



**MINISTRY OF ECONOMY AND TRADE**

***Sectoral Operational Programme  
“INCREASE OF ECONOMIC  
COMPETITIVENESS”  
- Second Draft -***



**November 2006**

## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	<b>5</b>
<b>1. SOCIO-ECONOMIC ANALYSIS</b> .....	<b>7</b>
1.1 COMPETITIVENESS FACTORS .....	8
1.2 MANUFACTURING INDUSTRY .....	12
1.3 SMES SECTOR .....	15
1.4 SCIENTIFIC RESEARCH, TECHNOLOGICAL DEVELOPMENT AND INNOVATION .....	21
1.5 INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) MARKET .....	25
1.6 ENERGY .....	30
1.7 TOURISM .....	33
1.8 PREVIOUS EXPERIENCE IN PROGRAMMES AND PRE-ACCESSION INSTRUMENTS.....	36
<b>2. SWOT ANALYSIS</b> .....	<b>40</b>
<b>3. STRATEGY</b> .....	<b>42</b>
3.1. OBJECTIVES .....	47
3.2. LIST OF PRIORITY AXES .....	48
3.2.1. PRIORITY AXIS 1: AN INNOVATIVE PRODUCTIVE SYSTEM .....	49
3.2.2. PRIORITY AXIS 2: RESEARCH, TECHNOLOGICAL DEVELOPMENT AND INNOVATION FOR COMPETITIVENESS.....	55
3.2.3. PRIORITY AXIS 3: ICT FOR PRIVATE AND PUBLIC SECTORS .....	59
3.2.4. PRIORITY AXIS 4: IMPROVEMENT OF ENERGY EFFICIENCY AND SUSTAINABLE DEVELOPMENT OF THE ENERGY SECTOR.....	63
3.2.5. PRIORITY AXIS 5: ROMANIA, AN ATTRACTIVE DESTINATION FOR TOURISM AND BUSINESS.....	68
3.2.6. PRIORITY AXIS 6: TECHNICAL ASSISTANCE .....	70
<b>3.3. COHERENCE AND COMPLIANCE WITH COMMUNITY AND NATIONAL POLICIES</b> .....	<b>75</b>
3.3.1. COHERENCE WITH COMMUNITY STRATEGIC GUIDELINES AND NATIONAL STRATEGIC REFERENCE FRAMEWORK (NSRF) .....	75
3.3.2. COHERENCE WITH OTHER EUROPEAN AND NATIONAL DEVELOPMENT POLICIES..	81
3.3.3. HORIZONTAL POLICIES.....	86
<b>3.4. COMPLEMENTARITIES WITH OTHER OPERATIONAL PROGRAMMES AND OPERATIONS FINANCED BY EAFRD AND EFF</b> .....	<b>90</b>
<b>4. FINANCIAL PLAN</b> .....	<b>93</b>
<b>5. IMPLEMENTATION</b> .....	<b>98</b>
5.1. MANAGEMENT .....	98
5.2. MONITORING AND EVALUATION .....	103
5.3. FINANCIAL MANAGEMENT AND CONTROL .....	108
5.4. INFORMATION AND PUBLICITY .....	114
5.5. SINGLE MANAGEMENT INFORMATION SYSTEM .....	117
<b>6. PARTNERSHIP</b> .....	<b>118</b>
<b>7. LIST OF ANNEXES</b> .....	<b>121</b>

A. SOCIO-ECONOMIC ANALYSIS .....	122
B. METHODOLOGIES USED WITHIN SOP COMPETITIVENESS .....	137
C. INDICATIVE LIST OF MAJOR PROJECTS.....	149

## **ABBREVIATIONS LIST**

<b>AFCOS</b>	Anti-Fraud Coordination Service
<b>BIC</b>	Business Information Centre
<b>CA</b>	Certifying Authority
<b>CAP</b>	Communication Action Plan
<b>CANSTAT</b>	Statistical Bulletin - Central Statistics Office publication
<b>CF</b>	Cohesion Fund
<b>CHUPIA</b>	Central Harmonisation Unit for Internal Audit
<b>CIF</b>	Cost, Insurance and Freight
<b>CIS</b>	Community Innovation Surveys
<b>CRM</b>	Customer Relationship Management
<b>CSF</b>	Community Support Framework
<b>DG REGIO</b>	European Commission General Directorate for Regional Policy
<b>EAFRD</b>	European Agricultural Fund for Rural Development
<b>EFF</b>	European Fisheries Fund
<b>EITO</b>	European Information Technology Observatory
<b>EMAS</b>	Eco - Management and Audit Scheme - European Environmental Standards
<b>EPO</b>	European Patent Office
<b>ERP</b>	Enterprise Resource Planning
<b>ESF</b>	European Social Fund
<b>ERDF</b>	European Regional Development Fund
<b>EU</b>	European Union
<b>EUROSTAT</b>	Statistical Office of the European Communities
<b>FDI</b>	Foreign Direct Investment
<b>FOB</b>	Free on Bord
<b>FTE</b>	Full Time Equivalent
<b>GCR</b>	Global Competitiveness Report
<b>GD</b>	Government Decision
<b>GDP</b>	Gross Domestic Product
<b>GIS</b>	Geographic Information System
<b>GERD</b>	Gross Domestic Research and Development Expenditures
<b>GEANT</b>	Gigabit European Academic Network (financed by the 5th Framework Programme )
<b>GRID</b>	Electronical Communication Technology in the Research Field
<b>GVA</b>	Gross Value Added
<b>HR</b>	Human Resources
<b>IB</b>	Intermediate Body
<b>ICT</b>	Information and Communication Technology
<b>ILO</b>	International Labour Office
<b>ISO</b>	International Organization for Standardization
<b>IT</b>	Information Technology
<b>MA</b>	Managing Authority
<b>MAI</b>	Ministry of Administration and Interior
<b>MET</b>	Ministry of Economy and Trade
<b>MEWM</b>	Ministry of Environment and Water Management

<b>MICE</b>	Meetings, Incentives, Congresses, Exhibitions
<b>NACE</b>	Nomenclature générale des activités économiques dans les Communautés européennes
<b>NARMPP</b>	National Authority for Regulating and Monitoring Public Procurement
<b>NCGF</b>	National Co-Guarantee Fund
<b>NASMEC</b>	National Agency for Small and Medium sized Entreprises and Cooperation
<b>NDP</b>	National Development Plan
<b>NFC</b>	National Forecast Commission
<b>NGO</b>	Non-governmental Organisation
<b>NIS</b>	National Institute of Statistics
<b>NSPRD</b>	National Strategic Plan for Rural Development
<b>NSRF</b>	National Strategic Reference Framework
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>OLAF</b>	European Anti-Fraud Office
<b>OP</b>	Operational Programme
<b>PC</b>	Personal Computer
<b>PEOP</b>	Pan-European Oil Pipeline
<b>PPP</b>	Purchasing Power Parity
<b>PPS</b>	Purchasing Power Standards
<b>RDA</b>	Regional Development Agency
<b>R&amp;D</b>	Research and Development
<b>RDI</b>	Research, Development and Innovation
<b>RES</b>	Renewable Energy Sources
<b>ROP</b>	Regional Operational Programme
<b>SFIT</b>	Structural Funds Information Team
<b>SME</b>	Small and Medium sized Enterprise
<b>SMIS</b>	Single Management Information System
<b>SOP HRD</b>	The Sectoral Operational Programme "Human Resources Development"
<b>SOP IEC</b>	The Sectoral Operational Programme "Increasing of Economic Competitiveness"
<b>SWOT</b>	Strengths, Weaknesses, Opportunities and Threats
<b>TA</b>	Technical Assistance
<b>TEN</b>	Trans-European Energy Network
<b>TIPC</b>	Tourism Information and Promotion Centres
<b>TT</b>	Technological Transfer
<b>TT&amp;I</b>	Technological Transfer and Innovation
<b>USPTO</b>	United States Patent and Trademark Office
<b>WEF</b>	World Economic Forum

## INTRODUCTION

The Sectoral Operational Programme “Increase of Economic Competitiveness” (further referred to as SOP IEC) is one of the seven instruments (OPs) 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 and Regional Policy 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.

SOP IEC mainly focuses on the first priority of NDP “Increase of economic competitiveness and development of knowledge-based economy” and the second priority of NSRF i.e. “Increasing long-term economic competitiveness” and also contributes, to a different extent, to the implementation of all NSRF priorities.

SOP IEC was elaborated under the coordination of the Managing Authority for SOP IEC - Ministry of Economy and Trade (MET) and is the result of the partnership consultations both with the strategic partners (Ministry of Public Finance, other MAs–ministries coordinating other OPs, institutions designated as Intermediate Bodies, other line ministries and agencies, social partners, civil society organizations, potential beneficiaries, other stakeholders involved in this field).

The implementation of the programme is under the responsibility of the Managing Authority for SOP IEC within MET. In order to carry out the programme efficiently, the National Agency for SMEs, Ministry of Education and Research – National Authority for Scientific Research, Ministry of Communications and Information Technology, Ministry of Economy and Trade-Energy Policy General Directorate and National Authority for Tourism were designated as Intermediate Bodies (IBs) for SOP IEC.

