



DISCOVER NORTH EAST ROMANIA

REGIONAL INNOVATION STRATEGY



1. INTRODUCTION

The project DISCOVER NE ROMANIA was prepared in the context that North-East Regional Development Agency (NE RDA) entered into the family of innovative regions from Europe with two international projects PARTNER and SAIL (2000-2002) which contributed to the identifying of a regional innovation system in the North-East region of Romania. In 2002, NE RDA joined the European network IRE Network and became member of the European association of RDA's (EURADA). As a member in IRE Network, NE RDA organised in October 2003 the Information Day dedicated to TIS, which had success from local and central public authorities (Italy, Belgium, Great Britain). This was the moment that constituted the basis of the RIS project together with the future partner Metron Srl from Italy.

The title of the project Development of an Innovative strategy Continuously Oriented to the Valorisation of Economic Resources from North-East Romania (DISCOVER NE ROMANIA) is suggestive for its strategic objectives:

- Stimulate the policy makers as regards research and innovation policies in North-East region and in Romania
- Facilitate the integration of the universities and research institutes along with SMEs and specialised companies for SME's support in regional, national and European networks of innovation.

The project objective is to **develop the first Regional Innovation Strategy in North-East Region Romania that will contribute to the valorisation of its economic potential, based on an innovation support system.**

As **specific objectives**, the project was focused on:

- Set up the framework for identifying the needs on innovation in developing a business with the involvement of academic environment and research institutes in solving of those needs;
- Strengthen the business environment in strategic areas and increase the regional economic potential through competences and efficiency of SME's activities;
- Increase the competitiveness of regional business environment;
- Develop a support system, the culture and awareness on innovation role in development regional economy

These objectives were reached by the analysis mechanism of the needs and technologic diagnosis of the region and also by the structure (priorities and intervention fields) included in the regional innovation strategy which was agreed together with the partnership structures and decisional factors at regional level.

The official launching of the project was in October 2005 and the duration for elaboration of the strategy was of 35 months, structured in 3 stages.

During **stage 0**, after the setting up of administrative structures of the project, over the first months of 2006, there were organised meetings for involving and mobilising all interested regional actors and setting up "regional consensus". In partnership with experts from INFYDE Spain, it was realised the Strategy for Communication which was implemented during the whole duration of the project. The elaboration of Regional Economic Structure Analysis and Trends had an important role for establishing the actual general context and future perspectives.

During **stage 1**, it was realized the Analysis of Regional Innovation System as it follows:

- analysis of SME's needs from the region, by questioning a number of over 2000 SME's within the region (with external assistance provided by INFYDE Spain and performing of 40 direct

- interviews (face-to-face) with companies from the region and 20 technological audits, with external support provided by Spanish partner FUNDECYT
- analysis of regional supply on research-development-innovation, by carrying out 41 direct interviews (face-to-face) with research-development units from public/private sector, of which 20 with external assistance provided by Italian partner METRON Srl
 - analysis and assessment of services and development needs for the 9 technological transfer and know-know structures existing in North-East Region

During **stage 2**, there were realized the following activities:

- SWOT analysis on sectors: SME's, research-development-innovation and technologic transfer
- first matrix (in draft) of the Regional Innovation Strategy
- organization of 3 sectorial Focus Groups (SME 's, technologic transfer structures and academic and research environment)
- organization of 6 county-level meetings, with the participation of the members from the county working groups constituted already at the level of each county and presentation of the first draft of the regional innovation strategy's draft
- realization of a synthetics document with the financing sources existing at national and international level which could finance pilot projects within the regional innovation strategy
- identification of pilot projects within the Regional Innovation Strategy
- development of the strategy, elaborate the implementing methodology and grid of monitoring indicators.

2. ADMINISTRATIVE AND DECISIONAL STRUCTURES OF THE PROJECT

The project was implemented following the methodology for elaborating the regional innovation strategies accredited by DG Enterprise and benefits from the contribution of exceptional international partners: Metron Srl Italy and Fundecyt Spainia.

Coordinator

North-East Regional Development Agency was set up on 1st of April 1999, as per the Law 151/1998 regarding the regional development in Romania, as legal person, non-governmental organisation, of public utility. The mission of the Agency is to generate social-economic development in North-East Region, to elaborate and promote strategies in order to attract resources, to identify and implement financing programmes. The Agency offers services to stimulate sustainable economic growth, partnership and entrepreneurial spirit. The headquarter of the Agency is in Piatra Neamt and the organisational structure is including a number of 73 employees. On each of the 5 counties in the region, there is a county office with two persons.

During 1999-2007, the activities of the Agency were focused mainly to the implementing and monitoring of the Phare Economic and Social Cohesion programmes, being a regional champion as regarding the value of the absorbed amounts and the number of implemented projects. During 2007 -2013, the Agency will have the role of Intermediate Body for implementing the Regional Operational Programme, stimulate and develop partnerships and local, regional and international development projects. The agency will remain faithful to its mission, continuing to initiate activities for regional promotion by organising at local and regional level of informative and presentation events, providing necessary information for developing economic contacts within the region and facilitate the setting up of support networks to attract investors and develop the tourism.

NE RDA is founder member of the Regional Offices for Cross-Border Cooperation Suceava and Iasi and also of the National Association for Regional Development (ROREG). NE RDA is acting as an European information multiplier within the multiply information network recognised by the Representative of European Commission in Romania and starting with 26th of March 2008 is host structure of Information Centre EUROPE DIRECT.

Until now, within NE RDA were implemented over 500 projects financed by ESC Phare and Romanian programmes. Also, there were initiated as coordinator or partner 17 international projects (INTERREG IIIB CADSES, TACIS IB, DfID, GOF, Leonardo, etc).

Partners

Metron Srl Italy is a private company that provides consultancy services to companies, consortiums and public institutions. Starting with 1990, Metron Srl was involved in innovative projects which support the economic development of the regions. Metron Srl is partner within 3 projects of regional innovation strategy financed by European Commission within Framework Program 6, Specific Support Actions in Associated Countries in 3 regions of Romania: project REGIS North -West Romania, project DISCOVER North-East Romania and project BUCURE TI ILFOV. At European level, Metron Srl successfully implemented a number of 30 projects financed under FP6, INTERREG, EQUAL, etc.

Within the project DISCOVER NE ROMANIA, Metron Srl was involved especially in analysis of technologic profile of the region – offer of innovation services (structures of research -development) and diagnosis of technologic transfer structures. This activity ended by elaborating a dedicated methodology to analyse the innovation offer (questionnaires and face -to-face interviews), elaborate a diagnosis report and design the proposals of strategic interventions.

Foundation for Science and Technology Development (FUNDECYT) has a main role in the preparation of economic development, structural and innovation strategies in Extremadura Region, Spain. It is a non-profit organisation, established in 1995, with the main objective to stimulate cooperation between companies, universities and public administration. At present, FUNDECYT has more than 50 employees, out of which 15 are involved directly in research and development activities. FUNDECYT developed the service offer according to SMEs', university and technological centres' needs, contributing thus to the benefit of the entire community. Following this path, FUNDECYT implemented projects in the field of research, technology and development, at national and European level, cooperation projects (INTERREG), technologic transfer (4th Framework Programme), education (LEONARDO DA VINCI) and RIS projects. FUNDECYT has also the legal statute of Regional Innovation Centre (CENEO).

Due to its experience, the main role of FUNDECYT within the project DISCOVER NE ROMANIA was to analyse the innovation needs of production sector. This activity included the elaboration of a grid of evaluation indicators for the innovative potential of a company, assessment of the needs and competences of development of companies from North-East Region by using, as per the Spanish model, of an audit methodology which to allow to companies interviewed to act towards a competitive development.

During the project, it was envisaged to identify the best practices examples and it was ensured an efficient transfer of know-how by a continuous dialogue within the members of the project team, the numerous meetings organised with international experts, organising dedicated study visits focused on projects and innovative solutions from partners regions: Italy - Abruzzo Region and Spain - Extremadura Region. These visits were organised having the informative support of **INFYDE Spain, as International Process Consultant**, which assisted the project RIS DISCOVER NE ROMANIA during the entire stages of implementation, identifying the characteristics of regional economic system which can be valorised in the context of international technologic trends, by presenting the most adequate RIS experiences from Italy and Spain and by organising the program of international meetings in such manner to be valorised, as many as possible, from the identified contacts. NE RDA, together with Fun decyt Spain prepared and submitted an application form within the INTERREG IVC Program - CREA SOFT which is intending to develop and to put in practice the innovative support mechanisms for increasing the SMEs sector competitiveness.

In February 2008, Metron Srl organised an economic mission which brought in North-East Region 10 representatives of local public authorities, companies and entrepreneurial associations from Abruzzo Region with the purpose to have direct contacts with same representatives from NE Region. The meeting was facilitated by NE RDA and 15 representatives from the counties Suceava, Neamt and Bacau participated.

Management Unit

Represents one of the administrative structures of the project and consists of 7 representatives from NE RDA:

- Constantin Apostol, Director General - Project Coordinator
- Gabriela Macoveiu, Director Communication and Regional Promotion - Project Manager
- Elena Nane, Director Economic Director - Coordonator financiar
- Elena Pascanu, Headoffice Regional Communication - Expert Public Relations and Communication
- Alina Capitanu, Expert Planning and Programming
- Gabriela Purcarea, Expert Planning and Programming
- Liliana Baicu, Expert Business Support
- Daniela Calin, Expert Business Support

The role is to implement the daily project activities by coordinating and developing the scheduled activities, realise the technical, administrative and financial management of the project.

Steering Committee (SC)

Consists in regional key-actors (political actors and decisional makers, representatives of business and financial environment), having as responsibilities the supervising of project's activities and quality. The role is to approve the basic proposals of the strategy, the final reports and finally the priorities regarding the funding allocation of the projects that will be identified based on this strategy. The meetings of the SC are periodical, each member being allowed to propose modifications and improvements to the project activities, proposals which will be forwarded to the Management Unit.

The structure of the Steering Committee consists of:

- North-East Regional Development Agency
- Ministry of Economy and Commerce
- Neamt County Council
- The Businessmen Association 2003 from Iasi
- Neamt Regional Statistics Office
- Technical University "Gh.Asachi" Iasi – Centre of Research and Technological Transfer "Polytech"
- Institute of Economic and Social Research "Gheorghe Zane" – Iasi
- National Institute of Research-Development for Technical Physics - IFT – Iasi
- Institute of Biological Research - Iasi
- Chamber of Commerce, Industry and Agriculture Vaslui
- PLANTAVOREL S.A. Piatra-Neam
- ELECTROCONTACT S.A. Botosani
- CEFIDEC Vatra Dornei, Suceava

Reference Panel (RP)

It was constituted as a technical body, which will contribute at identifying the objectives and measures included in the Regional Innovative Strategy.

Supervise the implementation and development of project's activities, in order to improve its impact on regional socio-economic development.

The structure of the Reference Panel consists of:

- North-East Regional Development Agency – Project Manager DISCOVER NE
- Iasi County Council
- University "Alexandru Ioan Cuza", Iasi
- University of Agricultural Sciences and Veterinary Medicines "Ion Ionescu de la Brad" Iasi
- University from Bacau
- University "George Bacovia", Bacau
- University "Stefan cel Mare", Suceava
- National Institute of Research-Development for Textiles and Leather, Centre for Textiles Research – Moldova, Iasi
- Chamber of Commerce, Industry and Agriculture Bacau
- National Council for SMEs from Romania, Regional Office Iasi
- National Agency for SMEs and Cooperation – Territorial Office Iasi
- Romanian Commercial Bank - Piatra Neamt Branch office
- Scientific and Technological Park TEHNOPOLIS Iasi
- Industrial Park HIT Hemeius, Bacau
- Metron SRL, Italy
- Fundecyt, Spain

3. SOCIO ECONOMIC ANALYSIS

3.1. MAIN CHARACTERISTICS OF THE REGION

The region covers the North-East part of the country and according to the tradition it is a part of the old historical region of Moldavia. Having a total surface of 36,850 km² and a population of 3,734,546 inhabitants, **North East Region is the larger of the 8 development regions of Romania.**

Geographically, the region is neighbouring Ukraine in the North, Galati and Vrancea counties in the South (South-East Region), Republic of Moldova at the East and the counties of Maramures and Bistrita-Nasaud (North-West Region), as well as Mures, Harghita and Covasna counties (Centre Region).

Taking the benefit of a rich historical, cultural and spiritual background, the region harmoniously combines tradition with modernism and the past with the present, it's potential being used in development of infrastructure, rural areas, tourism and human resources.



Relief

The region is characterized by a harmonious combination between **all the forms of relief**, 30% being represented by mountains, 30% by Sub-Carpathian (hilly) relief, and 40% by plateaus and plains. This last form of relief covers more than 70% of Botosani, Vaslui and Iasi counties.

In the West, the Carpathian Mountains stand as a wall with heights of nearly 2,000 meters in the North (Pietrosu, Rarau, Giupalau, Ocolasu Mare and Hasmasu Mare Peaks) and height drop toward South (Ciuc Mountains, Trotus Mountains and, to a low extent, Vrancea Mountains).

The Sub-Carpathians have heights ranging between 7-800 meters and surround the mountains like a tight belt. Going further, the Eastern half is split in two large areas: the Moldavian Plain in the North and Barlad Plateau in the South.

The North-West part of the region is known as Plateau of Suceava, with 500 meters in height and famous for its "obcine" (slight waving of the ground constituted as a chain of petrified waves).

Climate

The various types of relief create climate areas that show significant differences between mountains, hills and plains. In the region's mountain area (West of Suceava, Neamt and Bacau counties) the climate is moderate continental, with cool summers and winters rich in snowfalls. In the Sub-Carpathian area, which includes hills and plains (East parts of Suceava, Neamt and Bacau counties, as well as the entire territory of Botosani, Iasi and Vaslui counties), the climate is continental, with hot and dry summers and cold winters, most of the times with no snow at all.

The yearly average temperature in the air is 2°C in the mountain area and 9°C in the Sub-Carpathian area of hills and plains.

Hydrological network

The region is crossed by **eight important water-streams**, which stretch on North-South direction, the largest hydrographical basins being Siret (42,890 sq. km) and Prut (10,990 sq. km). The latter represents the natural border of Romania with the Republic of Moldova along circa 680 km.

Administrative organisation

The North-East Region consists of six counties (Bacau, Botosani, Iasi, Neamt, Suceava and Vaslui) and has a total population of 3,734,546 inhabitants, being situated from this point of view on the first place among the eight regions of the country (17.27% of the total Romania's population).

Administrative organisation of North East Region in 2005

Territorial unit	Total surface (square km)	Number of inhabitants (on 1.07.2005)	Number of municipalities	Number of cities	Number of communes	Number of villages
<i>Bacau</i>	6,621	723,518	3	5	85	491
<i>Botosani</i>	4,986	459,900	2	5	71	330
<i>Iasi</i>	5,476	813,943	2	2	93	418
<i>Neamt</i>	5,896	570,682	2	3	78	344
<i>Suceava</i>	8,553	705,752	5	11	93	379
<i>Vaslui</i>	5,318	460,751	3	2	81	449
<i>Total</i>	36,850	3,734,546	17	28	505	2,411

Source: Romania's Statistics Yearbook 2006

Bacau County is located in the Eastern half of the country, in the middle basin of Siret and Trotus Rivers. Its location has contributed to the development of the area by taking the advantages given by the European road (E85) that crosses the county. Towns like Targu Ocna and Trotus have been developed thanks to the existing natural resources (mountains of salt). The Slanic Moldova health resort obtained an international fame due to its healing waters rich in salt. Bacau, the county capital hosted a catholic bishopric, statute obtained through a patent from Pope Bonifaciu the 9th. A wide range of enterprises from the industrial sector, business infrastructure and banking sector, as well as public and private education institutions is concentrated also in Bacau.

Botosani County is located in the North extremity of Romania, between the superior

watercourses of Siret River at the West and Prut River at the East. Botosani town appeared on a favourable commercial crossroad, which has assured its prosperity right from the beginning. It is specially known for giving to Romanian culture some of its greatest geniuses: Mihai Eminescu, George Enescu and Nicolae Iorga.

Iasi County is located in the Central-Eastern part of Moldavia, in the middle basins of the Prut and Siret Rivers. The city of Iasi, also known as the capital of historical Moldavia, is the largest city in the region (307,377 inhabitants) being an important academic centre with its seven higher education institutions. Iasi is also the location of an important research-development nucleus for the industrial sector, represented by most of its branches. Here there is the greatest Orthodox centre in Romania – the Metropolitan Cathedral (1840-1880). With the occasion of celebrating 2,000 years of Christianity, the city of Iasi had been nominated as being one of the 5 European cities intended for international pilgrimage.

Neamt County is located in the Central-Northern part of Moldavia, in the basins of Bistrita, Siret and Moldova Rivers. The county capital Piatra-Neamt, historically attested in 1392 under the name of Craciun's Stone, situated near the Ceahlau Massif, this true „Moldavia's Olympus”, cannot be considered only a tourism crossroad but also an important tourism objective with various both historical and architectural monuments.

Suceava County is located in the North of Moldavia, in the superior basins of Siret and Bistrita Rivers. The churches with external paintings of Suceava are famous and known worldwide. They were included in the UNESCO World Heritage List, alongside Putna and Probota. Suceava town was advantaged by the fact that here the main customs office of the country functioned here, having also the role of storehouse. The town had the privilege of being the mediator for the commerce with oriental products to Poland and Hungary.

Vaslui County is located in the Eastern part of Romania, on the middle course of the Barlad River. In spite of its historical richness monuments are less present in Vaslui. The existing ones did not resist through the time and hadn't been restored. Vineyards, as natural richness brought reputation to these places (remarkable wines of Husi). Due to a long time experienced wine purifying system here is obtained a very good high quality brandy.

Region accessibility

Road access:

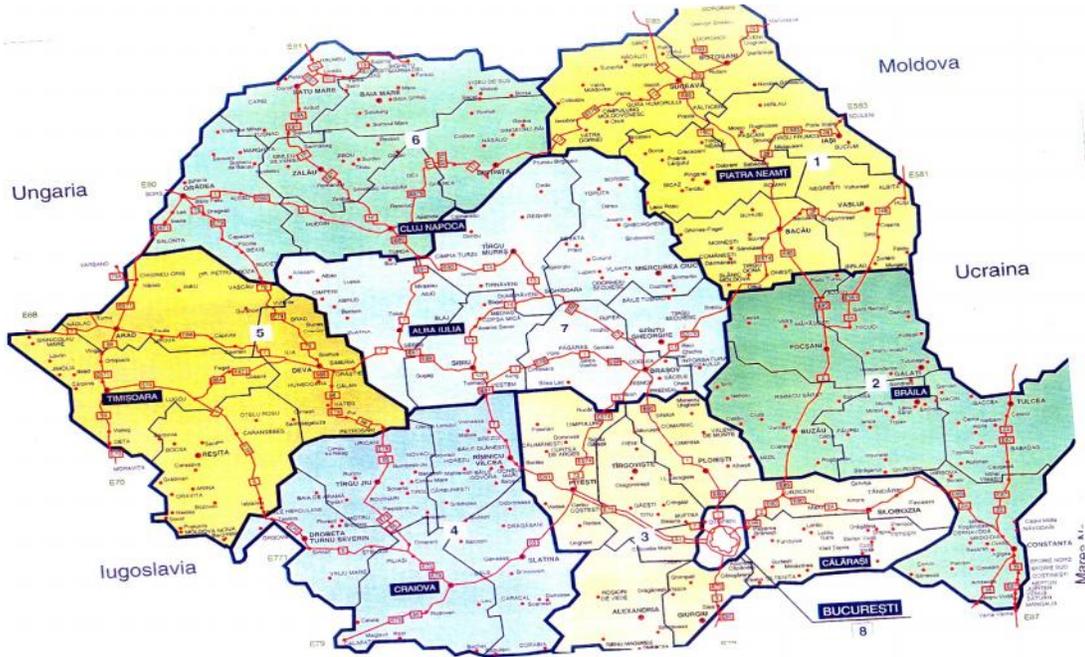
- Bucuresti – Bacau – Roman – Suceava - Siret (border check and cross-point) – **E85** European road;
- Suceava – Vatra Dornei – Cluj Napoca (**E576**) which connects with E60 European road Cluj Napoca – Oradea
- Bacau – Brasov – Pitesti, **E577** European road (which links with E70 European road Craiova – Vidin - Scopje);
- Bucuresti - Barlad – Albita - Chisinau - **E581** European road that crosses Vaslui County.
- Roman -Tg. Frumos, which turns-out to Botosani (**E58**) and Iasi - Sculeni (**E 583**).

Railway access:

- Bucuresti – Bacau – Roman - Suceava – Siret – Ukraine – **main line 500**
- Bucuresti - Iasi – Ungheni – Republic of Moldova – **main line 600**.

The following airports provide the air transport within the region:

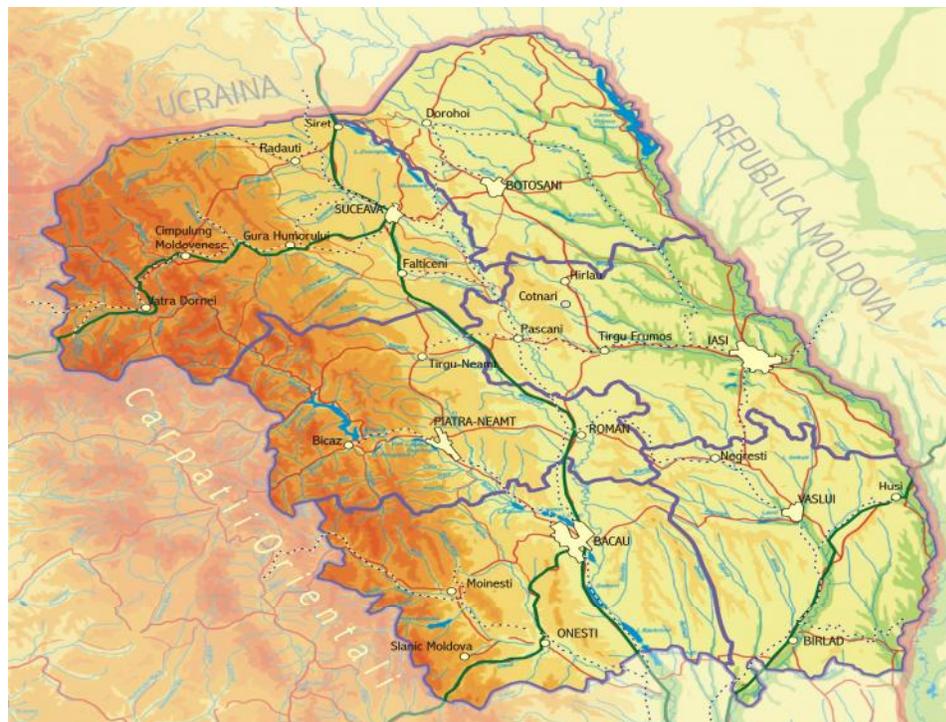
- Bacau Airport – domestic and international flights
- Iasi Airport – domestic and international flights.
- Suceava Airport – domestic and international flights.



Road distances between main towns of the region and Bu charest (kilometres):

	Bacau	Botosani	Iasi	Piatra-Neamt	Suceava	Vaslui	Bucuresti
Bacau	-	193	130	58	151	83	294
Botosani	193	-	125	145	42	258	499
Iasi	130	187	-	139	145	71	430
Piatra-Neamt	58	145	139	-	103	129	354
Suceava	151	42	145	103	-	216	457
Vaslui	83	258	71	129	216	-	359

Source: Romania's Statistics Yearbook



3.2. SOCIO–ECONOMIC FRAMEWORK

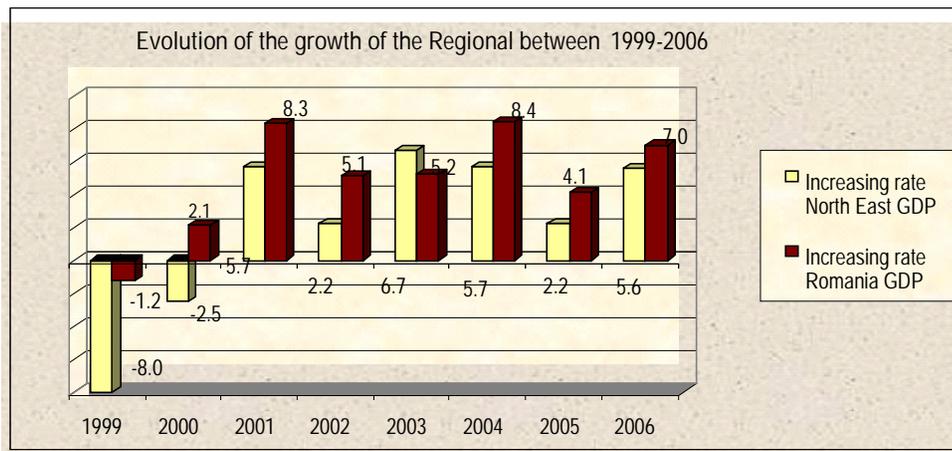
Regional economic context

The geographical and historical conditions have determined a serious social and economic gap in the North-East Region. The economic feature of the '60s was agriculture prevalence, the living standard being very low.

During 1965-1985 the region was subject to a forced industrialization, aimed at restoring the existing economic condition by purchasing modern producing capacities, fact that determined the establishment of an industrial culture, labour force qualification and training of a large number of specialists. Nevertheless, the industrial development was planned to be too diversified and didn't take into consideration the natural, energetic and environmental resources available in the region.

It could be ascertained that during 1998-1999 there was a decline registered at both regional and national levels due to effects of liberalization of the foreign currency exchange rate against Romanian Lei and because of the loss resulted from the restructuring process initiated during 1997.

The faulty management, a direct result of the reticence in implementing the quality standard system for the production and products, lack of enterprise development strategy, undeveloped marketing rules in promoting the products, alongside the loss of sales markets and drop in the level of competitiveness of the products due to the lack of resources for maintaining the investment, have caused a sharp decrease in the industry since 1997, with serious implications on the development of the region as concerning all the economic sectors.



Source: National Commission of Prognosis – Regional disparities at the horizon of the 2008 (processed data)

The presented graphic shows the evolution of the economic growth during the period of 1999 -2006 in the North East Region, by comparison to the situation recorded at the national level:

- in 1999 the decreasing of the regional economy was 50% higher than the one recorded at the national level (-8% vs.- 1.2%);
- In 2001 the region registered the first economic growth of 8.32%, superior to the national one, as a result of both monetary and fiscal policy promoted at national level and of development funds the North -East Region took the benefit of starting with 1999;
- In 2003, the economic growth of 8.3% was superior to the value recorded at the

national is of 5.2, but in 2004 the economic growth of North East Region was 5.7% lower than the national level of 8.4%;

- After a modest economic growth in 2005, especially due to the diminishing of the agricultural production caused by the floods that affected all the Romanian regions, in 2006 the economic growth recorded a more substantial increase of the Regional GDP of 5.6%, but still inferior to the value recorded at the national level (7%).

Comparisons regarding the GDP/inhabitant

One of the indicators that offer relevant information regarding the economic situation of the region is the regional Gross Domestic Product per inhabitant (GDP/inhabitant). The following table presents the GDP/inhabitant during 2000 -2004 by comparison to the other region and the national GDP, but also the EU average.

By analysing the data it can be noticed that the GDP/inhabitant in North East Region has the lowest level comparatively to the other regions from Romania, representing 69.3% of national GDP/inhabitant in 2004, but it is, at the same time, the region with the lowest GDP/inhabitant of the EU average among the regions of the EU (23.6% of the EU average in 2004).

	Year	National	Nord-Est	Sud-Est	Sud	Sud-Vest	Vest	Nord-Vest	Centru	Bucuresti
GDP / inhabitant (RON)	2000	3582.6	2506.7	3185.2	2920.7	3000.9	3676.7	3331.3	3838.6	7408.2
GDP/inhabitant from the national level (%)		100	70	88.9	81.5	83.8	102.6	93	107.1	206.8
GDP/ inhabitant from EU 27 average (%)			18.2	23.2	21.5	22.1	26.9	24.3	27.9	54
GDP / inhabitant (RON)	2001	5211.0	3737.4	4490.0	4138.0	4378.1	5521.2	4811.1	5465.0	11028.6
GDP/inhabitant from the national level (%)		100	71.72	86.16	79.4	84.01	105.95	92.32	104.87	211.64
GDP/ inhabitant from EU 27 average (%)			19.7	23.6	21.8	23.2	29.3	25.5	28.8	58
GDP / inhabitant (RON)	2002	6950.0	4970.9	5966.7	5562.6	5553.0	7527.4	6538.1	7505.3	14466.9
GDP/inhabitant from the national level (%)		100	71.52	85.85	80.03	79.89	108.3	94.04	107.98	208.15
GDP/ inhabitant from EU 27 average (%)			21.1	25.2	23.6	23.6	32	27.8	31.8	61
GDP / inhabitant (RON)	2003	9090.3	6575.9	7788.1	7377.3	7698.0	10265.1	8783.7	9747.7	17638.9
GDP/inhabitant from the national level (%)		100	72.33	85.67	81.15	84.69	112.92	96.62	107.23	194.04
GDP/ inhabitant from EU 27 average (%)			22.6	26.7	25.4	26.6	35.4	30.3	33.6	60.3
GDP / inhabitant (RON)	2004	11372.0	7868.6	10319.2	9488.1	9476.3	13042.9	11053.6	11852.9	21778.2

<i>GDP/inhabitant from the national level (%)</i>		100	69.2	90.7	83.4	83.3	114.7	97.2	104.2	191.5
<i>GDP/ inhabitant from EU 27 average (%)</i>			23.6	30.7	28.4	28.8	39	33	35.5	64.5

Source: Romania's Statistics Yearbook 2002-2006

Key issues in the general social-economic development

- The historical and geographical conditions have determined a serious delay from the socio-economic point of view of the North East Region;
- North East Region has the lowest GDP per inhabitant from Romania and EU;
- The economic growth recorded by the North East Region in 2005 was only 2.2%, but the situation was improving in 2006 when the Regional GDP had increased with 5.6%, value still inferior to the national one (7%).

