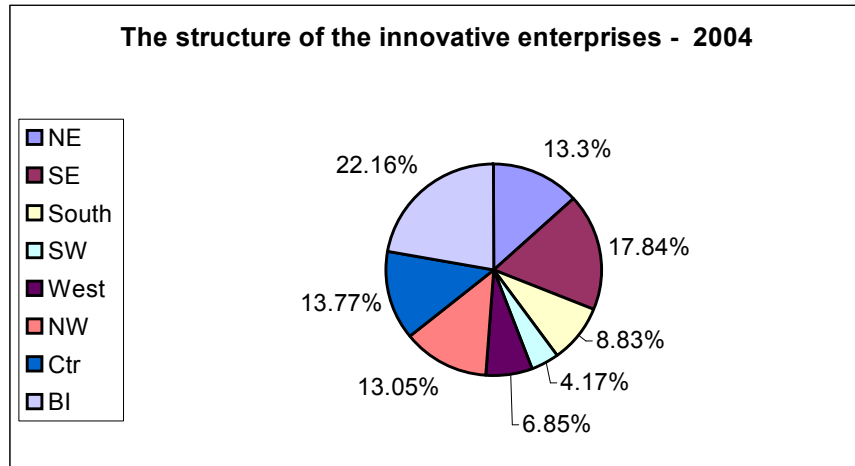
Analysis of regional SMEs needs: business innovation in South-East Region

- **Romania v/s European Union : 20% - 51%**



Source: NASMEC

- **South-East Region v/s Romania : ranks 2nd out of 8 regions**



Source: NASMEC

2. RIS INITIATIVE

The **ARISE** project was funded by the European Commission under the 6th Framework Programme. The **ARISE** project aims at the development of A Regional Innovation Strategy for the South-East Region of Romania. The Coordinator organisation is the Regional Development Agency of the South-East Region.

The supporting partners are: The Regional Government of Tuscany– General Directorate for Economic Development - Regional Innovation and Research Policies Sector and Etruria Innovazione Spa – Tuscany Region.

The partners of **Tuscany** region provided a channel to their vast experience of regional innovation strategy and regional policy making.

The **ARISE** project is considered as a unique opportunity to contribute to the raise of awareness on a common regional identity by strengthening the awareness on innovation related issues at regional level. From this results a new operational attitude of the key stakeholders of the business and governance dimension of the regional innovation system.

The project had **34 months' duration**. It consisted of three successive stages with 15 work packages (stages according to the RIS-methodology).

- Stage 0 - 12 months (with 6 work packages)
- Stage 1 - 10 months (with 4 work packages)
- Stage 2 - 12 months (4 work packages)

A specific workpackage was dedicated to project management activities carried out throughout the whole duration of the project.

2.1. Strategic objectives

- to design a regional innovation policy appropriate for enhancing the post-transition processes and for preparing the accession to the European Union,
- to embed the regional innovation policy in a comprehensive regional development policy,
- to progressively acquire to the region an international visibility via innovation in the environmental sphere and through site marketing actions.

2.2. Methodologies applied

The **methodologies applied** in order to achieve the objectives of the **ARISE** project are as follows:

- Desk research in order to lay the foundations for field research activities in later work packages
- Work meetings
- Workshops/ trainings
- Continuous feed-back and interaction via mailings, email, phone
- Information dissemination via communication and dissemination plan
- Assessment of short surveys and data collected during desk research
- Regional meetings of key sectors
- Individual and focus group interviews for the analyses of demand and supply
- Commitment of key stakeholders

- Work meetings for setting up the monitoring system
- Regional cooperation partnership events
- On-site visits by the monitoring staff in order to monitor and evaluate the actions
- Lobbying at regional and national level for sustainability of ARISE
- Study tours and staff exchanges/ visits
- Mid- and Final conferences

2.3. Project Management and Coordination

An **Integrated Management Unit (IMU)**, a **Steering Committee (SC)** and an Advisory Committee (AC) were set up in order to ensure smooth management and successful project coordination.

The **Integrated Management Unit** was responsible for the day-to-day management and coordination of the project and also for maintaining close collaboration between the South-East Regional Development Agency (SE RDA) and its supporting partners, Giunta Regionale Toscana (GRT) and Etruria Innovazione Spa – Tuscany Region.

The Integrated Management Unit was composed by six staff members from SE RDA and three from GRT and Etruria Innovazione Spa – Tuscany Region.

The members of the *Romanian Management Team* have been nominated since June 2006. All changes occurred during the implementation of ARISE were notified to the Project Officer in Brussels.

The *Romanian Management Team* was permanent, experienced and worked full time for the whole life of the project. Besides the IMU members, 6 employees from SE RDA county offices were involved in the development of specific actions within the ARISE project, especially for dissemination and partnership activities as they became part of the supporting network

The *Italian Management Team* was mainly responsible of providing SE RDA with advice from their own experiences stemming for regional innovation strategy development.

The Project Management Team including Romanian Integrated Management Unit and Tuscany management team had several joint IMU meetings (in Romania and Italy). By using telephone calls and e-mails the two project manager had continuous contact with each other.

The ARISE project was overseen by a **Steering Committee** that mainly comprised key regional stakeholders.

The Steering Committee had two functions:

1. steering the ARISE project
2. strategically guiding and protecting the project.

The role of the Steering Committee lied in steering a consensus-based and learning process and in supervising the project progress, organisation and management. It also played an important role in comparing the results of the analyses, reflecting the strategy and action plan and providing feed-back to the on-going RIS process.

The Steering Committee members were chosen for their ability to provide legitimacy and support to the project, but also for their ability to actively contribute to the project implementation.

When setting up the Steering Committee, it was considered that it should be broad enough to enable consensus building and anchoring the project in the region.

Membership was drawn from national and regional authorities, business associations, chambers of commerce and industry, universities, research institutes and business support organisations.

The Steering Committee of our RIS project consisted of 15 members as follows:

- RDA General Director as Project Coordinator/Head of Steering Committee;
- Vice-president of the Regional Development Board;
- ARISE Project Manager from Etruria Innovazione;
- General Director of the Intermediate Body for SOP “Increase of Economic Competitiveness” - Ministry of Education and Research
- Director of National Agency for SMEs and Cooperation – Constanta Territorial Office;
- Dean of Economic Sciences Faculty, “Danubius” University, Galati
- Dean of Business Management and Marketing Faculty, “Constantin Brancoveanu” University – Braila Branch
- Lecturer within “Ovidius” University, Constanta
- Lecturer within “Lower Danube” University Galati – Braila Branch
- President of the Small and Medium Enterprises Association, Galati
- President of the Small and Medium Enterprises Association, Buzau
- President of the Chamber of Commerce, Industry and Agriculture, Galati
- President of the Chamber of Commerce, Industry, Shipping and Agriculture, Constanta
- Director of the Danube Delta National Research Institute, Tulcea
- Member of the National Association of Travel Agencies, South -East Region Branch

The Steering Committee members met almost quarterly.

In order to set up operational and efficient structures for our ARISE project and also to support the Integrated Management Unit in implementing the project, an **Advisory Committee** was constituted.

The **Advisory Committee** consisted of eleven members and had the following composition:

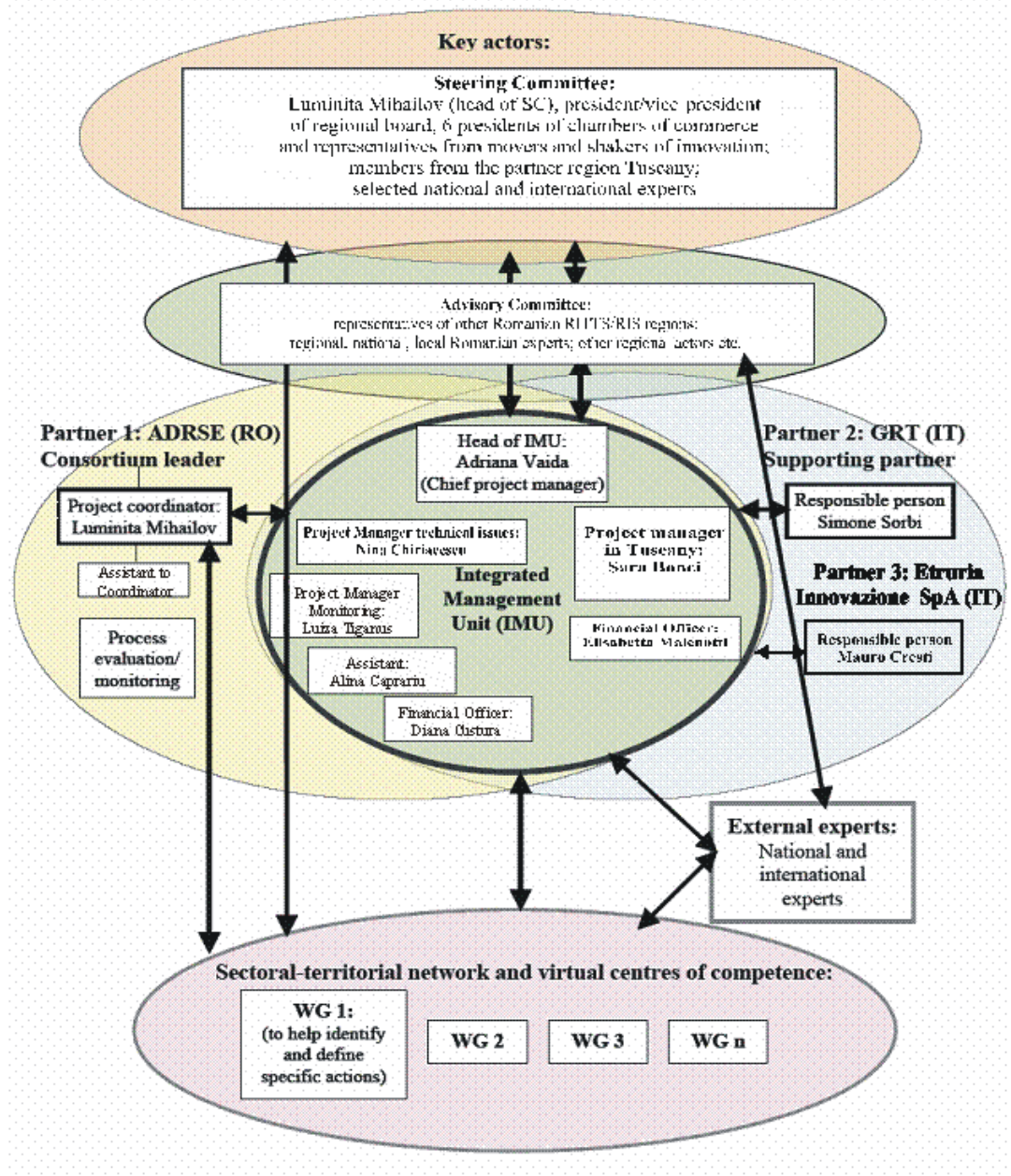
- ARISE Project Manager from Etruria Innovazione;
- Director of the Strategy and Programme Management Department within the Ministry of Development, Public Works and Housing;
- General Director of the Management Authority for SOP “Increase of Economic Competitiveness” - Ministry of Economy and Commerce;
- 1 representative of the Ministry of Culture and Religious Affairs;
- Secretary of State for Science and Technology in the Ministry of Education and Research/President of the National Authority for Scientific Research;

- Executive Manager of the National Institute for R&D in Nanotechnologies IMT-Bucharest/Education and International Cooperation;
- Coordinator of the Regional Centres for Intellectual Property Promotion - Romanian State Office for Inventions and Trademarks;
- General Director of the Romanian Centre for SMEs Association;
- Dean of Economic Sciences Faculty, “Danubius” University, Galati;
- Member of the Small and Medium Enterprises Association, Galati;
- Communication and Regional Promotion Director within North-East Regional Development Agency, also member of a RIS project team.

It allowed to involve a larger number of organisations more actively in the project development, attract further regional actors and thus to raise awareness, stimulate consensus-building and achieve political backing. The Advisory Committee members met yearly. The Advisory Committee played an important role in comparing the results of the analysis and in the reflection on action plan.

The external experts accompanying the project implementation were selected upon their qualifications for the tasks where external expertise was needed and were managed by the Project Manager and Head of the Integrated Management Unit.

The organisational, management and decision making structures set-up at the beginning of stage 1 are presented in the following diagram:



2.4. The Communication and Dissemination Plan

A Communication and Dissemination Plan was designed in Stage 0 and included a strategy for internal and external communication and information dissemination.

According to the communication and dissemination plan, the dissemination focused on two main target groups:

1. **internal** to the project partners (IMU meetings, personal meetings, phone communication or via electronic mail);
2. **external** to significant outside stakeholder groups (business associations, chambers of commerce and industry, SMEs, researchers, universities via newsletters, brochures, conference folders, web-site, press communication).

The plan ensured dissemination of the project results to all relevant stakeholders by:

- disseminating project results and reports widely within and external to ARISE;
- establishing a web-site early in the project and developing it as project results were delivered and tools made available;
- producing major reports and studies on project results for publication.

The tools used for communication were of two categories: *active* and *passive*.

The *passive tools* used were the following:

1. *Name and logo*. The project name – ARISE – was fixed at the very beginning of the project elaboration and stands for „A Regional Innovation Strategy for South-East of Romania”. For the creation of ARISE project distinctive image IMU team had its logo designed. The project logo was continuously used together with EU logo on project documents and events for promotion and image creation purposes.
2. *Web-page*. The project web-page www.adrse-arise.ro was designed in November 2005, being considered an important communication entry-point. Essential information (workshops, conference presentations, a brief presentation of the project, a virtual centre of competence) could be found and/or downloaded from the project home-page.
3. *Presentation & dissemination of newsletters and leaflets*. For information and communication with a larger interested public newsletters of major events were prepared.
4. *Preparation and dissemination of brochures*. The Integrated Management Unit had the responsibility of producing 2 brochures (one at the beginning, the other at the end of the project).
5. *Workshop/conference/seminar materials*. In order to facilitate conferences, seminars and other project events, the members of the Integrated Management Unit prepared conference folders including a brief project description, short summaries of analyses, good practice examples from other EU regions, etc), depending on the conference/workshop/seminar topics.
6. *Press releases. Press articles*. According to the provisions of the communication plan, press releases were issued with large events (launching, mid-term and final conferences). Press articles were also published in local media on different occasions.