The starting point for SOP IEC is the analysis of the current situation of entrepreneurship and innovation, with special emphasis on the small and medium-sized enterprises sector (SMEs), the resources for RDI sphere, ICT sector, energy efficiency and environment protection issues in the energy and industry sectors, as well as tourism.

It is followed by the SWOT analysis, on which the development strategy is built. The SOP also contains a description of the priority axes, key areas of intervention and proposed operations, as well as financial tables, implementation provisions, partnership arrangements.

The **general objective** of SOP is **the increase of Romanian companies’ productivity by reducing 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.

**The specific objectives are:**

- Consolidation and growth of the Romanian productive sector
- Establishment of a favourable environment for enterprises’ development
- Increase of the R&D capacity and stimulation of the cooperation between RDI institutions and the productive sector
- Valorisation of the ICT potential and its application to the public (administration) and private sector (enterprises, citizens)

- Increased energy efficiency and sustainable development of the energy system.
- Promotion of Romanian tourism potential

Taking into account both the identified possibilities for improvement of the competitive position of Romanian enterprises to cope with the challenge and to be able to use the opportunities arising from operating on the European Single Market and the areas eligible for the ERDF support, the following Priority axes have been identified in the SOP IEC:

**Priority Axis 1: An innovative productive system**

**Priority Axis 2: Research, Technological Development, and Innovation for Competitiveness**

**Priority Axis 3: IT&C for private and public sectors**

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

**Priority Axis 5: Romania, an attractive destination for tourism and businesses**

**Priority Axis 6: Technical Assistance**

Technical Assistance (TA) will assist in the implementation and monitoring of the programme. TA is expected to contribute significantly towards achieving the global and specific objectives.

The priority axes of Romania's competitiveness strategy are in full compliance 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.

The ERDF contribution to SOP IEC budget for the 2007-2013 programming period is 2,554 million Euro, which represents 13.3 % of the Community contribution to the NSRF.

## **1. SOCIO-ECONOMIC ANALYSIS**

## 1.1 Competitiveness Factors

Sustainable economic growth and improvement of living standards of the population are triggered by the development of economic competitiveness in the world's challenging context such as globalization, opening of international markets and rapid technological changes; these challenges have to be transformed by Romanian economy into opportunities. The analysis of competitiveness factors, the problems' identification and the best approach in finding the correct solutions, represent a must for the assessment of Romania's future economic potential.

The world states' competitiveness study (World Economic Forum - WEF), ranked Romania 67<sup>th</sup> out of 117 analyzed countries in 2005 (with a score of 3.67), lower compared to the previous year when it was 63<sup>rd</sup> out of 104 analyzed countries (with a score of 3.86), behind the new member states and also behind other candidate countries such as Bulgaria (ranked 58<sup>th</sup>) and Turkey (ranked 66<sup>th</sup>). The analysis considered three factors: technology, institutional frame and macroeconomic environment. Thus, the WEF, Report 2003 and 2004 on Global Competitiveness ranked Romania 55<sup>th</sup> -in terms of technology, 58<sup>th</sup> -in terms of macroeconomic environment, and 67<sup>th</sup> -in terms of public institutions, out of 80 analyzed countries. The above clearly demonstrates the need for major improvement of all factors determining competitiveness.

Over the last five years, Romania registered a **macroeconomic stability** that is essential for the country's sustainable development, marked by a substantial GDP growth, based on investments, exports and less on consumption. In structure, the contribution of economic branches to gross domestic product indicates an improvement in terms of proportionality, but also an evolution towards modern structures, typical for developed economies. It is worth mentioning that, because of its structural reforms, Romanian economy is currently capable to meet market requirements, enhancing the international economic environment opportunities in real time. The sustained economical growth, with an annual average rate of 6.1% in 2001-2004, was due to annual increases in constructions (8.2%), industry (5.2%) and services (5.5%). In 2005 the GDP increase was of only 4.1%, i.e. half of the 2004 level (+8.3%), mainly due to agriculture decline and a slower increase in industrial sectors. Still there were significant increases in constructions (+9.9%) and services (+8.1%), these two participating with 54.8% to GDP.

A positive indicator of structural changes in Romania is the constant growth of private sector weight in GDP, which reached 70.8% in 2004 compared to 63.7% in 1999.

Despite the significant progress made in the recent years, Romania is still lagging behind the European countries, in terms of economical development, which is also proved by GDP at PPP, that is approximately 50% of the new member states' GDP and approximately 40% of that of the least developed EU countries (Greece, Portugal). The GDP per capita (PPP) is approximately 1/3 of the EU25 average in 2004, proving also the substantial gap compared to EU.

The evolution of **labour productivity** (GDP at PPP/employed person) registered a positive, but insufficient trend, from 27.9% in 2000 to 35.3% in 2004.

The labour productivity in industry increased by 11.6% per year, in the period 2000-2003, a higher percentage than in many other countries of the region (source: CANSTAT Statistical Bulletin 2003/4), such as Poland (9.8%), Czech Republic (7.7%) and Hungary (8.9%). Although this indicator had a positive evolution, a trend maintained also in 2004 (11.9%), Romania is



behind EU countries average, including the countries in the region, for most economic activities. Productivity growth depends both on technological development, carried out through tangible investments (equipment, new technology) and intangible investments (licenses, patents, trademarks and know-how), and on improvement of product quality, marketing and application of research / innovation and other sources that foster added value.

The **low cost of labour** is a dominant source of competitive advantage but this records a progressive decrease, which calls for stimulating internal research and innovation as major course of action, that will bring beneficial results as lowering the imports of technologies and equipment and increasing the gross added value of products intended for the domestic market but also for export.

The **privatization process of state-owned companies** reinforces financial discipline and arrears' decrease, enterprises' restructuring, lowering of production costs, increase of professional training of employees. That is why this process was intensified in Romania over the last years, where a considerable share of processing industry and most of the natural gas and electricity supply have been privatized.

The **engines of economic growth** over the last years have been represented by export and investments. Romania's **export**, based approximately 98% on industry, registered a positive evolution between 2000 and 2004, but depended to a great extent on products with low added value. The highest exports volume was recorded in textile industry, where inward processing is predominant, followed by metallurgy with mainly inferior steel and less special steel. There has been progress in export of high added value products such as equipment industry, radio, television and communication equipment, car and electrical appliances and of transport industry (mainly motorcars).

The increase of Romanian products competitiveness was reflected by changes in exports structure of products belonging to manufacturing industry (the food industry was not included in the analysis). Thus, in the 1999-2004 period, the weight of resources exports decreased from 16.1% to 15.6%, as well as the low technology ones from 49.6% to 43.1%, whereas the weight of average technology products significantly increased from 16.1% to 22.3% and of high technology ones from 2.5% to approximately 5%. The export volume continuously increased in this period and almost doubled in 2005 compared to 2000 (from 11,273 mil. Euro in 2000 to 22,255.1 mil. Euro in 2005). As for imports, the weight of high and average technology products is approximately equal to that of low technology products. This demonstrates that technology is mainly imported in Romania, and only on a small scale is locally generated and, where available, local innovation is hard to be promoted and transferred to productive companies. It can be said that, to a great extent, Romanian products offered for export are competitive by costs and not by innovation.

**Investments** represent a significant driving force for economical development. Direct foreign investments may lead to a substantial growth of productivity because they bring not only technology, but also the best practice. In 2004 Romania witnessed an increase in foreign direct investment (FDI) that was of 4,098 million Euro (according to National Bank of Romania statistics), which represents an increase of over 111% compared to 2003. Romania managed thus to lower the gap and to become more competitive in attracting FDI.

The interest of foreign partners in Romania as destination for FDI is also reflected in the 54% growth companies with foreign-capital incorporated in 2004, compared to 2003, most of them in industry (58.7%). The foreign investors' orientation towards industry is especially due to the advantages Romania offers in this field (reduced price for land compared to other countries in the region, cheap labour force and qualified for the industrial field, production capacities, tradition). On the other hand, the FDI growth was highly affected by transport, communication and energy infrastructure development that do not reach European levels.

A determinant element for the growth of foreign direct and local investments is the **existence of a stable and predictable business environment**. An Action plan to remove administrative obstacles for business environment was developed, and its implementation led to simplification of legal and administrative procedures for starting up and developing business competition and increasing the efficiency of authorization and approving processes. The incorporation process for a limited liability company involved 6 procedures, lasted 27 days and cost approximately 220 USD, which placed Romania above the average of EU candidates and new member states.

One issue that small investors, especially Romanian, have to cope with is **reduced access to financing**, which calls for the creation of a favourable environment for business financing on competitive market terms, creation of guarantee and co-guarantee funds to support enterprises and stimulation of other financial instruments as venture/risk capital.

The economic competitiveness is intrinsically determined by **the quality of products and services**. At national level, the efforts were focused on transposing the European regulations into the national legal system and on ensuring the implementation conditions in terms of EU requirements. Moreover, the legal framework has been improved by adopting laws on evaluation of products conformity, and the institutional infrastructure has been developed with regard to national standardization, metrology, laboratories and accreditation of certification and inspection bodies. Implementing the European standards and creating a product conformity evaluation system - efficient, competent, transparent and, therefore, credible, significantly contributes to facilitate the access of Romanian products on the single market and offers opportunities for the business environment in Romania to improve its international position.