Business environment

The companies have a higher flexibility, being more receptive to the market needs, more innovative in responding to the customer needs, improving the competition level, increasing the organisational culture and creating the premises for a social stability.

By comparing the definition of SMEs in Romania to the one recommended by the EU, it can be noticed that it was realised a harmonization of the classification of the micro enterprises and SMEs. So, by micro enterprise it is understood a company that has a maximum number of 9 employees and a turnover of maximum 2 millions euro, a small enterprise may have a maximum number of 49 employees, the turnover being of maximum 10 millions Euro and a medium enterprise it is considered the company that has a maximum number of 249 employees, and a turnover of maximum 250 millions Euro.

Since 2000, when the economy showed a significant boost, an increase of SMEs number has been reported in North East Region from 36,688 units reaching the level of 49,325 units in 2005. In this context, North East Regions recorded a percentage of 11.13% of the total SMES activating in Romania.

At the level of 2005, the highest share was represented by micro -enterprises with 87.22%, followed by SMEs (12.27%). This trend is according to the situation reported at the national level.

During 2000–2005, the number of SMEs/thousand inhabitants was the lowest comparing with the other regions, being recorded still an important increase (12.18 SMEs/thousand inhabitants in 2000 vs 13.1 SMEs /thousand inhabitants in 2005).

Distribution of firms and employees in North East region and their participation between 2000- 2005

	Reference Year	Total	From which		
			0-9	10-249	peste 250
<i>Units number</i>	2000	36688	31666	4715	307
	2001	37199	32007	4890	302
	2002	37534	32239	5001	294
	2003	40855	35008	5554	293
	2004	45462	39543	5643	276
	2005	49325	43021	6057	247
<i>Employees number</i>	2000	487429	64575	181659	241195
	2001	492339	71493	185425	235421

	2002	474390	69664	191870	212856
	2003	480076	79148	205397	195531
	2004	473610	91200	211209	171201
	2005	460363	99057	212599	148707
% employees	2000	100	13.25	37.27	49.48
	2001	100	14.52	37.66	47.82
	2002	100	14.68	40.45	44.87
	2003	100	16.49	42.78	40.73
	2004	100	19.26	44.60	36.15
	2005	100	21.52	46.18	32.30

Source: Romania's Statistics Yearbook 2001 -2006

The period of 2001-2005 is characterized by the increasing number of the employees at the level of micro enterprises and SMEs, and important decreasing of this indicator within the large enterprises. Small and medium enterprises are an important segment of the regional economy, absorbing at the level of 2005 a great part of the total number of employees working in firms (46.18%), level increased compared to the one recorded in 2000 (37.27). If taking into consideration also the employees working in micro -enterprises it results a total share of 67.70%.

Although they represent 0.50% of the total number of the firms existing in the region, the large enterprises have a contribution of 31.38% to the total turnover and employ 32.30% from the total employees.

Distribution of local working units on activity sectors in 2005

Activities (CAEN sections)	Total	units			%		
		0-9	10-249	>250	0-9	10-249	>250
Total North East Region	49325	43021	6057	247	87.22	12.28	0.5
Mining and quarrying	89	49	32	8	55.06	35.96	8.99
Processing Industry	7577	5378	2054	145	70.98	27.11	1.91
Electric and thermal energy, gas and water	72	11	31	30	15.28	43.06	41.67
Constructions	2834	2146	669	19	75.72	23.61	0.67
Trade, car services and goods	25338	23104	2225	9	91.18	8.78	0.04
Hotels and restaurants	2237	1987	250	-	88.82	11.18	-
Transport, storage and communications	3362	3032	303	27	90.18	9.01	0.8
Real estate transactions, rentings and service activities	5813	5464	343	6	94	5.9	0.1
Education	152	136	16	-	89.47	10.53	-
Health and social assistance	782	753	29	-	96.29	3.71	-
Community, social and personal services	1069	961	105	3	89.9	9.82	0.28

Source: Romania's Statistics Yearbook 2006

The distribution of SMEs per activity sectors of economy respects the national distribution from the point of view of the owned shares:

- The micro enterprises own the majority of the total active units within processing industry and the field of services. 91.18% of the total active units are involved in the trade sector, 88.82% of them are hotels and restaurants, 90.18% operate in transport and 75.72% in construction sector;
- As regarding the structure of SMEs per activity sectors, they are highly represented in the extractive industry (43.06%), power and heat production (35.96%) and processing industry (27.11%);
- Most of the large enterprises operate in the field of electricity and heat production representing 41.67% of the total active units.

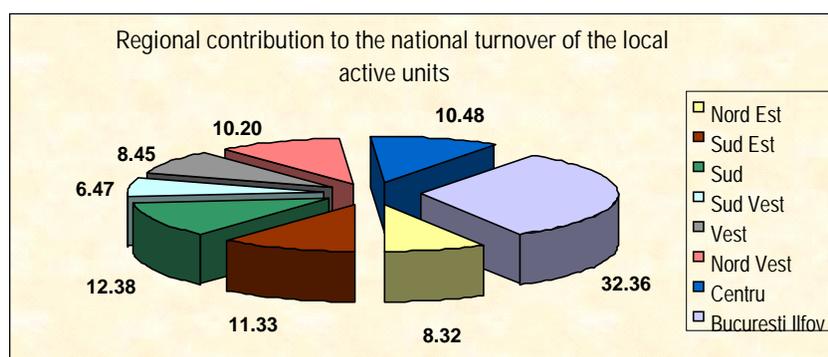
Turnover of the local active units on activities and classes in 2005

Activities (CAEN sections)	Total	millions RON current prices			%		
		0-9	10-249	>250	0-9	10-249	>250
Total North East Region	42795	8665	20701	13429	20.25	48.37	31.38
Mining and quarrying	450	14	124	312	3.11	27.56	69.33
Processing Industry	13821	878	5157	7786	6.35	37.31	56.33
Electric and thermal energy, gas and water	2487	3	110	2374	0.12	4.42	95.46
Constructions	3330	307	2384	639	9.22	71.59	19.19
Trade, car services and goods	18507	6151	10962	1394	33.24	59.23	7.53
Hotels and restaurants	468	179	289	-	38.25	61.75	-
Transport, storage and communications	2311	484	1003	824	20.94	43.40	35.66
Real estate transactions, rentings and service activities	974	518	436	20	53.18	44.76	2.05
Education	16	10	6	-	62.50	37.50	-
Health and social assistance	78	52	26	-	66.67	33.33	-
Community, social and personal services	353	69	204	80	19.55	57.79	22.66

Source: Romania's Statistics Yearbook 2006

Relevant information can be obtained by analysing the contribution of the local active units to the turnover and on activity sector, divided on size classes.

- It can be noticed that the highest share to the regional turnover is due to the SMEs (48.37%), following the large enterprises with 31.38 and in a lower proportion the micro enterprises with 20.25%. The SMEs have the highest contribution to the total regional turnover in the sector of constructions with 71.59%, hotels and restaurants (61.75%) and trade (59.23%);
- The micro-enterprises bring the greatest contribution in the trade sector with 33.24%, real estate transactions (53.18%), hotels and restaurants (38.25%);
- The large enterprises contribute to the regional turnover of each activity sector (except the hotels sector, health and education), having the major contribution in sectors such as the extractive industry (69.33%), processing industry (56.33%) and power sector (95.46%).



Source: Romania's Statistics Yearbook 2006

By comparing the contributions of the local active units in North East Region to the national turnover, it can be noticed that it contributes in a low percentage of 8.32%, but still superior to the South West Region.

Foreign investments

Despite the attractiveness of the labour force low cost, as a main competitive advantage, Romania records one of the lowest level of foreign direct investments (FDI) per inhabitant, and the North East Region is the least attractive destination for the foreign investors.

The majority of FDI realised during the last years have been done by massive privatisations and not by green field investment. Usually, the multinational companies that activates in Romania do not subcontract local companies, due to the deficiencies related to the management, quality of technology and products. Consequently, many multinational companies import the largest part of the utilised components, a very small percentage of them contracting local suppliers. This situation diminishes the advantages that could be generated by the presence of foreign investors in the national and regional economy.

Structure of foreign direct investments 2005

<i>North East</i>	<i>Foreign investment sold Millions euro</i>	<i>% total</i>
<i>South East</i>	18	0.1
<i>South Muntenia</i>	1752	11.6
<i>South West</i>	1273	8.5
<i>West</i>	405	2.7
<i>North West</i>	1093	7.3
<i>Center</i>	1035	6.9
<i>Bucuresti Ilfov</i>	1038	6.9
<i>Romania</i>	8426	56
<i>North East</i>	15040	100

Source: Statistic bulletin NSI INS 2006

Foreign investments have been influenced accordingly to the accessibility to the eastern markets (including the presence of international airports) and by the urban character of the aimed areas, including the existence of an adequate level of facilities and services. In this context, it is not surprising the favourite destinations for the foreign investors are Bucharest -Ilfov and South East.

Companies with capital foreign participation and the values of the subscribed social capital between 1991-2005

<i>Development region</i>	<i>Number of companies</i>	<i>%</i>	<i>Value of the subscribed social capital (thou RON)</i>	<i>%</i>
<i>North East</i>	4749	4	1317431.4	3.9
<i>South East</i>	6496	5.5	4200327.7	12.4
<i>South Muntenia</i>	4781	4.0	8174536.0	24
<i>South West</i>	2975	2.5	654694.7	1.9
<i>West</i>	12858	10.8	2164666.0	6.4
<i>North West</i>	11622	9.8	1864685.8	5.5
<i>Center</i>	11132	9.3	1792433.9	5.3
<i>Bucuresti Ilfov</i>	64507	54.2	13838737.2	40.7
<i>Romania</i>	119120	100	34007512.8	100

Source: National Register of Commerce

The North East Region capacity to attract FDI is negatively influenced by the low accessibility to the rest of the Europe, the rural character of the region, insufficiently quality of the transport infrastructure and also the perception of the corruption and a difficult business

environment.

Stimulating the foreign investment will have a positive effect on the labour market through the constant increasing of the demand for the qualification of the labour force and through the development of services. The existence of high -qualified labour force is an important factor for the investments localisation, because while the transfer of productive and creative activities is intensified, the demand for high qualified labour force will increase. The last economic information show that the regions that succeeded in attracting an important volume of investments have already been confronted to the difficulties of finding on the local labour market high qualified labour force, especially in the technical and administrative fields.

Exterior trade

Consequence of the low level of innovation is the fact that the Romanian exports are limited to the sectors where the added value and the cost are low. In order to develop t he Romanian economy, it must be stimulated the development of companies into the international markets.

Evolution of the exterior trade activities between 2003 -2005

	<i>Export FOB – mil euro</i>				<i>Import CIF – mil euro</i>				<i>Deficit – mil euro</i>			
	<i>North-East</i>	<i>Annual growth</i>	<i>Romania</i>	<i>Annual growth</i>	<i>North-East</i>	<i>Annual growth</i>	<i>Romania</i>	<i>Annual growth</i>	<i>North-East</i>	<i>Annual growth</i>	<i>Romania</i>	<i>Annual growth</i>
2003	1310		15614		1290		21201		20		-5587	
2004	1540.9	17.63	18935	21.27	1624.2	25.91	26281	23.96	-83.3	-516.5	-7346	31.48
2005	1840.7	19.46	22255	17.53	1889.2	16.32	32569	23.93	-48.5	-41.77	-10314	40.4

Source: National Commission of Prognosis – Regional disparities at the horizon of the 2008 (processed data)

As regarding the dynamic of the exterior trade, in 2005 the exports increased with 19.46%, value superior to the national value, while the imports recorded an increase of 16.32%, much lower the national value of 23.93%. In this context, the sold of the commercial balance, the North East Region recorded a diminishing of t he deficit in 2005 with 41.77, while at the national level it is recorded an increased level with 40.40%.

The structure of exports of the processing industry continues to reflect the dominancy of the traditional industrial sectors that use the labour force with a diminished degree of training and relative absence of high tech sectors. The textile products and clothes continue to hold the first place on the exports volume, more important shares belonging to the wood and chemical industry.

The import is realised in majority by the processing industry and it is due mainly to the import of equipments and machinery, necessary for modernisation and improving the level of technologies.

Business infrastructure and support structures for SMEs

The development of the business infrastructure and access possibilities, for improvement of the business environment, supply of information, services and technologies aiming the increase of the business competitiveness, was supported by financing programmes through pre-accession and governmental funds.

Within North-East Region operates an IRC (Iasi Innovation Relay Centre), 3 business incubators and 33 consultancy centres. The 3 existing business incubators provide services for 118 firms contributing to the creation of 230 new jobs. The 33 consultancy centres of the region provide training, information and consultancy services. The consultancy mainly aims to juridical and financial-accounting fields, business-related consultancy being still insufficiently developed.

One of the main objectives of PHARE ESC programme – regional infrastructure component, is the development of business infrastructure as well as the possibility to access this infrastructure in order to improve the access to business environment, information, services and technologies.

Under this component of the programme, the following business infrastructure projects have been approved for the North-East Region:

- The business infrastructure development park for SMEs and private entrepreneurs located in Bacau County (HIT Industrial Park of Hemeiusi) - PHARE ESC 2000;
- The academic innovation centre and business development park for SMEs and investors - Tehnopolis Park Iasi, PHARE ESC 2000;
- SMEs business incubator of Botosani, PHARE ESC 2001
- Bucovina Economic Center of Suceava, PHARE ESC 2001
- Tutova-Barlad Business Center, Vaslui County, Phare ESC 2002
- Resources Centre for businesses – Vaslui, PHARE ESC 2004-2006
- Exhibition Centre Moldova Iasi, PHARE ESC 2004 -2006

Also, from the reserves list of projects within the call for proposal Phare 2004-2006 will be developed and financed through the structural funds:

- Multifunctional Business Centre Trotus, Bacau County
- Centre for promotion and development of the business environment Neamt

Romanian Government promoted the establishment of basic infrastructure necessary for the improvement of business environment from Romania through the Programme “Industrial Parks”, which aimed the stimulation of investments for improving regional economic infrastructure, respectively the establishment of industrial, scientific and technological parks, through which facilities are created for the implementation of one company’s activities. The industrial parks from North East Region that received functioning licence are:

- Industrial Park Mecanica Ceahlau, Neamt County
- Industrial Park Botosani, set up through the association of SC Electromining SA, SC Electrocontact SA, SC Mecanica SA

Also, it must be underlined the establishment of the first recorded cluster in North East Region - “ASTRICO NORD-EST” (end of 2006). The cluster activates in the textile field, promoting the interests of 7 firms with activity of production and selling textile clothes, having as support RIFIL S.A.

Financing programmed for supporting the business environment

During the pre-accession period, the development of the business environment was supported by European and governmental programmes. Thus, the main financing programmes from which benefited the private companies from the North East Region are the following:

Pre-accession programmes

- PHARE ESC 98 Programme, first programme launched at the regional level through public call for proposal, having an allocated budget for the region of 4,550,600 euro and as main objective the tourism development, human resources and supporting SMEs initiatives;
- PHARE ESC Programme 2000 „Financing program for new enterprises, micro enterprises and SMEs newly set-up”, with contracted budget in the Region of 3,156,240 euro;
- PHARE ESC 2000 Programme – credit line for SME’s in total value of 8.1 million Euro for 4 regions, North-East Region being one of them, implemented through Romanian Commercial Bank;
- PHARE ESC 2000 Programme „Counselling and training scheme for SMEs”, budget allocated of 201,925.83 euro and having as main objective the increase of the performance level of the services provided for SMEs;
- PHARE ESC 2001 Programme „Assistance for SMEs”, budget allocated for the region of 3,650,972 euro;
- PHARE ESC 2000 Programme “Human resources development”, amount contracted 3,303,495 euro having as main objective the qualification and requalification of the labour force aiming a better adjustment to the continuously developing needs of the labour market;
- PHARE ESC 2001 Programme “Human resources development”, amount contracted 3,334,628,55 euro;
- SAPARD Programme „Development and diversification of the economic activities within the rural environment”.

Governmental programmes:

- Business development (Governmental Decisions 520/2000), allocated budget of 11,067,349,110 ROL and having as main objective the business development within the disadvantaged areas;
- Support for investments (Governmental Decision 521/2000), allocated budget of 31,200,252,094 ROL having as main objective facilitation of the large investments development in disadvantaged areas
- Development of North East Region, allocated budget 263 billions ROL and having as main objective the creation new work places;
- Sub programme „Tourism investments”, contracted budget in North East Region 40 billions ROL;
- Sub programme „Development of towns through the supporting of the SMEs activities”, having an allocated budget of 15,213,490,000 ROL;
- Subprogramme „Investments in tourism”, amount contracted in North -East Region 40 billions ROL;
- National multi annual programme 2002 – 2005 for the supporting of the micro enterprises and SMEs, implemented by NASMEC.

Key issues of the business environment

- The number of private companies had an ascendant trend in North East Region from 36,688 units in 2000 to 49,325 units in 2005, representing 11.13% from the total companies at the national level;

- Number of SMEs/1000 inhabitants has increased from 12.18 SMEs/1000 inhabitants in 2000 to 13.1 SMEs/1000 inhabitants in 2005, but it is still the lowest comparing with the other regions in the same period;
- Regional distribution of SMEs on economic activity sector respects the national distribution;
- The basic infrastructure for supporting businesses has lately developed, but it is still insufficiently valorised;
- Counselling services specialised for the business development is still insufficiently developed and used by the companies;
- Low share of foreign investments in North East Region, representing only 0.1% from the national FDI in 2005;
- The activity of exterior trade in North East Region records increasing yearly, in 2005 being reported an increase of 19.46%, superior to the national increase of 17.53%.

Economic sector structure

Regional evolutions of the last years have been influenced by the diminishing of the agricultural production, especially in the area with a strong agricultural profile, but also to the steady evolution of the constructions works, taking into account that the areas affected by floods necessitated important works of infrastructure reconstruction (roads, bridges etc), and also reconstruction of the locative spaces.

Industry

In 2006, the gross added value in industry at the level of the North -East Region recorded an increase of 2% by comparison with the situation of 2005, but the value recorded at the national level was much higher (6.4%).

Percentage modification comparing to the previous year

	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP									
<i>North-East</i>	-2.5	8.3	5.2	6.7	5.7	2.2	5.6	6.6	6.3
<i>Total economy</i>	2.1	5.7	5.1	5.2	8.4	4.1	7.0	6.6	6.4
From which gross added value in:									
INDUSTRY									
<i>North-East</i>	4.7	13.5	-5.2	7.2	3.0	-1.4	2	4.5	5.2
<i>Total economy</i>	5.9	4.4	5.1	4.4	6.5	2.5	6.4	4.8	5.7

Source: National Commission of Prognosis – Regional disparities at the horizon of the 2008 (processed data)

Within the North East Region it can be mentioned the evolution of the industrial production in Neamt county, with an estimated growth of 5%, but also the continuous decline of industrial production in Suceava county -10%, county that contributes with 18% at the gross added value of the region and that acknowledges drastic diminishing of the industrial production for 2 consecutive years.

As regarding the growth rate of industry in North East Region, this one will increase every year and, in 2007 it is forecasted to be equal 4.5% and in 2008 will reach the level of 5.2%.

The industrial production value during 2000-2004

in millions RON current prices

	2000	2001	2002	2003	2004	% sector/ GDP 2000	% sector/ GDP 2001	% sector/ GDP 2002	% sector/ GDP 2003	% sector/ GDP 2004
<i>North-East (mil. RON in current prices)</i>	2557.7	4093.9	4870.3	5917.8	6780.7	26.50	28.55	26.17	24.03	23.05
<i>North-East (million Euro)</i>	1179	1408	1558.49	1575.98	1674.2					
<i>Romania (mil. RON in current prices)</i>	21948	32304.7	42609.8	49489.7	60794.9	27.30	27.66	28.13	25.05	24.66
<i>Romania (million Euro)</i>	10118	11116	13635.15	13179.68	15011					

Source: Romania's Statistics Yearbook 2002 -2006

In 2004, the share of industry contribution to the regional GDP was 23.05%, diminished value comparatively to the recorded values from the past years, but the same situation is reported also at the national level.

The index of regional specialisation in the industrial sector in 2004 shows the following particularities: the textile industry owns an important share from the total industrial activities in North East Region (23.3% from the total processing units from the region). The wood industry is also specific to the North East Region (20.9%) due to the existing national resources.

Key issues in the industry

- The evolution of industrial production is characterised by interregional disparities, thus the Suceava county recorded a massive decline of industrial production of -20.2% in 2005 and -10% in 2006;
- In 2006, the gross added value in industry recorded an increase of 2% against the situation recorded in 2005, but much lower than the national value of 6.4%;
- The share of industry in regional GDP decreased within the period of 2001 -2004 (28.55% in 2000 vs 23.05% in 2004).

Agriculture and silviculture

In 2006 it was recorded a level almost equal to the one from 2005, in the conditions of an agricultural production seriously affected by the climacteric conditions specific to the respective two years. Especially 2005 was characterized by the diminishing of the agricultural production as a result of the disastrous effects of floods in connection to the agricultural cultures, the gross added value in agriculture being diminished with more than 10% in all the regions. In North East Region the diminishing of the gross added value of the agriculture was -15%.

Percentage modification comparing to the previous year

	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP									
<i>North-East</i>	-2.5	8.3	5.2	6.7	5.7	2.2	5.6	6.6	6.3
<i>Total economy</i>	2.1	5.7	5.1	5.2	8.4	4.1	7.0	6.5	6.4
From which gross added value in:									
AGRICULTURE									
<i>North-East</i>	-16.0	18.8	9.8	-2.5	6.5	-15.0	0.1	3.2	3.2
<i>Total economy</i>	-18.1	28.0	-6.7	5.2	18.9	-13.9	0.5	3.0	3.2

Source: National Commission of Prognosis – Regional disparities at the horizon of the 2008 (processed data)

The prognosis for the agriculture sector shows that the growth at the level of North East region is situated around the national average, forecast realized taking into account normal climacteric conditions.

Contribution of agriculture to the GDP

	2000	2001	2002	2003	2004	% sector/ GDP 2000	% sector/ GDP 2001	% sector/ GDP 200 2	% sector/ GDP 200 3	% GDP 2004
North-East (mil. RON in current prices)	1647.6	2682	3497.7	4099.1	4650	17.10	18.70	18.80	16.64	15.81
North-East (mil. euro)	825	1030	1119.29	1091.65	1148.14					
Romania (mil. RON in current prices)	8901.5	15617.9	17307.6	22849.2	30579.6	11.07	13.37	11.43	11.56	12.41
Romania (mil. euro)	4460	6000	5538.44	6085.03	7550.5					

Source: Romania's Statistics Yearbooks 2003 - 2006

In 2004, the contribution of agriculture to regional GDP was of 15.81%, value superior to the national level (12.41%), meaning that the regional economy is still highly dependent on agriculture, although it was recorded between 2001 -2004 a descending trend from 18.70% to 15.81%.

In 2004, the North East Region contributed with 15.2% at the national agricultural production, being for the first time that North East Region was over passed from this point of view by the regions of South Muntenia (18.54%) and South East (16.93%).

Agriculture

Although the North-East Region includes a large area of agriculture land - 15.45% of the total agricultural surface of the country, this resource cannot be efficiently capitalized, as the productivity is low for all types of crops, due to the influence of the following factors:

- Land quality, alternation of different soil categories, land fragmentation;
- Land worked on small plots (1-3 ha), due to fragmentation of the land fund, as a result of land privatisation under the Law No. 18/1991 and low level of mechanization (considering that a profitable land exploitation is achieved on plots of at least 50 ha per tractor);
- Aged labour force (more than 28% of the rural population is over 60 years old), while young people migrate towards urban centres;
- High poverty level of the owners, who face many difficulties in crop production and animal breeding;
- Lack of capital for agriculture restructuring and modernization;
- Soil instability and erosion, numerous land slides.

Silviculture

Silviculture represents for the region a traditional activity, having the following characteristics:

- Due to the lack of investment programmes and poor technology level existing in wood processing and furniture manufacturing industry, instead of exporting finished products for a better capitalization level, higher productivity and

consequently for reviving this economic sector, large amounts of wooden raw material (as timber and cut wood) is being exported;

- During the last years, there is noticed a trend of passing from primary exploitation to the secondary exploitation and even to the superior one;
- In North East Region hundreds of firms are developing activities related to the exploitation and wood processing, the majority having as main field of activity furniture productions. These types of product have begun to be exported to countries like Germany, Austria, Italy, Holland, Sweden.

Forest exploitations have a considerable contribution through the high wood volume produced in the North-East Region and large existing timbered areas (Suceava 420797ha, Bacau 266261 ha, Neamt 256463ha), supplying 25.12% of the total wood volume in Romania (in 2005).

Wooden volume introduced into the economic circuit in 2005

(thou cubic meters)

Territorial unit	Total	Coniferous	Beech	Oak	Various hard species	Various soft species
Romania	15671.3	6060.5	4794,2	1586.1	1852.1	1378.4
North – East	3937.3	2134.5	959.9	131.6	381.8	329.5
Bacau	680.0	217.7	32104	23.2	67.8	49.9
Botosani	134.0	1.5	3302	27.4	43.2	28.7
Iasi	274.3	4.3	37.2	36.3	91.6	104.9
Neamt	961.9	543.4	281.6	18.1	64.0	54.8
Suceava	1711.0	1366.7	267.0	5.3	53.0	19.0
Vaslui	176.1	0.9	19.5	21.3	62.2	72.2

Source: Romania's Statistics Yearbook, 200

The North East Region represents the largest supplier of wooden volume introduced into the economic circuit (3937.3 thou cubic meters), representing 25.12% from the total wooden volume at the level of 2005, but decreasing in comparison with the past years (32.83% in 2003 and 26.70 in 2004). The counties that have the strongest development of the silviculture are Suceava, Neamt and Bacau. These ones have the highest share of the wood volume introduced into the economic circuit and also the highest share of occupied persons in this sector of activity.

Key issues of agriculture and silviculture:

- The share of agriculture to the regional GDP (15.81%) is superior to the national level (12.41%) - 2004, suggesting a high dependency of the regional economy to agriculture;
- Agriculture exploitation is carried out on small plots that vary from 1 to 3 ha;
- The silviculture represents a traditional activity for the region, being the biggest supplier of wooden volume into the economic circuit.

Services

In 2005, in North East Region was recorded an increase of the gross added value of services of 9%, superior to the national value of 8.1%. The ascendant evolution is reported also in 2006, the growth of the services sector being of 6.5%, value close to the national level of 6.8%.

In this sector the valorisation of the tourist potential plays an important role. Thus, the North East Region benefits of areas with lots of historical monuments and landmarks, and has the advantage of extremely beautiful landscapes, which create premises for a future development of this field.

Also, the North East Region has competitive advantages in the field of communication, information society and related activities.

Percentage modification comparing to the previous year

	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP									
<i>North-East</i>	-2.5	8.3	5.2	6.7	5.7	2.2	5.6	6.6	6.3
<i>Total economy</i>	2.1	5.7	5.1	5.2	8.4	4.1	7.0	6.6	6.4
From which gross added value in:									
SERVICES									
<i>North-East</i>	-3.7	3.1	10.5	9.5	6.0	9.0	6.5	7.0	6.5
<i>Total economy</i>	5.5	3.6	7.1	5.5	6.8	8.1	6.8	6.7	6.5

Source: National Commission of Prognosis – Regional disparities at the horizon of the 2008 (processed data)

The following table illustrates the evolution of the services sector in North -East Region during 2000-2003 comparing with the national level.