The *active tools* include pro-active activities such as:

- *Visits to stakeholders*.
- *Press conferences*;
- *Conferences/seminars*
- *GOPP, Open Space Technology and other thematic workshops*

3. REGIONAL STUDIES AND ANALYSES

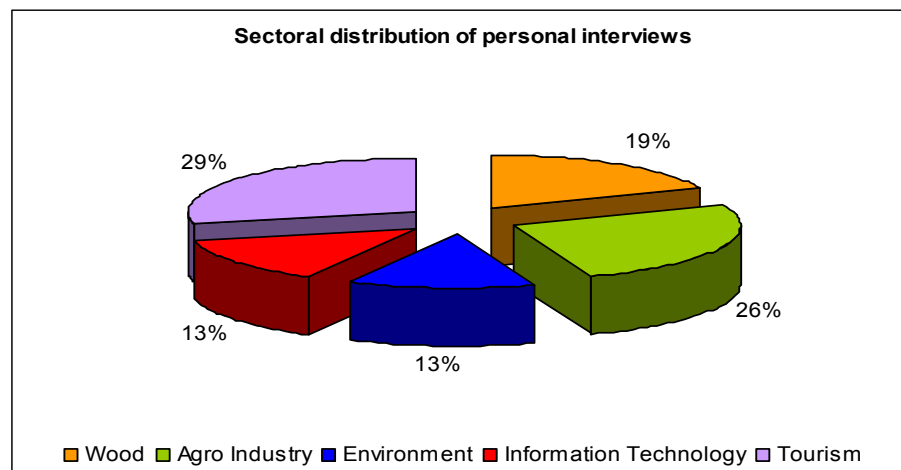
3.1. Innovation demand analysis

209 companies from the South-East Region belonging to five target sectors: wood, agro-industry, environment, information technology, tourism, were individually interviewed during November 2006 – March 2007 and several working group meetings were held with representatives from the demand side.

These sectors had already been selected during the proposal definition stage and were based upon in-depth desk research and discussion before the proposal was submitted to the European Commission. The interviewed companies were asked about their innovation activities and needs related to research, development and innovation and entrepreneurial support within the South-East Region of Romania.

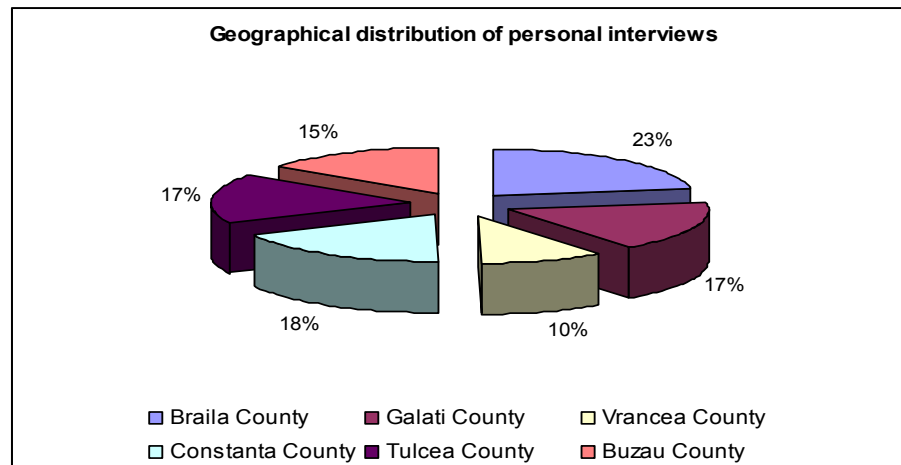
The companies that were interviewed represent a wide variety of company types, from very innovative to more traditional companies within the five sectors targeted by ARISE. The six counties of the South-East Region are well represented in the sample.

Sectoral distribution of ARISE demand side sample



Source: ARISE – Demand side analysis 2006.

Geographical distribution of ARISE demand side sample



Source: ARISE – Demand side analysis 2006.

Sectoral comparison

This section contains an overview on all sectors surveyed aiming to identify cross-sectoral trends or tendencies.

For most sectors it seems characteristic that they are represented through local-based companies. Only in the area of IT, it can be seen that regional branches of national companies are mentioned.

Looking at the **sectoral weaknesses** or obstacles, the data suggest that companies from agro-industry perceive mostly to be constrained in their access to regional/ national or international markets by the need for complying with EU standards.

Sectoral exports are mostly oriented towards target markets in EU countries and the bordering countries of Moldova and Ukraine in non-EU Eastern Europe. The East European market plays a more important role for those sectors which at the same time reported difficulties to comply with EU standards, problems with certification or licensing. Other barriers for an access to the EU-market were perceived to lie in the negative image of Romania as international trade partner.

Most important factors determining market competitiveness

The **most important factors** which determine the market competitiveness within the sectors can be aggregated as follows:

Overview on most important factors for competitiveness

Factors/ sector	Wood sector	Agro-industry sector	Environment sector	IT sector	Tourism sector
Creating products at high quality standards	69.2%	33.3%	35.7%	46.4%	55.0%
Tailoring products to specific customer requests	64.1%			50.0%	51.7%
Offering a large range of diversified products	28.2%	66.7%			45.0%
Guaranteeing clients an effective pre-/ post sales service				53.6%	
Periodically innovating the products offered		38.9%			
Selling products similar to those offered by other companies, but with a lower price			32.1%		
Adopting of cutting-edge production technologies			46.4%		

Source: ARISE – Demand side analysis 2006.

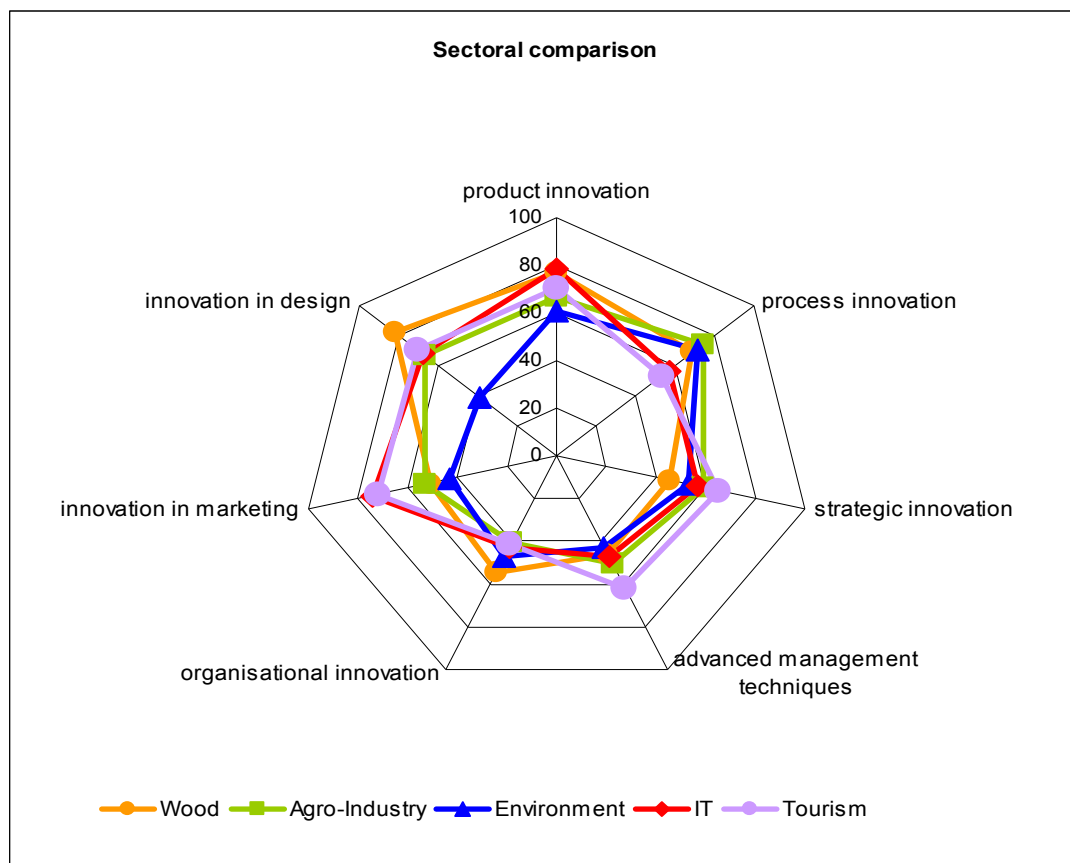
The table suggests that creating products at high quality standards plays a very prominent role in all sectors; this factor has been listed among the three most important factors by the companies in all five surveyed sectors. Tailoring the products to the specific customer's requests and offering a large range of diversified products play both a very prominent role in competitiveness for companies of three sectors.

It seems interesting that other aspects such as periodically innovating products (ranked at 2nd rank by agro-industry companies), or selling products similar to those offered by other companies, but with a lower price (ranked 3rd rank by environment sector), the adoption of cutting-edge technologies (put at 1st rank by the environment sector) and guaranteeing clients an effective pre-/ post sales service (ranked 1st by IT sector companies) have been considered among the three main factors by only one sector each.

The **three main market trends** that can be identified among the sectors:

- Increased demand for ecologic and natural products
- Increase of the quality and complexity of products
- Offers' diversity

Sectoral comparison of innovation activities



Source: ARISE – Demand side analysis 2006.

Product innovations and innovation in design are those two categories of innovation which are introduced by a majority (more than 66%) of companies in most of the investigated sectors, i.e. four out of five sectors have a majority of companies that introduce this type of innovation:

Innovation in design is likewise introduced by a majority of companies in all sectors, but excluding again the environment sector, where this type of innovation seems to be less applied. The favourable use of innovation in design could be explained by efforts of the

companies to improve their existing offer by lower-scale investments and a shorter time-span for introduction than other types of innovation would require.

Process innovation is among the types of innovation where at least the majority of companies from three sectors quote to have introduced it within the last two years. Agro-industry has a leading role here with 74.1%.

Innovation in marketing is mainly introduced by companies from two sectors, the IT (75%) and tourism sector (71.7%).

Strategic innovation, advanced management techniques and organisational innovation are introduced in general to a much lower extent than the four other types of innovation that were already referred to. Especially, organisational innovation should be highlighted here. In most sectors, i.e. four out of five, it less than half of the surveyed companies that introduced this type of innovation.

If ranking each sector for its position in the different types of innovations, and then generating an overall ranking for each sector, it can be seen (according to the following table) that the environment sector is often at last rank with its innovation activities and thus, has an average score of 4. The tourism sector performs best in this ranking with an average score of 2.3. It is closely followed by the IT sector which achieves an average score of 2.6. The wood sector and agro-industry reach similar scores with 2.9 respective 3.0.

Intersectoral ranking for different types of innovations introduced

	Wood sector		Agro-industry		Environment		IT		Tourism	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
product innovation	2	76.9	4	66.7	5	60.7	1	78.6	3	70.0
process innovation	3	69.2	1	74.1	2	71.4	4	57.1	5	53.3
strategic innovation	5	46.2	2	59.3	4	53.6	3	57.1	1	65.0
advanced management techniques	4	46.2	2	50.0	5	42.9	3	46.4	1	61.7
organisational innovation	1	53.8	5	40.7	2	46.4	3	42.9	4	41.7
innovation in marketing	4	51.3	3	53.7	5	42.9	1	75.0	2	71.7
innovation in design	1	82.1	4	66.7	5	39.3	3	67.9	2	70.0
Overall score/ average mean	2.9	--	3.0	--	4.0	--	2.6	--	2.3	--

Source: ARISE – Demand side analysis 2006.

3.2. Innovation supply analysis

The RIS process provides the South-East Region **an unique opportunity** to create their own regional innovation strategy that matches the demand that has been identified for such kind of support at a regional level with the existing supply for innovation and

technology transfer related activities, helps to fill gaps, and thereby helps the region to foster its own regional networking and regional identity.

The supply-side analysis brings an added value to our region thanks to the knowledge gained on the supply-side of the regional innovation system, on the support of the organisations' perception related to the innovation behaviour of companies, their development needs and barriers. It enables a view beyond the simple description of services including an understanding of their quality compared with the regional businesses needs.

The aim of this analysis was to gather information about the institutions responsible for the innovation development in the region, on supporting organisations for entrepreneurs, to identify the supply-side competences in the project key sectors and to find out the main trends of market and technology in these sectors. Further aim was to rate the development perspectives and barriers for SMEs and start-up companies in South-East Region and also, the type of services for companies which were not sufficiently provided.

The regional supply-side organisations were analysed through **95 personal (face-to-face) interviews** to collect quantitative data and **6 focus-groups** to collect qualitative data. both conducted during January-February 2006.

The results of the supply-side organisations were:

- the **supply side organisations** that were interviewed represent a wide variety of organisations, including research institutes, universities, public administration as well as banks or business associations. The six counties of the South-East Region are well represented in the sample. The results were that major bodies providing innovation were public. Public research organisations which create and disseminate knowledge account in total for 16.8% of all interviewed supply side organisations. Public administration, universities and research centres are the main actors in promoting innovation. **It is important to note that public administration, acting as promoter of pilot projects and catalyst in the development of action lines, accounts for 14.7% of the surveyed sample.** There is no sufficient evidence of private investment in innovation. Private actors for innovation are very few – the majority being business support centres or banks.
- the **mission statements** of the interviewed organisations show that human resources development is among the prevalent ones. The sectors wood, agro, environment, IT and tourism which are targeted by ARISE are also reflected in the the organisations' missions. There are organisations in the South-East Region which have specific competencies and can provide related services for each sector. As the statements suggest, the interviewed organisations target the major issues along the supply chain for innovation and entrepreneurial related support in the South-East Region, ranging from research, technological development and innovation to support in business development and human resources development. However, assistance in terms of training followed by business development services and financing services are among the most frequently mentioned fields in which the organisations provide assistance;
- there is a **lack of innovation culture**, most of organisations having difficulties in defining innovation as concept. For some of the organisations innovation means research for others technological transfer or new ideas, products and processes. For businesses, innovation is a rarely used word. In the ARISE project innovation means “efficient exploitation of new ideas”

- **market and technology trends** in the key sectors targeted by ARISE were reported. The supply-side organisations perceive a strong growth potential of agro-industry sector referring to the ecological agriculture, the development of an internal production and market for the ecological agro-food products. Mechanization and modernization represent the technology trend of agro-industry sector. It was also identified a growth potential of the environment sector because of the increased use of the recycling materials and the high interest in environmental protection, in compliance with EU regulations. As a result, the use of non-pollutant technologies with high degree of recycling defines the technology trend of this sector.
- the **innovation-related cooperation projects** in which the organisations were involved show a wide range of cooperation topics, reflecting e.g. R&D and innovation, human resources development, SMEs' development. 105 projects were reported as examples of cooperation projects. More than half of the partners were/are from Romania with mostly public institutions being involved as cooperation partners. The organisations' funding sources for innovation-related cooperation projects were mostly from EU and the public sector;
 - ✓ As far as the public administration is concerned, there are evidences of its involvement in creating a good environment for business development by promoting and implementing such projects as: Business centres (in Galati and Constanta), Innovation Centre (Galati).
 - ✓ Most of the investment promotion projects are located in urban areas, in the main cities of the region.
 - ✓ the universities and research centres, the main actors for innovation, are mostly involved in research projects financed by the State.
 - ✓ Very few research projects are financed by private companies under a Governmental funded Programme.
 - ✓ The private research centres are at very early stage, some initiatives being done in the field of health.
- the **interest in cooperation with partners from Tuscany Region** is high. Most of the interviewed organisations are interested in cooperation and have also expressed clear ideas related to fields of cooperation;
- very encouraging is the large share of organisations that would like to engage themselves within ARISE - 91.6% and the share of organisations that would like to be more actively involved through participating in a pilot project - 69.5%.