The permanent and constant expansion of the **information and communication technology** market (ICT) is a significant factor contributing to the development of IT infrastructure and to a greater competition. According to the EITO (European Information Technology Observatory) last survey, Romania has one of the highest dynamics at regional level. However, the total ICT expenditure as percentage of GDP is less than half of EU15 average (3%). Communication market liberalization and the removal of Romtelecom monopoly on the fixed telephony market have triggered an increase in the number of electronic communication networks and service providers operating on the market. During 2000-2004, the penetration rate for the mobile telephony increased by 50% each year but is still lower than EU25 average (83%).

**PC** penetration, despite an ascending trend, with an annual average sales increase by more than 50%, is still low with a rate of 12 PCs/ 100 inhabitants at the end of 2004, compared with EU15 average of approximately 40 PCs /100 inhabitants. The number of Internet users has increased, but the Internet penetration rate is also low, especially in rural areas, where the access prices are higher. The decrease of broadband Internet access costs, the increased competition among Internet providers, and the consolidation of a culture in this field represent comparative

advantages for the economic evolution of the country, together with the positive evolution of software industry.

The **IT society development** was marked in 2001 by the settlement of the legal framework for supporting the development of e-government and e-business applications. Since 2003, banks developed programs for electronic payment and, the use of cards increased. The positive evolution of the IT sector is reflected by World Economic Forum in the Global Report on Information Technology 2004-2005, and ranks Romania 53<sup>rd</sup> out of 104 countries, a positive evolution compared to 2003, when Romania was 61<sup>st</sup> out of 102 countries.

In Romania, the research, development and innovation activity is based on a valuable tradition currently covering over 50 specific scientific and technological fields and maintaining a relatively stable annual activity and results level. The research and development activities continue to be carried out mostly in the public sector (over 60%). One of the main problems is the insufficient financing from public funds (0.4% of GDP in 2004), of which only 10% of the innovating companies benefit. In 2004, the innovating companies have spent approximately 3% of the turnover, of which 24.5% on RD, 53.4% on purchasing equipment and only 6.6% on patents and licenses. The RD infrastructure is outdated and there is a 5 to 10 years gap between the existing equipment and the current standards. Another major problem is the weak connection between research and economy and the relatively low capacity of valorising research results (economic and commercial applicability). In creating the technological transfer and innovation infrastructure, the first steps have been made by establishing technological transfer centres, technological information centres, innovative business incubators, industry connection offices, scientific and technological parks as well as excellence centres, but the results are however not sufficient.

**The quality of training and new skills of labour force** are important factors of competitiveness. From the education point of view, Romania recorded a permanent growth of the number of active population with secondary studies (70.5% in 2003), higher than in many European countries. Unfortunately, the weight of high education graduates, even if with an upward trend, (10.6% in 2004) is lower than EU25 average of 21.9%. With regard to lifelong learning and professional training, the training offer focuses mainly on general aptitudes (PC use, foreign languages, accounting, etc.) and less on specific aptitudes. The number of people attending this type of education in Romania, of 1.6%, is 6 times lower than that in EU25 (9.9%).

The development of the **energy sector**, as fundamental infrastructure of the national economy, provides for the country's energy need and supplies export surplus, by interconnection to European networks. With regard to energy market development, the opening degree is of 82.3% since the beginning of 2005, which triggered the increase of eligible consumers. Regarding the natural gas market, liberalization continued by increasing the opening degree to 50% as of January 1, 2005. The problems affecting this sector are the high-energy intensity that can become a handicap for economic competitiveness in the context of energy prices increase and the negative environment impact of energy generation capacities, mainly large combustion plants.

In order to support **the use of renewable energy sources** that could provide a long-term competitive advantage, a legal package has been issued to foster the development of green certificates market (opened in November 2005).

The **SMEs sector** is a dynamic one with a high capacity to adapt to market requirements, which entails job creation and absorbs labour force from other sectors of economy. The number of active private SMEs has grown in 2004 by 27% and the number of employees by 10.5% compared to 2000, proving the existence of entrepreneurial spirit, which, however, needs more economic education and information on market potential, especially in the services area.

**Tourism** in Romania has a significant development potential, even if its weight in GDP is approximately three times lower than in countries where tourism is an important economic sector (Spain, Italy, and Greece). The increase of investments in tourism infrastructure creates conditions for the development of a modern tourism but needs sustained promotion actions at national and international level.

## 1.2 Manufacturing Industry

The constant development of industry as a whole in the period 2000-2004, contributed to an economic growth of 26.5%. The weight of industry in GDP structure remained of about 27%, comparable to developed economies levels.

### Weight of Gross Value Added into GDP, by Sector

	-%-				
	2000	2001	2002	2003	2004
<b>Gross Value Added, out of which:</b>					
Industry	27.3	27.7	28.1	27.3	27.0
Agriculture	11.1	13.3	11.4	11.7	13.0
Construction	4.9	5.3	5.8	6.0	6.1
Services	46.3	44.5	45.3	44.7	44.1
Other	10.4	9.2	9.4	10.	9.8

Source: National Institute of Statistics (NIS)

Industry as a whole contributes with approximately 97% to Romanian exports and employs about 23% of the active labour force.

The evolution of industrial production shows that **manufacturing industry** triggered the general economic growth. Manufacturing is the main component of Romanian industry, representing in 2004, 79.4% of the industrial production and employing 85,4% of the total labour force in the industrial field. Insufficient investment and managerial abilities led to a slower growth of industrial production in 2005 (only 2.3%).

### Industrial Production Indices

	(% change compared to previous year)				
	2000	2001	2002	2003	2004
Total industry	107.1	108.4	106.0	103.2	105.3

Extractive industry	105.0	105.0	96.1	98.6	102.4
Manufacturing industry	108.1	109.9	107.9	103.9	106.3
Electric and thermal energy, gas and water	99.6	98.7	98.3	101.1	96.8

Source: National Institute of Statistics (NIS)

In the period 2000 – 2004, a significant growth was registered in rubber and plastic materials production (201.3%); wood processing and furniture industry (180.3%); road transport equipment (151.0%); machines and electrical equipment (145.9%); chemical industry (149.0%), oil processing (122.3%); cellulose, paper and paper products industry (122.2%); radio, TV and communication equipment (140.9%); textile industry (121.7%);etc. (See Annex 1, Table 1).

Industrial FOB exports in 2004 of 18,560 mil. EURO represented a 69% increase compared to 2000 and accounted for 97.7% of the total Romanian export.

(% change compared to previous year)

	2000	2001	2002	2003	2004
Export FOB (mil Euro)	11,273	12,722	14,675	15,614	18,935
%	141.3	111.8	115.3	106.3	121.3
Import CIF (mil Euro)	14,935	17,383	18,881	21,201	26,280.7
- %	123.6	133.1	108.6	112.3	124.0
The degree of the imports coverage through exports (%)	79.2	73.2	77.7	73.6	72.0

Source: National Institute of Statistics (NIS)

In 2005, industrial FOB exports increased by 17.5% (21815.1 mill. Euro) and imports by 24.8% (32014.9 mill. Euro).

**Manufacturing industry export** represented in the period 2000-2005 over 99% of industrial export (annex 1, table 2). The higher industrial export growth compared to industrial output growth points to an improvement of competitiveness of several industrial sectors. Textile and clothing remained on the first place during 2004, with a weight of 22.5% in total export. Machines and equipment and electric appliances had a good evolution, with a weight in export of 7.2% each, from 5%, respectively 3.2% in 2000. A decrease of metallurgical products export, from 15.2% in 2000 to 14% in 2004 and of chemical products from 6.2% to 5.4% was registered in the same period. Despite the above, metallurgical products export ranks second in Romanian exports. The manufacturing industry exports structure still reflects the prevalence of traditional industrial sectors using low skilled labour force and a relative lack of high technology sectors.

**The manufacturing industry import** was of 22,788.4 mil. Euro, 86.7% of total **CIF import** in 2004 (annex 1, table 3) and 27,477.8 mil. Euro, 84.4% of total CIF import in 2005. The import was mainly due to „green field” investments and temporary import for inward processing. Machines and equipment prevail in the import structure, with a weight of 34.84% in 2004 compared to 31.5% in 2000, due to modernization and refurbishment efforts, including capital goods promoted by foreign capital penetration. Textile products imports still rank second despite a reduction of 4.5% compared to 2000. Next, come chemical products, plastics and rubber. At the same time, the relative weight of mineral products import decreased, from 23.5% in 1996 to 13.43% in 2004. The most important changes in the import structure were the increasing weight

of machines, equipment, vehicles, and control instruments group and the reducing weight of textile products.

The decrease of domestic and external market, financial difficulties and the harmonization efforts with new market economy conditions determined profound changes materialized mainly in the sometimes dramatic decrease of output, closing down of capacities (not always obsolete), massive layoffs, low level of modernization.