Contribution of services to the regional GDP

	2000	2001	2002	2003	% sector/ GDP 200 1	% sector/ GDP 200 2	% sector/ GDP 200 3
<i>North-East (mil. RON in current prices)</i>	44190	62386.5	84988.5	118327.6	45.86	41.87	45.7
<i>North-East (mil. euro)</i>	2214	2307	2719.64	3151.21			
<i>Romania (mil. RON in current prices)</i>	411414.4	581595.9	773827.5	1030629.1	51.18	47.70	51.1
<i>Romania (mil. euro)</i>	20616	21401	24762.48	27446.85			

Source: Romania's Statistics Yearbook 2002 -2005

In 2003, services sector contribute to the regional GDP with 48.1%, being noticed a steady growth during the period of 2001 -2003 from 43.5% to 48.1%. It can be noticed also that the ascendant evolution is higher than the one recorded at the national level.

The sector is characterised by:

- Existence of a strong concentration in developed centres of the region, Iasi and Bacau, in the rest of the territory the share being lower;
- It is concentrated on activities of commerce and food, the direct services for the population being insufficient and of low quality;
- The health and social assistance services are under the necessary quality standards;
- Transport activities of goods and persons have orientated on two directions:
 - Railway transport remained within the state sector and suffered a reorganisation on regional level aiming to the modernisation of the existing infrastructure;

- The auto transport acknowledged a strong development, especially in the private sector, being set up transport companies of goods and persons, organised modern and efficiently.

In constructions, commerce and transports the region contributes close to the national average. In public services from education, contribution to the national total is superior to the average and insures the highest share. There is lower contribution from the following sub sectors: financial and banking activities, real estate.

Tourism

Due to its favourable conditions, the landscapes, the purity of the air and water, the mountain areas of Bacau, Neamt and Suceava counties, as well as the inestimable cultural and religious existing patrimony, the North -East Region owns a high tourism potential which can be compared with other tourism areas in the country or abroad. Besides the picturesque, the region reveals its well-known hospitality, popular customs and the Moldavian gastronomy, the traditional wines of Cotnari and Husi vineyards giving local colour and attraction to tourists.

The great number of churches and monasteries within the Region contributes to the development of the religious tourism offering the possibility of pilgrimages creating tourism routes along the existing cultural and spiritual locations.

Following it is presented the situation of the economic indicators that characterise this sector:

The capacity and activity of accommodation units during 2000-2006

		<i>Accommodation capacity (thou places-days)</i>	<i>Arrivals (thou)</i>	<i>From which foreign tourists</i>	<i>Overnight staying (thou)</i>	<i>From which foreign tourists</i>	<i>Index of operational accommodation capacity use (%)</i>	<i>Average staying (nights/tourist)</i>	<i>Average staying of foreign tourists (nights/tourist)</i>
<i>North-East</i>	2000	4624	543		1468		31,7	2.7	
<i>Romania</i>		50197	4920		17647		35,2	3.59	
<i>North-East</i>	2001	4651	535		1406		30.2	2.62	
<i>Romania</i>		51882	4875		18122		34.9	3.71	
<i>North-East</i>	2002	4615	535		1332		28.9	2.48	
<i>Romania</i>		50752	4847		17277		34	3.56	
<i>North-East</i>	2003	4963	553		1450		29.2	2.62	
<i>Romania</i>		51632	5056		17845		34.6	3.52	
<i>North-East</i>	2004	5049	618	111	1489	214	29.5	2.41	1.93
<i>Romania</i>		53988	5638	1359	18500	3333	34.3	3.28	2.45
<i>North-East</i>	2005	5284	621	109	1435	207	27.2	2.31	1.9
<i>Romania</i>		54978	5805	1429	18372	3464	33.4	3.16	2.42
<i>North-East</i>	2006	5528	678	98	1599	191	28.9	2.36	1.95
<i>Romania</i>		56499	6216	1379	18991	3242	33.6	3.05	2.35

Source: Romania's Statistics Yearbook 2001-2006, Publications INS 2005 -2007

Although the modernisation of the accommodation capacity, passed into the private ownership-90% realised, the valorisation of the area with high touristic potential and of treatment bases through an adequate promotional activity and also the services provided to the tourist have been of a low level, situation that determined the existence both of a average staying inferior to other regions and also a low operational accommodation capacity use index.

In this context, it can be noticed that in the North East Region the index of operational accommodation capacity use had sinusoidal trend from 31.7% in 2000 till 28.9% % in 2006.

Also, it is recorded the fact that during 2000-2005 there was a decrease of the overnight staying from 1468 thousand persons in 2000 to 1435 thousand persons in 2005, but 2006 is characterised by an important growth of 11.42 of overnight stayings.

In 2006, the average staying was 2.36 nights/tourist, but the value is still inferior to the national and other regions situation, excepting Bucharest-Ilfov that records the lowest level of the indicator of 2.01 nights/tourist. It can be noticed that during 2000-2005, the average staying records a continuous decrease both at the regional and national level, but 2006 is characterised by a slight increase of the average staying in North East Region, although at the national level the descendant trend continued.

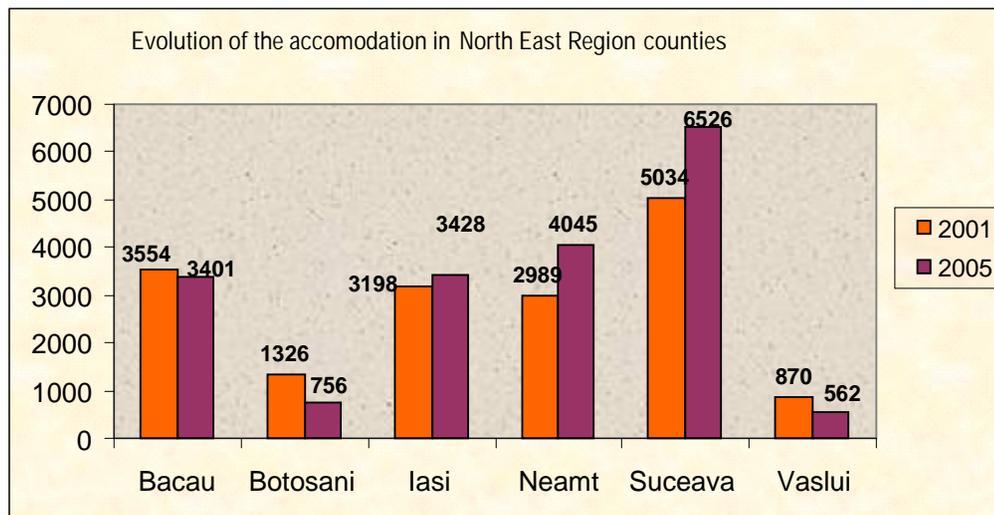
Structure of tourism accommodation units in 2000-2005

	Territorial unit	Total	Hotels/ motels	Vilas	Boarding houses	Agro-tourism boarding houses	Other types of structures
2000	North-East	250	81	38	46	28	57
	Total	3121	943	1066	361	240	511
2005	North-East	402	90	47	68	134	63
	Total	4226	1154	1021	597	956	498

Source: Romania's Statistics Yearbook 2001-2006

During 2000-2005 there was an increase of tourism and agro-tourism boarding units while the other types of tourism structures showed a steady increasing trend, which reveals the development of the entrepreneurial spirit in the touristic sector. The spectacular increase of the agro-tourist boarding houses extremely important because it represents an economic alternative for the inhabitant from the rural areas and contributes to the economic growth and it may be considered also a consequence of the accession to the SAPRD funds.

In the below graphic it is represented the evolution of the existent accommodation capacity (number of places) in North East Region, structures on counties:



Source: Romania's Statistics Yearbook 2002 and 2006

It could be noticed that the county having the highest accomodati on capacity is Suceava, a very normal situation if considering the outstanding relief favourable for tourism as well as the very well developed entrepreneurial spirit of the county's inhabitants. The lowest accomodation capacity is available in Botosani and Vaslui counties.

Tourism key issues:

- Low index of operational accomodation capacity use (27.20%) comparing with other regions and national level (33.40%) – in 2005;
- Low average staying of tourists of all regions (2.31 nights/tourist), inferior to national level (3.16 nights/tourist).
- Tourism services that are not capitalized at the level of the existing potential;
- Important increase of the number of touristic accomodation capacity in North East Region;
- Low index of operational accomodation capacity use (28.90%) comparatively to the other regions and national level (33.6%) –2006;
- Low average staying of tourists of 2.36 nights/tourist, inferior to national level (3.05 nights/tourist) –2006.

Population and the labour force

Population

At 1 July 2005, total population of North East region was of 3,734,546 inhabitants, representing 17.27% out of total country population. Population of region is concentrated in 45 urban centres, 505 communes and 2,411 villages.

Comparative situation regarding urban and rural population balance 2001 -2005

<i>Region</i>	<i>Romania</i>	<i>NE</i>	<i>SE</i>	<i>S</i>	<i>SV</i>	<i>V</i>	<i>NV</i>	<i>Centru</i>	<i>Bucuresti-Ilfov</i>
2001									
<i>Urban(%)</i>	54.6	43.5	56.8	41.6	45.3	62.2	52.6	60.3	88.8
<i>Rural (%)</i>	45.4	56.5	43.2	58.4	54.7	37.8	47.4	39.7	11.2
2002									
<i>Urban(%)</i>	53.26	40.77	55.26	40.64	44.72	61.71	51.14	58.85	88.86
<i>Rural (%)</i>	46.74	59.23	44.74	59.36	55.28	38.29	48.86	41.15	11.14
2003									
<i>Urban(%)</i>	53.37	40.77	55.19	40.71	45.33	61.67	51.17	59.23	88.80
<i>Rural (%)</i>	46.63	59.23	44.81	59.29	54.67	38.33	48.83	40.77	11.20
2004									
<i>Urban(%)</i>	54.9	43.6	55.5	41.4	47.2	63.7	52.8	60	90.6
<i>Rural (%)</i>	45.1	56.4	44.5	58.6	52.8	36.3	47.2	40	9.4
2005									
<i>Urban(%)</i>	54.9	43.4	55.5	41.7	47.5	63.6	53.1	59.8	90.5
<i>Rural (%)</i>	45.1	56.6	44.5	58.3	52.5	36.4	46.9	40.2	9.5

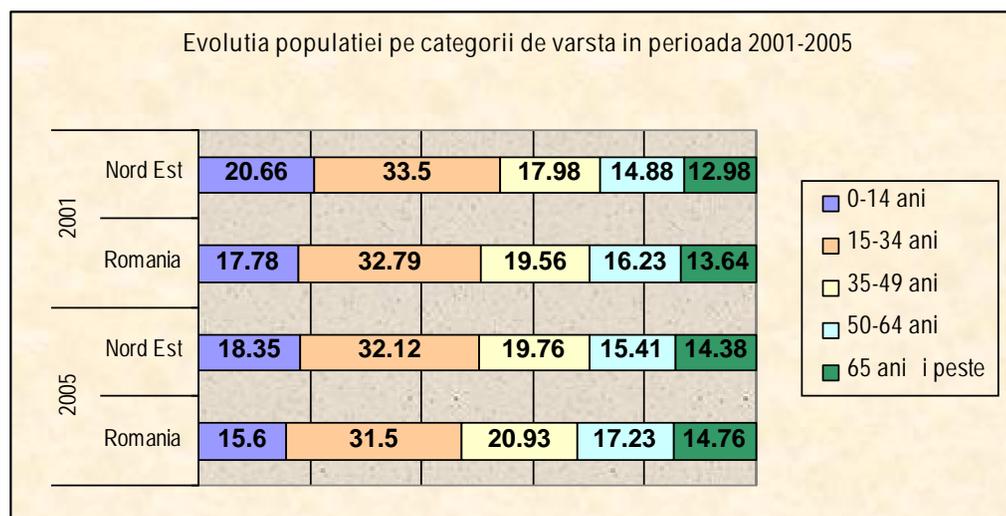
Source: Romania's Statistics Yearbook 2002-2006

Besides South and South West Regions, the North East Region has a majority population living in rural areas.

In 2005, the region has a medium density of 101.3 inhabitants/ km², being placed over the national medium level (90.7 inhabitants/ km²). The country with the highest density it is Iasi with 148.6 inhabitants/ km² and the lowest density it is in Suceava with 82.5 inhabitants/ km².

The Romania's population is a continuously decline being affected also by the ageing phenomenon, situation that it is recorded in the majority of EU states. Starting to 1990 the population segment up to 14 years is declining and in the same time the population over 65 years is extending. Also, it must be underlined that the number of births is a continuously decline .

The highest share of young population is recorded in North East Region, 18.35 % in 2005, being noticed a slight decline comparing to 2001.



Source: Romania's Statistics Yearbooks 2002 and 2006

From total, young population the percent between 15 -34 years old is representative (32.12%), but can be also observed a high percent of elderly (14.38%) with 65 and over, this population segment share being increased from 2001 when it was recorded 12.98%.

From the following table it is noticed that both at national and regional level during 2001 - 2005, have been recorded a decrease of the population and also a diminishing of the urban population (excepting the year 2004, phenomenon explained by declaring a series of communes as towns).

Evolution of population

- no persons-

	2001	2002	2003	2004	2005
North-East	3836835	3743242	3743819	3738601	3734546
<i>Urban, din care:</i>	1664997	1526407	1526398	1629448	1620437
<i>Femei</i>	856543	788275	789712	842808	838670
<i>Rural, din care:</i>	2171838	2216835	2217421	2109153	2114109
<i>Femei</i>	1081530	1102020	1101224	1046155	1048350
Romania	22408393	21794793	21733556	21673328	21623849
<i>Urban, din care:</i>	12243748	11608735	11600157	11895598	11879897
<i>Femei</i>	6340211	6029693	6033756	6191301	6187381
<i>Rural, din care:</i>	10164645	10186058	10133399	9777730	9743952
<i>Femei</i>	5118692	5122562	5093555	4910421	4892950

Source: Romania's Statistics Yearbook, 2006

The structure on sexes shows a balanced distribution of population in North East Region, 49.48% from the total population being men and 50.52% women.

The diminishing of the population generally and the urban population have as main causes the decrease of the natural spore and the migration from the urban areas to rural areas. Starting to 1995, North East Region is the region that lost the largest number of persons while the regions that attract the population due to the higher living standard and the opportunities provided are Bucuresti Ilfov si Vest.

The persons willing to migrate are usually young people who are attracted by the possibility to acquire a better job and more attractive social life, more precisely the population segment of 20 – 39 years old.

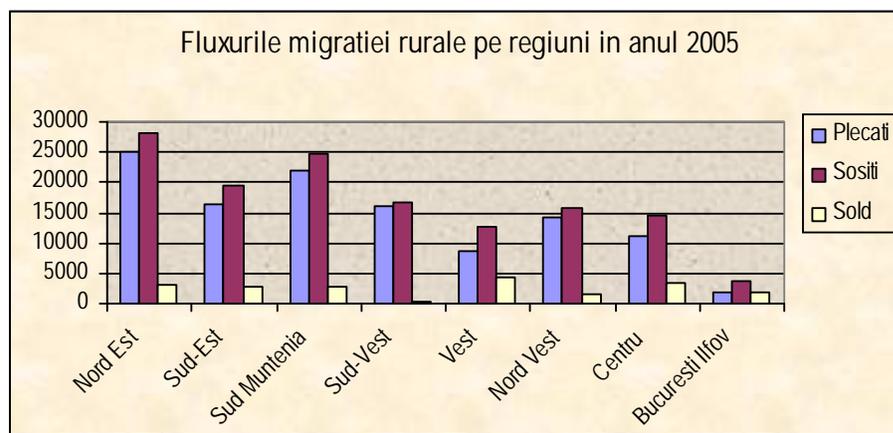
Migratory flux on regions in 2005

	Internal			International		
	Leaving	Arriving	Sold	Emigrants	Immigrants	Sold
North-East	47150	43430	-3720	1852	339	-1513
<i>Sud-Est</i>	35248	34408	-876	1180	233	-927
<i>Sud Muntenia</i>	40517	39333	-1184	453	143	-310
<i>Sud-Vest</i>	29848	29168	-680	488	113	-375
<i>Vest</i>	23849	25638	1789	1418	292	-1126
<i>Nord Vest</i>	28742	28426	-316	1595	278	-1317
<i>Centru</i>	27902	28093	191	2164	241	-1923
<i>Bucuresti Ilfov</i>	39312	44108	4796	1808	2065	257

Source: Romania's Statistics Yearbook 2006

It must be underlined, in the same time, the existence of the migration flux towards the rural area, specific to the population segment over 40 years old, affecting both North East Region and the other regions of Romania. Generally, it is the case of the persons that, following state companies reorganisation, did not succeed finding another job, being forced to return to the rural area where usually are developing agricultural works of subsistence.

This situation is presented at the level of the year 2005 in the following graphic:



Source: Romania's Statistics Yearbook, 2006

As regarding the official international migration, after 1990, Romania was confronted with a massive flux towards various destinations such as Italy, Spain, Canada. The official statistic data do not offer a real image of the phenomenon, because there are not included the temporary migration that it is quite an important situation.

Also, the immigration in Romani has recorded an important trend, the immigrants being from countries like Republic of Moldovia, Italy, Germany, having as motivation the realisation of activities in lucrative aims. The favourite destination of immigrants Bucharest Ilfov Region, followed by North East, North-West and Centre Regions.

Structural analysis of the labour market

Region North East has faced special problems regarding unemployment during the last decade of the XX century. Starting to 2003, it can be notice a decreasing of the unemployment rate, reaching in 2006 the level of 5.9%, marking the process of economic development but also the abroad migration.

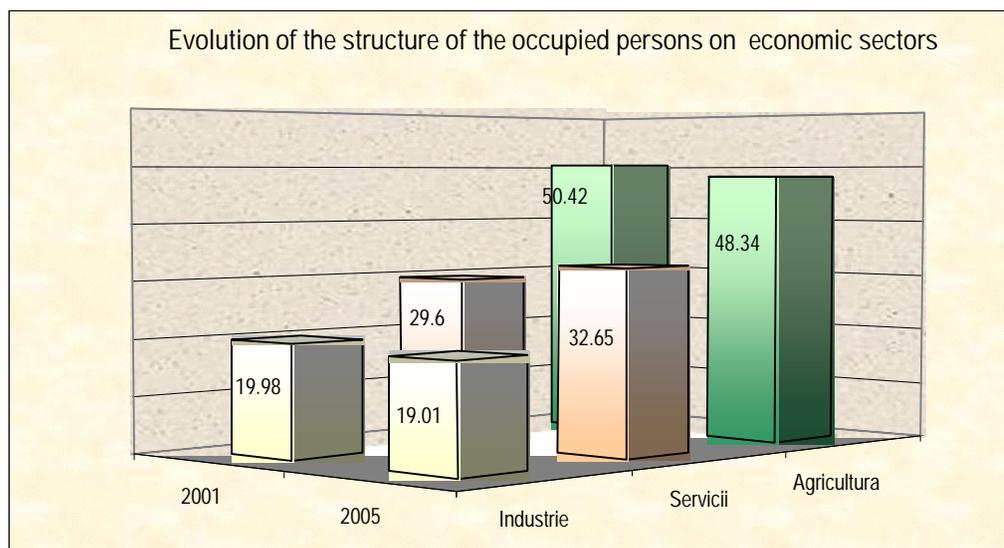
In the same time, in North East Region it was noticed the descending trend of the occupied population till 2004 as a consequence of the economic decline due to the reorganisation of many state enterprises with large numbers of employees.

But, starting with the year of 2005, it is noticed an increase of the number of occupied person, thus at the end of 2006, the civil occupied population of the region was 1,278,300 persons, representing 15.15 % from the total civil occupied persona of the country.

	2001	2002	2003	2004	2005	2006
Unemployed – thou persons						
<i>North-East</i>	166.2	158.8	127.3	106.2	92.3	79.7
<i>Romania</i>	826.9	760.6	658.9	557.9	523	480
Unemployment rate						
<i>North-East</i>	10.6	10.8	9	7.8	6.8	5.9
<i>Romania</i>	8.8	8.4	7.4	6.3	5.9	5.4
Civil occupied population - thou persons						
<i>North-East</i>	1401.8	1308.9	1290.9	1253.3	1265.6	1278.3
<i>Romania</i>	8562.5	8329	8305.5	8238.3	8390.4	8435

Source: National Commission of Prognosis – Regional disparities at the horizon of the 2008 (processed data)

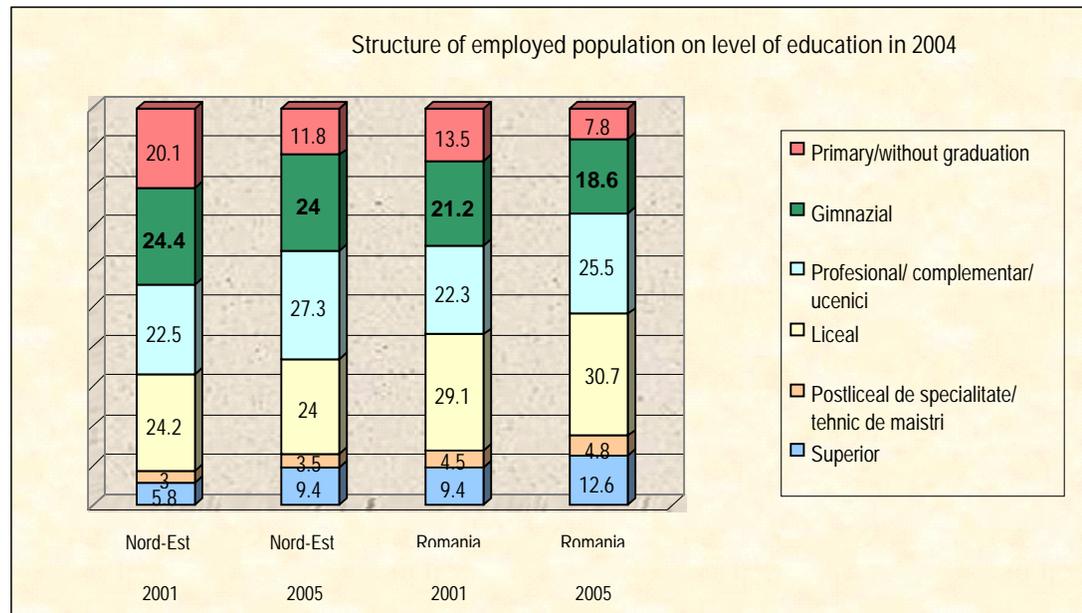
In 2005, from the total of employed population 48.34 % were employed in agriculture, 19.01% in industry and 32.65 % in services sector. It can be noticed the ascendant trend of the services between 2001-2005, especially activating the commerce field.



Source: Romania's Statistics Yearbook 2002 and 2005 (processed data)

The share of occupied persons in agriculture is at least ten times highest than other region from EU. In agriculture, from the total occupied population, 32% have ages between 45 -64 years old, and 8.3% over 65 years old, reflecting the phenomenon of aging of the occupied person in agriculture.

As regarding the qualification of occupied population, it is noticed that the highest share belong to the persons with high school and vocational qualifications (51.30 %), followed by the ones with gymnasium studies (24.%). Only 9.4 % have university graduation diplomas, but the percentage has recorded an important increase from the level of 5.8% in 2001.



Source: Romania's Statistics Yearbook 2002 and 2005 (processed data)

The North East Region owns the share above the national average of occupied persons with only primary education or any graduation diplomas; situation explained by the fact the region has a rural character. But it is important to notice that this share has diminished drastically from 20.1% in 2001 till 11.8% in 2005.

Key problems regarding labour market analysis:

- High percent of population concentrated in rural area: 56.6 % from total of region population - 2005;
- From the total of employed population 48.34 % are active in agriculture.

Educational infrastructure

The essential factor in developing a national or a regional economy is highly represented by the human capital. Although it is difficult to quantify and represents a controversial concept, the human capital could include the human resources having a certain level of education.

The NE Region comprises all kind of education forms, the number of pupils enlisted in pre-university education in school year 2005 -2006 being 771,342 pupils, 17.69% % of all region population, and as far as the academic education is concerned, in the three universities there were 78,970students.

In order to have a better image regarding the school population from the region, the below table present the situation recorded in school year 2005 -2006.

School population of all levels of education, during the school year 2005/2006

Territorial unit	Pre-school	Elementary			High school	Arts and les schools	Post-high and foremen schools	University	Total
		Primary	Gymnasium	Special					
Bacau	24412	35194	35556	458	23033	10217	955	7872	137697
Botosani	16311	23830	23132	395	13267	8040	247	92	85314
Iasi	28140	41444	39291	988	27792	14166	2369	60686	214876
Neamt	16499	25580	26950	404	18671	8070	904	332	97410
Suceava	25945	37314	37224	840	23224	10642	920	9909	146018
Vaslui	17672	24863	23224	401	15201	8310	277	79	90027
Nord-Est	128979	188225	185377	3486	121188	59445	5672	78970	771342
ROMANIA	648338	931973	949273	19315	767439	284412	43617	716464	4360831
% Nord-Est	19.90	20.20	19.53	18.05	15.79	20.90	13.00	11.02	17.69

Source: Romania's Statistics Yearbook, 2006

Although the region has good staff experienced in human resources education and training as well as a good potential as concerning the number of enlisted persons in different educational forms, yet another problem that appears is the young people migration to more developed regions or to other countries, because the jobs demand in region is very low and in some other regions there is a better offer and payment level for the same activity fields. It must be noticed that the North East is the third region as regarding the number of students 11.88% (Bucharest Ilfov 32.31% and North West 13.98%).

Key issues on educational infrastructure

- The North East Region benefits of a high number of graduates, representing 17.69% of the total graduates;
- The North East Region is the third region as number of students, 11.02% of the total number;
- Migration of the young graduates to more developed regions or to other countries.

3.3. RESEARCH DEVELOPMENT AND INNOVATION INFRASTRUCTURE, TECHNOLOGICAL TRANSFER AND IT&C

Science, technology and innovation are strategic fields that assure the steady technological progress and, consequently, the sustainability of the development and the economic competitiveness of a country.

This field is characterized by dynamism and complexity and it is based on large -scale use of innovation results, technological transfer, fast and modern communication, diversity of information processing methods. These factors led to a new type of society, known as "information society". The technological background of this new concept of information society is based on three elements: communication technology, information technology and multimedia production sector. The interference of these components brought out new services and applications (mobile phone networks, computer networks such as Intranet and Internet, etc.).

RDI, TT and IT&C are nowadays self-sustainable economic sectors that provide, at their turn, support for the development of other economic sectors, opening new horizons for increased competitiveness of companies and leading to the creation of new jobs.

The RDI, TT and IT sector is characterized by an evolution influenced by a series of reference changes, caused by the implications of the Romania's accession process:

- Supplementary efforts of alignment to the objectives established by the Lisbon Agenda, mainly the increasing of the economical competitiveness based on knowledge, having as aim that, by the year 2010, a minimum of 3% from GDP to be utilized as RDI expenditures, from which a minimum of 2% from the industry sector;
- The perspective of RDI programmes increase from the private sector, due to the increasing pressure generated by the necessity to be in compliance to the economical and technical regulations (technological level, quality, environment protection, commercial requirements) aiming the competitiveness insurance and the access on EU and international markets.

Main instruments of implementing the RDI policy in Romania

The objectives of the RDI policies are implemented mainly through the programmes for research development and innovation coordinated by the National Authority for Scientific Research (NASR), as specialised entity of central public administration, subordinated to the Ministry of Education and Research, having as mission to elaborate, apply, monitor and evaluate the policies in the field of scientific research, technological development and innovation.

- ***Excellence Research Programme***, launched in 2005, having as objective the development of Romanian Area of Research and thus consequently:
 - Increase of scientific and technological capacity of Romania to integrate itself into the European Area of Research
 - Preparing for the 7th Framework Programme of EU).

The programme stimulates the development of the cooperation between the units and institutes of RD, universities and enterprises in order to have an impact onto the quality of research in Romania.

- ***The National Plan for Research, Development and Innovation (NPRDI)***, launched in 1999, having in an initial phase 4 programmes, extended between 2001 -2004 with other 11 programmes, orientated to specific scientific and technical fields. Through NPRDI it is insured also the participation to the international RDI programmes by the programme dedicated to the

international scientific and technical cooperation – CORINT. The present NPRDI was closed in 2006, NASR intending to launch the future NPRDI for the period 2007 -2013.

- **The Nucleus Programmes** of research and development, launched in 2003, for the financing of the RDI activities specific to the profile national institutes
- **Grant Programme for Scientific Research**, launched in 1996, whose purpose consists in the widening of the existent scientific patrimony through stimulation of research on excellence and, also, developing the human potential for and through research.
- **The sectorial Plan of RD of NASR**, launched in 2004, in order to support the implementation of strategic objectives of sectorial development, including the strengthening of the NASR capacity to elaborate and implement specific policies
- **INFRATECH Programme** for the development of innovation and technological transfer infrastructure” was launched in 2004, instrument that will provide financial and logistic support for creating and developing institutions specialized in innovation and technological transfer infrastructure, and also to technological and science parks;
- **IMPACT Programme**, launched in 2006, in order to ensure the development of a RDI projects portfolio that will be financed under the structural funds.