4. COMPARATIVE ANALYSIS BETWEEN THE TWO PARTNER REGIONS: TUSCANY REGION/ITALY AND SOUTH-EAST REGION/ROMANIA

Tuscany Region/Italy	South-East Region/Romania
General characteristics	
<p>Tuscany Region is situated in the middle North-western part of Italy, occupying the 7.63% (22.993 km²) of the national territory, with 633 km of coastland and hosting 3.600.000 inhabitants (6.2% of the total Italian inhabitants). The population density is 156.5 inhabitants per km², not reaching the 192.5 inh/km² from Italy.</p> <p>Toscana is one of the 20 regions of the country, and is been divided into 10 administrative provinces: Massa Carrara, Lucca, Pistoia, Prato, Firenze, Pisa, Livorno, Siena, Arezzo and Grosseto.</p>	<p>The South-East Region is situated to the eastern part of south Romania. Covering 35.762 km² or 15% of the total national surface, the region is the second largest among the eight regions of Romania. South-East Region includes 6 counties: Braila, Buzau, Constanta, Galati, Tulcea and Vrancea. The region had a population of 2.858.687 inhabitants on the 1st of July 2003. That represented 13.1% of country population, with a density of 79.9 inhabitants/km², which was under the average national density of population. The higher density is met in Galati county (139.5 inhabitants/km²) and the lowest one in Tulcea county (29.9 inhabitants/km²).</p>
Economic context	
<p>Tuscany's Gross Domestic Product (GDP) of 83,285 million euro (2004) corresponds to 6.8% of the Italian total, with a growth rate of 1.1%. Tuscany is among the richest Italian regions, although the GDP per capita is lower than in some other areas of the country.</p> <p>The Tuscan economic system is characterised by some specific features, in particular the size and geographical / sector based distribution of manufacturing plants. A number of sectors in Tuscany count much more in gross terms in comparison to the national average. This is the case of the fashion sector (fabric, clothing, and leather) which accounts for 9.2% of regional jobs, while the overall Italian figure is 3.6%. It is also true for services including commerce, hotels and public operations (with a notable 24.7%) which clearly signal the importance of tourism in a region like Tuscany.</p> <p>The success of traditional Tuscan manufacturing is based on the uniqueness of the economic model which is made up of several kinds of industrial structures, including on the one hand large companies</p>	<p>In 2004, the South-East Region produced a GDP of 7,469 million euro.</p> <p>In 2003, the South-East Region was hosting 44.534 enterprises out of which 99.4% were small and medium sized enterprises (44.266).</p> <p>From the total of 44,266 SMEs in the region, the majority (57.2%) operated in the trade sector. Hence, the SME's sector is the driving force of the local economy, playing a vital role in the creation of new employment.</p> <p>Agriculture is very important for the regional economy: 40.4% of employed people work in this sector. The cultivated land represents 65% of the Region's surface.</p> <p>The regional industry is concentrated mainly in the urban centres and the processing industry holds by far the first place in terms of turnover and people employed in the region, comparing to other industrial activities.</p> <p>The gross added value generated by the services sector in the region has been</p>

<p>and on the other hand Small Medium Enterprises (SMEs). These companies are located in industrial districts developed as industrial clusters.</p>	<p>increasing constantly since 1995 to reach the amount of 2.14 Billion Euro in 2002. That represented 43.7% of the total regional product and 10 % of the national services gross added value respectively.</p>
<p>Sectoral comparison in terms of innovation</p>	
<p>Information Technologies</p>	
<p>Although the framework of high tech sectors in Tuscany is generally characterised by a slow growth rate, ICT has developed at a relatively high rate over the last decade. It can claim to a growth rate of 31.2% compared to the Italian percentage of 24.5%. In fact ICT is the only diffused sector to emerge recently in Tuscany and which can claim a presence of a new generation of entrepreneurs. According to the OECD classification (Organisation for Economic Cooperation and Development), over 13,000 companies are present throughout the territory, employing over 60,000 employees. ICT in Tuscany is particularly strong in manufacturing where technological competences are linked to mature management in the traditional sector competences, such as those of the industrial districts. As far as services are concerned, the most outstanding result has been the growth of the services for ICT R&D recording a growth of 70% in the last decade</p>	<p>The enterprises in the South-East Romanian Region seem to follow the ICT paths of other European Regions in the field of the SMEs development in the field of ICT.</p> <p>The growth of young enterprises is not so much capital intensive at the beginning of their activities. However, in the development phase, which is also aligned with increased skill requirements the growth of such enterprises becomes more capital intensive. In this context, the availability of external financing sources: support programmes, seed or venture capital fund becomes a decisive role. It seems, that the companies may be not aware about their future needs and may work with insufficient planning horizon. Therefore,</p> <ul style="list-style-type: none"> • Lack of financing <ul style="list-style-type: none"> ○ financial support is needed for the development of innovative and capital intensive (i.e. large volume) projects, e.g. support for SMEs to implement the e-learning concept and open IT system, support for development of a single management system for the local public administration. <p>and</p> <ul style="list-style-type: none"> • Limited access to new technologies: <ul style="list-style-type: none"> ○ lack of support schemes facilitating SMEs' access to external markets <p>lack of mechanisms to build consortia for joint procurement of cutting-edge technologies are the main constraints in this sector.</p>
<p>Wood processing</p>	
<p>Tuscany, land of unique traditions, of ancient tastes, of culture and history, but also a region that looks to the future thanks to the spirit of contemporaneity by which it</p>	<p>The South-East Region is very beautiful, diverse and balanced natural and landscape heritage. The mountaineous areas are found in the counties of Buzau, Vrancea and</p>

<p>is animated: its capacity for innovation and renewal.</p> <p>Embracing all that is new, but strongly attached to feelings of the past, this is the productive criterion thanks to which Tuscany has shown great skill in knowing how to write its history a thousand times over, plunging in and drawing from tradition, thus, absorbing vitality and creative genius from this. A link with tradition is perhaps the best way for promoting a productive sector such as that of wood, furniture and furnishings. It is a sector consisting of many small companies, and points of excellence in the workmanship of handicrafts. Modern companies characterized by the search for that which is new, but small companies as well, fruit of secular traditions. That is why quality represents the common element, the magnet which unites all of the forces in the sector. This is the reason why Consorzio Casa Toscana came to life, occupying itself with the promotion of our region's image, with its land, the product of the work carried out by its craftsmen, but also including its contemporaneity and innovative capability.</p>	<p>Tulcea. Among the natural resources of the mountains, the main treasure is the wood. The counties of the region shelter many forest reservations.</p> <p>The needs of companies in this sector:</p> <ul style="list-style-type: none"> • Financial support for acquisition of new technologies (e.g. wood or wood waste processing technologies, specific wood species processing technologies – osier, poplar); • Financial support for acquisition of advanced facilities for R&D companies for creating innovative applications, services and products; • Support for building of new production facilities or modernization of exiting ones in order to comply with EU standards; • Support for training activities for staff directly involved in production processes; • Support for SMEs' access to the international market; • Facilitating the SMEs' access to data bases with foreign equipment suppliers; • Support for setting-up of international partnerships (transfer of know-how, experience exchange); • Support for participation in international fairs and exhibitions; • Support for setting-up of information and business activities promotion centres
<p>Agro-industry</p>	
<p>In Tuscany a number of areas are characterised by a strong interest in the development of businesses linked to the agri-food industry. These have been identified as rural districts, having a high quality output in terms of “taste”, “naturalness” and “uniqueness”.</p> <p>The “Tuscan model” is characterised by integration of “rural world” inside the various local systems with different functions.</p> <p>This sector is transversal respect two</p>	<p>The competitive advantage of the South-East Development Region in the agro-industry as compared to other Romanian regions concerns the availability of fertile soils, favourable climate and tradition.</p> <p>Strengths</p> <ul style="list-style-type: none"> • Large fields with fertile soils favourable to agriculture • Favourable climate • Sufficient own resources (raw material for the processing industry)

<p>aspects: productive system (agricultural, industrial, extra-agricultural enterprises, infrastructures) and landscape and environmental resources (forest, water resources, ground etc...).</p> <p>Strenghts</p> <ul style="list-style-type: none"> • quality and typicality of agricultural and agro-industrial products • presence of enterprises of excellence • landscape as result of particular agricultural organisation • Integration (systemic) between communities and productive activities • <u>Weaknesses</u> sensibility (in certain cases fragility) of environmental resources, in special way for connections with landscape and activities linked to attractivity of territory • human resources with a high level of growing old and professional lacks • infrastructure and services for agriculture and rural world in general <p>The Tuscan agro industry is structurally characterized by predominance of a network of enterprises with a reduced economical dimension, links with local agricultural activity and at the same time oriented to satisfy the exigencies of local final consumer.</p> <p>Beside these enterprises, in the territory are present a limited number of enterprises medium-large dimension, which have often occasional relationship with the regional productive agricultural base.</p>	<ul style="list-style-type: none"> • Qualified human resources with great interest in fostering the sector • High quality agricultural products (less additives and chemicals, etc) • Tradition in agro-food industry (local traditional products) • Subsidies/ incentives for agriculture • River Danube (shipping, irrigation systems, etc.) <p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Big number of small sized farms operating at high costs due to land fragmentation • Low agricultural product processing capa-city due to outdated technologies • Minimum level of prices due to the low purchasing power • High production costs and limited exports due to the lack of high-technology • Lack of research in this field • Insufficient promotion of the regional traditional sectors (e.g. agro-industry) • Non-compliance with EU standards and ISO framework • Low awareness on EU standards – compulsory for Romanian companies after the EU accession • Insufficiently trained labour force • Lack of organisational culture <p>The companies in the sector are constrained by:</p> <ul style="list-style-type: none"> • Lack of financing • Insufficient training offer • Limited access to external markets
Tourism	
<p>Wonderful landscape, a preserved historical heritage and a rich artistic legacy makes tourism one of the most economic resources.</p> <p>12.3% of the Italian arrivals and the 10.3 % of the Italian presences are registered in Tuscany. Our region is one of the most visited Italian regions, at the second place behind Veneto.</p>	<p>Due to its geographical position, the South East Region of Romania has an important tourism potential with a large diversity of cultural and natural resources, harmoniously distributed, which can provide opportunities for various forms of tourism, from classical ones (mountain, seaside, cultural tourism), to the latest trends like rural tourism, eco-tourism.</p>

<p>In Tuscany there are several aspects of tourist phenomenon: art and affair, mountain, sea, thermal, countryside and hill. Each zone has a prevailing tourist resource and a widespread source of economic income.</p>	<p>wellness and spa and business tourism. The tourism in the region is characterised by the existence of some specific natural resources such as Black Sea Coast and Danube Delta. Agro-tourism is also developing. (especially in the Danube Delta and mountains area). The cultural tourism is represented by the North Dobrogea, Buzau and Vrancea monasteries, as well as by the cultural heritage (among them – archaeological sites, memorial houses etc). In 2004, almost 42.7% of the tourist accommodation capacity was concentrated on the Black Sea coast and 0.8% in the Danube Delta. In 2004 the number of active accommodation units increased with 41%, while the number of employees increased by 16%. The region ranks first with regard to accommodation capacity (47.8 % of the national total), as well as with respect to the number of tourists (28.8 % of national total).</p>
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Environment

<p>Among the Italian regions, Tuscany has the best environmental and urban equilibrium: it is the first region for woods extension. Nevertheless, there are some worries, especially in the biggest cities. Pollution and heating levels are considerably high and endanger environmental equilibrium. Energy consumption and waste production reach an elevated level, as well as the other industrialized regions.</p>	<p>Placed in the Europe interference area of Carpathians-Danube and Danube-Black Sea ecosystems, the South-East Region is proud of its very beautiful, diverse and balanced natural and landscape heritage. The preservation, protection and further improvement of the unique biotope and landscape related to the Danube Delta constitute a major issue of top priority for the region. The erosion process affecting Romanian beaches has an increased intensity at present, also as a consequence of global climatic changes, which determine an increase of the sea level. Among other environmental problems confronting SE Region:</p> <ul style="list-style-type: none"> - Decrease of soil quality caused by various types of pollution; - High air pollution caused by IMA; - High consumption of primary resources and and high specific emissions; - Soil erosion.
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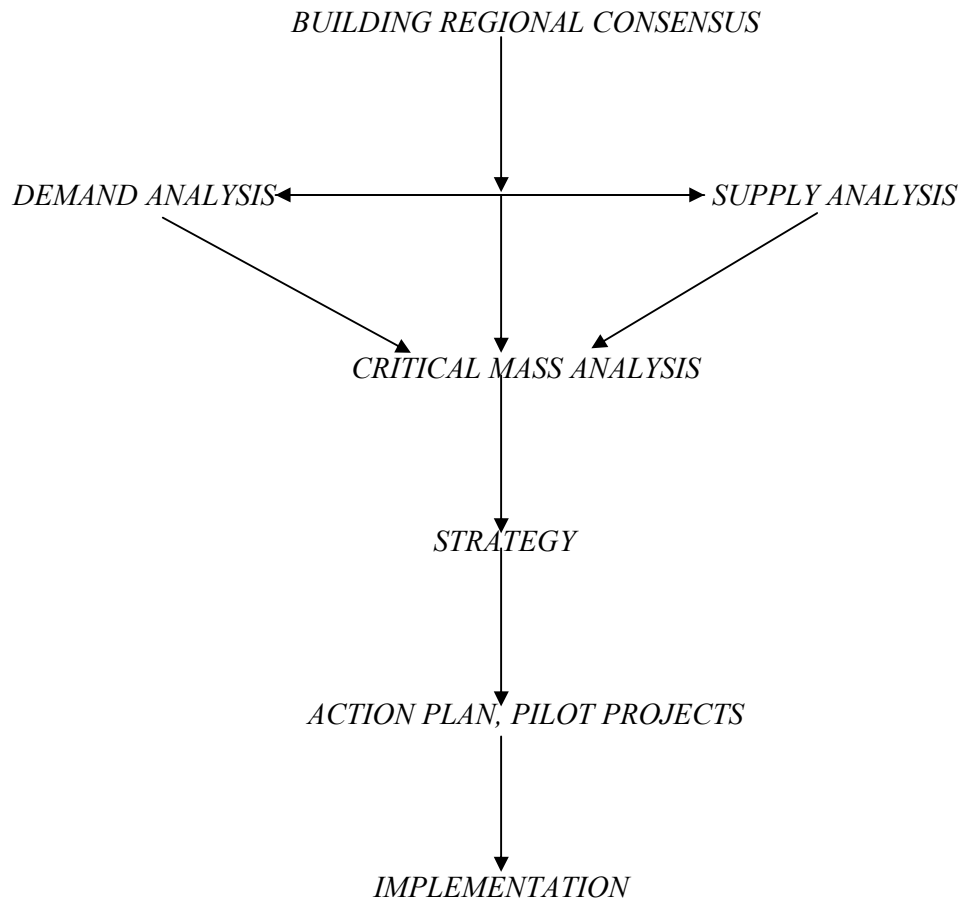
5. SWOT ANALYSIS OF THE SOUTH-EAST REGIONAL INNOVATION SYSTEM