**Foreign Direct Investments (FDI)** in Romanian economy were 15,040 mil Euro at the end of 2004 (according to the National Bank of Romania Report). FDI in industry were at about 8100 mil. Euro, manufacturing industry attracted 75.5% from total investments in industry as follows: steel industry 13.2% of total, means of transport 5.7% of total, building materials sector 4.0% of total, wood industry 3.4% of total, chemistry 2.6% of total and light industry 3.3% of total.

The main sectors that attracted green-field foreign investments are tires, auto components, telecommunication equipment, wood processing and construction materials. The investments of multinational companies started to generate clusters in different manufacturing sectors such as: auto components, wood, textile, and furniture.

However, multinational companies operating in Romania usually sub-contract local companies only to a small extent mainly because of their insufficient managerial, marketing and technological abilities. Better results in terms of supplier chains were obtained in automotive and electrical industries.

**Gross value added in** industry grew from 30.9% in 2000 to 35.1% in 2004. The weight of GAV in manufacturing industry out of total industry evolved from 68.3% in 2000 to 79% in 2004. The most important manufacturing sectors, from this point of view are metallurgy (27%), consumer goods (26%), chemistry (20%), machine building (11%), and electronic-electrotechnic (4%).

The average number of employees in manufacturing industry continuously decreased in the period 1999 - 2004, from 1628 thousand persons in 1999 to 1491.3 thousand persons in 2004 (Annex 1, table 6), especially in metallurgy, means of transport, chemistry and machines and equipment sectors.

(Thousand persons)

Sector	1999	2000	2001	2002	2003	2004
Metallurgy	194	163	168	146	144	138
Means of transport industry	146	132	126	121	110	102
Chemical Industry	142	128	122	108	108	106
Machine and equipment industry	182	150	144	149	135	133

Source: NIS

The reduction of personnel in the specified sectors was due to companies restructuring externalization of activities, production modernization and better managerial performance imposed by multinational companies. On the other hand, in the textile, footwear, garments and electrical machines and appliances sectors, the number of employees remained at the level of 1999. The existence of an increasingly ageing workforce requires programs targeting employment.

The structure of active enterprises in terms of staff number changed, through an increase of the number of SMEs, as a result of large companies restructuring and due to incentives for SMEs.

From the size point of view, only 2% of manufacturing industrial companies are large but they employ 54% of the work force and achieve about 62% of the turnover (according to data provided by the Ministry of Economy and Trade for 2004). In the above context, the increase of manufacturing industry competitiveness depends to a significant extent on the technological modernization of large enterprises.

Labour productivity in industry recorded a growing trend mainly due to staff reduction, but also, to a smaller extent, to modernization of production and better management (Annex 1, table 4). In the period 2000-2004, labour productivity increased annually by about 7.5% (Annex 1, table 4). However, productivity in manufacturing industry is about 4.5 times lower than EU average. A highly needed increase of labour productivity requires new technologies, new manufacturing and marketing methods, application of quality and environment standards, better energy efficiency, use of information systems and application of innovation.

Conformity with environmental standards is essential for industry competitiveness and will require significant financial efforts.

The speed of innovation's dissemination is crucial for productivity and growth and requires both the implementation of the R&D results and purchase of patents, licenses and new equipment and technology. Research-driven innovation in manufacturing industry is sustained both by own research activity within companies and by the 43 national R&D institutes (at the end of 2006), specialized in different S&T fields, with the capacity to generate applicable results in economy. The transfer rate of these results to industry is nevertheless unsatisfactory because the enterprises' financial capacity to implement them into production is very low.

### **1.3 SMEs Sector**

SMEs are prevailing in Romanian economy, as well as in European countries and represent over 99% of total enterprises, having a substantial contribution to GDP and employment.

#### **Weight of SMEs in economy**

	No. of SME in total enterprises %	SME Employees in total economy %	Employees /SME	Turnover /SME (Mil Euro)	% export in SMEs turnover
<b>ROMANIA 2002</b>	99.5	51.1	5.9	0.145	10.6
<b>ROMANIA 2004</b>	99.5	56.6	5.8	0.161	10.4
EUROPE 19	99.8	69.7	5	0.9	12

Source: National Institute of Statistics, SME European Observatory 2003

SMEs by size in 2004

The table below presents the evolution of the SMEs number by size.

Company size	2000	2001	2002	2003	2004
Micro	279,893	280,448	285,207	313,485	358,242
Small	29,417	31,249	32,010	34,883	36,080
Medium	6,864	7,455	7,989	8,342	8,674
Total	316,174	319,152	325,206	356,710	402,996

Source: Ministry of Public Finance (MFP) and National Institute of Statistics (NIS)

The most recent statistical data on SMEs' demography show an important growth: in 2005 there were 523,015 active SMEs representing a 30% increase compared to 2004. In 2004, almost 403,000 SMEs were active, representing an increase by almost 13% as compared to 2003. In 2000-2004 most SMEs were micro-enterprises; in 2004 they represented 89% of all SMEs (1% more than in 2003).

Romanian SME sector generally follows the European trend: in 2003, 92% of European SMEs were micro-enterprises, 7% small and 1% medium ones (European Commission, 2003).

#### **THE FOLLOWING TABLE PRESENTS THE SMES DISTRIBUTION BY FIELD OF ACTIVITY, DURING 2000-2004.**

Activity sector	2000	2001	2002	2003	2004
<b>Agriculture</b>	9.494	8.929	10.011	10.430	11.390
<b>Industry</b>	40.252	41.609	45.586	50.117	54.657
<b>Constructions</b>	11.705	13.990	16.312	20.378	25.115
<b>Services</b>	254.723	254.625	253.297	275.785	311.834
<b>Total</b>	316.174	319.152	325.206	356.710	402.996

Source: Ministry of Public Finance (MPF) and National Institute of Statistics (NIS)

Some remarks regarding the above figures for 2004:

- (1) A lively dynamics of 13% increase was registered in the services sector (that also includes wholesale and retail trade) compared with the stagnation phenomena registered during 2000-2003 showing a remarkable increase of "other services" chapter (real estate transactions, renting and service activities mainly rendered to enterprises, education,



health and social assistance etc) and an oscillating but continuous decrease of the trade sub-sector (6.0%).

The SME distribution by sub-sectors for the same period is presented below:

Total SMEs in services sector	Year	Trade	Tourism	Transport	Other services
	2000	100	100	100	100
	2001	95	105	123	122
	2002	88	137	143	149
	2003	94	156	170	201
	2004	94	174	201	263

- (2) An increased dynamics was also registered by the construction sector, with an annual growth rate of 20%.
- (3) The industrial sector is increasing with an approximately constant 13.6%.

### **Changes in the territorial distribution of SMEs**

The most relevant growing rate of SMEs per 1000 inhabitants is in Bucharest-Ilfov region, 45% in 2000-2004, followed by West Region, 25%. The North-East and South-West (Oltenia) regions registered a slower increase of 12-14%.

Despite the considerable growth of SME's number in 2004 compared to previous years, the gaps between regions is still high with a significant concentration in Bucharest-Ilfov.

The regions with positive SME demography dynamics are those where SME in processing industry are significantly present, whilst the weakest performances are those where the services SMEs are prevailing.

The country average rate is 19 SMEs/1000 inhabitants; 3 times lower than in EU-15, with an average of 52 SMEs/1000 inhabitants.

#### *- Regional specialisation index in industrial sector in 2004*

The regional economic structure by industrial sectors in 2004, illustrates the following features: Textile and garments industry has a significant weight in the total industrial activities in the North-East Region (23.3% of total manufacturing units in the region), in the North-West Region (20.2%), in the West Region (19.2%) and in Bucharest-Ilfov Region (17.8%). The mechanical processing sector is dominant in Bucharest- Ilfov Region (23.5%), South-East region (22.7%) and South-West Region (19.6%). The wood processing sets the profile for the Centre Region (22.1%), the North-West Region (20.9%) and North East one (16.4%). All these regions could be defined by a traditional abundance of raw material. The food processing industry prevails in the South Regions, especially in the South West (27.2%), South East (26.1%) and East (25.4%). The chemical industry is well represented in Bucharest (28.9%) and lower in all other regions, at almost half the weight. The "other industries" category which is very dispersed regionally has the largest weight in the West Region (16.3 %).

#### *- Regional specialisation index in services in 2004*

The regional economic structure by service sectors in 2004 is the following:

Although trade represents the most important component in the services sector in all development regions, (South West - 72.1%, East - 71.5%, North East - 68%), in the more

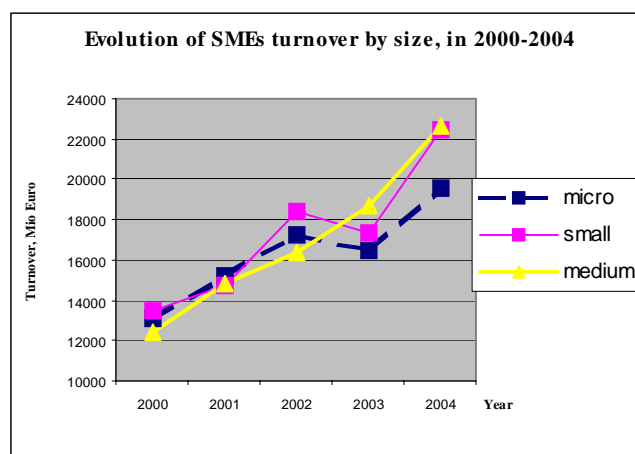
economically advanced regions trade begins to lose weight in the competition with other types of services, even if it still remains at more than 50%.