The access to the RDI programmes financed from public funds is based by competition and, excepting the nucleus programmes of RD, it is opened to all the categories of participants: RD institutes, universities, enterprises with RD capacities.

RDI sector benefits also of the financial advantages due to the alignment at the RDI system of the EU, more precisely the association to the Framework Programme and the Euratom Programme, and also to the other RDI programmes developed within the European space, such as EUREKA, COST.

Financing the RDI activities

The level of RDI activities in Romania remains very low, in spite of academic tradition that covers over 50 scientific and technological fields and of the efforts realised for the alignment to EU standards. In 2004, Romania spent 0.39% of GDP for RD activities, which represent half of the average recorded in the new member state and a 5th part of the EU 25 average. Although the budgetary allocation for RD doubled in 2006, reaching 0.38% of the GDP, in order to reach the target of 3% established by the Lisbon strategy, the contribution of the private sector must also increase.

Total RD expenditures on financing sources

- thou RON in current prices-

		<i>Total</i>	<i>Enterpris es</i>	<i>%</i>	<i>Public Funds</i>	<i>%</i>	<i>Other sources</i>	<i>%</i>	<i>Abroa d</i>	<i>%</i>
2000	<i>North- East</i>	16345	8938	54.69	6833	41.81	364	2.23	208	1.28
	<i>Romania</i>	296204	145010	48.96	120859	40.8	15833	5.35	14501	4.9
2001	<i>North- East</i>	26774	12132	45.31	9670	36.12	559	2.09	441	16.48
	<i>Romania</i>	459342	218631	47.6	197332	42.96	5715	1.24	37663	8.2
2002	<i>North- East</i>	29047	15059	51.84	12037	41.44	690	2.38	1261	4.34
	<i>Romania</i>	574386	238771	41.57	278042	48.41	17107	2.98	40466	7.05
2003	<i>North- East</i>	37490	22142	59.06	14079	37.55	727	1.94	543	1.45
	<i>Romania</i>	762064	345872	45.39	362965	47.63	11654	1.53	41574	5.46
2004	<i>North- East</i>	50439	26448	52.44	22259	44.13	1094	2.17	638	1.26

	<i>Romania</i>	952872	418843	43.96	467267	49.04	14398	1.51	52364	5.5
2005	<i>North-East</i>	65326	20292	31.06	40674	62.26	1808	2.77	2548	3.9
	<i>Romania</i>	1183659	440670	37.23	633261	53.5	47537	4.02	62191	5.25

Source: National Statistics Institute – Research Development in Romania, 2005-2006

In 2005, it can be noticed that, in the North East Region, the expenditure realised by public funds (62.26%) own a higher share than the one realised by the enterprises (31.06%), situation that changed significantly against the period of 2000 -2004 when in North East Region the private expenditure was above 50%.

It must be noticed that the funds attracted from abroad have increased significantly, representing 3.9% from the total expenditure in 2005 against the situation recorded in 2004 of only 1.26%, certifying the efforts of internalisation of the organisation involved in RDI within the North East Region.

Distribution of the R&D expenditure on development regions

	2000	2001	2002	2003	2004	2005
<i>North - East</i>	5.52	5.83	5.06	4.92	5.29	5.52
<i>South - East</i>	6.29	6.15	4.59	3.47	3.19	3.59
<i>South</i>	13.27	14.09	15.82	13.92	14.11	11.34
<i>South - West</i>	4.51	4.84	3.76	2.80	5.66	3.80
<i>West</i>	5.51	3.79	4.63	6.11	4.78	4.46
<i>North - West</i>	3.78	4.16	6.74	4.80	3.41	7.52
<i>Centre</i>	7.81	6.05	6.70	6.66	4.86	4.49
<i>Bucuresti Ilfov</i>	53.31	55.09	52.70	57.33	58.70	59.29

Note: the R&D expenditure on regional level are reported to the total R&D expenditure

Source: Romania's Statistics Yearbook 2001 – 2006 processed data

Regarding the distribution of the RD expenditures on regions, it can be noticed the ascendant trend of the share of expenditure realised in North East Region from 4.92% in 2003 to 5.52% in 2005. Also, it must be underlined that the North East Region is placed on the 4th position from the point of view of RD share.

Current situation of the RDI institutions

R&D activities continue to be developed mostly in the public sector (over 60%). In North East Region there are numerous research organisations such as: RD units, universities, agriculture stations and private companies. In the Annex 1 there is presented an exhaustive list of this RD units.

Very important there is the development that was acknowledged by the research and excellence centres within the universities from the region, recognised by the **National University Research Council** (NURC) through the Governmental Programme CEEEX.

In this context, between 2001-2006 in the North East Region there were established 12 Excellence Centres within the following universities University Al.I. Cuza Iasi, Technical University Gh. Asachi Iasi and Medicine and Pharmaceutics University Gr.T Popa Iasi.

Also, during the same period, NURC recognised 79 research centres in the North East Region located within the following universities: University Al.I. Cuza Iasi, Technical University Gh. Asachi Iasi, Medicine and Pharmaceutics University Gr.T Popa Iasi, Bacau University and „Stefan cel Mare” University from Suceava.

The list of research and excellence centres from the North East Region it is presented within the Annex 2.

Staff situation from the R&D field

The disadvantageous salaries, material resources totally inadequate for the realisation of performances, and also the opportunities offered the research programmes from other countries, had been leading gradually to the decreasing of the staff number from the R&D field, plus to the increasing of the average age level of R&D staff, thus the persons of over 40 years represents currently 60% of the total R&D staff.

	<i>Nord-Est</i>	<i>Sud-Est</i>	<i>Sud</i>	<i>Sud-Vest</i>	<i>Vest</i>	<i>Nord-Vest</i>	<i>Centru</i>	<i>Bucuresti Ilfov</i>
<i>RD staff (no persons)</i>								
<i>2002</i>	3368	1934	4016	2757	1925	3183	3479	18590
<i>2003</i>	2926	1934	4205	2841	3268	2742	2508	20631
<i>2004</i>	3168	1922	4080	2799	3315	2302	2508	20631
<i>2005</i>	3704	1898	3850	2569	1855	2690	2419	22050
<i>From whom Researchers</i>								
<i>2005</i>	2872	1455	2256	2142	1275	1760	1807	16071
<i>RD employees 10000 civil occupied persons</i>								
<i>2002</i>	25.7	18.9	32.9	31.4	23.6	28.1	41.1	187.2
<i>2003</i>	22.7	18.9	24.8	32.5	40.3	24.2	33.9	196.9
<i>2004</i>	25.3	18.8	34.5	33.0	40.5	20.5	24.9	210.3
<i>2005</i>	29.3	18.5	32.4	30.0	22.2	23.5	24.0	207.6

Source: Romania's Statistics Yearbook 2001 – 2006 (processed data)

As regarding the number of employees in RD activities, the North East Region is one of few regions that are characterised by an ascendant trend, thus since in 2003 there were only 2926 employees, in 2005 the number increased reaching the level of 3704 persons. Also, it must be underlined that the North East Region is placed on the second position from the point of view of researchers number, after Bucharest Ilfov.

In the same time, the index per 10000 RD employees is 29.3 at the level of the year 2005, increasing situation comparing to the previous years.

Situation of the innovative enterprises

As regarding the SMEs that have as main activity object in the statutory documents the RD activity, it is very interesting to underline that, excepting the Bucharest Ilfov Region that benefits of a special situation, the North East Region records the highest number of SMEs, value equal to the one recorded in North West Region.

	<i>North-East</i>	<i>South-East</i>	<i>South</i>	<i>South-West</i>	<i>West</i>	<i>North-West</i>	<i>Centre</i>	<i>Bucharest Ilfov</i>
Number of local units								
<i>2001</i>	31	20	17	19	24	38	22	163
<i>2002</i>	36	24	24	21	31	41	28	209

2003	45	25	25	18	37	45	38	255
2004	40	23	23	20	30	40	32	247
Number of occupied persons								
2001	1353	1211	1625	641	915	1125	993	7823
2002	1757	1402	1760	1191	1292	1384	1057	8375
2003	1855	1569	1355	864	1058	1325	843	8702
2004	1429	1599	1308	1091	805	1184	556	10655
Turnover – billions lei								
2001	129	139	291	142	141	150	178	1445
2002	268	196	365	198	226	184	207	2024
2003	370	268	291	155	214	252	187	2511
2004	414	389	390	286	274	261	199	3333

Source: Role of SMEs in the Romanian economy, NSI 2006

Also it must be noticed that the recorded turnover – 414 billions lei of the RD is the highest among the development regions of Romania, excepting Bucharest Ilfov Region.

SMEs with innovation activities IMM

It is generally known the reduced capacity and the relative low interest of the companies for the RDI activities both for the own activities and the ones developed in partnership with specialized institutions. Plus, there is a reduced absorption capacity of research results.

The study „Romania – An Assessment of the Lisbon Score head”, realised by the Romanian Society for Economy in 2004 characterise the present situation of the innovation within the Romanian companies as following:

- The main source of competitiveness is represented by the low cost and not by the innovation degree of products and technologies;
- The new technologies generally are from import or through FDI and not through the local effort.

The statistical survey regarding innovation realised by the National Institute for Statistics shows that in North-East Region are recorded a number of 699 enterprises with innovation activity, the total value of the innovation expenditure realised at the level of 2004 being of 387,624 thousand lei (RON).

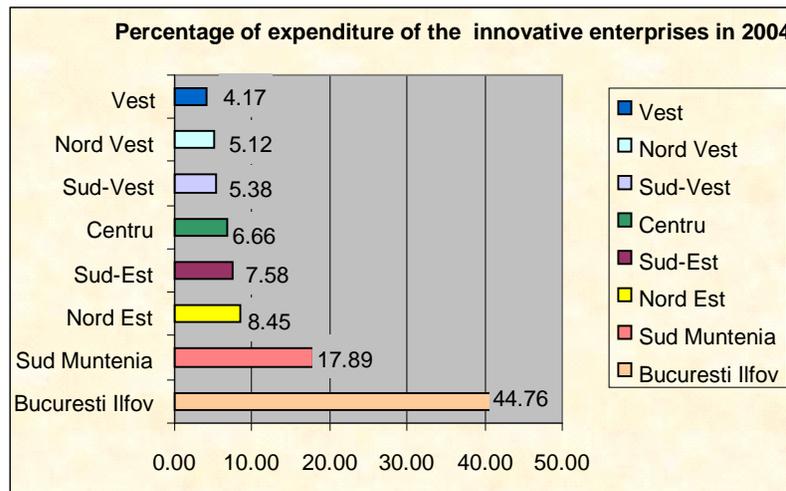
Innovation activity in 2004

	<i>Innovation expenditure (thousand lei RON – current prices)</i>					
	<i>Number of enterprises with innovative activities</i>	<i>Expenditures for innovation</i>	<i>RD internal expenditure</i>	<i>RD external expenditure</i>	<i>Acquisitions, equipments, devices</i>	<i>Acquisition of external knowledge</i>
<i>Romania</i>	5171	4588077	745334	144854	2852917	845972
<i>North - East</i>	688	387624	38282	2861	341178	5303
<i>South - East</i>	923	347979	37258	4708	305355	658
<i>South</i>	457	820913	97895	36890	669968	16160
<i>South - West</i>	216	246867	57524	5626	179954	3763
<i>West</i>	354	191261	27565	12024	148199	3473
<i>North - West</i>	675	235015	44420	8801	167190	14604
<i>Centre</i>	712	305669	62930	13418	219140	10181
<i>Bucharest Ilfov</i>	1176	2053749	379460	60526	821933	79183

Source: *Innovation Survey in Industry and Services 2004, INS 2006*

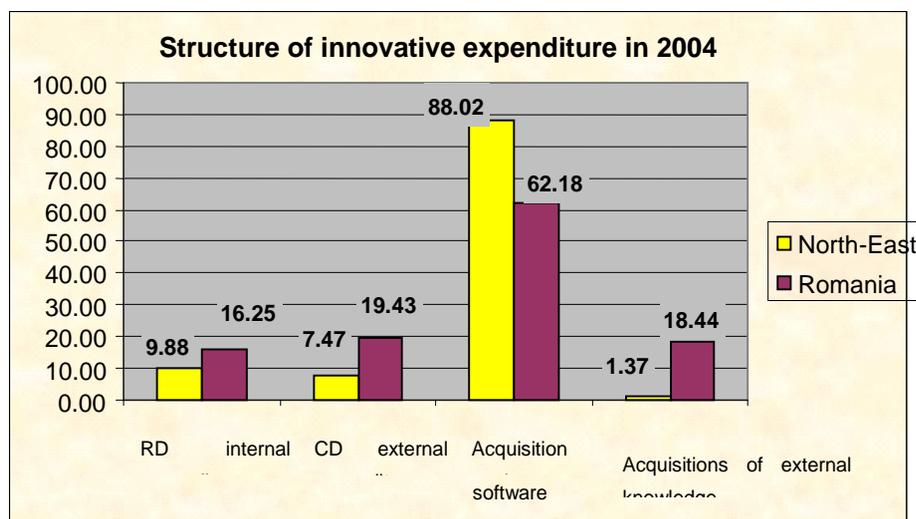
In North East Region activates 13.30% from the total number of national innovation enterprise, an average percentage taking into account that in South West Region is recorded the lowest level of 4%, and in Bucharest Ilfov 22.74%.

From the point of view of the level of innovation expenditure realised by the enterprises, the North East Region records a percentage of 8.45%, being situated on the 3rd place among the development regions.



Source: *Innovation Survey in Industry and Services 2004, INS 2006 (processed data)*

The innovation expenditure and the distribution depend on the strategy that the company is following, a company being innovative even if it does not allocate resources for RD, but records expenditure for the introduction of new technologies, acquisitions for brevets, licences, inventions.



Source: *Innovation Survey in Industry and Services 2004, INS 2006 (processed data)*

From the above graphic, it can be noticed that the companies have the tendency of investing in the acquisition of equipments and software, in North East Region the percentage of this type of expenditure being 88.02, higher than the national average of 62.18%.

In the North East Region, the level of the internal RD expenditure of 9.88% and the external RD expenditure of 7.47% is inferior to the national average of 16.25%, respectively

19.43%.

The statistical survey regarding the innovation shows that the factors that block the innovation process can be divided on three categories: cost factors, market factors and factors regarding the knowledge accumulation. In this context, the reason of the blockage in Romania is related to the lack of financing, high innovation cost, difficulties in finding cooperation partners, the fluctuant demand of innovative services and products, or lack of qualified staff.

Additional information provide the study “Business environment, SMEs situation and performances in 2006” realised by the National Committee for SMES from Romania (NCSMER), on a representative statistical segment, insuring an informational support adequate for extracting observations, conclusions and recommendation, including in the field of “Innovation in SMEs”.

As regarding the nature of the efforts of the SMEs to innovate, it is noticed that the highest number of SMEs are focused onto the new products (34.73%) and new technologies (32.82%).

Distribution of the innovation object within SMEs

Innovation fields	SMEs							
	North-Est	Sud-Est	Sud	Sud-Vest	Vest	Nord-Vest	Centru	Bucuresti Ilfov
New products	34.73	45.73	50.47	24.00	39.19	37.50	46.09	38.86
New technologies	32.82	30.15	33.96	12.00	25.68	22.37	18.75	31.44
New marketing and management approaches	25.57	21.11	19.34	42.00	36.49	19.74	19.53	19.21
Informatics system	0.38	0.00	0.00	2.00	8.11	0.00	0.00	1.31
Not applicable	18.70	25.13	16.51	22.00	12.16	28.29	14.84	19.65

Source: Study “Business environment, SMEs situation and performances in 2006”

Realising a comparative analysis, it can be noticed that the SMEs from the North East Region are focussed in a lower proportion on the new products, the recorded percentage being one of the lowest, but it can be underlined that it is much more interested on new technologies, the recorded value being over passed only by the South Region.

The SMEs analysis from the point of view of the percentage from investments allocated to the innovation, shows that 30.89% of the investigated companies did not allocated any percentage in this purpose.

Distribution of the innovation investment within SMEs

Share of the investment dedicated to innovation	SMEs							
	Nord-Est	Sud-Est	Sud	Sud-Vest	Vest	Nord-Vest	Centru	Bucuresti Ilfov
0%	30.89	26.06	18.50	25.00	11.27	36.99	25.00	16.75
1-5%	15.85	28.19	20.50	29.55	14.08	13.70	15.83	24.40
6-10%	19.11	19.68	16.00	20.45	26.76	16.44	22.50	20.57
11-20%	13.01	12.23	23.50	11.36	22.54	13.70	25.00	21.05
21-50%	13.01	9.04	12.00	6.82	18.31	13.70	3.33	11.48
Over 50%	8.13	4.79	9.50	6.80	7.04	5.48	8.33	5.74

Source: Study “Business environment, SMEs situation and performances in 2006”

The SMEs that realise innovation investments are characterised by a high availability to allocate funds in this direction comparatively to other regions, thus 21.14% of the SMEs allocate over 21% from the total investments in innovation expenditure, being the third region after West and South-Muntenia.

Concerning the technological transfer, this was mostly achieved in North-East region by the privatisation of the enterprises and by being purchased by the private foreign companies that brought new production technologies, thus being obtained products with higher quality at reasonable prices and with increased productivity. However, this modality had applicability in only few enterprises due to lack of attractiveness of most of them. The insufficient technological development is a major constraint for enterprises, particularly for SME's, which do n't have enough financial resources for the innovation process.

RDI Infrastructure and Technological Transfer

The infrastructure of technological transfer and innovation, respectively institutions specialised in the transfer and capitalisation into economy the R&D, is still insufficiently consolidated and valorised, due to the fact that the structures created did not have an important role into the national economy. In Romania there are 7 scientific and technological parks. Presently, only 3 of them are operational, one of which it is placed within the North East Region - TEHNOPOLIS Park Iasi.

Development and consolidating the infrastructure for innovation and technological transfer it is an important objective of the governmental policies from the RDI field, that may ensure a quite favourable environment for:

- Stimulating the partnership between companies and research units;
- Stimulating the demand and the own activities of RD of the companies, especially in the high tech fields;
- Increasing the number of innovative fields in advanced technological fields, by supporting their setting up and development.

In the North East there are the following technological transfer and innovation infrastructure units:

- **Scientific and Technological Park TEHNOPOLIS Iasi** , project financed by Phare funds

The objective of this project is the creation of a scientific and technological park intended for high-tech industries that include companies operational in the IT&C and biotechnology fields. The purpose is the stopping of the migration of young specialized labour force by providing jobs for the graduates of these academic fields.

The park is located in Iasi, at 5 minutes distance from Nicolina railway station and national road Bucharest – Iasi and at only 35 minutes far a way from Iasi Airport.

- **Industrial Park HIT Hemeiusi Bacau** , project financed by Phare funds

The present location was chosen due to the geographic positioning, the existing infrastructure within the counties, dynamics of business environment and the oport unities for labour force qualifying and specialization. Therefore, it was decided to locate this park near Bacau having in view that this city is first ranked in the central part of Moldavia in terms of

communication infrastructure, disposing also of medium and high-level education institutions necessary for the specialization of labour force into the IT&C technology.

The HIT Industrial Park of Hemeiusi represents an opportunity both for the counties of North-East Region and for the Northern counties of South-East Region (specifically Vrancea and Galati counties), with positive effects on reducing the labor force migration to other more economically developed regions and consequently decreasing the unemployment level and related social costs.

- **Botosani Industrial Park** was set up in a public private partnership, being managed SC ELECTROMINING SA Botosani and has as target sectors the processing industry, mechanic, machinery constructions.

The total surface of the park is 129.500 sm from which:

- Industrial Park – existing buildings 84.265 mp
- Industrial Park – new buildings - 20.000 sm
- Commercial Centre

- **Ceahlau Industrial Park** is managed by SC MECANICA CEAHLAU SA and has as main target sector machinery constructions.

The total surface is of 10.44 ha from which developed area 3.15 ha and undeveloped area 7.29 ha.

- **Industrial Area Buhusi** is managed by SC STOFE BUHUSI SRL and provides to the companies from the light industry various specific support services.

The total surface is of 24 ha from which developed area 15 ha and undeveloped area 9 ha.

- **Industrial Area Siret** is realised in a public private partnership, managed by the Siret City Hall and has as main target sectors the following: light industry, wood processing industry, mechanic industry, textile industry and food processing industry.

The total surface is of 21.15 ha from which developed area 15.85 ha and undeveloped area 5.30 ha.

- **“ASTRICO NORD-EST”** is the first recorded cluster from the North East Region at the end of the 2006. The cluster is envisaged as an industrial group that promotes the interest of 7 firms from the textile industry from the region, having as activities the production and selling of clothes and being supported by RIFIL S.A.

Information society

The continuously development of the ITC market constitutes an important factor that contributes to the development of the information infrastructure and the increase of the economy competitiveness. Romania records, accordingly to the last EITO study, one of the highest dynamics

The development of the informational infrastructure within the Romanian society represents a basic element for the modernisation and increased efficiency of each activity field. In the North East Region, the last years brought a very strong development of the ITC sector through the improvement of the communication network and the increase of companies that provides informational services. This development is superior to the growth recorded within the other economic sectors.

As regarding the PC endowment and its increase, it is noticed an ascendant trend, with an average annual rata of increase of the sales volume of over 50%. Still the number of PCs per 100

employees is 10.9 PCs/ 100 employees at the end of, below the UE 15 average of 40 PCs/ 100 employees.

Distribution of the main ITC indicators in 2004

Region	Nr. of companies with Internet connection - %	Nr of PCs/ 100 employees	Number of PCs connected to the Internet - %-	Nr of ITC specialists/ 100 de salariatii -%-
North-East	18.3	10.9	40.5	1.5
Sud Est	14.4	12.5	33.5	1.1
Sud Muntenia	24.6	11.8	41.6	1.6
Sud Vest	19.5	10.9	41.8	1.5
Vest	19.0	11.4	40.7	1.9
Nord Vest	18.6	13.8	39.5	2.6
Centru	14.4	10.7	34.8	1.5
Bucuresti Ilfov	32.3	17.1	52.5	2.3
Romania	21.4	13.3	44.0	1.8

Source: Statistic bulletin, NSI 2006

Also the e-banking sector is in a process of spectacular development due tot the fact that the banks implemented programmes for the promotion of the payments realised by electronic means, recording an increased trend of the cards use.

In North East Region is recorded an increase of the number of companies, hardware and software suppliers as well as data base processors.

	North-East	South-East	South	South-West	West	North-West	Centre	Bucharest Ilfov
Number of local units								
2001	307	299	269	210	344	548	590	1632
2002	386	359	381	287	437	686	751	1990
2003	558	525	554	379	622	979	1066	2717
2004	736	658	666	481	792	1237	1309	3495
Number of occupied persons								
2001	994	958	878	680	2069	2711	3038	10526
2002	1246	1108	1123	859	2191	2796	3161	9531
2003	1599	1427	1367	1100	2447	3113	3814	11802
2004	2261	1734	1585	1343	2928	3760	4463	14306
Turnover - mld lei								
2001	229	214	443	173	587	829	589	7779
2002	516	559	1083	384	1013	1512	1336	11050
2003	776	731	1129	594	1550	1839	1815	15472
2004	1568	980	1295	1006	1645	2799	2558	19234

Source: Role of the SMEs in the Romanian Economy, INS 2006

The above table show an ascending trend of the SMEs that activates in informatics field, the number of local units recording a very important development from the 307 in 2001 to 736 in 2004, representing a spectacular growth of 139.73% between 2001 - 2004. Also the number of employees has a positive trend from 994 in 2001 to 2261 occupied persons in 2004.

Regional experiences in the RDI field

A positive thing North East Region in RDI field is the development of PARTNER Thematic Network program, with the purpose of supporting the regions with regional innovation

strategy projects. Through this project, in which NE RDA is a partner, the following results are to be obtained:

- Methodology support for regions of the candidate countries that are designing regional innovation strategy projects;
- Exchange of information, experience and good practice;
- Increasing of the awareness level related to the importance of regional innovation strategies;
- Cooperation networks between Member States of the EU, Candidate Countries, Newly Independent States and Mediterranean Regions.

This project is located in regions of member states in EU and of candidate states. RDA North-East is a member of this network.

In the same area of innovative development, but also related to the academic cooperation with industrial environment, the North East RDA was partner in another programme called SAIL (Strengthening Academic and Industrial Links) Network. SAIL objective is to facilitate the exchange of knowledge and experience at trans national level concerning academic and industrial cooperation between regions and it is located in Development Regions from the following states: Germany, Crete, Island, Spain, Great Britain, Sweden, Romania, Northern Ireland, Cyprus, Poland, Israel.

Through this program, at the NE region level, these results were achieved:

- promotion of innovative development, providing information regarding the opportunities for enhancing trans national partnership, developing experience exchange activities, including the exchange of personnel, study visits;
- including industrial and academic cooperation on the political agenda of the regions in the network;
- dissemination of the information through a web site, a newsletter and two conferences.

Key issues on RDI sector:

- financing of RDI the sector of 60.26% from the state budget - 2005;
- during 2002 -2005 the RDI expenditure realised in North East Region recorded an ascendant trend;
- number of employees on RD sector recorded an ascendant trend, reaching 3704 employees in 2005;
- North East Region is placed on the second position from the point of view of researchers number, after Bucharest Ilfov.
- low receptivity of the companies to the RDI results due also to the low absorption capacity of the results of research by the enterprises;
- number of enterprises having as main activity field the RD is 40, and the number of enterprises with innovation activity is 688 (13.30% from the national level) – 2005;
- lack of communication between the RDI sector and the private sector and consequently lack of partnerships that could create the premises to develop this sector impact into the economy;
- the technological transfer and the innovation towards the economy is still in an initial phase of development, due to the fact that the specialised infrastructure for the diffusion, transfer and valorisation of the RDI results is still in a crystallisation process.

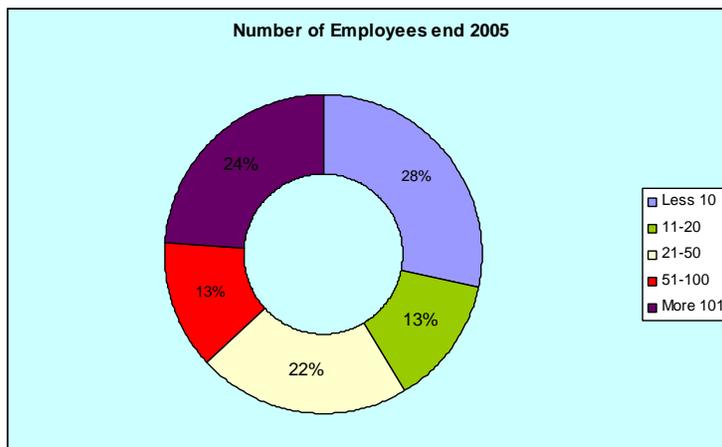
4. SECTORIAL ANALYSIS

4.1 RESULTS FROM SME 'S SURVEY

The following results show the panorama for the regional companies. There have been e-mailed a number of 2.000 questionnaires. The approach has been focused, first into the characteristics and the problematic of regional enterprises and second, in the analysis of their capacity to develop new products and their adaptation process to the new market conditions. Third, and finally, in the way those develop the innovation activities internally and in collaboration.

The predominance of the SMEs

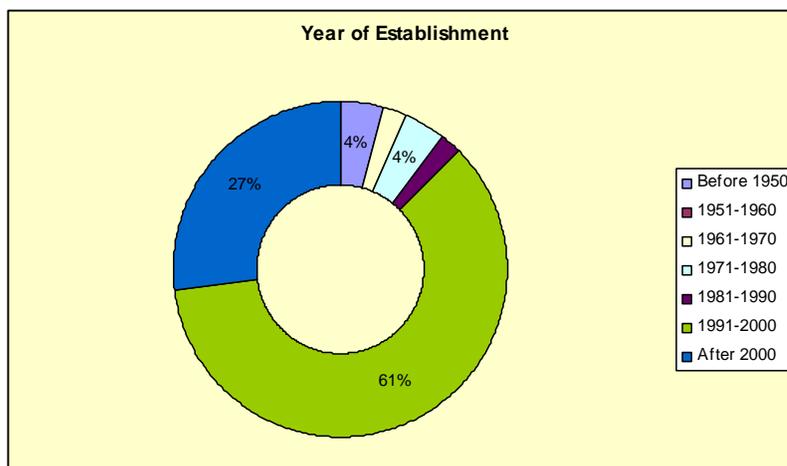
Related with the size of companies which have answered the questionnaire, the majority of them are small and medium companies.