STRENGTHS	WEAKNESSES
Strategic geographical position of the region, open to the European and Asian markets. Presence of important transport junctions: maritime ports, fluvial-maritime ports and airports	Low accessibility both at intra and inter-regional scale. High transport costs.
Consolidated presence of sustainable transports. In particular railway and navigable (ship canal and Danube river) transports are over the national average.	Reduced efficiency and safety level of the traffic on transport networks
Natural environment preserved, not altered by human activities with rare wild flora and fauna: presence of the Romanian largest protected areas, with international value.	Limited natural resources, low use of renewable energy sources and lack of inter-sectorial communication and coordination for the management of natural resources and environment, especially civil and environmental protection services.
Danube Delta variety and richness of the biodiversity and natural resources makes it one of great natural reservations in the world	The isolation of the localities and the lack of proper infrastructures (material and immaterial) within the Danube Delta, with high level of population poverty
Cultural and architectonic patrimony of national and international level (UNESCO protected sites)	Lack of coherent policies of promotion, both on cultural and tourism levels.
Large agricultural areas and fertile soils together with a great presence of biological products (low use of chemical products in cultivations)	High disparities among small and large property in agricultural lands leads to the mechanisation diminishing and to a low productivity in agriculture.
Rural Areas preserving the cultural and heritage traditions in daily life, especially in natural and traditional methods of cultivation.	Lack of services for agriculture, low awareness and orientation regarding products certification, food safety and diversification of activities in rural areas.
Positive trend of private sector in the Romanian economy. The presence of a diversified industry, with production high added value: petrochemical industry, metallurgy, machinery, naval industry.	Competitiveness based mainly on low workforce costs: low development of business infrastructures and consulting services, especially for SMEs, and low R&D demand orientation. Low level of modernised structures with respect to EU standards. Continuous increasing of energy costs.
Existence of two business incubators and one ICT park as well as favourable legislation framework for R&D infrastructure development	Lack of governance in decision-making processes. Insufficient cooperation and activities planning among Universities/Research Centres, Local Authorities and Industry.
Liberalisation of Telecommunications Market	Low coverage rate of the landline telephony (2003 – 20% compared to 57%

	in EU 15) and insufficient ICT infrastructures
Relatively well developed diversification and tradition in tourism (seaside and spa resorts, agro-tourism pensions in the mountain areas, monasteries, ecological tourism)	Low level of quality-price relation in tourism, the lack of inter-sectorial network, which leads to insufficient territorial marketing approach.
The highest accommodation capacity in Romania (around 40% of the Romanian summer accommodation capacity)	Seasonality of tourism at the seaside and tourism infrastructures underdeveloped or outdated: lack of services and safety.
SMEs sector is better developed compared to the other regions (12.4% from the national level, 3 rd place among the 8 regions) as weight of industry and services sectors turn over in total SMEs turnover.	Lack of cooperation among enterprises and reduced number as well as unbalanced repartition of investments over the region territory Low level of SMEs development especially related to capital and access to finance which determines very low expenditure level for development and innovation (only 3.4% out of the national total expenditure)
Flexible and qualified labour force (high qualifications level – 9.9% persons with university degree, 4 th place)	High unemployment rate. Low population incomes in the region. Strong emigration of the labour force in the last decade. Young people migration from rural areas.
Increased interest in environmental issues especially by companies, through the acquisition of specific equipment for environmental protection	Limited administrative capacity to implement legislation in environmental sector at regional and local level and reduced number of certified enterprises (ISO 9000, ISO 14.000, EMAS)
High-structured local administration. Experience with pre-accession funds of the EU and almost completed harmonization with EU acquis	Lack of mission and competencies for P.A. sector. Insufficient development of the public services and utilities infrastructures in towns and inappropriate waste and water management
OPPORTUNITIES	THREATS
As a consequence of the Black Sea strategic position: opportunities given by the constitution of Pan-European transport corridors: nos. 4-7-9	The proximity to highly attractive areas (Republic of Moldavia and Ukraine), characterised by localisation advantages.
Development of a logistic platform and centres East-West oriented with Euro-Asian destination and source. The construction and modernisation of highways and transport networks.	Growth trend of energy consumption on medium and long term, increase of pollution and risk to damage to the preserved natural environment
High international interest for biodiversity preservation (Danube Delta): Development/Promotion of natural reserves and protected areas/sites Management and Protection Systems.	High risk of natural calamities (floods, earth slides, coastal areas erosion, bird flu, etc.). High risk of increasing and uncontrolled pollution.

The increase in the consumers demand for bio-products and bio-tech can stimulate the improvement of quality certified production, research and specialisation in favourable natural conditions.	The homesteads' and farms' inability and delays to comply with the EU market quality standards in order to compete with community agricultural products. The risk of further massive migration of the population from rural to other EU countries.
Development/Promotion of services for agriculture and of agro-industry sector	Lack of competitiveness for EU market standards.
The foreign investments could generate an increase of the competitiveness through technological transfer, new markets exploitation and modern management,	The globalisation and the foreign currency rate fluctuations can isolate some economic sectors and even lead to their economic failure.
Innovation and modernisation of industrial infrastructures and production processes. Increasing support for business infrastructure and consulting services for enterprises. R&D and ICT sectors development	The deepening of the de-industrialisation process. Low capacity of the financial support for modernisation and deficient management of the outlet markets. Exposure to global markets.
The establishment of industrial areas alongside the Danube-Black Sea channel, for primary processing of en-gross products imported from the central-European countries.	The risk of relocation of some industrial sectors towards exterior, because of lower costs of production, fitting and installation (especially of the consumer goods industry).
Increasing potential demand for ecologic, religious, cultural, entertainment, seaside and spa tourism development in Romania. Exploitation of EU connections facilities.	The competition generated by the foreign tourism areas with a high qualitative tourism offer and more competitive prices.
Development of Innovation and R&D centres and enterprises incubators, in order to develop SMEs capacity to face market challenges through the implementation of the PPP partnerships.	Low levels of communication and coordination among public and private sectors. Lack of entrepreneurial capacity.
Development of competencies and know-how through introduction/promotion of vocational training and new professional figures both in private and public sectors.	The risk of professional skills and competencies depreciation for some categories of population with university degree because of the lack of jobs. Migration abroad of skilled workforce
Possibility of drawing-up projects financed under EU funding opportunities to support development/innovation, research and technological transfer. Possibility to constitute financial aid consortia. Opportunity to promote best practices and experiences through European partnerships and networks, in order to ameliorate/introduce public services and utilities.	Lack of governance in the decision-making process. The risk of not accomplishing the administrative reform for the financial and administrative decentralisation.

6. STRATEGIC FRAMEWORK AND ACTION PLAN



THE INNOVATION STRATEGY FRAMEWORK OF THE SOUTH-EAST REGION OF ROMANIA

VISION
South-East Region of Romania – A dynamic and innovating regional economy

STRATEGIC OBJECTIVE 2015:
A comprehensive innovation-friendly environment achieved until 2015 at a regionally large scale

SPECIFIC OBJECTIVES	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/qualification of R&D infrastructure and reduction of <i>brain-drain</i> .	Public administration and public services become strategic drivers in the triple helix for innovation (enterprises – R&D - 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.	Promotion of renewable sources of energy , adoption of new energy-saving and energy-efficient technologies, production processes and organizational models.
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PRIORITY AREAS OF ACTIVITIES (FOR EACH SPECIFIC OBJECTIVE)	Innovation culture as central strategic asset of enterprises and regional policy: <ul style="list-style-type: none"> - Increase of awareness on innovation processes; - Improvement of business networking & collaboration; - Improvement of efficient & innovative management & entrepreneurship; - Promotion of new access to SMEs funding; - Supporting innovative culture in education system. 	High research and development potential to enhance innovation: <ul style="list-style-type: none"> - Improvement of R&D infrastructure on regional level; - Reduction of migration of motivated & well trained people; - Up-dating of work force skills to a medium-high level; - Increase of investment in business-oriented research; - Strengthening excellence in the R&D field. 	Public administration and public services as the strategic innovation drivers: <ul style="list-style-type: none"> - Strengthening of the coordination role of P.A. for R&D and SME development by increasing transparency in providing useful data to the investors - Strengthening of <i>facilitating</i> role of P.A. in national and international relations - Improvement of public services quality through innovation 	ICT infrastructure as pivot technologies for innovation: <ul style="list-style-type: none"> - Introduction of ICT in P.A.: 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 	Renewable Energy Sources in South-East Romania: <ul style="list-style-type: none"> - 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 for the use of renewable sources of energy - Increase of public administration involvement in identification, promotion and use of renewable sources of energy
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HORIZONTAL PRINCIPLES FOR THE IMPLEMENTATION OF EACH PRIORITY

⇒ LEARN LESSONS from other regions, other countries and other sectors on how competitiveness and innovation can be achieved at the best, avoiding errors committed by others !
⇒ INTENSIFY RELATIONSHIPS between P.A. and SME, between P.A./SME and R&D institutions, between SME and education institutes, between single SME, etc., taking advantage of the infinite opportunities of united and coordinated action !
⇒ OPEN SPACES for ideas, motivation and collaboration , by involving as much as possible into planning, design and implementation different business partners, public officers, experts, workers, entrepreneurs, researchers and students into business, P.A. improvement and research projects !
⇒ ENHANCE OUR REGIONAL RESSOURCES: all our strengths and opportunities, all our valuable social, economic, natural or cultural resources can be the basis for a sustainable innovation and development of our region !
⇒ ASSURE FINANCIAL SELF-SUSTAINABILITY by promoting and implementing particularly those ideas, businesses and projects that have the capacity to survive on the market or as a social and cultural asset, because society, citizens, enterprises, clients and/or consumers need, appreciate, buy and/or support it also after the start-up phase !

Explanations to the Innovation Strategy Framework

After a broad analysis process during the ARISE project, involving more than 300 organizations from the demand (mainly small-medium sized enterprises) and the supply sides (R&D institutions, Public administrations, consultancy and expert organizations), and 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 Agency for Regional Development of the South-East Region of Romania was able to formulate the above Regional Innovation Strategy Framework.

The single Priority areas of activities, that should lead to the specific objectives (expected results) in the 7-year period from 2008 to 2015, contain various strategic issues to be addressed in pilot projects, which are intended to be implemented as an immediate follow-up of the ARISE project.

Each single priority area of activities and sub-measure – explained on the following pages – is a part that contributes to the achievement of one specific objective. All together, without being a sum of unequal parts, but a reasonable integration of central and important issues, will have as an effect the achievement of the Strategic Development Objective, i.e. the creation of a **comprehensive innovation-friendly environment until 2015 at a regionally large scale**, as the cultural, technological, administrative, educational and organisational framework for successful competition.

These logical links - priorities lead to the specific objectives, while the specific objectives lead to Strategic development objective, which contributes to reaching of the vision. The **RIS-Framework chart above needs to be read bottom up.**

The **5 Horizontal principles** will be quality implementation and evaluation criteria of the strategy, in order to

- **avoid errors** already experienced by other regions and sectors (1);
- **strengthen** business links, networks and Public-Private Partnerships between regional actors (2);
- **involve** experienced persons or organizations into design, planning and implementation phases, trying to counterbalance the limits of rigid hierarchies, difficult communication flows and self-centered organizations (3);
- and to **enhance** the region's values and strengths, building ideas, business and processes out of the existing regional *endogenous factors*, as well as to **prevent** from loss of investments, because of insufficient guarantees for a financial and social/public sustainability of pilot projects, after their start-up and implementation phase (4 & 5).

To show how a pilot project in the framework of the South-East Romanian RIS takes into account these 5 horizontal principles, a project could:

- **LEARN LESSONS:** propose in a start-up phase or with a strategic “pre-project” to make **study visits** to and **exchanges** (also of staff) with similar industries, research or service centres, public administrations, etc. in other Romanian or European regions, in order to find out which good or bad experiences have already been made with specific issues and which **lessons can be learned** from that before investing in South-East Romania. This might also be done only with a “good and bad practices study” (in the framework of feasibility studies), that refers directly to other experiences already made.

The ARISE-project partnership with the Region Tuscany in Italy is in this sense already a good basis for interregional know-how and experience exchange. Also the EU objective “Territorial Cooperation” with its different Operational Programmes for cross-border, transnational and interregional cooperation offers a great opportunity to implement “pre-projects” as proposed above.

- **INTENSIFY RELATIONSHIPS:** For a more intense relationship between different SMEs or Public-Private-partnerships or sector alliances between R&D institutions and SMEs, a pilot project should always be proposed by a consortium of different regional partners and stakeholders, also to create regional networks and *critical mass*. At least it should be proved that a project has been discussed and agreed between proponents and beneficiaries, before presenting it, and in the best case it should be implemented in a partner and beneficiary network.
- **OPEN SPACES:** To make innovation a real possibility it is necessary to allow that “unexpected things happen”. That can not be assured, but a good practice in this direction is to *open spaces* in planning, study, design and implementation, where as much as possible different interested and experienced employees, researchers, institutions, SMEs and beneficiaries are called to give a contribution in ideas, problems analysis, priorities, practical solutions, financial contributions, etc. in order to find new ways of doing, producing, delivering services and solving technical problems. To open spaces means for example to set-up interdisciplinary working groups, or to use innovative horizontal consultancy services, like coaching, team facilitation, process moderation, etc. or to create formal meeting points, like “Future Houses” or “Thought Factories” for creative and participatory elaboration of ideas, plans and strategies.

Many times the limits and lacks of rigid hierarchies, bad communication flows and self-centred, stagnant organisations hinder the motivation of employees or entrepreneurs and the possibility that “unexpected things happen”. This risks sometimes to become the real limits for innovation and successful performance. On the contrary, the intelligence, motivation and experience of persons not necessarily in charge with decision taking, but integrated in production, business and research processes, prove always more to be a source of un-enhanced resources, of new energy to be put into value, through involvement and stimulation.