The “other services” category is better represented than the trade sector in more developed regions such as Bucharest-Ilfov (39.4 %), Centre (26.3%), West (26.9%) and North West (24.5). Due to its geographical position next to the major commercial flow, the North West Region has a higher weight of transport services.

Except the Bucharest-Ilfov Region, tourism services display rather similar values in all regions, indicating a development potential of this SME category in almost all the regions of the country.

### Turnover evolution in SMEs sector

SMEs turnover in terms of value, appears to be quite balanced between the three categories of size, with a slight prevalence towards small enterprises pointing out the ascendant trend between 2000-2004.



Source: Ministry of Public Finance and National Institute of Statistics, The Annual Report on SMEs sector in Romania, NASMEC 2005

Statistical data for 2004 indicate a total turnover of 65,055 MEuro for the SMEs sector, out of which 19,498 MEuro (30%) for micro-enterprises, 22,524 MEuro (34.6%) for small enterprises, and 23,033 MEuro (35.4%) for medium sized enterprises.

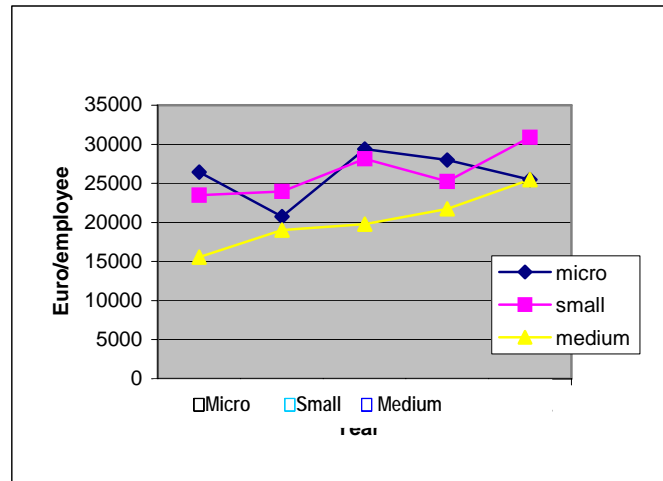
By economic sectors, SMEs turnover reached in 2004, 45,028 MEuro in the service sector, 13,835 MEuro in industry and 4,758 MEuro in constructions, which in all represents more than 50% of the total economy. It should be mentioned that the manufacturing sector turnover registered a positive trend.

Year	2000	2001	2002	2003	2004
Turnover weight of SME sector in economy, %	55.9	57.2	55.9	57.4	57.5
Turnover weight of SME productive sector in total SMEs sector, %	36.9	38.0	38.5	40.0	39.5

### Labour productivity in the SMEs sector

In 2004 the average productivity (turnover to number of employees) SME sector was of 27,823 Euros, 26,592 Euros for micro-enterprises, 30,984 Euros for small enterprises and 25,894 Euros for medium enterprises. The high productivity level of small enterprises is mainly the result of their trade activity, whilst the medium enterprises operate in manufacturing field. Productivity trend of medium enterprises' is constantly positive.

### Labour productivity by size, expressed in Euros per employee



Source: Ministry of Public Finances and National Institute of Statistics, the Annual Report on SMEs sector in Romania, NASMEC 2005

### SME sector foreign trade

The SME sector recorded in 2004 an export value of 6,754.8 MEuro, representing 35% of the total volume of Romanian exports.

The manufacturing industry sector accounted for 63.1% of the total SMEs export volume; 23.1% of the manufacturing SMEs were involved in outward processing in 2004.

The available statistical data for 2005 indicate a total SMEs export volume of 7,365.4 MEuro, that means an increase of 8.4% compared to 2004.

### SMEs capacity to invest

In 2004, SMEs carried out mainly small size investments: 46.1% of SMEs made small investments, while only 14.3% made higher value ones. A relevant percentage of SMEs (37.9%) did not make any investment at all in 2004. Micro-enterprises have the lowest percentage regarding large investments (13.0%) and the highest weight of enterprises that did not make any investment (39.4%), while the percentage for medium-sized enterprises that made large investments grows to 35.1%. and the weight of enterprises that did not make any investment decreases at 19.7%.

By type, the majority of investments, i.e. 88% of the total value in each SME category is represented by tangible assets. Intangible assets have a marginal role in SMEs investments, while financial intangible assets account for 9.5% of investments in micro-enterprises, 8.3% in small enterprises and 9.1% in medium ones.

Tangible assets have the following distribution: in industry (93.9%), in constructions (89%), and in services 86.9%. Intangible assets have a more important role in services (18%), and industry

(1.5%). Financial assets are important in services with 11.4% and in construction with 9.9 %, while they have a less relevant role in industry with only 4.6%.

### **Credit guarantee for SMEs**

In 2005, the number of guarantees granted by the National Credit Guarantee Fund for SMEs was 325 (out of which 182, i.e 56% for medium and long terms loans), with a total value of 36.72 MEuro representing 130% of the total resources of the fund at the end of 2005. The loans granted to SMEs amounted 70.52 MEuro.

Compared to 2004, the 2005 guarantees increased by 300% in number, and by 470% in value, from 7.80 MEuro to 36.72 MEuro.

At the end of 2005, the National Credit Guarantee Fund for SMEs had 14 territorial branches and three more were established, in 2006.

### **Innovative companies by size, activity and turnover**

In terms of innovation in businesses<sup>1</sup>, Romania lags behind other European countries. During 2002-2004 only 20% of companies undertook innovative activities<sup>2</sup>. This percentage is far behind the EU15, where in 1998-2000, 44% of companies were considered innovative<sup>3</sup>.

A large part of innovative companies (86%)<sup>4</sup> are SMEs out of which 55.2% are small enterprises and 30.9% are medium sized enterprises.

The majority of innovations made by companies refer to innovative products and processes (67.5%). SMEs implemented innovative solutions related to product design (8%), innovative process (21.1%) and 57% implemented innovative products and processes. Despite the improvement, according to Networked Readiness Index<sup>3</sup> (2004), Romania still ranked 53<sup>rd</sup> out of 104 countries, compared with 61<sup>st</sup> out of 102 countries in 2003.

The majority of expenditures related to innovative activities were made for purchase outfits, equipments and software (62.2%). By field of activity, 67.4% operate in the manufacturing sector and 32.6% in the services ones.

As regards intellectual property, SMEs are less willing to adopt protection measures than large enterprises. In industrial innovative companies the mostly used methods are the registration of industrial models and designs/trademarks (17% of companies), but related to application of at least one patent, 13% were large companies and 87% SMEs.

In terms of ICT use, SMEs are less prepared due to the lack of adequate IT infrastructure (number of PCs and Internet access). The ICT impact in sales, namely e-commerce, is still low compared with EU countries.

### **Access to business support services in 2004**

The SMEs demand for business advisory services is focused on consultancy in finance, marketing, production and design. Out of 80.4% of SMEs using consultancy services, only one

---

<sup>1</sup> An innovative enterprise is defined as enterprise which introduced or implemented at least one innovation product or process

<sup>2</sup> Data are based on the Romanian Innovation Survey carried out by National Institute of Statistics, covering the following sectors: extractive industry, manufacturing industry, energy and water and services. Only firms with 10 or more employees were included in the survey (analysed period 2002 - 2004)

<sup>3</sup>Data are based on the Romanian Innovation Survey carried out by NIS, covering the following sectors: extractive industry, manufacturing industry, energy and water, and services. Only firms with 10 or more employees were included in the survey

<sup>4</sup> Data are methodologically comparable since all surveys, included the Romanian ones, were based on the CIS 3 (Community Innovation Surveys)

third resorted to employees training services and even fewer to other consultancy services as business planning (21.7%) or technical assistance for certification and product standards (20.3%).

In Romania there are 21 business incubators located in all regions.

#### SMEs distribution within business incubators

Number of incubators by number of companies assisted in 2004				Number of SMEs assisted by sector in 2004	
No. of SMEs	1<5	6-15	16-25	Industry	Services
No of business incubators	3	6	8	60	159

Source: NASMEC, survey on business incubator, industrial and technology parks, The Annual Report on SMEs sector in Romania, NASMEC 2005

The average number of incubees is 11 SMEs per incubator, less than the average EU BIC of 27 companies per incubator. The average surface of a business incubator in Romania is of 1,630 sqm (mostly used for production and office activities) compared to 3000 sqm, the EU-15 average. Most incubated SMEs operate in services and industrial sector and there is no clear specialization for possible incubees. The existing incubators offer general business-consulting services, such as start-up advisory services and preparing business plans. Only 10 of the incubators offer ICT services as well.