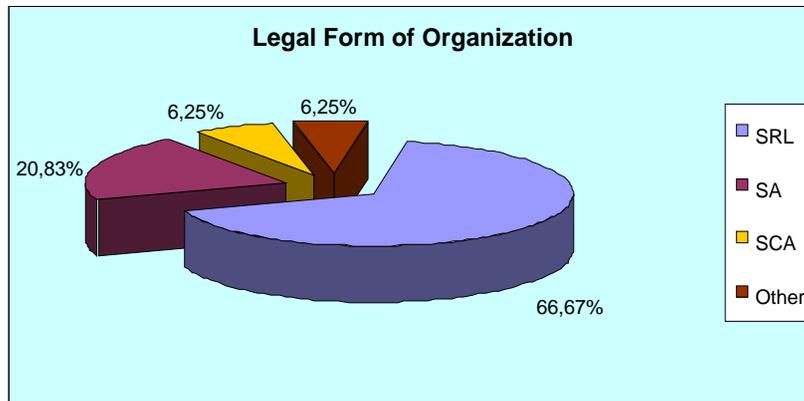
4.1.1 THE CHARACTERISTICS OF INTERVIEWED COMPANIES

A young economic tissue

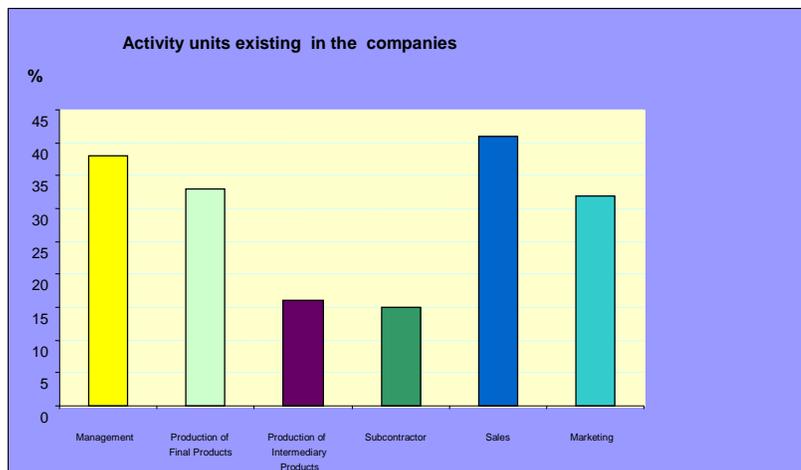
The majority of these companies were created between 1991 and 2000, as it is showed in the following graphic. So, the majority of the interviewed companies are relatively young illustrating the renovation process of the economic activities in the region.



Almost of the companies have adopted the limited liability company (SRL form), as it is showed into the graphic. The other legal forms (stakeholders shared company-SA or public owned company-SCA) are less representative.



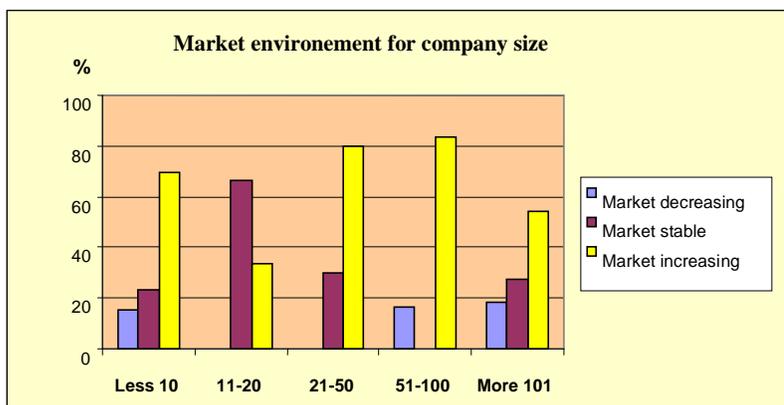
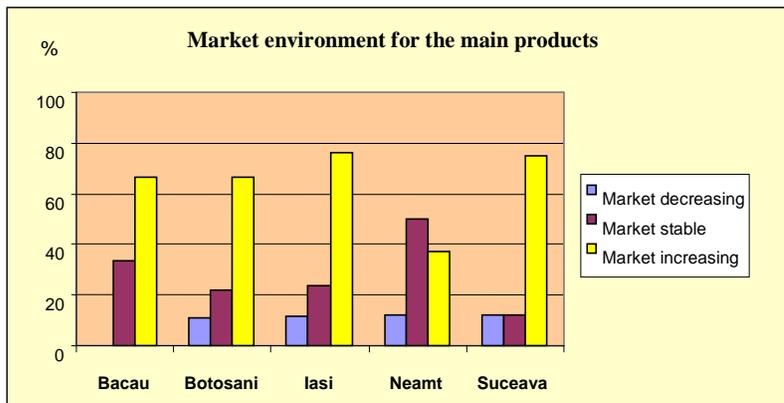
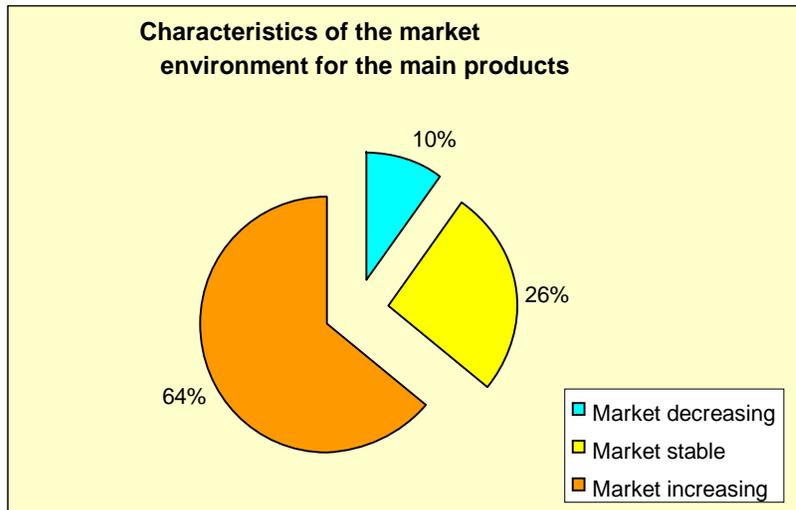
Related with the activity units the companies have the traditional and most usual units. Most of companies have sales unit, management unit, production of final products and marketing units. Fewer companies declare to have subcontractor or production of intermediary products. It may be indicates a lower relationship between companies.



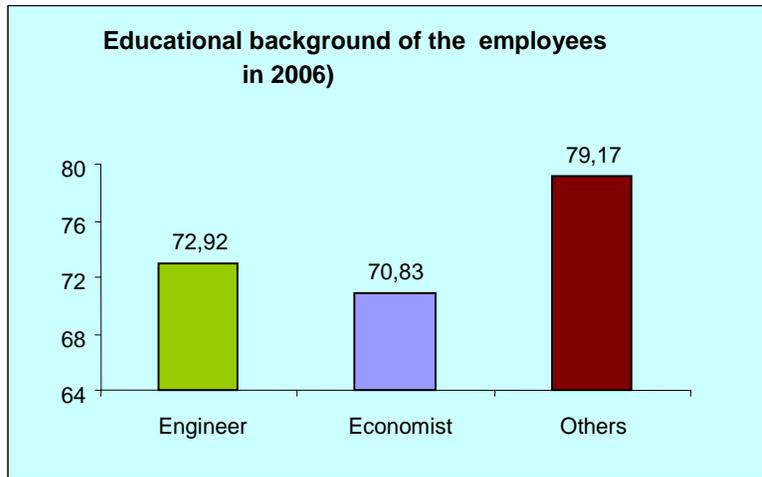
The majority of companies are positioned on increasing markets, which is a good perspective for the future.

It is also for all the counties where there are not big differences. Iasi and Suceava have the biggest percentage of companies operating on increasing markets. Bacau and Neamt have also, an important weight of stable market.

The analysis of the markets in function of companies' size shows that the some small and medium companies are positioned on increasing markets (between 21 and 100 employees) whereas the small companies are positioned on stable markets. It is important to say the dynamism of micro enterprises (less than 10 employees).



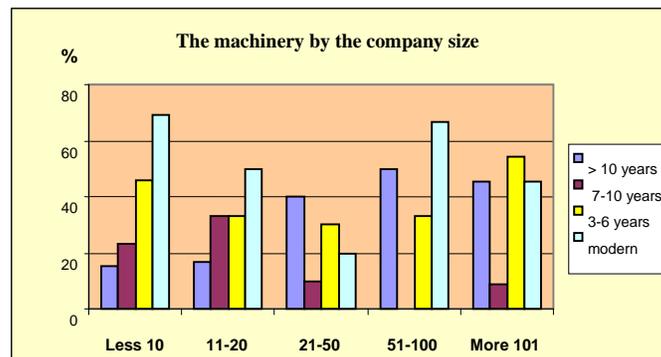
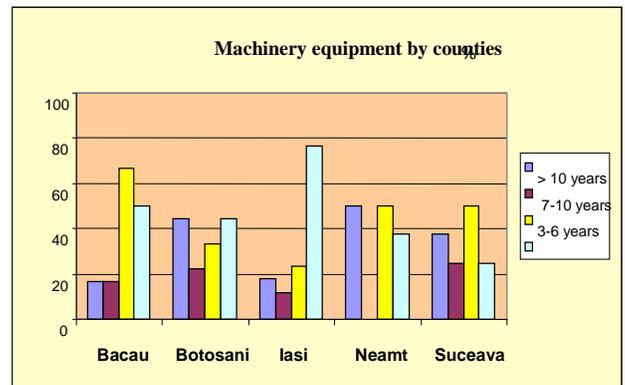
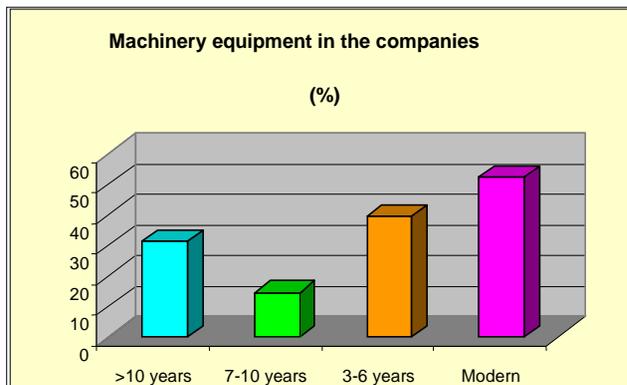
The educational background shows equilibrium between the different education levels but many of the companies declare to have non-qualified labour force.



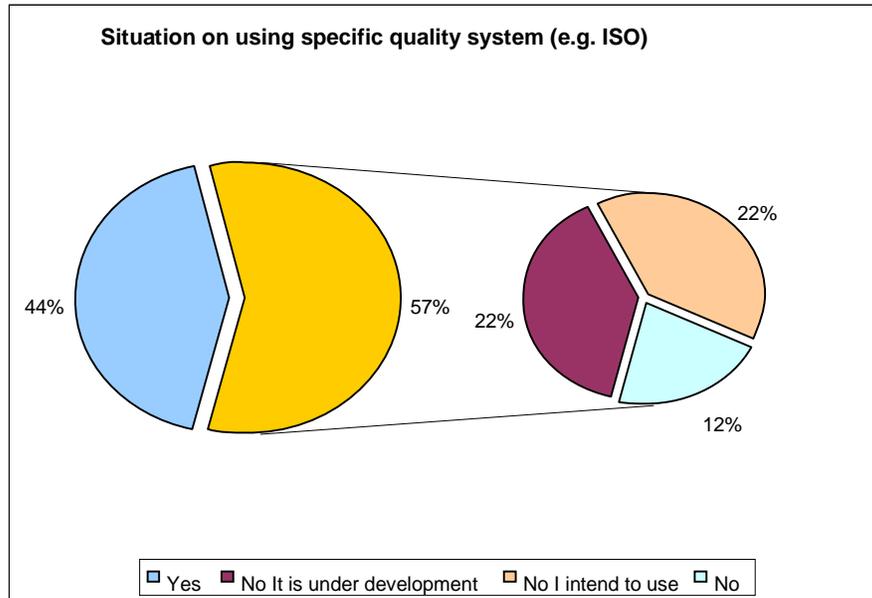
50% of the companies declare to have modern equipment and in general it is from the 3 and 6 years old. So, this data illustrates the started process of change taking place into the region.

Iasi is the county with more modern equipment on the contrary Suceava presents the oldest equipment. Bacau and Neamt register a medium position. The modern equipment is declared mainly in the micro enterprises. The medium and big companies have both modern and old equipments.

It is important so say that there is not a direct relationship between a new company and the new equipment because sometimes these companies declare to start their activities buying second hand equipments.



Few companies have implemented a quality system and also few of the companies which do not have quality system declared that intend to use it. *It is a potential field to work from the regional strategy taking into consideration that the quality is a mature topic related to the innovation at international level.*



The need for assistance in the companies

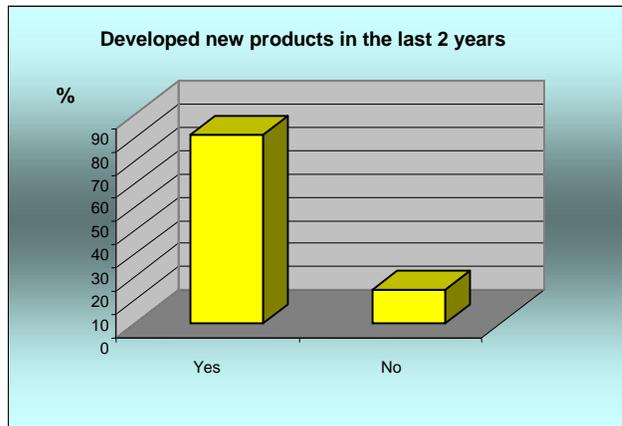
All of the items proposed were recognised as activities which need assistance for the interviewed companies. But, the main need from the companies seems to be for the funding. The second need is the equipment and third, new products development. See Annex 1.

At territorial level the needs are similar to the whole region. More or less is the same in relation with the companies' size. The most important activities with need for support according to the company size are:

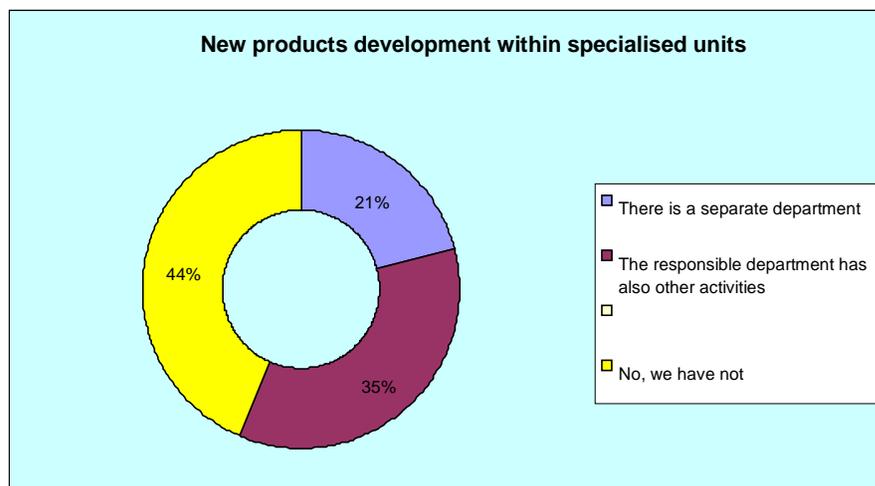
- marketing and new products development within micro enterprises,
- quality improvement within companies with 11-20 employees
- business organisation, education and export within companies with 51-100 employees
- new products development for the companies with more than 1 00 employees.

4.1.2 COMPANIES WITH NEW PRODUCTS

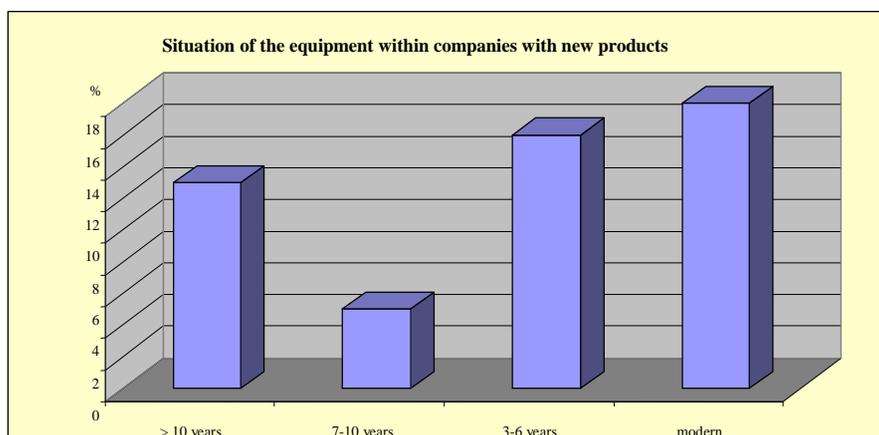
Related with previous question which indicate the future trend, main of the interviewed companies have developed new products in the last two years. This express the adaptation process of the companies to the market requirements.

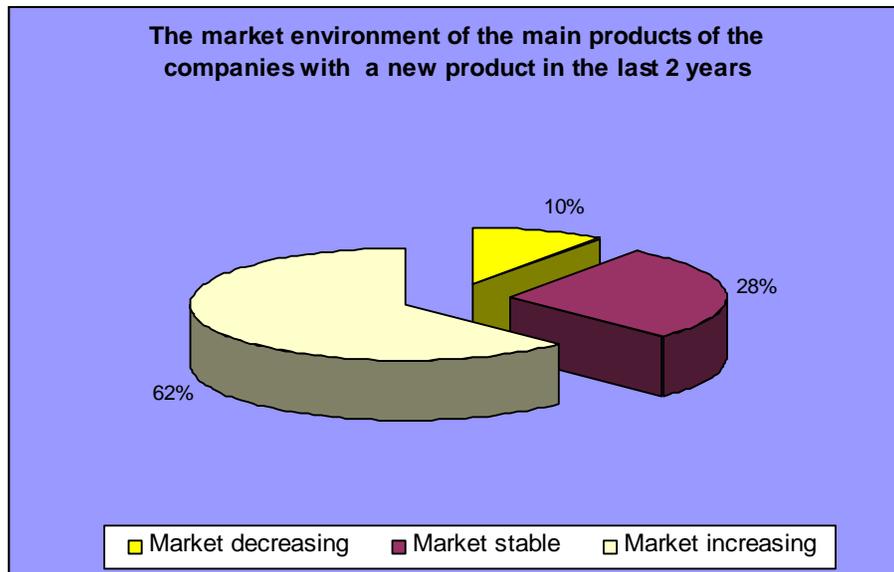


But an important number of the companies *do not have a department to develop these new products*. It is a relevant percentage which is correlated with the small size of the companies interviewed.

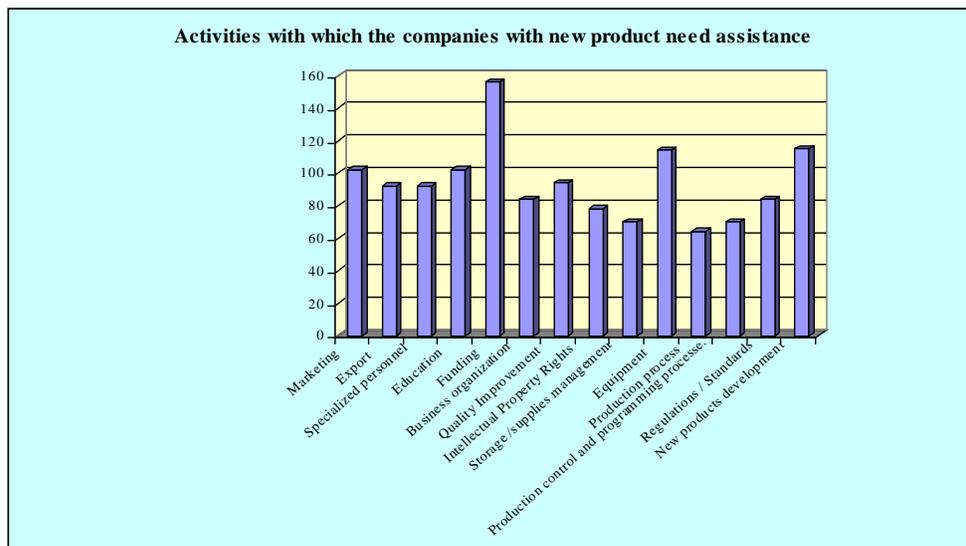


If we analyse the equipment of the companies which have developed a new product we can see that the most of the companies with a new product have modern equipment. The majority of these companies are positioned on a market increasing, but it is interesting to note that also some of these companies are on stable markets and even on decreasing markets.



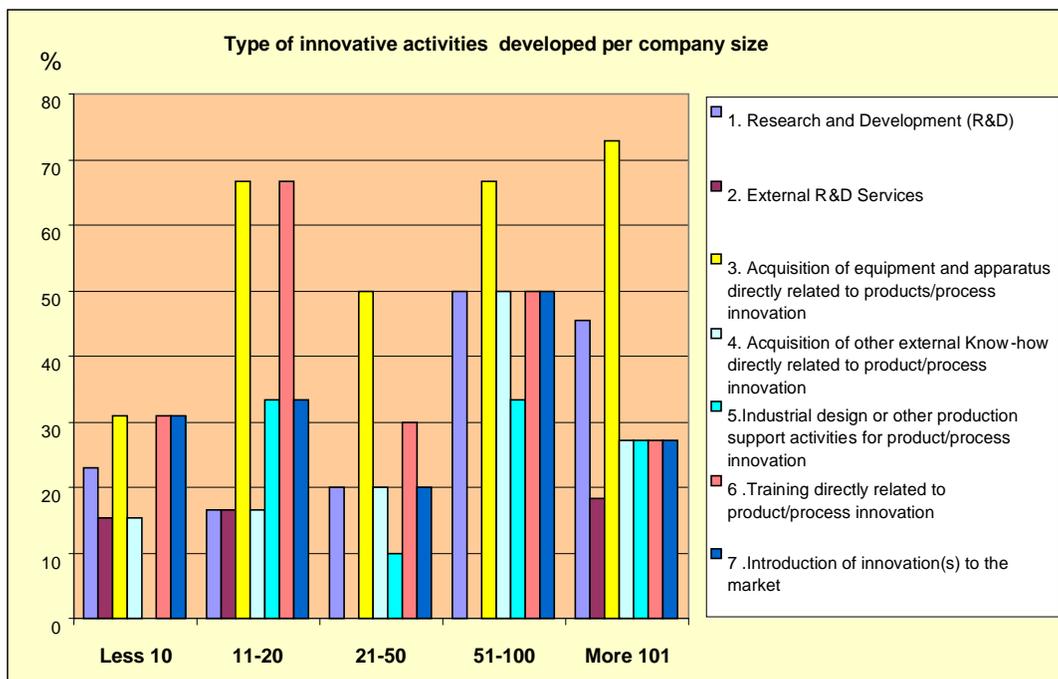
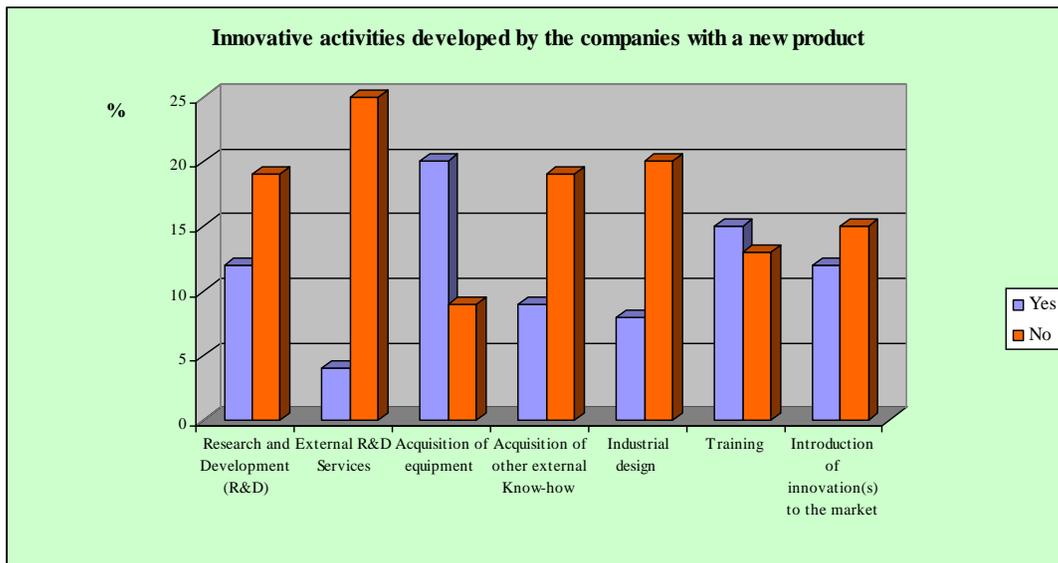


As it is possible to see in the following ranking of the need, the most important need for the companies with new products is funding and in a second level equipment and new product development. In this sense, these companies follow the same line that the all the companies interviewed.



The main innovation activity for the companies with a new product is the acquisition of the equipment and in the second place training. A few degree of R&D but it looks to be internal because the external R&D services have a big percentage of negative answers.

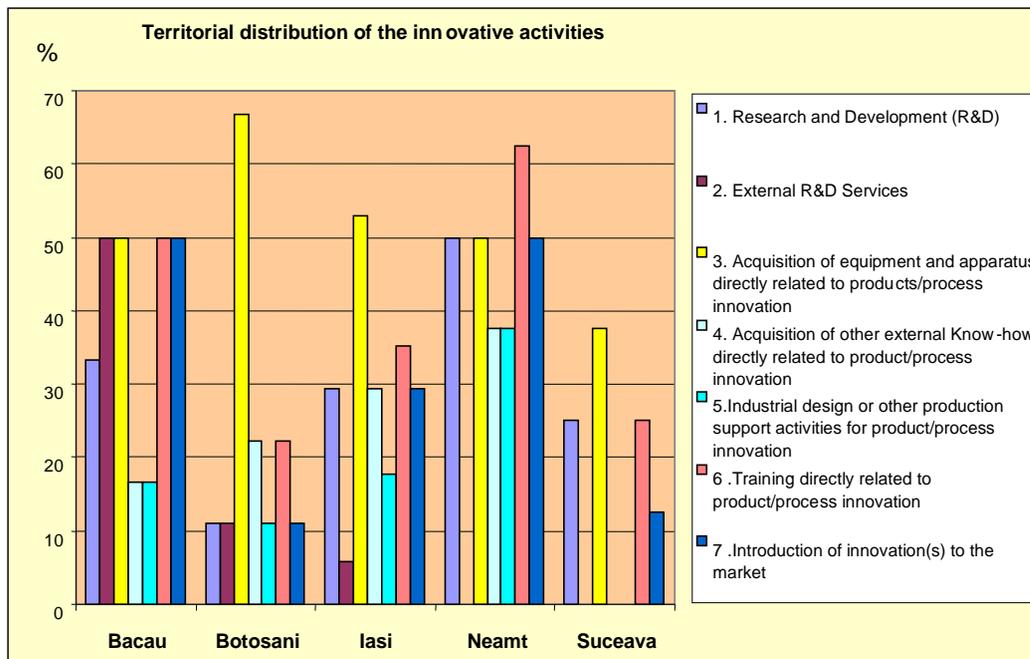
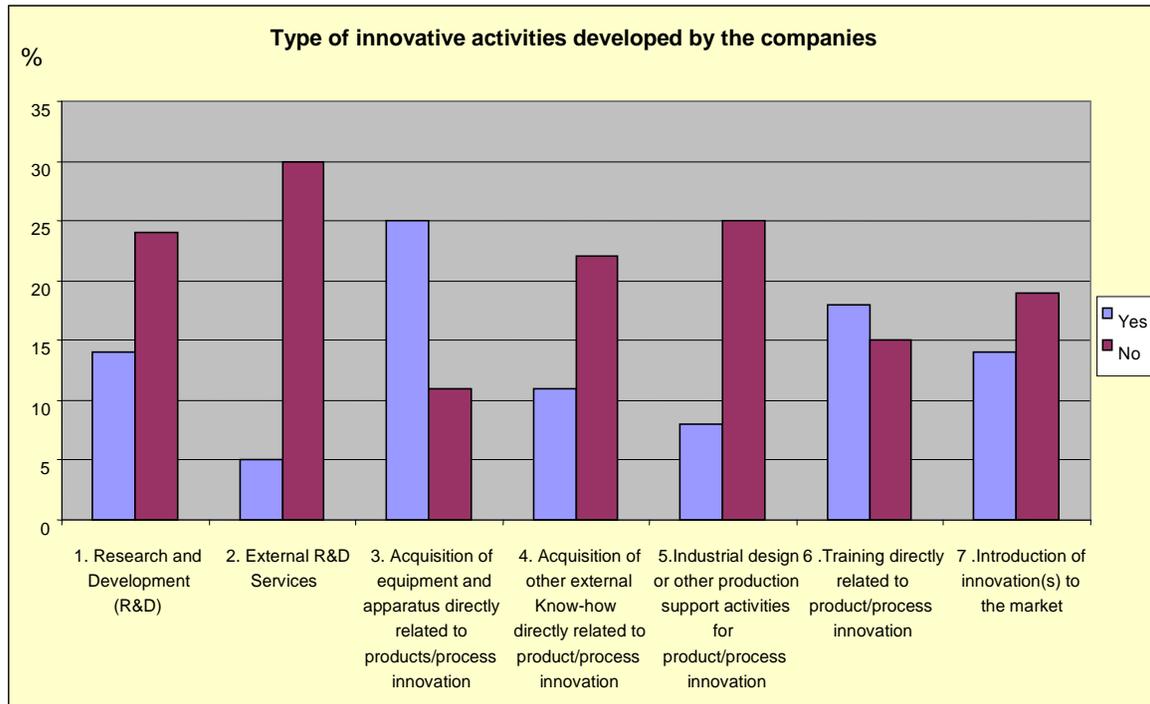
It is the same if we observe this aspect breaking down the companies by size. Micro enterprises have a low level of answer in all of the proposed items, due to their biggest difficulties to develop innovative activities.