Also *creativity classes* in schools, universities and SME proved to be successful, where music, painting, arts or modern visual and digital media are used to give impulses to new ways of thinking. European enterprises that invested in this kind of creative work-force training or also in team facilitation can show their success with a good performance in patent registration, organisational and technological innovation.

- **ENHANCE OUR REGIONAL RESOURCES:** A key to success and innovation is to build on the South-East Region's most important endogenous factors, on its values, strengths and capacities, already lined out in the SWOT-Analyses reported above. A project should show on which strengths and opportunities particularly linked to the region (natural resources, cultural strengths, historical patterns that bear opportunities, industrial or commercial capacities, special know-how available, etc.) it wants to focus. This should make R&D and investments easier, as also environmentally more sustainable because no totally new infrastructures have to build or resources to be imported.
- **FINANCIAL SUSTAINABILITY:** All the intervention actions and pilot projects are coherent with the EU funded programmes. From this perspective, we believe that all the participants the RIS process will be able to prepare an application to obtain EU funds for their projects. As far as SE RDA own projects are concerned, we have to mention our participation in the “ERIK Action” project which will give our region the opportunity to capitalise other EU Regions best experiences to support regional innovation. The project is co-financed under the INTERREG IV C Programme, Priority 1 “Innovation and the Knowledge Economy”– Subpriority “Entrepreneurship and Small Medium Enterprises” and it is focused on the development of entrepreneurship, innovation management, knowledge management and project management concepts and tools. The project implementation starts on the 1st of July 2008 with a duration of 24 months. The project is implemented by a Consortium, the lead partner is Tuscany Region. Other partners regions are: Lower Austria, Emilia Romagna-Italy, Alentejo-Portugal, Andalusia-Spain, Banska Bystrica-Slovakia, Bretagne-France, Flanders-Begium, Småland med öarna-Sweden, Western Macedonia – Greece.

Priority 1: Innovation culture as central strategic asset of enterprises and regional policy

Objective:

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

Description:

The Report on demand analysis shows that SMEs are the greatest potential generator of economic growth and jobs in the region. Due to this fact, it is extremely important for the regional policy to support a friendly entrepreneurship climate in the local communities, by facilitating the creation of new businesses and the development of existing ones.

The key activities for ensuring regional and local prosperity consist in supporting technological transfers to micro-enterprises, in line with the Regional Innovation Strategy and synergy with the Sectoral Operational Programme for Increasing of Economic Competitiveness.

Unfortunately, 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/opportunity to innovate is therefore strictly linked to entrepreneurship. But to exploit the maximum in this dimension, the will to innovate requires **self-assessment and assessment of the competitors**, as well as **risking new strategies and different approaches**. These aspects are mainly related to an individual *habitus*, but depend also strongly on “**lifelong learning**”, **new know-how** and **re-creation / re-formulation of visions**. The entrepreneur needs therefore also training, or better: *coaching*, i.e. an individual assistance, he needs information and he needs space to learn about new opportunities, to better achieve what he wants. But to receive this, he himself must be aware about his needs and then find the same awareness in the economic and public system in his area.

Additionally, R&D is for single SME often a too high and risky investment to be faced alone. Often the awareness about innovation potentials leads to no results because of too limited financial resources, available risk capital and a lack of support by the public. But also the possibility to collaborate for R&D with other SMEs, to build pools for new research and applications, is not used.

This priority aims to foster a dynamic and competitive SME base in the region by the following **measures and actions**:

Measures:

- 1.1. Increase of awareness on innovation processes**
- 1.2. Improvement of business networking & collaboration**
- 1.3. Achievement of efficient & innovative management & entrepreneurship**
- 1.4. Promotion of new access to SMEs funding**
- 1.5. Supporting innovative culture in education system**

1.1. Increase of awareness on innovation processes

To innovate strategically one must know how innovation can work, which processes are necessarily to be implemented, although these might not *assure* innovation, but only make it much more probable. Therefore some pilot projects pointing on mutual understanding of working environment and methods between in first line SME managers and R&D operators, but also with financial institutions and Public administration would be very helpful to facilitate understanding and awareness about innovation processes.

Also the organisation of “regional innovation weeks” with conferences, workshops and “inventions’ fair”, or study travels to other European SMEs or regions which are successful in innovation, will be useful.

Finally, the same recruitment of highly qualified people in SMEs and P.A. might increase the level of awareness on innovation of the entrepreneurs. This would limit the ongoing brain-drain from the South-East Region of Romania (SERR).

Actions:

- 1.1.1 Creation of the Regional Innovation Forum/platform to facilitate understanding and awareness on regional innovation process
- 1.1.2 Setting up of a Regional Innovation Centre to provide support for matching research supply and demand among local/regional actors and internationalisation
- 1.1.3 Organisation of events for regional innovation promotion (“innovation weeks”, innovation conferences)
- 1.1.4 Organisation of events for youth to promote the good practice examples – successful innovative companies

1.2. Improvement of business networking & collaboration

In order to create *critical mass* between SMEs to be able to invest in innovation, strategic alliances must absolutely be fostered, as for instance to create business clusters in the wood or the wine producing sectors, etc. It is **not intended** the establishment of *co-operatives*, (although if organized and regulated in a modern way they can be highly competitive and also innovative as well proven in Italy, namely in Tuscany, Emilia-Romagna and other regions), but to exploit all possibilities of contractual or project collaboration between SMEs, where each business unit defines clearly its contribution and its expected results. Also, *cluster services* delivered by public or private R&D institutions, the P.A. or other SMEs, that serve several SMEs with continuous information, evaluations, measurements, quality controls, etc. should be further developed. Such services shall have a priority for grants made available by local banks or investment funds.

Actions:

- 1.2.1. Facilitating interregional cooperation and multilateral partnerships between Romanian and Italian SMEs, R&D institutions and public authorities
- 1.2.2. Setting up of a Regional Centre for Traditional Industries Promotion
- 1.2.3. Promotion of cluster services within the Regional Centre for Innovation and Services in Agriculture and Rural Development
- 1.2.4. Encourage the companies to develop cooperation network (clusters)
- 1.2.5. Support to development of partnership networks based on innovative ideas (networking and cooperation of enterprises)
- 1.2.6. Support to inclusion of regional cooperation networks into similar international networks

1.3. Achievement of efficient and innovative management and entrepreneurship.

“The best management school is management itself” - such a statement might be correct, in terms of efficiency with the available means of an enterprise.

For our main target – the entrepreneurs of SMEs in SERR – innovative methods have to be explored, e.g. training and experience exchange offers combined with holidays or leisure time, for example “*summer business schools*”, or *team building, group coaching or training weekends* (for example on boats that travel down the Danube or in the mountains), or *business dinners* at a restaurant, as well as also *knowledge fairs* where it is possible to meet research & development institutions. Also, *study visits for groups of entrepreneurs* to other regions with similar productive sectors have a very high value in transferring professional ethics, know-how and management methods, because these visits stimulate often the participants to emulate the approaches of other successful entrepreneurs.

A particularly suitable method for SMEs that complain always of time is the “world café” method (www.theworldcafe.com).

Actions:

1.3.1. Promotion of training, exchange of experience and other innovative methods to achieve an efficient entrepreneurial management

1.3.2. Increase the access of SMEs to information regarding the research results, financing and cooperation opportunities through dedicated support services

1.3.3. Support to introduction of modern and innovative technologies, the use of product, process, organizational and/or marketing innovation

1.3.4. Support to entrepreneurship based on innovation by developing services in business incubators and by ensuring the training in the field of innovation management

1.4. Promoting new access to SMEs funding

The creation of a favourable environment for the investments financing represents an important step forward, compared to the approaches mainly based on direct investment support.

SMEs face major obstacles in the increase and development due to the lack of tangible assets that could be used as collaterals.

There is a need to overcome these obstacles since innovative ideas, products and services, business models are often generated by start-ups and new companies. The solution would be to create a range of funding sources including micro loans (micro-finance tools) to meet the various demands from SMEs. Support is envisaged for an appropriate mix of instruments and an awareness/promotion campaign regarding the opportunities of enterprises access to finance, as in particular to constitute financial aid consortia, founded by business associations and supported by local banks.

The ROP 2007-2013 also offers various opportunities for SME-funding.

Finally, also innovative spin-offs from bigger industries, e.g. ArcelorMittal, should be planned and supported, where they could support spin-offs with risk-capital and know-how.

Actions:

- 1.4.1. Organisation of promotion campaigns regarding funding opportunities for innovative SMEs
- 1.4.2. Fostering the creation of financial aid consortia by business association
- 1.4.3. Promotion of innovative spin-offs with risk-capital and know-how from bigger industries
- 1.4.4. Promotion of co-financing initiatives for innovation projects
- 1.4.5. Encourage the setting up of cooperation networks between big foreign companies and regional companies to ensure grants for common projects for technologies modernization
- 1.4.6. Promotion of foreign direct investments

1.5. Supporting innovative culture in education system

Companies require good managerial practices for technological development and innovation activities as well as vocational training of their employees to secure highly qualified workforce. There is a need to create tools that will provide practical support for employers in order to engage them in workforce development programmes and initiatives. The education system should shape new and change existing ways of thinking and affecting on students who are future creators of innovation. All schools and universities should prepare young people to develop new entrepreneurship culture features (such as teamwork, workshops, seminars, networking know-how, self-responsibility, communication skills, etc.) to raise confidence and to enable the exchange of ideas towards a knowledge society approach. It requires from scientific and pedagogical staff changing their mentality and preparing a new approach towards courses. This process is long and must start immediately. Therefore a strong collaboration between the regional development and innovation authorities and centers should be established and with the help of advanced trainer-training methods some first feasible measures be discussed. Furthermore, some instruments (master, specialization courses, spin-offs and start-ups) should be created at universities to stimulate and support creativity and research and to select gifted students who could set up innovative companies in future and be protagonist of regional development in the future.

In particular, **yearly awards** for pupils and students in creativity, research and design should be organized, in order to motivate the young generation.

Actions:

- 1.5.1. Setting up of a Centre of Excellence for Competitiveness and Sustainable Development
- 1.5.2. Promotion of new instruments, advanced trainer-training methods and entrepreneurship development model in universities
- 1.5.3. Integration of modules on innovation management into the curricula on educational products for adults, professional qualification/ conversion for jobs needed on the market
- 1.5.4. Providing specific training for employees in innovation support centres
- 1.5.5. Regional Award “Excellence in Innovation” to stimulate creativity and motivate young generation to set up innovative companies

Indicators of achievement

Indicator
Outputs
Pilot projects pointing on mutual understanding of working environment and methods between SME managers, R&D operators, financial institutions and Public administration
Organisation of “regional innovation weeks”, conferences, workshops and “invention fairs”, or study travels
Recruitment of highly qualified staff in SME and P.A.
Contractual or project collaboration and networking between SME
<i>Cluster services</i> set up by public or private R&D institutions, the P.A. or other SME
Innovative training methods for entrepreneurs tested
New funding tools and services for SME operating (Micro-financing, Financial aid consortia, risk-capital offers for SME, etc.)
Innovating Spin-offs supported
Advanced trainer-training methods identified
New curricula defined for colleges and high schools including entrepreneurship and professionalism objectives
Yearly awards for pupils and students in creativity, research and design organised
Results
Facilitated understanding and awareness about innovation processes
Improved economic performance through SME networking and collaboration
Efficient and innovative management and entrepreneurship
Improved access to SME funding
Improved education and training conditions for an innovative knowledge society

Priority 2: High research and development potential to enhance innovation

Objective:

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

Description:

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 also important to create effective systems to foster better knowledge of the business sector's needs and of available R&D capacities. It is essential to add new specialisations and build applied research centres meeting the emerging needs of industries and the business sector. It shall be improved the research system in terms of matching the research opportunities supply with the innovation demand raising from the economic sector.

This process will be central to increase research and ameliorate the related process of implementing innovation through technological transfer inside university and and research centres.

Given the region's limited capacity in the area of human resources, finances, etc., it is vital to establish ties with R&D teams and activities at national and above all international level and on the part of businesses. One possibility is to make use of the EU Framework Programmes by getting local capacities engaged in Integrated Projects and Networks of Excellence. A key factor for developing R&D capacities is to take advantage of mobility programmes for R&D staff.

A central problem of the SERR 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. Only if the well-trained and best motivated people remain and work in the area, there is a chance to compete on national and international level in quality, new products and services and technological innovation. It is important to train students, as new actors on the regional scene and future skilled workforce able to drive the local development. A more competitive regional sustainable economy will mean more opportunity for young actors and will help to tackle brain emigration.

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. They should have the possibility to run activities according to their own interests and needs, which will be the base of higher education and research institutes capacities upgrade. For this reason it will be of major importance for such institutes to develop all the possible tangible and intangible instruments (patents, license, proper infrastructures and direct contact with the business sector), in order to enable them to sustain and implement many valuable project ideas. The R&D sector employees should

be supported by their institutions. Employees and researchers, who are offered protection, opportunities and are encouraged to develop their own ideas, become more creative and, at the same time, increase awareness and confidence about their activity. Ensuring a more friendly environment around them into a more competitive system is a crucial condition for increasing innovation.

The following **measures** are included in this priority:

- 2.1. Improvement of R&D infrastructure at regional level**
- 2.2. Reduction of migration of motivated & well trained people**
- 2.3. Up-dating of work force skills at the medium-high level**
- 2.4. Increase of investment business-oriented research**
- 2.5. Strengthening excellence in the R&D field**

2.1. Improvement of R&D infrastructure at regional level

The improvement of the R&D infrastructure is basic and needs to be faced in the 2 sectors: universities, research institutions and schools, as well as in the public sector. This improvement means not only upgrading the education & research institutions or the public administration with new machines, technology, laboratories and instruments, but also to enable the **link** and **integration** between data systems, competences and technologies, on the one hand in order to allow the **access** to these resources by the largest public possible and on the other hand to **avoid overlapping of work and investments**. The public co-financing of R&D infrastructure should always be bound to the questions: Which other institution in the region has or needs the same infrastructure?, Who will be able to use these instruments (assuring the largest accessibility possible)?, How can the results of research and monitoring be integrated with other research and monitoring, and for which different purposes? Can the data and systems easily be linked with other data and systems in order to create technological chains and exchange? This might require a **balanced planning** of public administration technical infrastructure, but also a better distribution of specializations and competences in public education and research centers.