#### 1.4 Scientific research, technological development and innovation

The evolution of the R&D and innovation (RDI) field in Romania is undergoing important changes, mainly due to the near perspective of EU accession. The analysis of present RDI situation reflects the political and economical efforts necessary for responding to accession requirements and for ensuring the necessary conditions to achieve the overall Lisbon objectives.

##### R&D personnel

The research potential in 2004 was represented by a total personnel employed in R&D activities of 40,725 ("The Research activity in 2004", National Institute of Statistics 2005), out of which 9,000 PhDs. Around 55% are active in the field of technical and engineering sciences, which could be a comparative advantage for responding to research demand coming from the economic environment.

In 2004, the researchers weight was 3.13 per 1000 employed population, which represents about 58% of the EU25 average (5.4). The R&D personnel had a slight increase compared to previous years.

##### Employees in R&D activities

	1999	2000	2001	2002	2003	2004
Number of employees, of which:	48,113	37,241	37,696	38,433	39,985	40,725

Researchers	26,492	23,179	23,597	24,636	25,968	27,253
Certified researchers	10,341	8,926	8,507	8,513	9,219	9,318

Source: The Statistical Yearbook of Romania, 2004 and NIS Bulletin "Research activity in 2004", 2005

In 2004 the R&D personnel was distributed as follows: 13,739 in higher-education institutions, 10,162 in public institutes (national R&D institutes and institutes of the Romanian Academy), 16,601 in enterprises and 223 in private not-for-profit organizations with R&D activity.

Low salaries, inadequate research infrastructure for high performance, as well as the opportunities offered by research programmes of other countries, led to a gradual increase in average age of R&D personnel, so that at present the persons older than 45 represent approximately 50% of the total number of researchers.

The regional distribution shows a major concentration of R&D organisations (about 41%) and R&D personnel (about 50%) in Bucharest-Ilfov region. For the other regions, the weight of R&D personnel is between 4-5% (South-East, and South-West region) and 11% (South region). The network activity (between the researchers from different R&D institutions and/or universities) takes place only randomly and especially within national RDI programmes. A good example is the micro and nano-technologies research network which is permanently active, and is connected to other international networks.

In 2004 the largest weight of researchers (FTE) was in the manufacturing industry (62%), followed by agriculture, forestry, fisheries (14.4%), services (9.4%), extractive industry (8%), electric and thermal energy, gas, and water (5%) (Frascati methodology).

### **Funding of R&D and Innovation activities**

In the period 1999-2004, the yearly gross domestic R&D expenditures registered a relatively stable but very low level which started to increase to more than 0.40% of GDP only in 2004. A significant increase of public funds allocated to R&D occurs in 2006 (0.38% of GDP compared to 0.26% of GDP in 2005). This tendency will continue in the future due to the commitment of the Government for the implementation of the Action Plan for reaching the 3% objective of the Lisbon strategy. Generally, there is an equal contribution of the two principal sources of funds, public and private.

#### **Gross expenditures for R&D**

<b>Gross expenditures for R&amp;D</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004*</b>
% of GDP	0,40	0,37	0,39	0,38	0,40	0,43
out of which, by funding sources:						
- public R&D expenditure of GDP (%)	0,19	0,15	0,17	0,18	0,19	0,21
- business R&D expenditure of GDP (%)	0,20	0,18	0,19	0,16	0,18	0,19

Sources: Statistical Yearbook of Romania 2003 and NIS Bulletin „The research activity of R&D in 2004”, 2005.

Note: \*) Preliminary estimation of NIS

Romania has a very low level of gross expenditure for R&D, representing about a quarter of the R&D average of EU-25 R&D intensity. The R&D intensity of Romania is lower than countries from Central, and South-Eastern Europe. A positive aspect is the larger contribution of the business sector for financing R&D, compared to the ten New Member States.

### **Innovative enterprises**

At European level, 51% of production enterprises are technologically innovative. In Romania the innovative enterprises weight is still low, but the tendency is to increase from 17% (2000-2002 innovation resulted from the survey according to EUROSTAT CIS 3 methodology) to 19.3% according to 2002-2004 survey (EUROSTAT CIS 4 methodology). At the same time, the activity structure changed as follows:

<b>The innovation survey</b>	<b>Innovative enterprises in industry</b>	<b>Innovative enterprises in services</b>
2000-2002	19%	13%
2002-2004	21%	17%

Source: the innovation survey in industry and services, NIS

In 2002, the innovative enterprises' turnover accounted for 42% of the total turnover of enterprises subject to statistic research. A similar weight is reported in terms of employees number.

Innovation expenditure is still very low, representing about 3% of the innovative enterprises turnover in 2002, and 3.6% in 2004 (or 1.5% from the total turnover of all enterprises). In the structure of innovation expenditure, the highest weight is for equipment and software procurement i.e. 53% in 2002, respectively 60% in 2004, compared to 25% in 2002, respectively 24% in 2004 for R&D expenditure. Internal R&D expenditure is about twice larger than external R&D expenditure.

The weight of sales of new or improved products (new for the company or new for the market) is an important indicator to characterize the innovation state. In this respect, Romania is better placed in terms of new products either for the company or for the market, both in manufacturing industry and in services (Annex 2, Table 1). A special importance is attached to high-tech products and services. The high-tech products export represents only 3.3% of total Romanian exports that is much lower than EU25 average (18%). The new EU member states registered comparable data to Romania's with the exception of Hungary (21.7%) and Czech Republic (12.3%).

Innovation surveys indicate the companies' weak concern regarding intellectual property rights protection by patenting. Only 1% of enterprises submitted patents applications in 2000-2002, i.e. 7% of innovative enterprises. At international level, Romania was registered with 0.3 patents per one million inhabitants for EPO (in 2000) and 0.2 patents per one million inhabitants for USPT (in 2002), according to OECD and EUROSTAT data published in Science, Technology and Innovation, Key Figures 2003-2004, EU. The data rank Romania on the last place in the hierarchy, together with Turkey. The EU25 average is 107.7 patents/million inhabitants for EPO, respectively 59.9 patents/million inhabitants for USPT.

From the investigation carried out in 2003 by the National Institute of Statistics for 2000-2002, the structure of innovative enterprises was the following:

- a) by size: 83.4% are SMEs (53.7% small and 29.7% medium sized) and 16.6% are large enterprises;
- b) by field of activity: 73% are in industry and 27% in services (12% trade, 10% real-estate, 4.7% transport and communications).

Public financing of innovative activities is very low, only 10% of innovative enterprises (400, from which 306 SMEs) received funding.

The legal framework and the financial instruments to stimulate research activity and the application of research results in economy (i.e. risk capital funds for high-tech start-ups, and spin-offs) are missing, as well as tax incentives to foster innovation activities in enterprises.

The innovative enterprises' structure by size and NACE classification and the regional distribution of innovation expenditure are shown in Annex 2 (tables 2 and 3).

Therefore, it can be seen that in 2002:

- the most advanced innovation activity (except Bucharest Ilfov which concentrates most innovation capacities and resources) was the South Region, with innovation expenditure representing 11% of total expenditure of the country. The region with the lowest innovation expenditure was West Region (4.5% of total).
- the main economic fields with high levels of innovation expenditure were: transport and communications; electric, and thermal energy, gas, and water; food and drinks industry; furniture production, and other industrial activities; metallurgy; mining; mechanical engineering; road transport industry.

### **Partnership between R&D organisations and the productive sector**

The partnership in R&D activities between enterprises and universities/R&D institutions is at a low level.

The main cooperation framework between research and the productive sector consists of the national RDI programmes and direct orders (RDI procurement).

The main national programmes which promote and support cooperation enhancement between research units and the productive sector are the National Plan for RDI (1999-2006), and the Programme "Research of Excellence" (2005-2008). The co-financing funds from enterprises represented about 30% of the total budget of the National Plan for RDI.

### **R&D, and TT&I infrastructure**

In 2004 the number of organizations with R&D activity was 753, of which: 120 public institutes (37 national R&D institutes coordinated by various ministries and 83 R&D institutes of the Romanian Academy), 79 public higher-education institutions (including university clinics), 31 private not-for-profit organizations, and 523 enterprises (311 R&D institutes/centres/ agricultural stations organized as enterprises, and 182 companies with R&D activity).

The statute of the national R&D institutes is defined by GO no 57/2002, approved by Law no 324/2003 as a new form of organization specific for the R&D domain. The national R&D institutes are public institutes with activity oriented on certain S&T fields, and economic sectors, and are coordinated by various ministries. Their scientific performance is periodically evaluated.