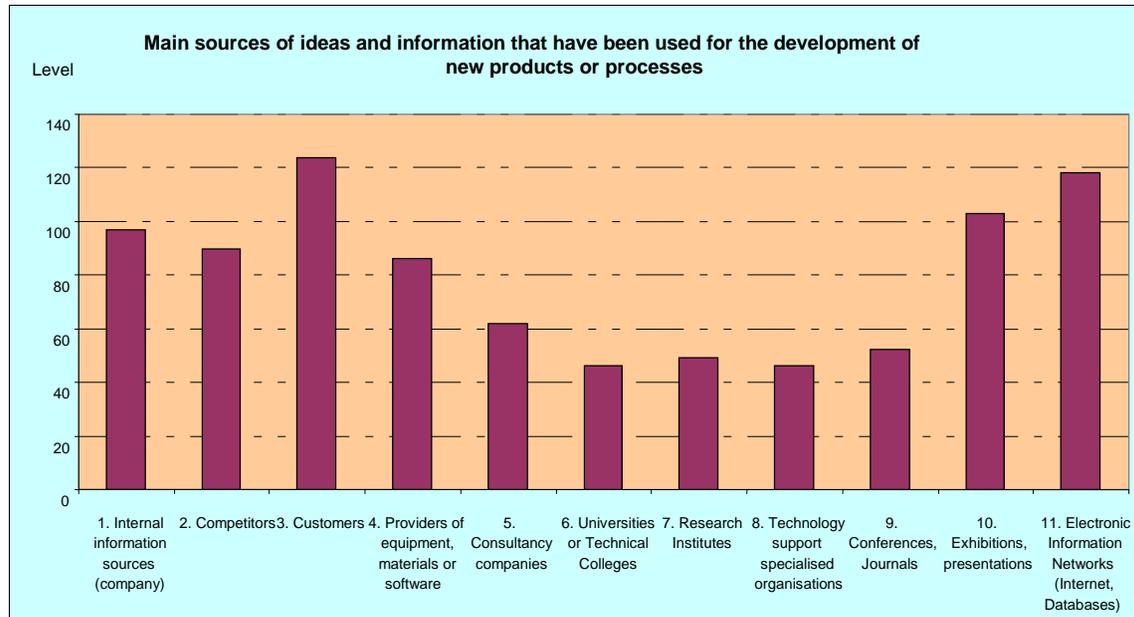
For these companies with new products the main sources of ideas, information are the consumers, the electronics networks, exhibitions and presentations. They do not use too much technology support organisations, universities or research centres.

4.1.3 INNOVATION ACTIVITIES AND COLLABORATIONS

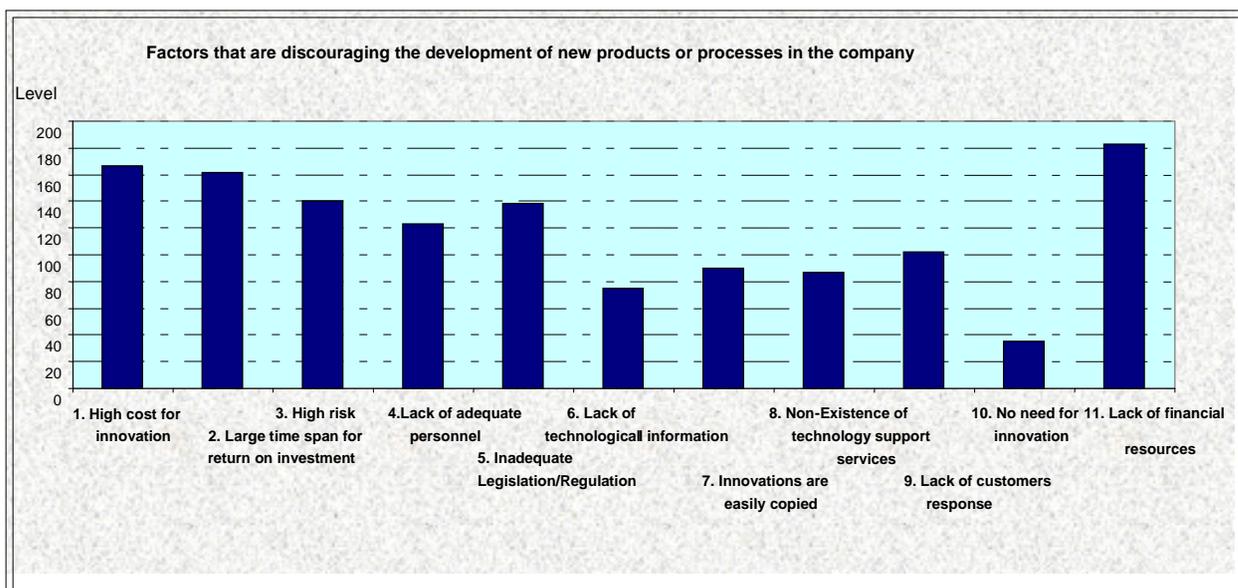
The main innovative activities in which the companies are involved are the acquisition of equipment and the training directly related to the product or to the innovation process. So, the internal R+D+I is low because the companies are worried to modernise urgently their equipment as the base, than to develop other kind of innovation process.



The interviewed companies prefer to use the information from their customers, electronic information networks, fairs, exhibitions and product presentations to develop their new products. On the other side the universities, research centres or technology centres are very less used for technology transfer, showing the *disconnection between the companies and the potential R+D+I supply in the region*.

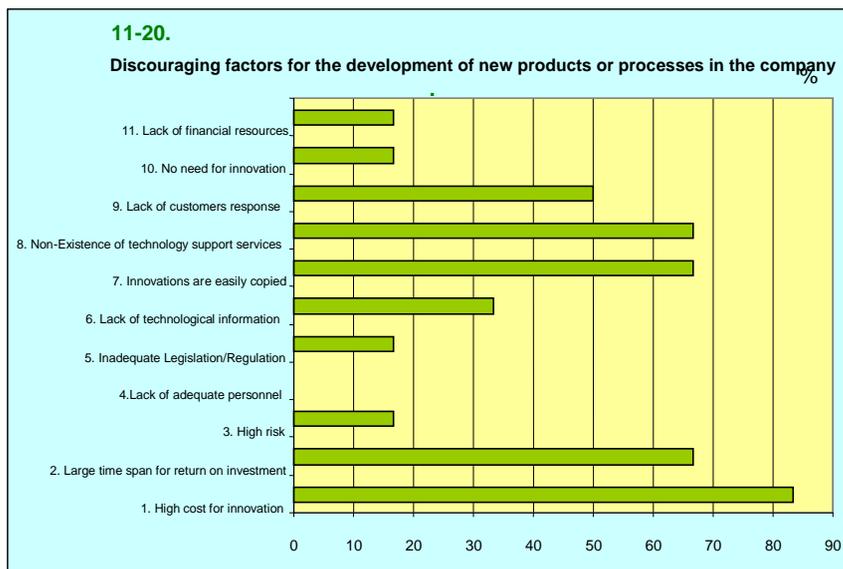
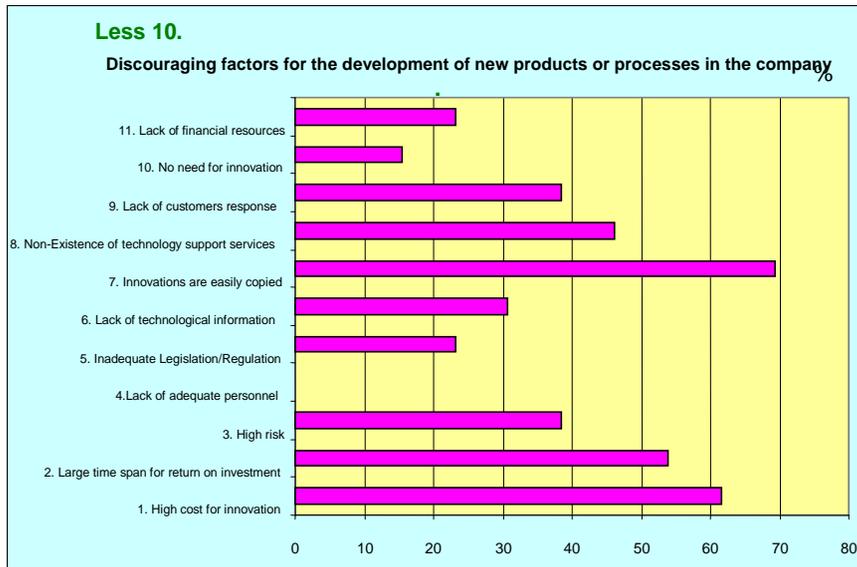


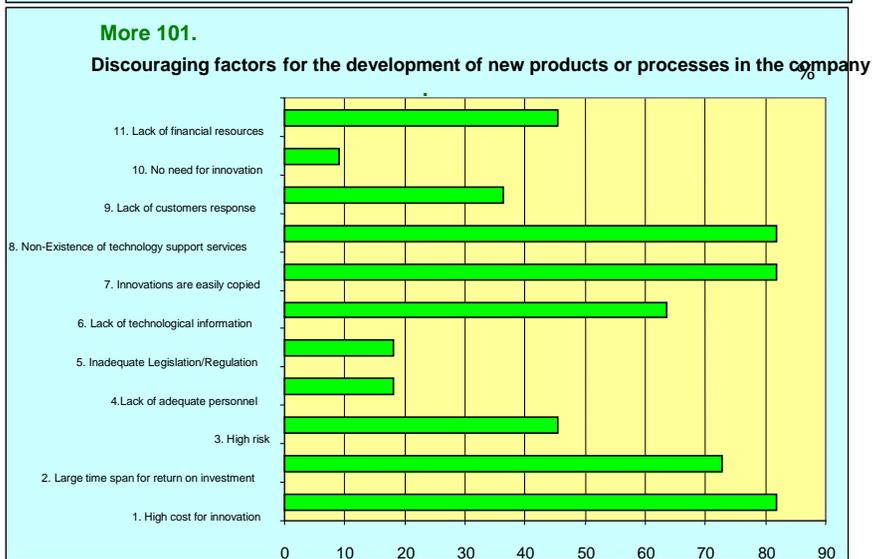
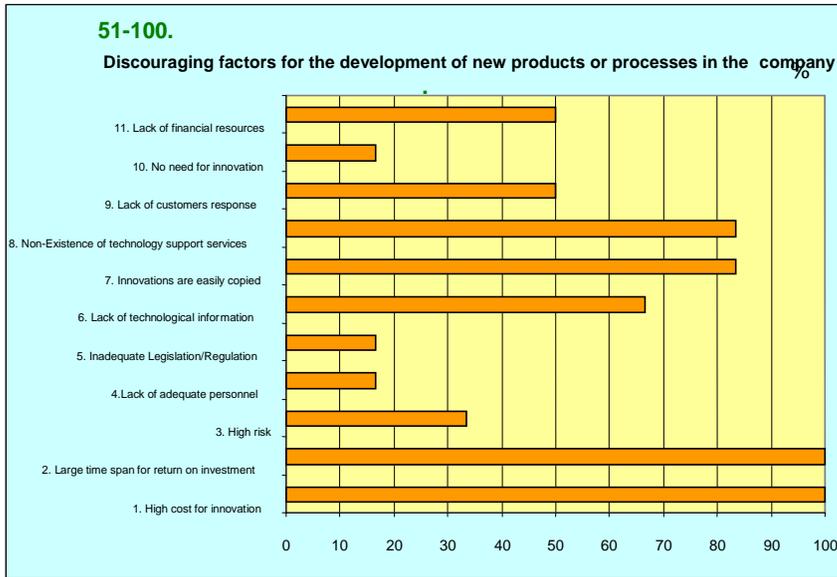
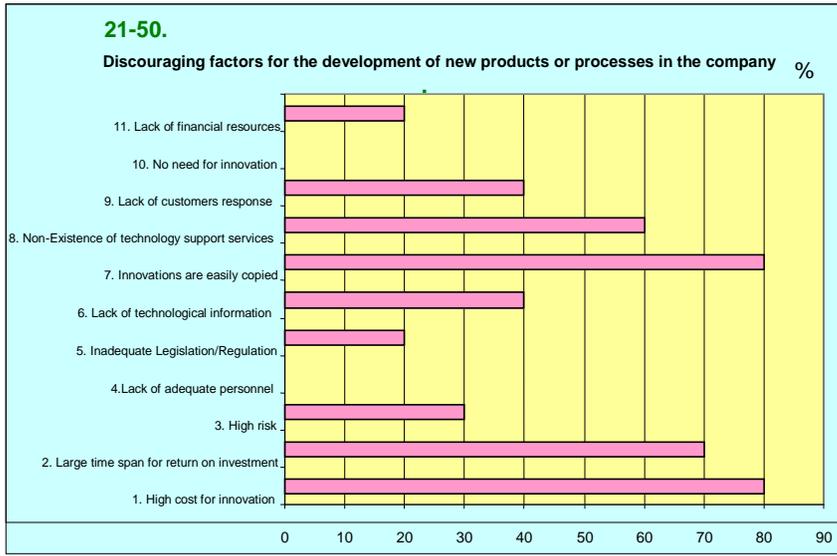
As it is reflected in the following graphic the *financing is a key issue at this moment for the companies*. The majority of them express the lack of financial resources as the main constraint, following by high cost for innovation and the large time spent for return on investment. Inadequate legislation and regulation are mentioned by the companies as a discouraging factor for the innovation.



The same conclusions we can obtain from the territorial analysis by counties: financing, risk and high costs are the main aspects that discourage companies to start innovation process.

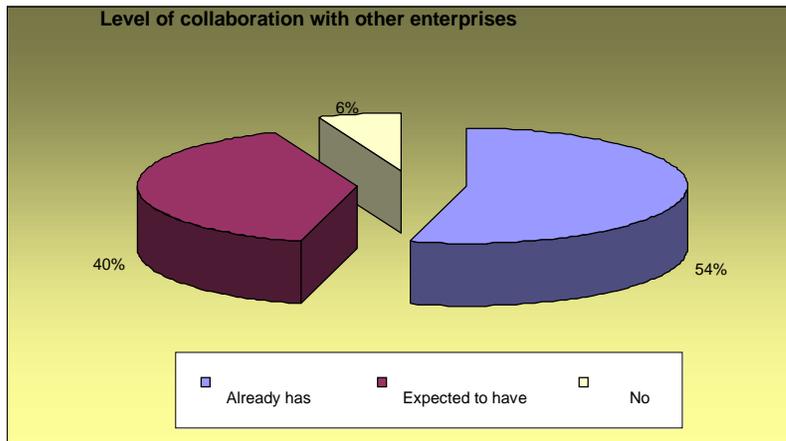
There are some differences if we compare the answers by the size of the companies. For the micro enterprises, companies with 21-50 employees and for the big companies, the main discouraging factor is that the innovations are easily copied. In this case a *most efficient diffusion of information about the intellectual property rights and patents will contribute to encourage the innovation between this type of companies*. The companies with 11-20 employees and with 51-100 employees expressed also a discouraging element the *non existence of technology support services*.



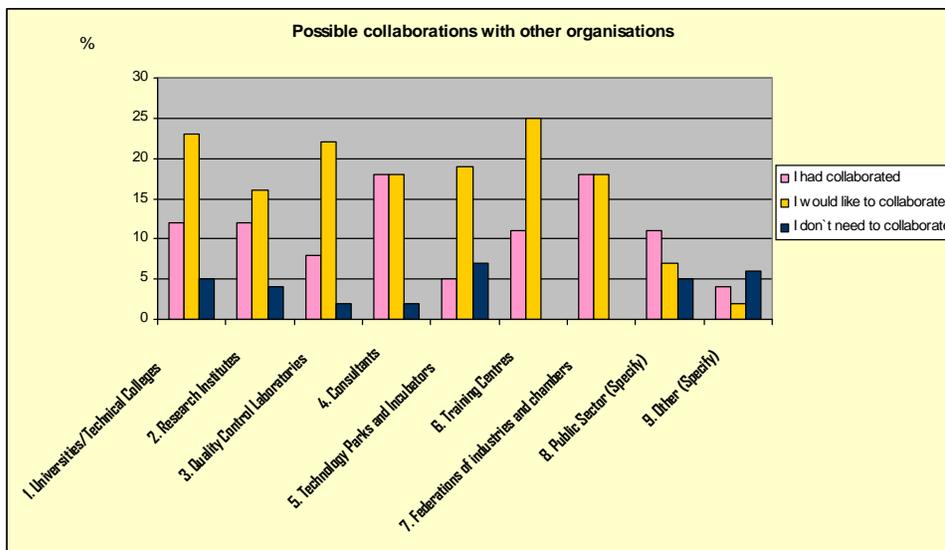


The collaborations

The companies are optimistic about their collaborations with other companies. One of two companies declares to be satisfied with the collaboration results and a significant number of them have some expectations about it.

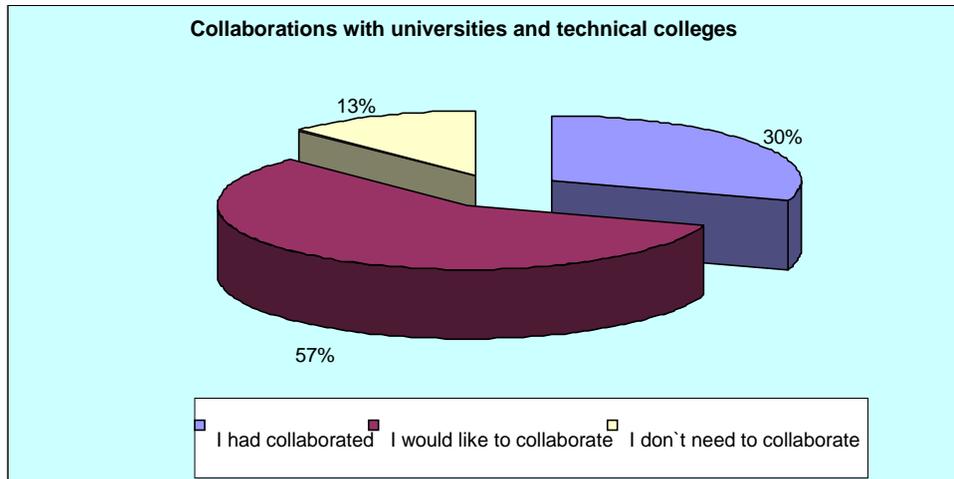


Going in depth through the collaborations the following graphic shows how the companies have collaborated with consultants, federations of industries and chambers. The companies would like to collaborate with training centres, universities, technological centres, laboratories and quality control units. Also the companies want to maintain the collaboration with consultants, federations of industries and chamber of commerce. In this sense they are aware of their future needs, but at this moment this collaboration is not enough developed.

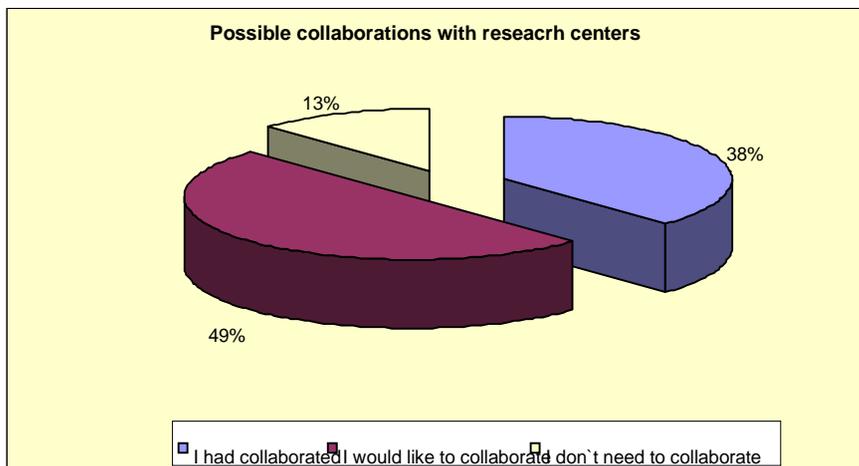


Taking into consideration the main objective of the RIS, to promote innovation process the following graphic shows the specific answer related with the collaboration with the main R+D+I supply in the region.

The collaboration with universities and technical colleges is declared only by one of three companies, but the majority of them declare the intention to start this process .



Just few of companies have collaborated with research centres, but some declare their intention to start a collaboration process. The companies consider a key factor for the future this kind of collaboration.

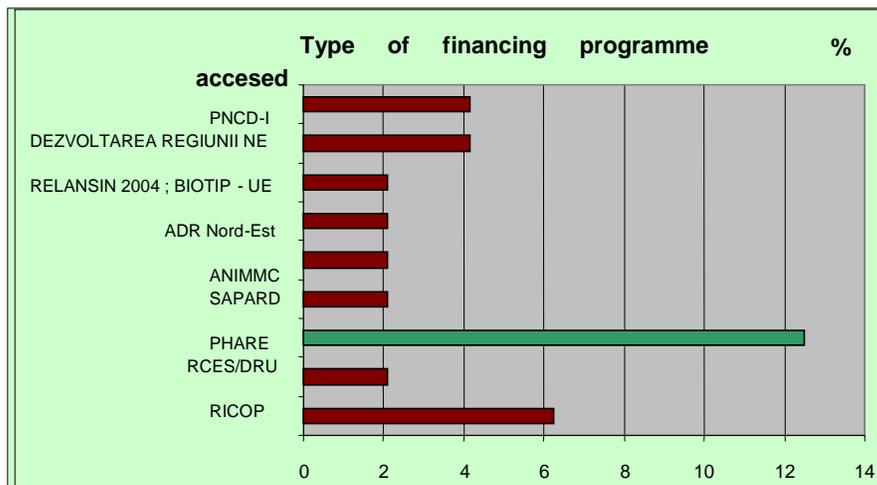


As regarding collaboration with quality control laboratories the situation is the same. At this moment the percentage of companies is low , but they expressed their will to establish more connections with these types of organisations.



4.1.4 FINANCING

It is important to note that the most of interviewed companies have not received any fund from the R&D programmes. Only a few of them have received some funds, mainly through PHARE programs as it is reflected in the last graphic.



The majority of the interviewed companies expressed the intention to participate in these programmes.

The qualitative information provided by companies related with the areas that they want to participate in these research programmes shows the following main categories.

- Development of the product, the brand, logistic and marketing issues.
- Research and technology.
- Materials, mainly for the construction.
- New equipment and industrial automation.
- Electronic and ICT: specialised software, informatics systems.
- Financing, specially in Structural Funds.
- Services and Tourism.

The proposed suggestions by companies are:

- To promote the collaboration with technological park.
- To facilitate the administrative and legislative issues.
- To finance projects companies and to diffuse the information related with financing.
- To promote the innovation.
- To promote joint venture.

4.2 DEMAND ANALYSIS

4.2.1 INTRODUCTION

The analysis was developed during stage 1 of the project based on interview and technological in dept audit methodology developed with the support of Fundecyt Spain partner of the project. A number of 40 production-orientated companies from the North-East Region of Romania were selected and visited. The companies were selected randomly but from 13 different fields of activities. The categories of activity are:

Type of industry	Number of interviewed companies
TEXTILE	5
SHOE	1
FOOD	7
METALLIC	6
WOOD	3
PHARMACEUTICAL	1
CONST. MATERIALS	2
PAPER	2
PLASTIC	3
IT& Electrical Equipments	6
ALCHOL	2
Project Mng Consultancy	1
Ophthalmologic	1

INFORMATIONS ABOUT THE ANALYSIS METHODOLOGY

To centralize the information collected during the interviews a classification was used according with the *technology/process, management and organization structure, marketing, market, other important aspects*.

The technology/process needs are referring to:

- **The need of new technology** - new automated machines or entire automated production lines, numerical commanded machines, etc.);
- **The production process** – the need to improve the way that they are producing, the need to make the process more efficient, the need to discover/buy/learn a better way to produce;
- **The need for more equipment** – they have modern equipments but they need more in order to increase the productivity or to be able do more test in their own laboratories.

Management and organization structure need are referring to:

- **Improve management** – the management system isn't a performing one or isn't an appropriate one or didn't keep up with the growth of the company, etc.

- **Develop or/and Reorganize structure** – the actual structure isn't efficient anymore (it's too big or too small), the company has to be oriented on organization in profit centers and cost centers;
- **Human Resource** – we referred here strictly at the need to invest in HR. The problems regarding HR we will discuss in another paragraph due to the fact that it is a very important aspect to take in consideration.
- **RTD and/or creation department** - we referred to the necessity to create such a department (who will work keeping in mind the data supplied by the different types of market studies), or to outsource this kind of activities by collaborating with R&D organizations, companies, universities, etc.

Marketing needs are referring to:

- **Marketing strategy**
 - the necessity to test the products in the market before launching them
 - the necessity of market opportunity analysis;
 - the necessity of a market strategy regarding the branding, the promotion of products and company
- **Sales Strategy/Politics** – we referred to the necessity to have a sales strategy/politics according with the market demands.
- **Delivering Strategy** - we referred to the necessity to have a Delivering Strategy according with the market demands, to have the necessary instruments (logistics) to satisfy the clients;
- **Product's promotion** – some of the companies have good products but they don't promote them in the market.
- **Company's promotion** - the necessity to build a brand, make known the company;

Market needs are referring to the necessity of extending the geographical area of clients at national or international level (export).

Other important aspects are referring to:

- **Cash flow – seasons** – some production and/or selling activities depend on the season. The company has to find a solution to keep a good cash flow in those periods also;
- **Production Spaces** – the company has to improve the production space because :
 - it isn't offering proper working condition for the workers or the machines;
 - It isn't satisfy the standards;
 - It isn't satisfy the legal requirements;
 - Etc.
- **Diversity of products** - it is referring to the fact that the company has to develop new products in order to satisfy demands;
- **Partners** - it is referring to the fact that the company has to make partnerships in order to satisfy certain need or to overcome different problems;
- **New/more Providers** – we are referring to the fact that the company has to find providers for raw materials (because the actual quality is not so good or the delivering

system does not advantage the company or the providers can not provide sufficient raw material, etc).

4.2.2 NEW TECHNOLOGY DEMAND

Most of the companies demand urgently new technology . All those companies, if they installed new technology, will have the necessity of ***redefining the production process***; half of the companies need to get better the production process.

The vast majority of the companies demand buying more modern equipments. Relating the technology and production processes we realized that there is a very long distance between companies. There is extremely reduced number of companies that have a relatively good level of technology and other that should be revised for reasons of production conditions.

It has to be considered that giving old production solutions in place the consequence is reflected as a bad result on the final product in terms of quality and price.

4.2.3 LABOUR FORCE DEMAND

The first demand relating the labour force is the lack of it . On the one hand there is need expressed for work force with low level of education and specialization and on the other hand, the need for work force with medium and high level of qualification.

This happens since a lot of Romanian people would rather go and work abroad Romania for better wages than in Romania. Romanian companies can't pay better because this would lead to increment the products prices. If they increased the prices there would not be competitive on the market.

The demand of labour force willing to work, especially at the lowest level of type of work, it means non-qualified or low qualified level, is typical for the kind of industries where many of the production stages are hand made i.e. textile, wood, metallic, and food. A bigger level of interest and motivation of the ***labour force to work in certain industries*** is the second demand that the companies have. This is typical, for the following industries: textile, wood, metallic, and food. The workers would rather to go abroad to do this kind of low -level jobs since are better paid there.

Another important demand regarding the human resource is the fact ***that is not easy to find workers with a high level of education/specialization*** . This demand is very usual for the IT& Electrical Equipments and for the Metallic Industry .

The rest of the companies do not have this demand since the level of specialization necessary can be achieved in the training programs that the companies provides.

4.2.4 MARKETING DEMANDS

The most frequent of marketing demand is the marketing strategy . Most of interviewed companies have difficulties relating this topic.

Marketing strategy focuses on analysing market opportunities, testing the products in the market before launching them, and finally promotion of products and company. The companies do not research in marketing to test their products before sending them to the market. It is very relevant to adequate the company's production strategy to the market demands and needs. Generally the

company products are similar to other products already in the market. They do not take into account the evolutions in the market.

More than half of the companies demand a branding plan or a strong promoting plan. Relating to the data of the demand analysis is a very important demand because the rate of request is quite high. Furthermore, this demand will grow if the companies increase the production because they will need to see new markets.