Actions:

- 2.1.1.** Creation of technologic transfer offices in universities to ensure interface between business environment and academic environment
- 2.1.2.** Increase the quality and efficiency of RDI activities from RDI institutions, inclusively by improving the existing infrastructure
- 2.1.3.** Setting up a Regional Centre for applied research (meteorology)
- 2.1.4.** Increase the quality and efficiency of RDI activities from RDI institutions, inclusively by improving the existing infrastructure

2.2. Reduction of migration of motivated & well trained people

The present high migration of motivated and well trained people can be reduced for example by the following **actions**:

- 2.2.1.** Making available more and dedicated funds for **team research projects**, where at least 70% of young researchers are involved, if necessary dividing full employment jobs into part-time research contracts.
- 2.2.2.** Promoting **spin-offs** from university and business-linked research, supporting the start-up phases with favorable loans
- 2.2.3.** Organizing a **competence fair** each year and for various economic sectors,

where young, creative and motivated individuals can meet enterprises, the P.A. and research institutions presenting their ideas and competences. The same could also be established as an **online data-base** where each graduated student or experienced and well-trained worker can register for free and introduce him-/herself to the different employers of the region. This data-base of available employees could also attract new investors into the region.

2.2.4. Establishing an **award system** for particularly well-performing students and young researchers (Ph.D.'s), granting them with an adequate job or a loan for a business start-up.

2.2.5. Promoting young, well trained and highly motivated individuals for new jobs in the P.A., particularly where good know-how, specialized technical competence and creative thinking is needed.

2.2.6. Involving the well-trained and motivated, mostly younger employees (in all sectors) as much as possible **into internal restructuring processes** (with innovative participatory methods for common planning and design), for all types of issues (re-organization, production re-shaping, design of new products & services, etc.).

2.2.7. Providing for **very good integrative childcare** opportunities for young parents with high competences and promising curricula, in order to bind them to the enterprise or administration where they are employed.

2.3. Up-dating of work force skills to the medium-high level

People are a real source of competitive advantage of the regional economy.

Under this measure it must be the priority to use as best as possible the **European Social Fund programs for employment and training**, creating a sound synergy between the needs of employers and the program implementation. For the Regional Innovation Strategy it is a priority to have a better performing, more productive work-force, particularly in those sectors that deliver internal expertise to SME and the P.A., which in the next years should become very well familiar with a large range of new technologies, innovative methods and be more creative in planning and executing.

To assure these results, it is important to create a **permanent working group** consisting of ESF-program authorities in the region, representatives of unions and public & private employers which can investigate at the enterprises level which training or awarding systems could be offered for a self-upgrading of employees.

Actions:

2.3.1. Develop training and consulting services for companies in order to identify the innovative needs of companies, the innovative potential, improve the skills in realizing the development strategies of the company

2.3.2. Jointly developing new service packages for post graduate education

2.3.3. Promotion of scientific specialisations and competences according to market trends

2.3.4. Support knowledge transfer between RDI institutions and business environment.

2.4. Increase of investment in business-oriented research

The R&D activities directed mainly to satisfy research needs of large companies from traditional sectors have been recently diversified. SMEs often become clients of R&D institutions. However, the lack of a market attitude in R&D institutions and complicated

procedures make SMEs not confident regarding a co-operation between them and such institutions.

It would be also helpful to create scientific and industrial centers of advanced technologies and/or centers of excellence where new quality standards for offers designed to SMEs would be prepared.

Furthermore, attempts that SMEs make to solve their problems can be a source of project ideas for innovative technologies and products. The process of involving SMEs by the R&D institutions in technology and innovation market should enclose the following stages:

1. Identification of important/strategic trends for markets as well as for technology.
2. Identification of leading SMEs, by experience, work sector and modernity level.
3. Analysis of general public needs.
4. Prioritisation of SMEs needs in the general market situation.

A cross-cutting matter of interest will be the awareness-raising and promotion of policies of business associations and cooperation among SMEs on the basis of the above-mentioned information, interests and opportunities.

It will require more flexibility from R&D organizations in procedures of entering into and maintaining co-operation activities with SMEs. This will allow access to privately co-financed research and development and elaboration of new patents.

Obviously, the public investment in higher education should be increased and scholarships for the best students in all faculties – but specifically in the natural and technical sciences – should be made more available.

Actions:

- 2.4.1. Increase the quality and efficiency of RDI activities from RDI institutions, inclusively by improving the existing infrastructure
- 2.4.2. Create scientific and industrial centers of advanced technologies and/or centers of excellence
- 2.4.3. Involvement of SMEs by the R&D institutions in technology and innovation market
- 2.4.4. Improve the marketing activities of RDI organisations in order to valorize their research results
- 2.4.5. Develop projects by SMEs in partnership with RDI institutions

2.5. Strengthening excellence in the R&D field

Increasing the capacity of enterprises to cope with the pace of technological evolution and competition at European and international levels will bridge competitiveness gaps. Systematic campaigns promoting the innovation culture including competitive services with application and development of management practices (centres for competitiveness), development of R&D and innovation activities in enterprises, technology transfer and compliance and evaluation of conformity with European and international technical regulations and practices will foster sustainable business development.

It is important for the research and development environment to focus on adapting to the new requirements in the economy and social life.

Consequently, it is crucial to raise awareness of the management of R&D institutions on advantages resulting from increasing employees' involvement in defining new problem areas, in developing innovation solutions and strategies. It will also be beneficial to set up new innovative companies (spin-offs) where to increase entrepreneurship abilities in the R&D sector and to develop new project ideas, by tackling risks and initial costs, usually linked to new enterprise development.

The presence of traditional industry does not necessarily have to slow down economic development, even if the presence of outdated technologies forms a threat for its competitiveness. The success of new technologies application depends on their use. Some techniques can be used in different economic areas and so can be a source of enhancement of traditional products and work processes. Therefore, it will be vital to build up **new kinds of specialization** linked, not only to final products, but also to new approaches in production processes as well as in monitoring all the production chains. The efficient exploitation of new techniques in a production process is often decisive as for better product quality, higher productivity rates and decrease in production costs. It concerns in particular: IT, agro-industry, robotics, biotechnology etc. Globalization of the world market has resulted in a concentration of production which has been growing along with the technical progress in the last years. The life cycle of new technologies is ever shorter with increased risk of failure for technology research. However, these technologies are necessary for the industrial development. Since specialization in all modern technology areas is almost impossible, R&D experts must choose whether to continue to support and update such research and implement their results or to gain new technological solutions from other countries by means of: importing licences, purchase of technical devices which carry out new technologies and investment undertakings in which technology suppliers could participate.

Actions:

- 2.5.1. Creation of new competences in the field of research management
- 2.5.2. Training for researchers on the issues of commercialisation of research results
- 2.5.3. Support to the development of RDI projects in transnational partnerships
- 2.5.4. Promotion of flexible procedures for R&D organisations to develop cooperation activities with SMEs for the elaboration of new patents
- 2.5.5. Setting up of a Regional Centre of Excellence in Viticulture for an efficient update and exploitation of new technology to improve product quality

Indicators of achievement

Indicator
Outputs
Poles/centres of competitiveness created
Scientific specialisation created according to market and technology trends
New innovative solutions in regional scientific specialisation
New products/processes implemented as a result of studies prepared in research institutions
Important trends in market and technology identified
Results
SME assisted with clear technological solutions to their problems
New innovative companies set up
New partnerships between research and business dimension created
Increase of commercialized output of research and development
Increase in the number of R&D projects with SME participation

Priority 3. Public administration as the strategic innovation driver

Objective:

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

Description:

The business sector introduces innovations in new market products, technologies and services. With this in mind, a healthy, well-functioning business sector is essential for the regional competitiveness. SMEs are a source of new jobs and play a key role in the innovation process. On the other hand, they often face restricted access to innovation sources, and that is why they are the focal point of the system **of public support to innovation**.

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. These are the public administration's genuine tasks to improve the innovation potential and environment of the region. The key words are therefore:

- ⇒ **Coordination**
- ⇒ **Facilitation**
- ⇒ **Strategy building and implementation**

The agenda for public service reform increasingly demands that services meet the rising expectations of citizens. At the same time, rapid changes in information and communication technologies provide new opportunities for gains in both efficiency and effectiveness. However, public services are subject to very different pressures than private companies, and so must innovate in very different ways.

Therefore the **measures** of this priority are focused on:

3.1. Strengthening of the coordination role of P.A. for R&D and SME development

3.2. Strategic support for regional economic sectors with innovation potential

3.3. Strengthening of *facilitating* role of P.A. for international relations of regional key-actors

3.4. Improvement of public services quality through innovation

3.1. Strengthening of the coordination role of P.A. for R&D and SME development

Regional clusters bring together cooperating companies and other entities (e.g. research institutes, universities, science and technology parks) in the region and in a certain branch. The experiences of other regions indicate that regional clusters contribute considerably to a continuous application of innovations and help to improve the competitiveness of SME both on regional, national and international scale. Genuine clusters have not yet been formed in SERR and the main task of this priority is to trigger the financial, methodological and information stimulation required to set up and develop clusters in the region, including the support to other forms of SME cooperation, with the aim of the maximum exploitation of the region's innovation potential. Potential sectors where clusters can be set up, including possible parties capable of initiating the clusters,

have been identified. First of all, traditional production sectors can be identified on the basis of already existing clustering features such as territorial contiguity/particularity and/or common field of needs/interest. Moreover new cluster can be driven: IT, agro-industry, tourism sectors are targeted. In all these clusters it is important that the P.A. takes over the role of **promoting the common identification of problems and needs**, that it **contributes to the solution of the same**, that it **coordinates the process** of cluster implementation, that it **monitors the achievements** and **promotes corrections or improvements** and finally that it **facilitates the collaboration** between R&D institutions and enterprises, as well as the collaboration between single P.A. units with different tasks.

Actions:

3.1.1. Increasing the role of public administration in initiating and developing regional clusters

3.1.2. Promotion of collaboration between R&D institutions, enterprises and P.A. in international projects

3.1.3. Promotion of SMEs involvement and cooperation with the support of P.A. in regional innovation clusters

3.1.4. Creation of a Regional Centre of Human Resources Development to develop competencies for cluster services

3.1.5. Setting up of a Centre for Innovation in Public Administration

3.2. Strategic support for regional economic sectors with innovation potential

Technology is rapidly changing. Enterprises face difficulties in order to keep up with the rate of change to remain competitive.

A key element of business development is the availability of **value added consulting services**. The support for consultancy to SMES will allow them to become more competitive on the market and to diversify their products and services. There is a need to move away from simple business development services and develop innovation support services. This kind of consultancy and other services – if not spontaneously required by SME – should be provided through a **public service system**, that manages also the selection of innovation-oriented consultancy, e.g. “future centers”, “business clinics”, consultancy for rationalization and productivity, innovation business incubators, patent offices, internationalization assistance, etc.

The companies which do not have easy access to organizations such as IRC, patent offices and other support organizations should be assisted to grow and innovate. Such consultancy/business structures would **also assist SME to access alternative sources of funding**, such as opportunities based on regional/national/European calls.

There is also the need to create integrated offer from interface organizations.

Bridging technology gaps means more rapid deployment of advanced technologies in the key sectors and the implementation of sustainable technological development patterns at sectoral level that enhances economic competitiveness.

Actions:

3.2.1. Setting up of a Public Service System/Business Clinics to provide innovation-oriented consultancy

3.2.2. Setting up of a Regional Centre for Innovation in Coastal/Maritime Area Management

3.2.3. Establishment of Centres of Innovation Support and Technology Transfer in the region

3.3. Strengthening of *facilitating* role of P.A. for international relations of regional key-actors

The implementation of European standards by enterprises represents an example of good practice that has proved its efficiency on the developed markets and contributed to the increase of commercial exchanges.

The implementation of quality and environmental management systems and product certification together with the support to investments is essential to ensure the penetration of the regional products and services into third markets.

The development of an adequate **certification infrastructure** is also an essential condition to overcome the financial difficulties linked to the certification process and implementation of quality and environmental management systems.

Publicly triggered consultancy services to SME for **management system improvements** and support for **participation in international fairs and exhibitions** as well as **economic missions** will create favourable conditions for SMEs to meet market requirements.

To meet all these conditions related to exports and internationalization could be useful to enable the creation of **export consortia**, as tools to make enterprises to associate and collaborate, on the basis of common field of interest, in order to develop services. Such strategic tools shall be facilitated by the P.A. in order to deliver an added value on their production other than represent model to achieve common objectives, by resolving the bottlenecks of scarce investment potential sources.

Actions:

3.3.1. Support to SMEs certification to meet European standards of quality and environmental management systems

3.3.2. Increasing the support of P.A. for SMEs and other regional actors' participation in international events

3.3.3. Creation of export consortia as tools of SMEs cooperation facilitated by P.A.

3.3.4. Support to potential foreign investment

3.4. Improvement of public services quality through innovation

In the last years there has been a growing awareness among policy makers that the public sector should learn how to innovate, if it were to respond adequately to a rapidly changing environment and citizen's/business expectations. A variety of drivers lie behind the current push for public sector innovation, among which most prominent is the need to provide prompt, improved and personalised public services to citizens. In other words, the public sector has recognised that it needs to cater more effectively to public needs and expectations by building public services around citizen's requirements.

Another key factor has been the drive to contain costs and improve efficiency both in the provision of public services and in the way the public sector operates.

ICT has been used within public services since the last ten years to cover a wide spectrum of relationships: internally and in public sector-citizen, public sector-business and public-public relationships.

However, since 2001 what is new in the state's approach towards e-Government is the strong belief among policy makers and public sector representatives that Internet and web-based technologies can transform the relationship between the state and the citizen/society, especially in view of the emergence of the "new" economy and information society. In general, the use of ICT has been long presented in policy and

practitioner circles as having the potential, through the organisational re-engineering it requires, to bring about a transformation of public service delivery and the citizen experience of using those services. Most recently, the potential of the internet and related digital technologies to transform service delivery has become a central focus for policymakers.

At present, e-Government is the broad term used to describe electronic/on-line public service provision aimed at enhancing their delivery by making them temporally and spatially more accessible to citizens.

Innovation has traditionally been the domain of the private sector, with public sector interest in and drive to innovate being low key in contrast. Given the longer history and greater proliferation of innovation in the commercial world compared to public sector organisations, it makes sense to ask what lessons can be learnt from the private sector for the public policy and service arena.

Lessons for successful innovation in public services:

- The adoption of private sector principles (such as customer focus and cost-awareness) can foster a spirit of innovation;
- Linking up with other providers can support the innovation agenda;
- Public Administration support for innovations is important for their success;
- A clear legislative framework helps the introduction of innovative policies;
- Joint-up working between different agencies and / or public administration departments means that comprehensive services cutting across artificial administrative boundaries are created;
- Strong leadership is essential to initiate and see through innovative reforms;
- Flexibility in the delivery of services on the ground facilitates the adoption of creative solution;
- Empowerment of communities, users/citizens and staff;
- Successful innovations are those that consult with communities and citizens with regard to improving public services and policy making, listening to their views and inviting them to play a role in implementation programmes. Furthermore, supporting staff empowerment by showing greater organisational tolerance for risk taking and encouraging front-line staff to take the initiative for change and develop ownership of new programmes, strengthens and promotes innovation in the public sector.