One of the new policies of the Ministry for Education and Research is the improvement of R&D infrastructure, in order to reduce the large gap between the Romanian R&D entities and similar ones in EU. This objective was approached in different steps, starting from the evaluation of available human resources and of its R&D performance and from the evaluation of the development perspectives of different scientific domains, both in the national economic context and the international one set by EU accession:

- between 1998 –2002 a number of grants have been given on a competitive basis for creating "research bases with multiple users" within high-education institutions, financed from a World



Bank loan for financing the Project for the reform of high-level education and scientific university research. The result was the set-up and development of 34 centres, laboratories and research bases within 15 higher-education accredited institutions (from a total of about 80) in different scientific and technological fields;

- between 2000-2004 the National Plan for RDI, the main competitive financing instrument for R&D, included a specific component dedicated to science and technology excellence centres' development in priority areas, which, starting from identifying the existing excellence pillars and based on development strategies elaborated by these centres, provided a financial support of 30% of the acquisition cost for equipment and instruments. The initiative for excellence centres financed research teams in 30 R&D institutions (out of 700 R&D entities). Five of these R&D institutions are also involved in the programme for excellence centres development in the candidate countries, within the EU 5th Framework Programme;

- starting with 2001, the National University Research Council is running the programme for "excellence centres", regarding the evaluation and certification of research centres from high-education institutions, according to criteria as: research capacity, scientific competence and research performance (no funding involved). This process identified 29 excellence centres in universities.

**The technology-transfer and innovation infrastructure**, namely the organisations specialised in the dissemination, transfer and valorisation of R&D results in economy is still poorly developed. The development and consolidation of TT&I infrastructure is an important objective of the R&D government policies and can ensure a very favourable framework for strengthening the partnership between enterprises, universities and R&D institutions, for stimulating the research demand, and the development of own R&D departments in enterprises, especially in high-tech, for increasing the number of innovative enterprises in advanced technologies and supporting their set-up and development.

The National Programme "Development of TT&I Infrastructure – INFRATECH", approved by GD No.128/2004, is the main instrument which provides financial and logistical support to set-up and develop specialized TT&I institutions, including science and technology parks.

### **1.5 Information and Communications Technology (ICT) market**

The ICT contribution to economic growth depends both on ICT sector development and the ICT use in economy. The Romanian progress in information society and its future opportunities are far from being satisfactory. The lagging behind especially regards Internet access, Information Society services and up-take of IT applications in economy.

As a proof for the current Information Society situation, it is to be emphasised the expenditure level in the IT field. In 2004, IT expenditure was only 1.34% of GDP, less than half of EU 15 average (3%). Even if there has been an increase from 0.89% in 2000 to 1.34% in 2004, it continues to be one of the lowest in Europe. From this perspective, the indicator for IT investments is essential for describing the innovation percentage in a knowledge-based society, especially due to the spreading of IT equipment, services and software applications. It is extremely important to increase investments in the ICT field and to reduce the gaps between the actual expenditure level and the desired development level.

An important issue to be considered in this context is the lack of financing and low ICT investment in the public sector, as well as the companies' reduced use of information technology.

In order to reduce the gap between Romania and the EU average, it is necessary to invest in broadband infrastructure and content development.

### **Access to information infrastructure**

Romania lags behind in terms of computer penetration and electronic communications infrastructure access, not only compared to EU 25, but also to the New Member States average. This has a negative impact on national competitiveness, as computer usage and Internet access are important factors for the economic development.

Concerning the PC penetration, Romania is still at a low level even if the annual average sales rate growth was more than 50%.

Many of the underdeveloped areas do not have the basic infrastructure to ensure Internet access and, in some cases, they do not even have access to fixed telephony. Romania has a policy for establishing telecentres for community's access to telephony and Internet services as an interim solution before fixed telephony can be generally available to households.

The fixed telephony penetration rate (20.3%) is lower than the overall European penetration rate (41%) and much lower than the EU 25 average (approximately 51%), due to the significant increases in mobile penetration and a tendency for people to abandon their fixed lines in favour of mobile telephony.

The digitalization of the fixed networks is crucial for the provision of value-added services and for the increase of the service quality. Although positive evolution registered, the digitalization rate reached 89.1% in 2005, compared to 54.8% in 2000, the rate is still low, especially in rural areas.

Concerning Internet access, the situation is critical, both for households and for enterprises. In 2004, only 10% of the population used Internet weekly, almost four times less than EU 25 average (38%). Only 39% of the Internet users accessed it from home, compared to 75% in EU 25. A similar situation can be found in enterprises, where 52% have Internet access, compared to 89% in EU 25. A major difference is noticed between SMEs and large enterprises where 90% of large enterprises have access to Internet, while only 50% of SMEs use this mean of communication.

The main reason for the low level of Internet penetration is the high prices for fixed telephony and Internet, both for citizens, compared to the average income of population, and for the some companies compared with the prices in large urban areas. Another reason is the low rate of investments in infrastructure.

From the total Internet access connections the percentage of **broadband connections** represented almost 41% in 2005. Considering the entire population, broadband connection penetration rate was approximately 3.5 % at the end of 2005, lower than EU 15 average (14.5%) and EU 25

(12.8%)<sup>5</sup>. Regarding the percentage of enterprises with broadband connections, there is a major gap between Romania (7%) and EU 25 average (52%) – more than seven times.

Those significant infrastructure gaps are remediable only through major investments, both from private companies and from public institutions.

A wide spread broadband infrastructure is essential for the development and deliverance of services and applications as **eHealth**, **eBusiness**, **eGovernment** and **eLearning**. Those type of services are essential for Romania's development and *lead to sustainable growth and better jobs, as stated in the revised Lisbon Strategy*.

### **E-government**

There is a growing consensus that e-government is now becoming a key factor for increasing competitiveness.

The multiplier and leveraging effect of the public sector on overall productivity and competitiveness is even increased by the use of ICT, which has become the main driver of productivity growth. In a recent study on the link between ICT and productivity growth the Economist Intelligence Unit (EIU) shown that the best thing governments can do to promote effective and efficient use of ICT and to boost productivity across the economy is probably to practice what they preach and “lead by example”.

Internet access is reflected also in on-line public services development. The population has shown an increased interest in e-government applications: in 2004, 19.8% of the individuals who used the internet in the last three months accessed it for interaction with public authorities and for obtaining information. The fact that only 5.8% of the individuals who used the internet in the last three months used it for downloading forms and 8.9% for sending filled forms is due to the small number of available applications. The gap compared to EU 25 average is major, taking into consideration that 43.7% of EU population accessed the Internet to interact with public authorities, to obtain information and 11.5% to return filled forms.

A similar situation is registered for enterprises that are using Internet to interact with public authorities. Thus, 29% of the enterprises are using Internet for interacting with public authorities and for obtaining information; this rate represents more than half of those enterprises that have Internet access (52%). The percentage of enterprises using the Internet for downloading forms (22%) and returning filled forms (12%) is much higher than the citizens percentage, but still below the EU25 level (41%, 29% respectively).

The reason for the difference between the two categories (citizens /enterprises) is that most of available online services are for the business environment. This is a situation also indicated by Economist Intelligence Unit in its market study related to e-government in Central and Eastern Europe. According to this study, Romania ranks 9th out of 10 scoring 4.08 points in e-government for citizens and 6th, scoring 6.16 points, in e-government for business.

---

<sup>5</sup> COM06-12 FINAL - Broadband access in the EU: situation at 1<sup>st</sup> January 2006

At the moment, e-government development in Romania is confronted with problems such as underdeveloped infrastructure, lack of interoperability between different available services and reduced number of available applications.

### **E-Learning**

A competitive knowledge society needs mobility, flexibility and adaptability with regard to skills of its citizens. E-Learning is an efficient and cost effective tool for fostering workforce development that can lead to cost savings through better usage of a user's time, efficiency in personnel resources in institutions providing education and training. In this sense, e-Learning is becoming the underlying enabler of a knowledge society and a key lever for competitiveness.

Since 2001, e-Learning has been developed in Romania, the Information Educational System, representing the most important project in this field at national level.

Due to this project, there are 10.8 PCs /100 students in primary and secondary schools, and 14.3 PCs / 100 students in high schools. Also, 610 high schools are connected to Internet, and are using the AEL – Educational Assistant for Schools and High schools. Through this project, 530 digital lessons have been made available, covering 40% of the curricula. In order to implement successfully this project, training programs for teachers have been organized. Even in these conditions, significant disparities between urban and rural areas have been noticed.

According to eEurope+ Progress Report 2004, the penetration of information technology is more significant and better funded in universities.

However, in 2004, out of the users who accessed the Internet in the past 3 months, only 5.6% used it for educational purposes - 4 times less than EU 25 average (20.7%). A better situation was registered in the case of using Internet for attending courses and training sessions related to employment opportunities (9.4% - almost 2 times lower than EU 25 average rated at 17.7%). The causes are two folded: lack of adequate infrastructure and reduced number of educational offers, especially for the employees.

A reflection of this is the score Romania obtained, only 1.6 points for Life Long Learning, in the European Innovation Scoreboard 2005 - 6 times lower than EU 25 average.

### **E-health**

Integration of modern information and communication technologies in the health system or e-Health is the key to optimize the processes within the entire healthcare system and to provide higher quality at less cost. This will offer important opportunities for improved access to better health systems which include tools for health authorities and professionals as well as for patients and citizens.

e-Health developments are improving the right of access to quality healthcare, regardless of citizens' personal condition or geographical location, facilitating mobility, allowing to choose the appropriate health resource in a framework of equal opportunity and knowledgeable participation

In Romania, the percentage of population over 16 years old using Internet to search information on health is only 2%, compared to 4% in Central and Eastern Europe (December 2003).