The second demand relating to the marketing of the interviewed companies is the products promoting. In some of the cases the products have quality enough and the market needs them, but the truth is that products have difficulties to be considered in the market, as they should.

The third demand is related to the promotion of the company and the brand management and it can be seen on half of the companies.

The sales and delivering strategies or policies are the last two as importance in the marketing demand section. This does not mean that the companies should not worry about it more concretely, if they want to raise production. The sales and delivering strategies or policies are a repetitive demand that should be covered for the metallic, food and textile industries.

4.2.5 ORGANIZATIONAL STRUCTURE DEMAND

Nearly half of the companies have to change the orientation of the or ganizational structure or have to reorganize the departments because they are not efficient at all .

Half of the companies demand the creation of a department who will work keeping in mind the data supplied by the different types of market studies, or to o utsource this kind of activities by collaborating with R&D organizations, companies, universities, etc. This request is typical for textile and metallic industries and R&D departments IT and EE and food industries. Most of the companies do not have great difficulties in this sense since those types of issues will appear if they increase production because they will have to find market for their products.

Half of the companies demand new production places or bigger ones . The type of industry in which we can observe the biggest demand is the IT&EE .

4.2.6 MARKET AND PRODUCTS

Currently, ***some companies have to extend market or are interested to do it .*** Some of them are interested in extending at national level and some others in international level. It is very relevant to remark that companies of the metal mechanic sector demand the external market. In general they can supply parts for certain machines producers from outside Romania.

The second necessity is the fact that they have to diversify the products in order to satisfy the demand.

Next we can observe that it is situated ***the demand of finding partner and new or more suppliers for row material .***

The following as frequents is the fact that ***the production or selling is up to the season .*** In spite of this, this is very important since it is a typical issue for the milk processors and for the construction materials producers. For the food industry (***milk processors***) the production decreases during the cold season because of lack of row materials (milk). In the cold period produced milk quality decreases. They have to find a solution in order to keep a good cash flow. They could produce more during the warm seasons; make stocks to sell during the cold seasons.

For the *construction materials producers* the cold season has an impact on selling because, during those periods, it not possible to construct outside. The solution could be the development of new types of products for interior construction or to collaborate with R&D organization in order to find a solution of chemical nature. The chemical additive should prevent the freezing of concrete at below 0°C temperatures.

4.3 SUPPLY ANALYSIS

4.3.1 INTRODUCTION

The RDI, TT and IT sector is characterized by an evolution influenced by a series of reference changes, caused by the implications of the Romania's accession process.

Presently, many RDI programs are developed at national level as following:

- The National Plan for Research, Development and Innovation – the main purpose is creating new development and innovation sources for economy and society, responding to some concrete demands or international integration requirements of Romanian science-technology system.
- The national programme “Development of innovation and technological transfer infrastructure” – INFRATECH, approved by Government Decision 128/2004, instrument that will provide financial and logistic support for creating and developing institutions specialized in innovation and technological transfer infrastructure, and also to technological and science parks;

A wide range of measures were undertaken, at national and regional level, for creating and developing new institutional structures in RDI field. The main activities initiated, in full progress now, concerning this aspect are the following:

- The establishment of national research & development institutes in strategic sectors of national economy as well as in fields of public interest as a result of the evaluation carried out based on the methodology approved by Government Decision no.135/1996;
- In universities there are being organised activities of R&D, design, consultancy or expertise, which are being developed within departments, faculties or own units of scientific research, including also collaboration with other national or international educational and research institutes .
- Supporting the development of “excellence centres” - research nucleus, centres and networks whose activity should reach a quality level recognized at the European/international level through the RELANSIN programme, launched in the framework of the National plan for research, development and innovation;
- The development of innovation infrastructure through the RELANSIN programme has as objectives also the creation and/or development of technological/scientific parks, innovation and business centres (BIC/TIC), technological transfer centres, technological information centres, centres of human resources development in RDI field, offices of networking with industry, others centres.

The financing of the National Plan for RDI is realised in a percentage of 30% by the private sector, an insufficient level in order to be able to respond to the increasing demand of innovation in economy.

The above described overall context, was the framework within the supply analysis was implemented with the contribution of Metron Srl Italy project partner. The interviews conducted had to bring further concrete information, as well as the perception of the people and the organizations directly involved in the research and innovation system of the region. 38 organizations were identified in the region as target group, and their representatives were identified as opinion leaders, who could describe the context from an internal and preferential point of observation.

The conclusion indicated that on one hand, *research is still conceived as a university and academic matter; on the other hand SMEs have not yet matured a clear awareness about the role of the universities and R&D centres in the industrial tissue* and their potential is still unknown, underestimated and/or unexpressed.

It has to be mentioned that the *North-East Romania region has a high scientific potential*, a quite well developed network of universities and institutes, with interest to adapt to the conditions of the market economy but with a very low relationship with productive activities.

In spite of that, *the overall vision of the R&D actors is still partial and centred too much in the inside of the country and inside the academic environment* .

4.3.2 NEW TECHNOLOGY SUPPLY

Although universities and R&D centres do not offer a clear offer of technology they present some key questions.

The financial weakness and the SMEs' mentality (they underestimate the universities' possibilities) are seen as the main important obstacles in the transfer .

The possible solutions given by the R&D providers are the following:

- Grouping SMEs with similar difficulties in order to allow a sufficient project volume to be reached and financial loss to be avoided;
- Repeating projects with the same company in order to improve the relation cost - effectiveness.
- Involving students and researchers in projects of transferring technology.

4.3.3 MARKETING SUPPLY

A lot of the interviewed organizations observe in marketing a strategic tool, but over all as a publicity instrument, rather than a strategic methodology.

Approach for marketing can be defined as a top down one , which generally is not build up and planned responding to concrete inputs and expectations coming from SMEs.

A lot of the interviewed organizations do not implement specific and regular marketing actions addressed towards the industry. For the remaining part, marketing is done through their websites, through the issue of publications and over all with their participation to seminars, meetings and events. In few words, marketing is not observed as a systematic activity to be structured and included in the regular planning of the organizations.

A relevant issue remains the financial aspect of such activities. Therefore, *R&D offer does not arrive at the SMEs since the information channels are limited to the academic domain* . It means that the communication flow does not arrive at the companies.

4.3.4 ORGANIZATIONAL STRUCTURE SUPPLY

The few examples found of independent technology transfer organizations are the **CAST ASSOCIATION** (NGO), created inside the Faculty of Economy of Economy and the **TECHNOPSIS IASI** indicated by the Research Institute of Synthetic Fibres. The tasks of these organisations are to put in touch universities and enterprises.

Usually the Research Centres see and describe themselves as the interface with the industrial system, while interface organization nearly does not exist .

It is obvious that technology transfer organisations are not seen as a potential to be created for the territory.

4.4 TRANSFER ANALISYS

4.4.1 FROM UNIVERSITY TO INDUSTRY

The links exist over all with the private sector. It is clear that *there is a lack of precise and productive channels of cooperation* , in some cases even communication, with the institutional levels.

Collaboration exists but is not strengthen or not set on a regular basis. Some universities regularly organize exchanges of personnel with industries, but only for students. In general the organizations are aware about the need to cooperate within a network of similar or complementary partners.

4.4.2 TT ORGANIZATIONS

Usually there is a not good opinion on the tasks of those few organizations carry out, and there are good inputs about some possible support services that could be given by them (linkage between R&D providers and SMEs, fund searching, identification of possible application of research products, etc.). The main activities of TT organisations are consultancy or technical help. Therefore, it means that TT activity is not their strong point

At regional level there is only a single case of TT organisation which is **CEPROPLAST IMPEX**. The rest of the actors stay outside of the region.

The relationship and the connection between the R&D performers and companies are based on personal and direct contacts. The relation between them is not structured and/or made on a regular basis.

4.4.3 FINANCIAL SUPORT

Although there are some public financing support programs like **CEEX, CNSSIS and IMPACT** the majority of the interviewed organizations do not consider them sufficient to answer their real necessities.

In several cases the interviewed organizations (at least the interviewed persons) had never thought about using this financial support.

This fact could be linked as well with another often up coming topic denounced, which is the *lack of information and coordination between universities and R& D centres and public and private financial support departments* .

Nearly no organization has information about highly specialized assistance services for TT. The only programme mentioned is IMPACT

4.5 SECTOR SWOT ANALYSIS AND CONCLUSIONS

The SWOT analysis for the R+D+I demand based in the demand analysis and the discussion on the working-groups show the following results:

SWOT ANALYSIS FOR THE R+D+I DEMAND	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Existing of important raw materials for certain sectors (wood processing) • Good tradition of certain sectors – wood processing, food processing, textile, ICT, tourism, construction • Good potential of qualified human resources • Existence of high qualified staff in ICT sector, textile industry • Existence of certain companies that are dynamic, interested of innovative activities (leaders of sectors, role models) • Willingness to develop, to be competitive on the European market • Increasing number of the SMEs • Adequate environment (landscape, historic and cultural heritage) conditions for developing tourism sector • Good level of multilingvism 	<ul style="list-style-type: none"> • Low level of products diversification • Insufficient level of new technologies • Insufficient level of cooperation between SMEs and universities/RDI units • Low development of industrial areas • Lack of human resources with low and medium qualification • Lack of a good human resources, management and marketing policies within SMEs • Insufficient support services for SMEs • Insufficient development of transport / broadband infrastructure • High level of bureaucracy, taxations
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Geographical position as East cross border of European Union • Accession of Romania to EU • National and international financing opportunities • Good moment for the territory to attract foreign investors • Potential to create clusters, outsourcing industries • Premises to reattract the Romanian emigrants with improved skills • Demand conditions to develop services sector for SMEs 	<ul style="list-style-type: none"> • Insufficient perception and valorization of the opportunities as a new EU Member State • Insufficient competitiveness of the small and medium enterprises on the European Market • Brain drain of high qualified persons • Increased level of import products from the European market -globalization

In other side the SWOT analysis for the R+D+I supply shows that:

SWOT ANALYSIS FOR THE R+D+I SUPPLY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Good representation and recognition in the region and at international level • High number of students (specially technical universities) • Interest of universities to have RD activities (professors commitment) • Very good in basic research • RD units interested to have international vision (contacts, projects, exchange of staff and students) • Presence of National Inventics Institute in Iasi • Existence of basic infrastructure for RD and TT 	<ul style="list-style-type: none"> • Unfavorable environment (legal framework, mentality, different perception of RD activities in university-enterprise) • Lack of trust among universities and RD units, toward TT and SMEs • Lack of stimulation to induce connections with enterprises (too much learning oriented) • Lack of culture for marketing RD results (not aware of this necessity) • No modern tools/equipments used for RD activities (particular private universities, public RD units) • No economic use of patents and high tax for registration
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Accession of Romania to EU • Financing opportunities available national and international sources • Good moment for the region to attract foreign investors • The possibility to plan future orientation of development in the region • Dynamic business environment • Increased awareness of RD sector on the role of driving economic sector 	<ul style="list-style-type: none"> • Brain drain of qualified RD personnel • Lack of coordination of different sectorial policies • Lack of structure to integrate the innovation system at regional level • Not favorable legislative framework (including PP partnership).

The SMEs situation illustrated by *the survey results show that the companies are producing on increasing markets and there are renovating their equipments, in modernisation process of their markets and structures*. This effort from the companies can be supported as they expressed through financing, helping for new equipments and developing new products. In fact the interviewed companies mentioned as their main innovation activity the acquisition of the equipment and secondly the training.

That is a similar to the result obtained from the demand analysis. *The most important demand for the companies in order to develop and to be competitive in the European market is to access to new and modern technologies*. In spite of the financial weakness there are possible solutions as grouping similar SMEs. *The labour force demand* especially that with low level of qualifications, *is the second priority*. Resolving the first priority can solve an important part of it since with the proper technology the necessity of low level workers can be reduced.

For the medium and high level human resources there is a not yet consolidated cooperation between universities and industry and interface organization between them almost do not exist.

The third one is a good marketing instrument. Even though universities and research centres do not observe it as a systematic activity to be structured and included in the regular planning of the organizations.

A proper organizational structure is the forth demand of the companies interested in reaching a competitive level. Companies demand a department able to study data supplied by different

types of market. This kind of work could be done by R&D centres and universities but links between them have to improve already.

Although few companies are developing innovation internally with their R&D departments the truth is that innovation level has a long distance to increase already.

If companies worked with universities and R&D centres a good innovation level would be reachable since most of the universities and R&D centres are really keen on developing such activities. In order to get this goal it is convenient to create companies dedicated to link the necessity of the companies with the offer of the universities due to the existing TT organizations do not work properly.

5. DESCRIPTION OF EXISTING INNOVATION POLICIES IN ROMANIA

The future strategy of innovation for North-East of Romania will have to be integrated in line with the established in the Sectorial Operational Programme “Increase of Economic Competitiveness” (2007-2013) and Regional Operational Programme (2007-2013).

The Regional Innovation Strategy (RIS) to be implemented within the framework of both programmes includes both the chapters related to Research and Development and the ones concerning the Innovation.

The pre-accession experience with financing programs will constitute an essential element for the definition of a new more global strategy that will cope not only partial aspects of R&D but also a progressive advance in the configuration of an information society advanced and competitive.

5.1 SECTORAL OPERATIONAL PROGRAMME “INCREASE OF ECONOMIC COMPETITIVENESS” (2007-2013)

The *Sectorial Operational Programme “Increase of Economic Competitiveness”* is one of the seven instruments, under the Convergence objective, for achieving the priorities of the National Strategic Reference Framework (NSRF) and the National Development Plan 2007 – 2013 (NDP), which aim to strengthen the strategic focus of the Economic and Social Cohesion policies across Romania and to make the correct and appropriate linkages to the European policies and the Lisbon Strategy, which focuses on policies for growth and job creation.

Romania has a series of weaknesses that makes, necessary to design some programmes which will contribute to increase the economic competitiveness:

These weaknesses are:

- Competitiveness and technological gaps compared to EU due to low market integration and low productivity
 - Low productive investment rate
 - Low productivity in the manufacturing sector
 - Obsolescence of technological endowment, especially for large companies
 - Insufficient access of SMEs to adequate finance (undercapitalisation)
 - Low level of compliance with EU standards in enterprises
 - Low level of internationalisation of business activities (notably in the SMEs)
 - Lack of institutional capacity to scale economies through cooperation/networking/business agglomeration
 - Insufficient development of a dynamic entrepreneurial base
 - Lack of business support and guidance
- Insufficient development of the knowledge economy
 - Low public and private R&D expenditure
 - Obsolete R&D infrastructure and lack of skilled researchers with managerial qualities
 - Poor level of cooperation/partnership between research centres, universities and companies
 - Low number of patents and therefore insufficient valorisation of domestic R&D
 - Still insufficient and underdeveloped structures of technology transfer
 - Insufficient hubs/poles of research excellence
 - Limited and decreasing direct involvement of industry in research activities
 - Insufficient computer penetration and communication infrastructure access

- Considerable digital divide (especially urban rural)
- Insufficient use of public 'e-services' (e-government, e-health, e-learning)
- Low level of sophistication regarding IT access and entrepreneurial application (e-business)
- Major inefficiencies in the energy sector
 - Outdated and polluting energy production technologies
 - High energy intensity in production processes
 - High losses in electricity/thermal energy, oil and gas transport and distribution networks.
 - Low valorisation of available Renewable Energy Sources
- Insufficient valorisation of the important tourism potential
 - Insufficient tourism information and promotion
 - Insufficient capacity to co-ordinate marketing/branding efforts

In this context, the *Sectoral Operational Programme* has been created with the aim to increase of Romanian companies' productivity, in compliance with the principles of sustainable development, and to reduce the disparities compared to the average productivity of EU. ***The target is an average annual growth of GDP per employed person by about 5.5%***. This will allow Romania to reach approx. 55% of the EU average productivity by 2015.

Although Romania has registered substantial progresses in the last years, the competitiveness gaps, when compared with EU member states, are still very deep. The reasons for this lagging behind are connected with all the supporting factors of competitiveness. Synthetically, these are reflected by low productivity, which can be seen as the emblematic issue of the Romanian competitiveness. The level of GDP in PPP25 stands at about 50% of new member states average.

In this context the *specific objectives of the programme* are:

- Consolidation and environment-friendly development of the Romanian productive sector
- Establishment of a favourable environment for sustainable enterprises' development
- Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises, and increase of enterprises' access to RDI
- Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens)
- Increased energy efficiency and sustainable development of the energy system

To achieve this goal, the RIS Strategy will have to:

- address the weaknesses of existing industrial sectors and their outdated and often poorly eco friendly and excessively energy-intensive technologies
- further diversify the productive basis of the country to avoid overdependence on low value added products
- bridge the gap between R&D activities and their industrial application and promote research led innovative sectors
- foster the pervasive use of ICT technologies
- increase the efficiency and sustainable development of the energy system as a factor of overall competitiveness, while addressing at the same time energy efficiency issues at the end users;

The principal lines of performance related to the innovation, which will be taken into account to elaborate the strategy are:

Priority Axis 1: An innovative and eco-efficient productive system

Objectives:

- Consolidation and sustainable growth of the Romanian productive sector

- Establishment of a favourable environment for enterprises' development

Areas of Intervention:

1. Productive and environment friendly investments and preparation for market competition, especially of SMEs, mainly through
 - a) Support for strengthening and upgrading the productive sector by tangible and intangible investments:
 - Support of investments in technology, equipment, machineries, outfits, production premises
 - Support for intangible investments: acquisition of patents, trademarks, licences and know-how.
 - b) Support for the implementation of international standards, by
 - Support for implementation and certification of quality management systems
 - Support for implementation and certification of environment management systems (or EMAS registration)
 - Support for voluntary certification and eco-labelling of products and services
 - Support for developing and accreditation of calibration and testing laboratories
 - c) Support to access to new markets and internationalization
 - Consultancy services to SMEs for management systems improvement
 - Support for participation in international fairs and exhibitions and economic missions.
2. To provide innovative financial instruments: micro loans, seed funds, risk capital, equity capital, venture capital.
3. Sustainable entrepreneurship development :
 - a) Development of business incubators.
 - b) Consultancy support. SMEs will be supported for the acquisition of consultancy in fields like: elaboration of projects/business plans; products/services and enterprise strategies development; investments and financial issues; information technology and e-business; innovation and intellectual property rights.
 - c) Support for enterprises' integration in supplier chains and clusters. The aim of the operation is to strengthen networking and cooperation relations between enterprises, reinforcing value chains and supporting the process of cluster development.

Priority Axis 2: Research, Technological Development and Innovation for Competitiveness . An innovative and eco-efficient productive system

Objectives:

- Increase of R&D capacity, stimulation of cooperation between RDI institutions and enterprises, and increase of enterprises access to RDI.

Areas of Intervention:

1. R&D partnerships between universities/research institutes, and enterprises for generating results directly applicable in the economy
 - a) Joint R&D projects between universities/research institutes and enterprises. This operation will fund mainly industrial research and pre-competitive development activities that will generate results of economic interest and will initiate the transformation of the research results into new or improved products, technologies and services with high demand on the market. Different forms of collaboration between enterprises and R&D institutions will be encouraged with the aim of enhancing their R&D activities and fostering the technology transfer.
 - b) Complex research projects fostering the participation of high-level international experts.
2. Investments in RDI infrastructure.

- a) Development of the existing R&D infrastructure and the creation of new infrastructures (laboratories, research centres). This operation will support the development of R&D infrastructure in public universities and R&D institutes by modernization of the existing laboratories, the accreditation of testing laboratories, etc, and by the creation of new infrastructures (laboratories, research centres/institutes).
 - b) Development of poles of excellence. The operation will support investments in the development and strengthening of the relationships between universities, research institutes and high-tech SMEs in dynamic technological fields.
 - c) Development of networks of R&D centres, nationally coordinated and linked with European and international networks (Gigabit European Academic Network (GEANT), Electronical Communication Technology in the Research Field (GRID)). This operation aims to contribute to the involvement of the Romanian researchers in international research networks of major importance for the future development of science and technology, and to develop an appropriate infrastructure to support large, and complex research projects.
3. RDI support for enterprises.
- a) Support for high-tech start-ups and spin-offs.
 - b) Development of R&D infrastructure in enterprises and creation of new R&D jobs
 - c) Promoting innovation in enterprises. The operation will finance the acquisition of R&D services and application rights of R&D results and will stimulate the R&D activities in enterprises and their further development into technologies, products, services.

Priority Axis 3: ICT for private and public sectors

Objectives:

- To support the economic competitiveness through increasing the interactions between the public sector and enterprises/citizens by fully exploiting the ICT potential.

Areas of Intervention:

1. Supporting the ICT use
 - a) Supporting access to Internet and to connected services. It is envisaged to offer support to SME's and Non Governmental Organisation for connecting to Internet.
 - b) Supporting local authorities for setting up a broadband network and Public Internet Access Points (PIAPs)
 - c) Supporting SMEs for setting up a broadband network and PIAPs in the market failure areas (under-served rural and small urban areas).
 - d) Supporting broadband connections for schools.
2. Developing and increasing the efficiency of public electronic services
 - a) Supporting the setting-up of e-government solutions and broadband connection where needed
 - b) Setting-up ICT systems in order to increase the information systems' interoperability
 - c) Setting-up E-Learning solutions
 - d) Sustaining the setting-up of e-health services, applications and tools
3. Sustaining the E-Economy
 - a) Support for integrated ICT business systems and other electronic business applications
 - b) Sustaining the development of e-commerce systems, and other Internet based solutions for businesses

Priority Axis 4: Increased energy efficiency and sustainable development of the energy sector

Objectives:

- Reduction of primary energy intensity in order to contribute to meeting the national target (40% decrease by 2015, compared to 2001) and pollution reduction in the energy sector.

Areas of Intervention:

1. Improvement of energy efficiency. Indicative operations:
 - a) Supporting investments in refurbishment, upgrading and rehabilitation of existing power and heat capacities in order to improve the energy efficiency (power plants/units for power and heat production, co-generation plants/units, turbine equipment).
 - b) Supporting investment in installations, equipment for economic operators, in order to improve energy efficiency leading to energy savings.
 - c) Supporting investments in expanding and upgrading electricity and gas transport grids and electricity and gas distribution grids, in order to reduce losses and secure the continuity and safety of transport and distribution services.
 - d) Supporting investments for interconnecting the national electricity and gas transport networks to European networks.
2. Valorisation of renewable energy sources (RES). Investments in upgrading, rehabilitation and building new power and heating production capacities by valorisation of renewable energy sources: biomass, micro hydro, solar, wind and geothermal, bio fuels and other resources.
3. Reducing the negative environmental impact of the energy system functioning. Investments in flue gas de-sulphurization installations, burners with reduced NO_x and filters for large combustion plants.

The priority axes of Romania's competitiveness strategy are in full concordance with the lines of action of the Commission's proposal regarding the framework for Competitiveness and Innovation 2007-2013, and take into account the guidelines put forward by the European Commission for the cohesion policy for 2007-2013.

5.2 REGIONAL OPERATIONAL PROGRAMME (2007-2013)

The *Regional Operational Programme (2007-2013)* builds on the analysis and reflects the Regional Development Policy of Romania, according to the Regional Development Law (Law 315/2004) and the process of decentralisation, as detailed in the Framework Law regarding Decentralisation 339/2004 and other relevant laws. The strategy also takes into consideration the provisions of the Community Strategic Guidelines for the 2007 – 2013 period, the Lisbon Agenda, particularly regarding preconditions for growth and also the EU Territorial Agenda, regarding support for a balanced territorial development.

The current generation of innovative actions of the European Commission has as aim to reduce the existing disparities among the European regions within the area of innovation and RTD, as well as in the use of ICT, allowing that the least advanced regions could benefit from the opportunities that the new economy offers and overcome the difficulties that this economy presents.

The *Regional Operational Programme (2007-2013)* is in line with the NSRF provisions, contributing to the achievement of its global objective, related to reducing the social and economic development disparities between Romania and the other EU Member States. The Regional Operational Programme addresses all the five priorities of the NSRF being connected with most of the development issues envisaged therein. In comparison with EU 27, the Romanian Regions are all among the least-developed, and for reaching the convergence with the other Member States' Regions, large amounts of resources need to be efficiently invested, both timely and spatially.

The ***Regional Operational Programme (2007-2013)*** derives specially from weaknesses identified in the national regional socio-economic analysis:

These weaknesses are:

- Reduced activity rates in certain parts of the Country
- High dependency on agriculture in most of the regions, especially in NE, S and SW
- Signs of increasing socio economic disparities in traditionally underdeveloped parts of the Country
- Deteriorated / un-modernised public social infrastructure (health, social services infrastructure, education)
- Massive temporary migration abroad from areas experiencing industrial decline and over dependence on agriculture
- Reduced accessibility to the national /European transport network of most regions because of the lack of maintenance of county roads.
- Loss of urban functions in many small and medium towns
- Business infrastructure underdeveloped and not balanced distributed across the Country
- Underdeveloped micro-business sectors in certain parts of the Country
- Underdeveloped service and trade sectors due to lack of critical mass of demand in many urban areas
- Large cities increasingly experiencing congestion
- Lack of modern urban infrastructure (water, sewerage, modernized roads, public lightning) negatively affecting appeal to external investors

In this context, it is created the ***Regional Operational Programme (2007-2013)*** with the aim to support the economic, social, territorially balanced and sustainable development of the Romanian Regions, according to their specific needs and resources, focusing on urban growth poles, improving the business environment and basic infrastructure, in order to make the Romanian Regions, especially the ones lagging behind, more attractive places to live, visit, invest in and work.

Specific objectives of the programme are:

- To increase the economic and social role of urban centres, adopting a polycentric approach, in order to stimulate a more balanced development of regions
- To increase accessibility within regions and in particular the accessibility of urban centres and their connection to surrounding areas
- To increase the quality of social infrastructure of regions
- To increase the competitiveness of regions as business locations
- To increase the contribution of tourism to the development of regions.

The Priority Axes are:

Priority Axis 1: Support to sustainable development of urban growth poles

Priority Axis 2: Improvement of regional and local transport infrastructure

Priority Axis 3: Improvement of social infrastructure

Priority Axis 4: Strengthening the regional and local business environment

Priority Axis 5: Sustainable development and promotion of tourism

The principal line of performance related to the innovation, which will be taken into account to elaborate the strategy will be:

Priority Axis 4: Strengthening the regional and local business environment

Objectives:

- To set up and develop business support structures of regional and local importance, rehabilitate industrial sites and support regional and local entrepreneurial initiatives, in order to facilitate job creation and sustainable economic growth.

Areas of Intervention:

1. Development of sustainable business support structures of regional and local importance.

The aim is to attract investment to valorize local resources. ROP activities will focus on providing support to local authorities and companies (administrator companies) in order to set up and develop their own regional/local importance business support structures, to attract enterprises, mainly SMEs.

The support will be given to the development and creation of new locations for business support structures, providing advanced equipment and utilities. The aim of this is to attract innovative enterprises, which will perform or benefit from research activities.

In this context, the following performances will be putting in march:

- a) Construction/rehabilitation /extension of buildings only for productive and services activities, excepting the ones focused on business incubators
 - b) Rehabilitation/extension of the internal road system inside the location and also the access roads
 - c) Set up/rehabilitation/ modernization/extension of the basic utilities (water, sewage, natural gas and electricity networks)
 - d) Cabling, internet broadband networks etc.;
2. Rehabilitation of unused polluted industrial sites and preparation for new activities. The rehabilitation of these industrial areas supports not only the improvement of the environment, but it also provides better conditions for new investment due to the infrastructure, which requires only improvements and not complete renewal.
 3. Support the development of micro-enterprises. The Regional Operational Programme supports the development of productive and service micro-enterprises and use of the endogenous potential of the Regions (natural resources, raw materials, human resources, etc). Furthermore, micro-enterprises will be encouraged to use new technologies and innovations, IT equipments and services with an essential role in increasing competitiveness, productivity and quality of services.

In this context, the following performances will be putting in march:

- e) Procurement of equipments and modern productive technologies, services, constructions
- f) Procurement of IT systems (software and equipments)
- g) Use of new technologies in the current activities of micro-enterprises
- h) Relocation of the micro-enterprises in business structure
- i) Extension/ construction/ rehabilitation/ modernization of the micro-enterprises production spaces
- j) Specific development activities.

5.3 CONCLUSION

In the new managerial and economic frame work that tends to an unstoppable globalization of markets, where innovation and information appear as central elements , *the regional area is the manager* of establishing the conditions of environment most adapted for the appropriation of the above mentioned information, and for the incorporation of the processes of in novation that allow to foster the competitiveness.

With this project, it is a question of elaborating a strategy that integrates the set of regional agents and generates a system of regional innovation, that besides of increasing the managerial effort in RDI, it manages to improve the interrelationship between the environments that demand and offer technology (the productive and technological environment, which in this moment have a weak interaction). Because of that, it is necessary to focus on reaching a consensus with the efforts of the different organizations involved in the process of innovation (the regional administration, the companies, the university, the technological centres, the associations of undertakings, the foundations, etc.), such as all of them promise themselves to set-up of a pertinent and coherent strategy defined of common agreement on the basis of the collective consensus.