Actions:

3.4.1. Establishment of a dedicated team to provide the human resources backup necessary for implementing of innovative pilot projects

3.4.2. Support to the provision of public services for business in the area of innovation

3.4.3. Involvement of service users in the design and management of innovative public services to increase the sense of ownership and ensure that activities are tailored to the needs of community.

Indicators of achievement

Indicator
Outputs
SME involved in particular networks
Implemented projects by SME based on advanced technologies, carried out as a result of common research in networks.
Centers of innovation support and technology transfer in the region.
Service offers of centers of innovation support and technology transfer adapted to particular target group in the SME sector.
Results
SME using services of centers of innovation support and technology transfer.
New workplaces created in the network sectors
Technology transfers carried out from R&D institutions to SME.
Supported companies which received patents, licences or got involved in common R&D projects.

Priority 4: ICT infrastructure as pivot technologies for innovation

Objective:

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

Description:

ICT importance to economic development and competitiveness is confirmed. The ICT leads to new models of work organisation as well as to faster spreading and using information. Particular emphasis on **broadband** is considered, since high-speed internet connections are seen as the enabling source of the benefits of convergence, a technology trend expected to drive productivity gains and output growth in economy.

Broadband is expected to contribute significantly to ICT gains because it is a basic infrastructure and enables the delivery of innovative services and applications. The use of advanced applications and services in turn brings about productivity gains both for businesses and public administrations. It also creates new markets and increases demand for new ICT goods and services impacting on economic growth.

New ways of running marketing and business with customers and suppliers within the e-business are not widely used. At the same time, the e-learning creates for SME a possibility to gain knowledge in a flexible way tailored to conditions.

ICT solutions can be very useful in a management process and production optimisation. Implementation of the solutions often requires from company employees the ability to adapt to it and to have an additional training.

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.

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.

But also the impulse to be given by the P.A. should not be undervalued: in regions where the P.A. delivers information and services through ICT applications (e-government) or shifts its procurement procedures to digital channels, normally the private sector and citizens increase their use of ICT in order to access the often crucial information, offers and services of P.A. in an easier and faster way.

The following **measures** are targeted by this priority :

- 4.1. Introduction of ICT in P.A.: e-government and e-procurement**
- 4.2. Improvement of access to information on a regional scale, particularly in education and R&D institutions**
- 4.3. Support for the up-grading and completion of ICT-networks in the region**

4.1. Introduction of ICT in P.A.: e-government and e-procurement

Since 2001, measures have been taken to create the legislative framework and supported development for **e-Government**. The government strategic goal is to re-design public administration by more accessible and more cost-effective public services. The structural funds will come in support to national funds in order to achieve this objective by **setting-up e-government applications and systems**, increasing productivity by better organizational performance and by multiplier effects that enable companies to lower their administrative costs and raise their competitiveness.

Successful public procurement for innovation requires government purchasers to be intelligent customers who plan what they will need to buy, and how to buy it.

Communicating long-term plans to the market, to both existing and potential suppliers, gives the market time to react and develop solutions to the defined need.

Handling the public procurement of innovative solutions requires intelligent organization, and well-trained staff with a multitude of skills. These include good procurement skills, but also skills in project management and contract management. The need for such skills will be most evident when an innovative acquisition requires organizational change.

Public procurement can support the uptake of innovative products, works and services when intelligently used.

The procurement of innovation by the public sector is certainly not risk-free. The nature of innovation itself is inherently risky, especially in the field of radically new, science-based innovative products.

Naturally, the perception of risk by private companies is different to that in the public sector, which is often more concerned with diffusion of innovation rather than increased profits. When creating the conditions for public procurement to take place, procurers need to identify all these issues and resolve them before any contract is signed. Policy interventions can help alleviate some of the pressures involved in this process.

However, all successful cases of public procurement investigated are characterized by a number of elements, which can be traced back to a thorough knowledge of the market and the technologies at hand. Staff within agencies and organizations involved in the procurement process need a high degree of sophistication in their specific field of activity. In other words, they need to acquire a high level of expertise and know-how before getting involved in procurement projects with third parties.

Actions:

- 4.1.1.** Promotion and support to innovation friendly public procurement
- 4.1.2.** Support to P.A. to train staff in project management and contract management for public procurement of innovative solutions
- 4.1.3.** Support to better organisational performance to acquire a high level of expertise and know-how before getting involved in procurement projects
- 4.1.4.** Introduction of e-government applications and systems in P.A.

4.2. Improvement of access to information on a regional scale, particularly in education and R&D institutions

Access to information is a crucial aspect for R&D and innovation in general. The P.A. needs to improve all levels on open channels for information delivery to citizens, enterprises, research institutions and students, particularly through ICT systems.

Also the R&D institutions – in order to share as much know-how, data and research results as possible – need to interface their systems between each other and to open them to students.

Taking into consideration that the correlation between **education** and **broadband** is strong, the main direction will be to stimulate demand, in the sense of supporting development of new projects which will complete the achievements of ongoing major projects like Knowledge Based Economy and Information Educational System. Therefore, the structural funds intervention will support the implementation of e-learning applications for a more efficient qualification system, generating a better-trained work force, more flexible and more adapted to the market requirements.

Actions:

4.2.1. Support to e-learning applications in R&D institutions for a more efficient qualification system

4.2.2. Stimulate introduction and use of ICT-networks in education and research centres

4.2.3. Encourage use of broadband connections by enterprises

4.3. Support for the up-grading and completion of ICT-networks in the region

The broadband connections extension and data security increase, that are compulsory conditions for the knowledge-based economy, are also to be supported. The interventions aiming to support the broadband infrastructure development will address the competitiveness consolidation as a target for higher potential areas.

Under this measure, it should be planned to support SMEs in the purchase of specific ICT infrastructure and Internet services, including basic terminal equipment, Internet connection, technical assistance services, the development of simple commercial web pages, their maintenance and virtual hosting. Also the server capacities in the regions need to be upgraded, through the promotion of such dedicated services.

On the other hand, SMEs already possessing at least an elementary ICT infrastructure will be supported to adopt ICT applications and solutions, to develop an e-business culture. The support is directed towards ICT applications and their interoperability, adoption of integrated solutions for companies leading to long term cost-cutting, thus facilitating the access to internal and international market and sustaining more efficient management processes, observing at the same time the increased security of the electronic networks and the adoption of anti-fraud solutions in order to develop a secure and dynamic E-Business sector. These application include also the development of different data platforms, not only web-based, but also through mobile telephone networks.

Complementary to these actions, SMEs will receive specialized training support provided by ICT specialists.

The ICT sector, which has one of the highest growth rates in the country (about 15 percent per year), is a priority sector for the development of Industrial Parks.

Actions:

4.3.1. Development of an internet portal with search facilities where entrepreneurs could find solutions for their business/ technological problems and researchers could present their innovative solutions and research services

4.3.2. Support to development of ITC sector in enterprises

4.3.3. Support to procurement of ICT equipment and related services by entrepreneurs

Indicators of achievement

Indicator
Outputs
Broadband networks projects supported in the region
Public electronic services projects supported
E-economy projects supported
Results
Companies connected to supported broadband networks
SMEs using the supported E-economy applications
SMEs trained in ICT related fields
SMEs supported in purchasing specific ICT equipment and related services

Priority 5: Renewable Energy Sources in South-East Romania

Objective:

- ***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 organizational models.***

Description:

An efficient, flexible, safe and clean energy infrastructure is a necessary precondition for economic development as it boosts productivity, and thus competitiveness. Reduction of primary energy intensity means more efficient energy production, transport and distribution, technologies and equipments at the end-user.

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.

In order to improve **energy efficiency**, a comprehensive and streamlined set of measures are envisaged for each part of the chain: production, transportation, distribution, final use of energy.

At the same time, public support devoted to sustain the production capacities will also pay attention to **capitalize renewable energy sources (RES)**.

Investments are needed for improving energy efficiency over the entire chain production - transmission – distribution - end use of electricity and thermal power. Investing in energy efficiency projects in line with the National Strategy for Energy Efficiency - will lead to savings in financial resources for primary energy resources.

Energy and environmental problems are closely related, since it is nearly impossible to produce, transport, or consume energy without significant environmental impact. The environmental problems directly related to energy production and consumption includes air pollution, climate change, water pollution, thermal pollution, and solid waste disposal. The emission of air pollutants from fossil fuel combustion is the major cause of urban air pollution. Burning fossil fuels is also the main contributor to the emission of greenhouse gases.

The **measures** of this priority axis are:

5.1. Increase of awareness about alternative energy solutions in P.A., education system, R&D institutions and SME

5.2. Implementation and dissemination of pilot projects for renewable energy sources, energy saving and energy-efficiency

5.3. Incentives for SME to introduce cost-reducing energy systems

5.4. Increase of public administration involvement in identification, promotion and use of renewable sources of energy

5.1. Increase of awareness about alternative energy solutions in P.A., education system, R&D institutions and SME

It is necessary to spread the knowledge about cost advantages and technologies linked to energy saving, as much as possible all over the region. Information campaigns by the P.A. and its related operative agencies, but also by the energy suppliers are highly necessary to stimulate the introduction of solutions. TV and radio programs on this aspects, local newspaper articles, web-pages and leaflets, all possible communication tools to

disseminate the opportunities are necessary to be used and to reach the end-user as well as the SME in the region. Also dedicated fairs should be organized and open to the public.

Actions:

5.1.1. Organisation of events on renewables involving P.A., education institutions and R&D organisations

5.1.2. Support to awareness raising on renewable energy issues for the general public and youth

5.2. Implementation and dissemination of pilot projects for renewable energy sources, energy saving and energy-efficiency

Indeed a significant, and diversified, potential for the production and the use of RES (wind, biomass, hydro) with only a small part being economically capitalized so far. The diversification will thus be promoted, based on sound assessment of regional availability and potential. Apart from improving the security of supply and reducing pollutant emissions, such investments should also bring new opportunities for business and jobs. Pilot projects are needed to demonstrate the technical feasibility also to the entrepreneurs and citizens in the region and to prove the financial benefits. In particular wind power and bio-gas should have a great potential in the region, as well as solar power.

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 renewable energy resources will be used both in the sector of electricity production and in the heating sector. The production of bio fuels used in electricity/heat generation will also help to comply with the environmental standards. Producing energy from RES can reduce the burden on existing production capacities using fossil fuels or can be more advantageous than the conventional solution.

Actions on energy efficiency will reduce waste of energy resources and will strengthen the security of supply. It is also a cost-effective manner to mitigate climate change as energy efficiency improvement/energy saving ultimately leads to the reduction of fossil greenhouse gases emissions.

The modernization and expansion of the electricity, natural gas and oil transport grids and of electricity and natural gas distribution grids will lead to a decrease in energy losses, to an increased security of supply by avoiding crisis situations and to meeting the economic performance and quality standards required by electricity consumers.

Actions:

5.2.1. Support to implementation of projects for improving energy efficiency

5.2.2. Support to implementation of projects for the valorisation of RES

5.3. Incentives for SMEs to introduce cost-reducing energy systems

Apart from financial support through public funds, which should have a role in regional and national programs, a more innovative measure is the possibility to make **energy balance calculations** for SME, residential houses and public and private functional buildings, like schools, universities, hospitals, administrative buildings, etc., where the consume is clearly outlined and can be a tool for a more rational use of energy, becoming an incentive for the introduction of energy-saving measures (thermal isolation, lightning, etc.). Furthermore, the **tariff policies** of energy suppliers should award those consumers that use less energy and penalize the more energy intensive consumers. Finally the P.A. should facilitate the availability in the region of **energy consultants** that can solve more

complex problems of energy efficiency and energy saving in industries or greater buildings. A very interesting experience in this sense is the ECOPROFIT system, elaborated by the city of Graz in Austria (www.oekoprofit.at).

Actions:

5.3.1. Promotion of cost-reducing energy systems by SMEs and other users

5.3.2. Stimulate upgrading and building new power and heating production capacities by valorisation of renewable energy sources: biomass, solar, wind, bio fuels and other renewable resources.

5.4. Increase of public administration involvement in identification, promotion and use of renewable sources of energy

Renewable energy policy and sustainable community issues place an enormous strain on society and its institutions. For good or ill, the fossil energy economy created a sense of independence. But times are changing. There is an increasing awareness that energy supply is somehow connected to nearly all aspects of modern life: diplomacy; international conflict; health care issues; environmental quality; international development; food supplies; and sustainable living conditions in general.

In order to participate, however, all energy policy stakeholders require at least two things: **unbiased information** and **the capacity to process information**. In the **energy policy** arena, **information** is widely available. Yet, the big challenge for a broad-based understanding of renewable energy lies in the capacity of individuals to assess the legitimacy and value of information; in that way, information becomes something even more essential -- knowledge. Therefore, the two above essential prerequisites to a participatory sustainable community energy policy making environment are inextricably and perpetually linked.

It is recommendable the establishment of a department/body at national and county levels that would deal with the **promotion of renewable energy sources** capable of offering consistent data on the opportunities for renewable electricity and thermal power, as well as the permitting procedures, and that would also advertise these opportunities in collaboration with NGOs.

It is also necessary to include a target for thermal power production from renewable sources in the national renewable strategy and the associated action plan.

Theoretically speaking, subsidies and promotion programmes should not be necessary for renewable energy, but hidden subsidies for fossil fuels and nuclear power should be eliminated. Subsidies can create the impression that renewable energy is non-economic, and this is still the perception in our region and in Romania; this is why **a professional advertising campaign** for renewable energy investments is necessary.

While the electricity market has evolved in the last few years, the heat market is still governed by state-owned companies. It is only logical for the national and local authorities to take responsibility for a comprehensive programme that would focus on a fuel switch towards renewable sources, network rehabilitation, metering systems and buildings with thermal insulation.

A shift of focus is also necessary in the general approach to energy policy, from supply side to **demand side management**. Of course, this would also involve stopping other

energy sources programmes and re-directing funds towards clean, reliable, renewable energy sources.