Therefore, the Sectorial Operational Programme “Increase of Economic Competitiveness” (2007-2013) and Regional Operational Programme (2007-2013) are taken into account in the development of Regional Innovation Strategy that intends to contribute on:

- promoting innovation at regional level, specially in the SMEs
- promoting the partnership between different agents who compose the Romanian system of R&D and companies
- supporting the demand of the SMEs
- supporting the development of the existing technological offer of the region
- creating the framework for the development of future strategy and measures for the promotion of innovation

6. PERFORMING OF THE BANKING SECTOR FOR INNOVATION

The objectives of the National Reforms Program are:

- Economic stability and public finance sustainability
- Improved competitiveness and economic productivity
- More functional labour market which means more quality in the employment.

Romania has the following major targets for 2007:

GDP increase	6.5%
Inflation	4.0+1%
C/A deficit	-10.5%
Budget deficit	-2.8%
Government debt / GDP	14.6%
GDP/capita PPS - EUR	9.4

The general aim of the National Reforms Program in Romania is to turn from a factor driven economy to an innovation driven economy.

The factor driven economy represents a stage where the successful industries draw their advantage from production factors, mainly production factors. The economy is sensitive to world economic development and changes in exchange rates, which affect demand and relative prices. In the innovation driven economy the consumer demand is growing increasingly sophisticated and world class supporting industries are developed. In this stage it is not relevant to talk about foreign technology and improve it, but rather about creation of technologies. The range of industries involved is usually increased and the importance of competitive domestic service industries is increasing.

Six National Priorities sustain the three objectives:

- Economic competitiveness
- Transportation infrastructure
- Environmental infrastructure
- Regional development
- Human resources development
- Rural development

In order to get those 6 priorities Romania counts with 3 main resources:

- 1) National (government co-financing)
- 2) EU Funds (Structural funds)
- 3) Private funding (IFI+banks)

The efficient utilisation of resources is a prerequisite for reducing the gap in the next years. The biggest economic benefit for Romania is the EU economic funds. The requirements to receive the funds are turning them into real investments, contribute to fill the gaps on medium terms (EUR 33 billion 2007-2013), and last but not least, drawing on the experience gained to better use the EU funds.

Romania has a low level of R&D. It represents the 0.6% of the GDP. It is planned to increase this figure until the 0.7% of GDP in 2007 and for the 2010 is planned to reach the 3% (1% public and 2% private). Innovation finance is sustained by public sector, banks, and private finance sources. *In Romania the private sector has less contribution than in more developed countries in terms of R&D funding.*

Romanian IT&C is on an upward trend with a turnover 24% in 2006, reaching EUR 6.7 billion being 4 times higher than in 2000 and with a contribution of 4% to GDP with the tendency of increasing .02-0.3% annually and representing more than EUR 1 billion (+30%).

The financial intermediation in Romania is below the regional average and EU average . There is an upward trend of loans, particularly in retail the Compound Annual Growth Rate CAGR between 2004-2006 is 81.9% but the 50% of consumer loans are actually housing loans. The economy needs funding and effective competition improves access to finance by lowering costs of borrowed funds. The risk of widening the credit account deficit generated by fast loan growth has impacted on external imbalance and macroeconomic stability. The tightening of the monetary policy would mean higher costs for banks supported by narrowing profit margins and competitive disadvantage for local banks and potential growth of foreign private debt. Because of that a trade off solution is needed in order to foster the development of the banking system since countries with more developed banking sector grow faster.

A solid financial banking sector is a prerequisite for sustained economic progress and achievements of Lisbon goals.

The Romanian Financial System is the most dynamic sector of the economy. It is dominated by banks, directly by services provider and indirectly through non bank subsidiaries. The banks' assets represent the 50% of the GDP and the mutual funds are the 0.2% of the GDP. The sustainability of the financial system comes from the capital situation of 17.3% and the ratio of bad loans of 2.8% of the total loans. The venture capital in Romania is more oriented towards expansion and replacement than towards early stage investments.

Banks sustain business potential for SMEs in Romania. Bank loans represent around 8% of SMEs total liabilities and shareholders' equity. Romanian banks should offer tailor made and flexible financial solutions. These solutions have to be specially focused in innovative companies which are 3-4 time less in total companies as compared to EU.

SMEs should have access to soft loans and consultancy for preparing investments projects financed by EU funds .

Banks should refine their risk management systems to better sustain an expanding SMEs segment. Micro finance market in Romania is estimated at around USD500 million/year. About 80% of the new incorporate companies in Romania are micro -companies; insufficient coverage in terms of funding: 70% commercial banks provided 55% of the financial needs. ***The micro finance encourages entrepreneurship, competitiveness and social inclusion .***

There are around 449 thousand SMEs in Romania of which almost 400 thousand are micro companies.

The structure of SMEs by size is the following:

ACTIVITIES	SMALL AND MEDIUM	MICRO
Industry	30.3%	10.6%
Agriculture	3.7%	2.7%
Constructions	9.9%	6.2%
Trade & Services	56.1%	80.5%

Some progress has been made in starting up new business but on the other hand still there are regional disparities in terms of banks' presence:

DISPARITY RATIOS %	NORTH-EAST	SOUTH-EAST	SOUTH-MUNTENIA	SOUTH-WEST OLTENIA	WEST	NORTH-WEST	CENTER	BUCHAREST
Loans/Capita	55.0	71.7	55.9	63.9	82.3	95.4	85.1	353.9
Deposits/Capita	38.6	56.3	42.5	43.3	63.5	61.2	73.6	514.5

Another interesting point is that *banks are expanding now more and more toward s rural areas*.

Venture capital is a type of private equity capital typically provided by professional, outside investors to new, growth businesses. Generally made as cash in exchange for shares in the invest company, venture capital investments are usually high risk, but offer the potential for above-average returns in Romania is at an early stage.

These capital funds are at an early stage. 10 venture capital funds are currently operational in Romania (mainly regional funds). EUR 150 million were invested among 2002 and 2006 and 30 million in new companies.

On the other hand SMEs gain additional support from business angels which are wealthy private investors who take equity stakes in small, high-risk firms. Competition will increase among venture funds based on new opportunities as IT&C, consumer goods, services, construction materials, and healthcare.

Therefore, banks have to adapt to the market economy conditions and a streamlined regulatory frame work. Besides, they have to focus on developing IT oper ational platforms and there is one investment potential in infrastructure which is human capital and distribution networks. On the other hand there is a significant FDI (Foreign Direct Investment) in -flows (know-how and expertise). Over the 88% of the banking assets are controlled by foreign banks. However, banking sector development largely depends on the actual growth of the real economy.

The year 2007 has been the first of EU membership for Romania and the challenges are the following:

- Self monitoring of the integration process is a prerequisite for the Romania's future
- According to the Lisbon Strategy and Maastricht Treaty the structural instruments must operate adequately through the National Programme of Reforms and the Convergence Programme
- to continue with the EU Cohesion Policy by the sustainable growth stimulation and the creation of job reaching the economic and social cohesion.

As a conclusion, Romania must take the most of its strength and opportunities in order to reach the macroeconomic stability and a strong economic growth.

Sources:

- Lisbon Strategy-Signals for Romania and Romanian Banking Sector, 2007 Dr. Nicolae Danila CEO
- Wikipedia

7. GENERAL SWOT

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Existence of human resources well prepared active in the sector of RDI and IT • Existence of 3 universities centres that include in main areas of activities scientific research invention, technological innovation and IT • Existence of the basic infrastructure for research, development, innovation and TT - 79 units recognised by CNSIS (cca.12% from the total at national level) • Existence in the region of 13.3% of enterprises with innovation departments at national level • Existence in the region of specialised companies in producing software and IT services • Communication infrastructure well developed with high level of coverage • Existence of the European road E85 that crosses the region from North to South, the European corridor no. IX and the international airports Bacau, Iasi, Suceava • Existence of sectors of activities with potential for development, inclusive through innovation, such as: wood superior processing, food industry, textile industry, ITC, machinery and equipments, biologic agriculture, tourism, energetic sector 	<ul style="list-style-type: none"> • Insufficient financing of RDI sector, both from public and private sources • Reduced level of investments in modernizing, retechnologisation • Insufficient cooperation between research/university centres and business environment in order to valorise results of research and achieving TT toward economy • Insufficient accessing by companies of the available financing (loans, grants) • Reduced number of enterprises ISO certified • Reduced level of EDI in the region • Low productivity of economic activity • Low level of entrepreneurial and innovation culture
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Romania accession to EU, importance of innovation being recognised in the European policies • Opportunities to finance RDI projects from 7 Framework Programme and structural funds • Increasing awareness level upon the role of RDI for economic development of the regions • Possibility to develop business environment as result of the establishment of industrial and scientific parks as well as business incubators • Increasing dynamics of SMEs sector • Rapid development of the electronic commerce and e-business market • Increased interest of the foreign companies to 	<ul style="list-style-type: none"> • Work force migration, particularly that qualified and specialised from research and innovation sector toward countries that offer more motivating salaries • Reduced competitiveness of the regional companies on the European market • Increased volume of imported products on the Romanian market • High level of piracy in the IT sector, that jeopardises the development of this sector; • Limited availability of the enterprises for RDI expenditures, especially due to financial issues • Inexistence of a structure that integrates the innovation system at regional level

<p>locate branches in the region as a consequence to accession</p> <ul style="list-style-type: none">• Possibility that through regional airports modernisation to be sustained the development of the regional businesses that become starting points for regional tourist itineraries• Possibility to develop commercial exchanges due to the position of the region as Eastern border of EU• Development of the first Regional Innovation Strategy	<ul style="list-style-type: none">• Lack of coordination between different sectorial policies with consequences toward development of RDI sector
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8. VISION AND MISSION

8.1. VISION

Innovation is the basis for economic competitiveness in North -East Region.

8.2. MISSION

The Regional Innovation Strategy encourages the creation of an economic competitive environment by establishing and developing innovative companies, developing modern technologies in RDI institutes, valorisation of this infrastructure and stimulating partnership creation between universities, research institutes and companies.

8.3 SPECIFIC OBJECTIVES

- To enhance the knowledge and innovation generation, diffusion and utilisation in the region, through effective transfer system and innovation commercialisation.
- To increase the regional added value and to generate new economic activities.
- To promote the adequate social and economic environment to extend and maintain innovation process and entrepreneurial culture.

8.4 FIELD OF INTERVENTION

Hereinafter are presented proposals for priorities and measures, each of them including some activities which can be developed in the region. The idea to provide these activities is to improve the regional discussion as a base of potential activities to carry out as mid term pilot actions.

PRIORITIES

- 1. Improve the capacity of research-development-innovation of RDI institutions from NE Region with the purpose to increase the economic regional competitiveness .*
- 2. To develop the capacity of enterprises to be innovative including improvement of business support infrastructure.*
- 3. Develop an innovative entrepreneurial culture in North-East region.*
- 4. Improve human resources dedicated to RDI sector.*

1. IMPROVE THE CAPACITY OF RESEARCH-DEVELOPMENT-INNOVATION OF RDI INSTITUTIONS FROM NE REGION WITH THE PURPOSE TO INCREASE THE ECONOMIC REGIONAL COMPETITIVENESS

STRATEGIC LINES:

- Create a regional network of technologic and innovation transfer system bringing nearer research centres and companies.
- Boost research in strategic scientific and technological areas.
- Encourage the up-grading of research equipments.
- Improve marketing activities of RDI institutions
- Encourage the participation of R&D entities in international projects, networks and international cooperation in R&D.

2. TO DEVELOP THE CAPACITY OF ENTERPRISES TO BE INNOVATIVES INCLUDING IMPROVEMENT OF BUSINESS SUPPORT INFRASTRUCTURE

STRATEGIC LINES:

- To enhance the access of SMEs to the research results through financing and dedicated support services.
- Support the introduction of modern and innovative technologies and equipments.
- Development of innovation financing mechanisms.
- Develop and improve the technologic and innovation transfer infrastructure
- Encourage the strategic clusters in the region.
- Support the participation of enterprises in RDI European projects.

3. DEVELOP AN INNOVATIVE ENTREPRENEURIAL CULTURE IN NORTH-EAST REGION

STRATEGIC LINES:

- Boost an innovative culture in the region, through media, seminars, forums, good practices, etc.
- Foment the entrepreneurship across of a new approach in the educational system: in secondary schools, universities and centres of vocational training.
- Boost the creation of new innovative and/or technological companies.
- Develop training and consultancy services for companies in order to identify innovation needs

4. IMPROVE HUMAN RESOURCES RELATED TO RDI SECTOR

STRATEGIC LINES:

- Attraction and retention of qualified personnel, specially technologists and researchers.
 - Increase the mobility of technologists and researchers .
 - Promote innovation management training courses focused on entrepreneurs.
 - Foster management training courses for researchers .
 - Support the incorporation of national and foreign researchers and technologists in regional companies.
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1. IMPROVE THE CAPACITY OF RESEARCH-DEVELOPMENT-INNOVATION OF RDI INSTITUTIONS FROM NE REGION WITH THE PURPOSE TO INCREASE THE ECONOMIC REGIONAL COMPETITIVENESS

STRATEGIC LINES:

- Create a regional network of technologic and innovation transfer system bringing nearer research centres and companies.
- Boost research in strategic scientific and technological areas.
- Encourage the up-grading of research equipments.
- Improve marketing activities of RDI institutions
- Encourage the participation of R&D entities in international projects, networks and international cooperation in R&D.

The scientific research and the technology are two key factors to reach competitiveness of economy and to strengthen the system of Science -Technology-Company-Society by means of: improving connections among the different agents, identifying strategic areas where the region has good experience, improving and updating research equipments, taking part in international projects or networks, making profitable research activities and improving the relation among university and firms by means of scientific parks.

1.1 Create a regional network of technologic and innovation transfer system bringing nearer research centres and companies.

Objective: To create institutions dedicated to innovation and foster the connection between R&D&I and entrepreneurial area.

A group of specialised people will nearer to universities, research centres, firms, transfer offices, associations, etc in order to motivate their participation in the network. The network should include the maximum of agents of the Regional Innovation System, in number and in kind of agent. The diversity of the network will favour the knowledge about different agents and reveal the necessities of the enterprises which could lead to collaborations and agreements among agents. This should be a shared effort among firms, research organizations and interface organizations.

This line is composed of different actions or instruments:

- Create specific institutional infrastructure dedicated to innovation in North -East Region (regional agency for innovation, regional technologic centres, transfer offices, etc).
- To design a digital platform to know more about results and characteristic of regional innovation system, international tendencies in R&D&I .
- Awareness campaign at regional level to create regional innovation and technologic networks.
- To elaborate a communication plan to ensure the dissemination of the main results of the network

1.2 Boost research in strategic scientific and technological areas

Objective: To use potential strategic areas to optimize the limited resources available on R&D&I activities. The strategic areas for the region are: TIC, Biotech, Lean manufacturing, Nanotechnology, Tourism and Energy, with special attention to the sustainable energies. These areas are linked to sectors with development potential identified in the *Sectorial Operational Programme “Increase of Economic Competitiveness”* . Some of these areas are included as basis for other areas, for example TIC or nanotechnology. Whereas other areas have applications in specific fields, and the development of the research in these areas should be aimed to strengthen

the economic sectors and sub sectors which exist in the region. For example specifically in the North-East Region, biotechnology is closely linked to agro industry, and Lean manufacturing to industry: machinery and equipments industry, textile industry, food processing industry and superior wood processing industry.

This line is composed of different actions or instruments:

- To create a data base of excellence centres and researchers where the region has competitiveness position.
- To establish strategic sub-areas and priority research lines.

1.3 Encourage the up-grading of research equipments.

Objective: To improve the capacity of the research centres and universities with modern equipments adjusted to the necessities of the researchers. The update of equipments will contribute to increasing the added value of the projects. The change of equipments should be occurred in all scientific disciplines, but to invest in strategic research areas should be priority.

This line is composed of different actions or instruments:

- To invest in equipments used in strategic research areas.
- To develop new research areas.
- To optimize the use of the equipments ensuring their valorisation during their entire life.

1.4 Improve marketing activities of RDI institutions

Objective: To increase the profits of the research activities. The research should be oriented to make profitable the research activities through patents, licenses or outsourcing. This target could aim research centres to business sector, and improve their connectivity.

This line is composed of different actions or instruments:

- To encourage creation of specialized department for legal, commercial and marketing advisory, which get in touch with transfer officer of the universities and RDI entities
- To consolidate a technological supply as a catalogue to be disseminated among firms and other kind of organisation, in the region and abroad.

1.5 Encourage the participation of R&D entities in international projects, networks and international cooperation in R&D.

Objective: To promote the participation of the research groups, centres and enterprises in international projects and networks. These projects and networks will contribute to exchange knowledge with foreign agents about specific areas, but also it will favour the abilities related with management of projects.

This line is composed of different actions or instruments:

- The creation of an infrastructure as a centre or an organism specialised in international projects. This organism should inform, training, guide and act as consultant to how participate in such projects.

- To organize training in project cycle management for R&D entities. The availability of persons specialized in this area is an important resource in order to consolidate a strong regional innovation system.

2. TO DEVELOP THE CAPACITY OF ENTERPRISES TO BE INNOVATIVES, INCLUDING IMPROVEMENT OF BUSINESS SUPPORT INFRASTRUCTURE

STRATEGIC LINES:

- To enhance the access of SMEs to the research results through financing and dedicated support services.
- Support the introduction of modern and innovative technologies and equipments.
- Development of innovation financing mechanisms .
- Develop and improve the technologic and innovation transfer infrastructure
- Encourage the strategic clusters in the region.
- Support the participation of enterprises in RDI European projects.

The region is facing a situation where almost of the companies are SMEs (specially micro enterprises), the products diversification level and the investments in modernizing and new technologies of the equipment are very low, the main source of competitiveness is represented by the low cost and not by the level of product and technology innovation. Therefore it is necessary to develop the technology capacity of enterprises in order to increase the added value of the production and specially the development of new products that stimulates the diversification towards new lines of business with major technological component.

Besides, as the innovation culture is not enough implemented in the business network, few companies have developed a systematic management of innovation. This fact leads to the companies to keep technological and economical surveillance, to think carefully about opportunities and technological solutions, to carry them out, to develop know-how, to turn to specialized external services, to look for the most suitable funding.

2.1 To enhance the access of SMEs to the research results, financing and cooperation opportunities through dedicated support services.

Objective: The companies or different research units from Romania to obtain relevant information and to conclude successfully that technological innovation is representative in the achievement of competitiveness and become aware of its true relevance.

For this, its necessary create instruments of support, as for example:

- Progress on the inclusion of innovation culture in less dynamic geographical economic environments. Support the diffusion of successful innovative experiences in North East Region companies.
- To put at the disposal of each company the necessary tools to have access to relevant information: studies about the sector situation, evolution and perspectives, technological prospective studies, patent database, organisation of scientific and technological conferences or meetings.
- To promote the collaboration between university/research (centres, institutes, stations) and enterprise.

2.2 Support the introduction of modern and innovative technologies and equipments

Objective: To improve the acquisition, the utilisation and the exploitation of new technologies by companies.

This line is made up a series instruments:

- Support companies to incorporate new technologies for product modernisation and diversification, process improvement and market expansion
- Support to the acquisition and introduction of Information Technologies and Communication
- Promotion of the introduction and improvement of Quality Management Systems in companies

2.3 Development of innovation financing mechanisms

Objective: To stimulate financing innovation, through investment attraction policies and incentives provided by financing bodies with international, national or local origin.

- Stimulating the development of seed fund, risk capital and guarantee funds
- Facilitating adequate information so that companies and institutions access to external financial sources
- Facilitating training and assessment for companies and institutions on how to obtain capital for innovation
- Facilitate and provide access to financing for companies in their start-up and initial phases;
- Develop programmes that facilitate financing for companies in their expansion phases and favouring the entry of private investors into specific financial markets for new high-tech companies

2.4 Develop and improve the technologic and innovation transfer infrastructure

Objective: To create spaces for the knowledge transfer from university and research centres to business sector with special attention to creation of new technology-based firms.

The purpose is to strengthen the TT offer of the region, in such a way that the rendered services contribute to answer adequately to the needs of the companies and to offer a quality area for the settlement of technological and/or innovation companies. This field of intervention must stimulate the creation of innovative spin-off companies especially from the university, the research centres and from different companies.

For this, its necessary:

- Funding investments in equipments or developing infrastructures of technologic and innovation institutions such as: technologic and scientific parks, industrial parks, industrial zones.
- To create business incubators oriented mainly to new high-firms.
- Encouraging creation of spin-off companies around universities.

2.5 Encourage the strategic clusters in the region

Objective: To develop and promote the capacities of the clusters in strategic areas as key elements of the system of innovation.

- To promote agreements of cooperation among companies to establish clusters in order to boost innovation.

2.6 Support the participation of RDI entities in European projects

Objective: To promote applications on essentially international projects in a range of calls for tenders such as: EU Frame Programmes, CRAFT, etc.

Participation in this kind of programs give businesses and SMEs in particular, the possibility of entering on new international markets by acquiring, or renewing, new technologies, for which they can receive EU financing to perform R&D&I projects. In this context, businesses increase their levels of competitiveness, future viability and prestige. The next few years EU policy are going to be increasingly oriented towards the principles of the renewed Lisbon Agenda, agreed by the heads of state and Government of the EU, as they seek to transform EU in the most dynamic system in the world as regards stimulating innovation towards growth and employment. Improving the innovation capability of businesses is therefore going to be the basis for consolidating production in a context of growing business competitiveness and environmental sustainability. In this context, the intensity of the European support to the innovation will go be increasing.

For this, its necessary:

- To promote the incorporation of external advisors (researchers, doctors, consultants, etc) in the regional companies to collaborate in the definition of own technological innovation strategy, identifying their necessities or their technological opportunities and helping them to present R&D projects into European programs.
- Promote participation to international programs by organising dedicated trainings and information campaigns.

3. DEVELOP AN INNOVATIVE ENTREPRENEURIAL CULTURE IN NORTH-EAST REGION

STRATEGIC LINES:

- Boost an innovative culture in the region through media, seminars, forums, good practices
 - Foment the entrepreneurship across of a new approach in the educational system: in secondary schools, universities and centres of vocational training.
 - Boost the creation of new innovative and/or technological companies.
 - Develop training and consultancy services for companies in order to identify innovation needs
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One of the biggest existing obstacles to innovation in Europe in general and in Romania in particular, is the lack of an entrepreneurial culture. And although much may have begun with an innovation strategy, certainly such a culture should be promoted from infancy, by gradually modifying the contents and practices of current education systems.

There is no doubt that in order to do so, quite a few existing obstacles will have to be overcome, among them the minimal amount of seed capital actually available, the lack of theoretical and practical training on how create an innovative company and the lack of well developed services in business sector that would facilitate an innovative atmosphere in the region.

3.1 Boost an innovative culture in the region, through the media, seminars, forums, good practices

Objective: This strategic line will allow advancing in the process of creation of a society that grants a value and positive social consolidation to the figure of the Entrepreneur - Businessman and contributes to wake up the economic, administrative and social interest around the promotion of the business spirit.

- To establish a Communication Plan to approach citizens to the message that undertaking is possible and each of the citizens is a possible entrepreneur.
- Integrate the new Technologies of Information and Communication as channel facilitator of the processes of communication and interaction
- Publication of interactive and support materials to the different potentially enterprising groups
- Introduce the entrepreneurial elite into the dynamics of innovation system in the region to make use of their potential magnet effect on other regional businesses.

3.2 Foment the entrepreneurship across of a new approach in the educational system: secondary schools, universities and vocational educational training centres.

Objective: To develop and promote enterprising culture, incorporating formation with the enterprise activity, on different educational levels. It is about driving within the education system of programs that develop entrepreneurial aptitudes and adapt the formative offer to the concrete necessities of the different groups of entrepreneurs.

For this, its necessary create instruments of support, as for example:

- Develop entrepreneurial capacity of the education system at all levels.
- Develop Specialised Training Services for the necessities of new enterprises.
- Organize intensive courses for trainer for trainees.

3.3 Boost the creation of new innovative and/or technological companies.

Objective: Establishment of support tools to encourage the diversification of the industrial tissue by means of creation of technology based innovative companies.

In this context, the actions to put into gear are:

- Configuration of an integrated business support system based on cooperative networking, that covers the territory and different sectorial elements (different collectives, kind of companies).
- Impulse meetings between business support companies, entrepreneurs and investors
- Aid potential entrepreneurs to define and make feasibility analyses of their business ideas .
- Promote actions that reflect economic trends and organize awarding events in order to support business dynamics in constant evolution and adaptation.

3.4 Develop training and consultancy services for companies oriented to innovation needs

Objective: Create a system to support the identification of knowledge gaps in the Romanian companies and to help them to implement their innovation projects in the most suitable way.

The actions will be turned into information, consultancy services, informative meeting on specific programmes, individualised search for partners and advice for the presentation and development of the definition phase and viability of R&D projects in the framework of national an international technological programmes.

For this, its necessary create instruments of support, as for example:

- To increase competences of the companies for advanced support services and innovation
- To support creation and development of business support services oriented to identify the innovative needs of companies, the innovative potential, improve the skills in realizing the development strategies of the company
- To encourage the development of support services for entrepreneurs in using the intellectual property protection systems, including the establishment of a dedicated interface organism

4. IMPROVE HUMAN RESOURCES

STRATEGIC LINES:

- Attraction and retention of qualified personnel, specially technologists and researchers.
 - Increase the mobility of technologists and researchers.
 - Promote innovation management training courses focused on entrepreneurs.
 - Foster management training courses for researchers.
 - Support the incorporation of national and foreign researchers and technologists in regional companies
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Another key factor in a competitiveness economy is the existence of qualified human resources. To convergence from information society to knowledge society, it is important the *creative class*¹. To stimulate a creative society is necessary the *three T's* : tolerance, talent and technology.

The education and training are important issues, but also the establishment of incentives to ensure continuance of high qualified personnel. In a country such as Romania and a region like North-East, this last factor is vital to combat emigration phenomenon.

4.1 Attraction and retention of qualified personnel, specially technologists and researchers.

Objective: To increase the quality and quantity of human resources by increasing number of employees in regional research centres.

In this way, the region could count on a critical mass of researchers to favour regional development of strategic scientific research and technological areas.

This line is composed of different actions or instruments:

- To create employment program for researchers and technologists.
- To stimulate the researcher career.
- The promotion of the interchange of personnel between companies and the academic environment, of both researches and technically qualified people, students, university graduates and company personnel with the objective of the disseminating and favouring cooperation.

4.2 Increase the mobility of technologists and researchers.

Objective: To transfer knowledge and abilities among institutions and agents of the Regional Innovation System through exchange of personnel among technological centres and enterprises,

¹ The Rise of the Creative Class and The Flight of the Creative Class . 2003 and 2006. Richard Florida.

among universities and research centres or among technological centres and enterprises and to improve the experience of technologists and researchers working in other institutions in other regions.

This line is composed of different actions or instruments:

- To design a program which stimulates technologists and researchers the stay in international centres by means of grants, leaves, agreements, etc.
- To valorise and recognize the stay in international centres among consolidated research groups.
- To stimulate mobility by demanding as main progress criteria to stay minimum three months in other centre in a period of three years and participate to international events such as congress, symposiums, etc.

4.3 Promote innovation management training courses focused on entrepreneurs.

Objective: To strengthen the innovation management by means of dedicated training for personnel in universities, technological centres and in special enterprises. The training supply should contain from general aspect to specified issues especially in areas where the region has potential.

This line is composed of different actions or instruments:

- The dissemination campaign about the importance of innovator figure in enterprise and society among firms and educational centres.
- Design a dedicated innovation training program shaped on the needs of entrepreneurs.

4.4 Foster management training courses for researchers.

Objective: To improve the qualifications and abilities of researchers in management area. The management of projects is also important as research activities. A suitable management of a project it is a key factor to ensure its success. The training supply should be solid and with quality and to give possibility to create a line of specialization with different degrees.

This line is composed of different actions or instruments:

- To design management and PCM training programs dedicated to researchers.
- To promote introduction of research manager as a professional profile within universities and research centres.

4.5 Support the incorporation of national and foreign researchers and technologists in regional companies.

Objective: To expand the vision of enterprise by means of incorporation of high qualified personnel to its R&D&I departments. The origin of these workers it is not important, the most important characteristic is their qualification.

This line is composed of different actions or instruments:

- To create a program that allows technologists and researchers the stay in regional firms by agreements and protocols.

- To establish special agreements among universities and researchers organism with enterprise in order to exchange resources such us: human resources, infrastructures and financial resources.
- To set incentives for the incorporation of researchers and technologists in regional companies. From the side of companies financial incentives and deductions. From the side of researchers and technologists, improving work conditions.