Actions:

5.4.1. Provision of unbiased information relating to the use of renewable energy through all media tools

5.4.2. Support to setting up of centres for promoting renewable energy sources with offices facilitating permitting procedures

Indicators of achievement

Indicator
Outputs
Projects for improving energy efficiency
Projects for the valorisation of RES
Projects for upgrading and building new power and heating production capacities by valorisation of renewable energy sources: biomass, solar, wind, bio fuels and other renewable resources.
Results
Jobs created in the RES sectors through assisted projects
Share of electricity produced from renewable energy resources in the gross regional electricity consumption
Costs for energy (per KWh) reduced for RES applying and ES SMEs (compared with 2008)

END RESULTS AND IMPACT

End results

- Design a regional innovation strategy and a relevant action plan
- Creation of an innovation network fostering the increase of innovation-based competitiveness of regional companies (synergy with Regional Operational Program and Sectoral Operational Program of Competitiveness)
- Improvement of entrepreneurial culture and innovative thinking of the target group (SMEs)
- Fostering new knowledge-based competitive companies
- Identification of pilot projects and their integration in the Regional Operational Program and Sectoral Operational Program for Increase of Economic Competitiveness for funding
- Integration of South-East Region in the national and European system of innovation

Impact

- Improving the understanding of the regional innovation system by :
 - providing a broader conception of innovation beyond the concept of technological innovation in the region
 - analysing whether the interactions between research, business and governance dimension in the South-East Region really constitute a regional innovation system
 - improving the analytical skills in the region by using the international experts as source from which to learn how to embed knowledge on innovation and analytical techniques within SE RDA (cf. trainings on analytical methods and tools)
 - ensuring added value of international views and comparison of analysis by benchmarking the results with:
 - the partner region Tuscany
 - other European regions which previously implemented RITTS/ RIS/ RIS-NAC and the members of the IRE – network
- Increasing the efficiency of the regional innovation support by:
 - promoting the networking between the different key stakeholders of the supply side
 - enhancing institutional capacity building of regional institutions of the governance, academia and business dimension and their interaction:
 - increased involvement of public authorities at municipal and county level in regional innovation policy of the South-East region
 - change in strategic policy making culture by contributing to a better integration of the innovation concept into the wider economic policy
 - improved consensus building strategy by introduction of a more inclusive and improved bottom-up dialogue among key actors
- Exchanging of experience of innovation policy at national level by:
 - learning effects between Romanian regions
 - better coordination between national and regional policies and actors (via active lobbying and marketing of the project, by ensuring that the development of the regional innovation system becomes part of the regional mainstream policies)

RELATIONSHIP BETWEEN REGIONAL DEVELOPMENT STRATEGY AND THE REGIONAL INNOVATION STRATEGY

The Regional Innovation Strategy of the South-East Region (RIS) can be fully implemented only through a strong coherence with the Development Strategy (RDS) in order to bind the regional policies as close as possible to the needs of the region. With this purpose the key axes of intervention, emerged as fundamental from the analysis of the RDS and considered a *conditio sine qua non* for the implementation of the Regional Innovation Strategy, have been pointed out.

The key axes which have been identified are the following:

- **Accessibility**
- **Urban Development and Small and Medium Enterprises (SMEs)**
- **Territorial enhancement**
 - **Agriculture**
 - **Tourism** (eco tourism, agro tourism, cultural tourism, business & congresses tourism, cruises)
 - **The Danube and its Delta**
 - **Climate**

ACCESSIBILITY

According to the RDS, in order to improve the attractiveness of the region it is essential to increase the length and the quality of the access roads and the railroads to the main economic centres and also the link among them and the pan-European transport corridors as well as to create a multi-modal transport system; the aim is to establish an innovative access system in order to ensure quick and efficient connections to the international markets, and take advantage of the geo-strategic position of the region.

Nevertheless, it should be useful to enlarge the meaning of “accessibility” also to the **ICT net** that should be created and/or implemented to carry out a capillary connection amongst the main centres of the Region and the small villages (binding elements for the organisation, management and presidium of the landscape) which are scattered in the rural lands. Improve the ICT accessibility and raise the diffusion of the e-governance allow creation of a network that will be less expensive, easier and faster than an efficient physical communication infrastructure.

URBAN DEVELOPMENT and SMEs

With reference to the RDS conclusions concerning the SE socio-economic situation, the globalisation may cause the regression of some economical sectors or even a total disappearance of some of them (i.e. textile industry, light industry etc.) because of the continuing deindustrialisation process. The tendency of decrease is higher in industry due to the liquidation and restructuring of big enterprises.

The majority of the industrial clusters are located in the proximity of urban areas; this means that it will be necessary to count two different but complementary lines of intervention:

- ⇒ a program of redevelopment of urban areas to increase their attractiveness for investments, by improving life standards. An important foreseen result of implementing this strategy is to ensure a polycentric development of the region and diminish the intraregional disparities. Most of all, Constanza county (which has quasi-monopolised foreign capital invested in the region - 68 % of total in the region),

even maintaining its focal role, should become part of a net of cities so as to release the local vocations and potentialities of the other counties.

- ⇒ a contextual management of the process of economical reposition within the value chain through the improvement of R&D sector in order to support the enterprises which should be localised in the SE. These action will be mainly directed to improve the creation of SMEs by local entrepreneurs, since this sector is the driving force of the local economy, playing a vital role in the creation of new employment (in 2003 the South-East Region was hosting 44,534 enterprises out of which 99.4 % were SMEs). Unfortunately, still nowadays most of enterprises are oriented towards assembling activities, as subcontractors and they do not make enough efforts to produce under their own brand. The companies are confronted, in general, with the difficulties of market economy, there appearing problems especially due to the insufficient management and marketing abilities, the reduced access to information, the lack of funds necessary for procurement of technology and the insufficient co-operation between companies. It can be said that the low costs remain the main source of innovation and not the innovation. To solve this cultural problem, the link between research and economical sectors should be improved also by stimulating the creation of high qualified research and training centres and scientific parks (which should be located within the rehabilitated urban areas), whose purpose is to develop partnerships among Public Administrations, R&D units, universities and companies.

TERRITORIAL ENHANCEMENT

For the RDS the aim is to increase new opportunities for sustainable economic development and life quality by developing the natural/environment and urban/architectural heritage and promoting the environment policy; a system for management and control of the environment factors should be therefore created.

▪ Agriculture

The agriculture is very important for the regional economy: the cultivated land represents 65% of the Region's surface and 40.4% of employed people work in this sector. Despite a great agricultural potential, the agricultural products processing capacity is low because of outdated technologies.

Owing to the great potential and the low exploitation, the development of this sector should follow the valorisation of the landscape, by improving modernisation of the agricultural sector and diversification of the economical activities other than agriculture, by using the natural and environment resources (fish, forest, biodiversity, heritage) for the differentiation of the agricultural sector.

▪ The Danube and its Delta

The Danube and its delta should be one of the central axis of the regional development. By creating a network among the river-maritime harbours of Braila, Galati, Tulcea and Sulina - river ports which can be accessed by sea ships and whose rehabilitation should be a focal point for the general urban rehabilitation -, it will be possible to create a unique network for activities concerning eco and cultural tourism.

The "Danube Delta Biosphere" is also an area having an important scientific value, the reservation represents not only a special attraction but also the possibility of the creation of an innovation centre for scientific research on environmental clean-up and biodiversity preservation.

- **Tourism**

Unquestionably, the region has a unique tourism development potential, including almost all types of tourism: ecotourism, agro-tourism, cultural tourism, business and congresses tourism.

Nevertheless, also in this sector, the RDS analysis shows that there are no coherent policies or programs for tourism development; thus it is essential to build a strategy that should be able to define tourism poles by increasing the specific vocations.

- **Energy**

The RDS encourages an increased usage of non traditional and renewable sources of energy (biomass, hydro-electricity, wind energy, geothermal, solar energy etc.) which might lead to the development of new technologies and the economical development.

- **Climate**

One of the fundamental task which has been pointed out by the RDS concerns the need to decrease the negative impact on the environment caused by the natural disasters (floods, land sliding, coast erosion, earthquakes).

Coherence and compliances with the Regional Operational Programme and SOP IEC 2007-2013

SE Regional Innovation Strategy	ROP	SOP IEC
<p>Priority 1: Innovation culture as central strategic asset of enterprises and regional policy</p> <p>Priority 2: High research and development potential to enhance innovation</p> <p>Priority 3. Public administration as the strategic innovation driver</p>	<p>Priority axis 4 - Strengthening the regional and local business environment</p>	<p>Priority Axis 1: An innovative and eco-efficient productive system</p> <p>Key area of intervention 1 “Productive and environment friendly investments and preparation for market competition, especially of SMEs”.</p> <p>Key area of intervention 3 “Sustainable entrepreneurship development”</p>
<p>Priority 4: ICT infrastructure as pivot technologies for innovation</p>	<p>Priority axis 3: Improvement of social infrastructure</p>	<p>Priority Axis 3 : ICT for private and public sectors</p> <p>Key area of intervention 2 “Developing and increasing the efficiency of electronic public services”</p>
<p>Priority 5: Renewable Energy Sources in South-East Romania</p>	<p>Priority axis 1: Support to sustainable development of urban growth poles</p>	<p>Priority Axis 4: Increasing energy efficiency and security of supply, in the context of combating climate change</p> <p>Key Area of Intervention 1 “Efficient and sustainable energy (improving energy efficiency and environmental sustainability of the energy system)”</p>

Coherence and compliances with the South-East Regional Development Plan 2007-2013

SE Regional Innovation Strategy	RDP
Priority 1: Innovation culture as central strategic asset of enterprises and regional policy	Priority 2: Create the favourable conditions to attract new investments Key area of intervention 2.3: “Create the necessary premises for SMEs development by creating technologic parks, business infrastructure, and economic districts and support the clusters”
Priority 2: High research and development potential to enhance innovation	Priority 2: Create the favourable conditions to attract new investments
Priority 3. Public administration as the strategic innovation driver	Priority 2: Create the favourable conditions to attract new investments Key area of intervention 2.3: “Create the necessary premises for SMEs development by creating technologic parks, business infrastructure, and economic districts and support the clusters”
Priority 4: ICT infrastructure as pivot technologies for innovation	Priority 2: Create the favourable conditions to attract new investments
Priority 5: Renewable Energy Sources in South-East Romania	Priority 4: Create new opportunities for sustainable economic development and life quality increase by developing the natural/environment heritage and promoting the environment policy

PROVISIONS FOR THE IMPLEMENTATION OF THE REGIONAL INNOVATION STRATEGY

The ARISE Partner Consortium proposes the following steps to assure a successful implementation of the present Regional Innovation Strategy:

- ⇒ RIS **political approval** and **commitment** by the SERR regional council (of all 6 counties) and establishment of a **Monitoring Committee**, with representatives of each county (Județul), ADRSE, business associations, chambers of commerce, universities and other R&D institutions (max. 12-15 persons).
- ⇒ Creation of a dedicated **management unit** with several tasks:
 - animation and technical assistance to pilot projects that correspond to the RIS
 - coordination of working groups and multipliers for innovation in the region
 - monitoring of achievements
 - reporting to EU and national authorities
 - coordination of international relations for know-how exchange and transfer.
 - coordination of Regional Operational Programme and other EU-funds with the implementation of the RIS.
- ⇒ Elaboration and signing of “**memorandums of understanding**” with the relevant **program management authorities** for the ROP, the SOPs, ESF programs for the SERR and other regional/national institutions that supervise and manage the implementation of public programs, in order to coordinate together the implementation of the RIS with funds from these programs.
- ⇒ Selection of approx. 30 “**Regional Innovation Promoters**” in different key-sectors (public and private, SME, P.A. and R&D) and in all 6 counties, that promote and sustain local and sectoral projects for the achievement of the RIS objectives.
- ⇒ Regularly (at least each 3 months) **meetings** of this promoters’ group for exchange of experiences and for the creation of regional and interregional partnerships.
- ⇒ Establishment of an **Scientific Advisory Board** for know-how inputs and progressive quality monitoring and improvement of the RIS.

7. MONITORING AND EVALUATION SYSTEM

The monitoring system adopted by ADRSE will be an indispensable continuation for the fulfillment of the Regional Innovation Strategy.

To ensure that the Strategy objectives are met, a comprehensive process of monitoring and evaluation will be established.

The strategy has to match the needs of the region, to be compatible with national and regional development programmes. In order to ensure successful implementation of the Regional Innovation Strategy a number of factors should be taken into consideration.

The ARISE Steering Committee will support the implementation of the strategy after the end of the project provided that a relevant funding may be ensured. An important issue is the establishment of a body to control the implementation of the strategy.

The strategy implementation control function will be undertaken by an **Innovation Board** established at the end of the project. The main aim of the Innovation Board is to monitor the progress of the implementation of the project and innovation action plan and evaluate the results of its actions.

The Innovation Board will be in charge of:

- assessment of the impact of implemented measures on innovation
- monitoring and adjusting the ARISE project pilot actions during implementation,
- provision of information about innovation infrastructure and relevant support programmes
- dissemination of information about the good practice in implementation of the actions of the regional innovation strategy.

The Innovation Board will have the Steering Committee and national innovation experts as membership and meet annually to consider the outputs achieved.

The Strategy will be subject to independent evaluation at key stages over the next three years, including mid-term and final assessments. The evaluation process will focus on the achievements of the Strategy against the five priority themes.

In addition to identifying outputs and results, the evaluations will identify the mechanisms underpinning changes brought about by the Strategy. This will ensure that the evaluation process places a strong emphasis on learning lessons and providing an effective input into the overall work of the Innovation Board.

To further support the work of the Innovation Board and the Management Unit a suite of indicators will be developed as a means of monitoring progress.

The set of output, result and impact indicators will be able to monitor the innovation process in 2007-2015. The indicators aim to ensure the sustainability of the project results and the control and evaluation of adopted procedures.

In line with the EU indications, for each indicator the source of verification that indicate who should provide the information and the frequency it should be provided need to be mentioned.

The following provisions for the Monitoring System of the RIS in SERR have to be adopted:

- **All beneficiaries of public funds** (for projects or as grants) **shall be obliged to deliver reliable data for output and result evaluation.**
- **The Scientific Advisory Board** (see above under provisions for the implementation of the RIS) **defines the monitoring methods following the S.M.A.R.T. criteria.**
- The responsible bodies for the RIS implementation shall set-up together with the **Regional Innovation Promoters** local and sectoral **observation groups** to observe changes during the 7 years of duration.
- The responsible bodies for the RIS implementation will produce and publish on a specific website for the SERR-RIS **two monitoring reports**, one in **2012** and one in **2016**, at the mid-term and after the end of the validity period of this RIS, taking into account all collected data and general socio-economic data.

The main sources for the collection of general socio-economic and environmental data are:

EIS 2007 Indicators - www.proinno-europe.eu
Key indicators on EU policy - http://epp.eurostat.ec.europa.eu
European Environment Agency (EEA) - http://themes.eea.europa.eu
INS – INSTITUTUL NATIONAL DE STATISTICA - https://statistici.insse.ro

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