According to eEurope+ report, in December 2003, 16% of general medical practitioners had Internet access in their medical offices and 5% of them have been using Internet to interchange their patients' medical files. Also, the percentage of practitioners using patients' electronic records was 49.2% in Romania, compared to 59% in the new member states.

The low ICT penetration in the health system is mainly due to insufficient budgetary funding. In 2004 only 43% of hospitals and 33% of clinics had Internet access. The present situation has negative consequences on treatment efficiency, inter-institutional communication and control.

### **E-business**

E-business does not mean only on-line commerce, but also ICT integration in business development. It is, therefore, important to support SMEs to adapt to the structural changes enforced by new technologies.

While the percentage of enterprises that have Internet access is half of EU 25 average, the percentage of those having a web page is even lower, only a third of EU 25 average.

Although the last year's statistics on e-commerce showed an increasing trend, it still represents a small percentage of the total value of trade. In 2004 only 3% of Internet users have purchased on-line, compared to 33% in EU 25. The reduced number of electronic commerce users is reflected in the low value of the turnover obtained from on-line commerce. In 2004, the e-commerce weight in the total turnover was 1.3% in Romania, compared to 2.1% in EU 25.

The reasons are the insufficient number of e-commerce offers, incomplete legislation and lack of public trust in transactions security. While the legislative framework was improved by reviewing the e-commerce law and by launching a portal for the official time in Romania – necessary for electronic transactions, a lot has to be done regarding supply diversification, transactions safety and increase of public trust. According to Security Space Report, on October, 1<sup>st</sup>, 2006, only 214 from 42,768 servers in Romania were secured, i.e. only 0.5%.

Expenditure for integrated applications has a major impact on the entire activity of an enterprise. Because of the high cost of integrated software solutions for corporations, the number of those who are using this type of applications is reduced. The level of new technologies uptake does not refer only to connectivity (even if this is the key element), but also to the capacity of the population and the business environment to use efficiently these technologies and to the way the Government encourages the use of digital technologies.

In October 2006, 396 distance payment instruments were approved for 25 banks. In the second semester of 2006, there were 150,000 registered users compared to 66,000 users in the same semester of 2005. The transaction value increased from 15 billion euro in the second semester in 2005 to 29 billion euro in the same period of 2006.

The situation of ICT use is reflected in 2005 Economist Intelligence Unit Report, where Romania received 6.25 points for business environment, 2.25 points for ICT adoption by population and business environment and 5.75 points for e-services support. With an average of only 4.19 points, Romania was on the 47<sup>th</sup> place, behind most European states.

### **Regional disparities**

In the last years, Romania has faced the problem of growing inter-regional and intra-regional gaps. The most significant disparity is between Bucharest-Ilfov and the other regions. In Romania, at the end of 2004 there were 9,281 IT companies, compared to 8,438 in 2003 and 3,639 in 1999; 70 to 75% of the total turnover was concentrated in Bucharest.

As a result of the low socio-economic integration and weakness of ICT infrastructure, the existing opportunities in the Bucharest region were not extended to the adjacent areas. The same applies with respect to the urban and rural areas.

Therefore, an essential condition to ensure the development of the Information Society is the permanent upgrade and extension of the existing ICT infrastructure through public investments at local and national level, mainly in market failure areas.

It is recognized that ICT play a significant role in increasing the economic competitiveness and facilitate the development of a strong knowledge based economy. However, the analysis shows that the incidence of ICT has not been evenly spread across the country, leading to significant digital gaps between urban and rural areas. Also, there is a need to increase the ICT uptake at business and public administration level, and to put in place the broadband infrastructure necessary to enable the Romanian companies to compete with modern technology based economies.

### **1.6 Energy**

The economic and social sustainable development depends directly on the evolution of the energy sector, a strategic sector with the role of providing energy to the national economy.

In 2005, the final internal electricity consumption was 48,990 GWh and 56.7% of electricity was produced from fossil fuels (coal, oil and gas) at high production costs. 34% of the national electricity production was produced in the hydro power plants, while electricity produced in Unit 1 of the Cernavoda nuclear plant accounts for 9.3% (Annex 4, table 1).

The gross consumption of natural gas was 18,091 million cubic meters in 2005, with a national gas production of 12,922 million cubic meters (2005) and imports of 5,169 million cubic meters in 2005 (28.5% from internal demand).

**The gross internal consumption of primary energy** was 41,4 million toe<sup>6</sup> in 2004, out of which 66% was covered by domestic production (which was about 28 million toe), while the remaining 34% was covered by imports. Taking into account the dependency of imported primary energy resources that will exceed 50% of total primary energy consumption by 2015, according to estimations, and the expected yearly increase in energy consumption of about 3%, the following lines of action are essential: refurbishment/upgrading/rehabilitation of existing production

---

<sup>6</sup> Tons of oil equivalent, data source: "National Energy Policy", document which is to be approved by the Romanian Government

capacities based on fossil fuels and hydro energy resources leading to reduction of energy intensity and also a better capitalization of renewable energy resources.

### **Energy efficiency**

Romania has low energy efficiency in comparison with EU countries. This is both the result of a low efficiency during transformation, transport and use of energy carriers and especially of the national economy structure where the share of energy intensive industries and products still remains high.

During 1999-2004, energy efficiency increased by about 1% per year due to the closing of inefficient enterprises, the emergence of new companies which use energy efficient technologies and the education activities of the consumers in this purpose.

As a result of economic restructuring, the primary energy consumption decreased by 30% in 2004 compared to 1990, and the final energy consumption decreased by 40% in 2004 compared to 1990, due to reduction of energy losses over the entire cycle: production-transport-distribution-end use.

In 2004 the energy intensity<sup>7</sup> of the Romanian economy was 1226.95 kgoe<sup>8</sup>/1000 Euro 1995 at constant prices compared to EU 25 average energy intensity (187.48 kgoe/1000 Euro 1995), and the same indicator for EU15 was 204.89 kgoe/1000 Euro 1995<sup>9</sup>.

In 2005, the **primary energy intensity** in Romania was 0.511 toe/10<sup>3</sup> Euro 2005 and the final energy intensity was 0.358 toe/10<sup>3</sup> Euro 2005 (the latter was 3 times higher in Romania compared to the EU 25 average which was 0.109 toe/10<sup>3</sup> Euro 2005)<sup>10</sup> -see Annex 4 – Table 2.

The re-launching of the development of some energy intensive industries after 2000 led to an increase of final energy consumption for these industries.

The relatively low performance of energy production capacities leads to a lower energy efficiency in Romania, compared to EU member states. The weight of electricity production in thermal power plants in Romania indicates the great importance of these units in ensuring the necessary energy for all types of consumers. Most thermal power units (approximately 82%) were installed between 1970 and 1980 and have been in use for more than 20 years (see Annex 4, Graph 1). Most of these units exceeded their rated operating life, have low technological performances and a negative impact on environment. The same situation is valid for hydro power plants, out of which 37% have exceeded rated lifetime.

The **Electricity Transmission Grid** has a technological level of the 60s and 70s and its equipment has exceeded the rated lifetime; wear and tear is 50% for electricity lines and 60% for electric stations. **Distribution grids**, especially the medium and low voltage ones, also have a relative high degree of wear.

---

<sup>7</sup> Gross inland consumption of energy divided by GDP

<sup>8</sup> Kilogrammes of oil equivalent

<sup>9</sup> Eurostat data

<sup>10</sup> According to the National Energy Data Services

The expansion of the **gas transport grid** and of the number of the measurement-adjustment stations (SRM) was relatively slow (increase by only 0.87% in 2004 compared to 2003) and 29% of the measurement and adjustment stations are older than 25 years. 69% of gas transport pipes and 40% of the **distribution grids** have exceeded the rated lifetime.

Admission in 2003 of the national company of electricity transmission -Transelectrica S.A, state owned company, as a full rights member in the Union for the Coordination of Transmission of Electricity (UCTE) and in 2004 in the Association of the Transport and System Operators (ETSO) contributed to its technical integration in European organisations, thus making possible the transmission through/to Romania of important electricity flows to/from Western and Central Europe.

Investments needed for improving energy efficiency over the entire chain production - transmission – distribution - end use of electricity and thermal power are estimated at 2.7 billion Euro over 2004-2015 period. Attention should be given also to the expansion and upgrading of gas and oil transport and distribution grids. Investing in energy efficiency projects will lead to savings in financial resources for primary energy resources. Thus, the estimations for 2004-2015 indicate a decrease by 3.4 billion euro of the financial effort to acquire primary energy resources, if the consumption of primary energy sources decreases by 25.4 billion toe. Investing 1 Euro in energy efficiency projects can lead to savings of 1.26 Euro for primary energy resources acquisition. This may have as a result the reduction of production costs and the increase of products and service competitiveness.

In this context, the improvement of energy efficiency is a priority of the national energy policy as a counterbalance to the trend of increase of primary energy consumption and of final energy consumption in the economic sectors.

### **Renewable energy sources (RES)**

At present, the weight of energy produced from renewable energy sources in the total energy consumption is about 29%, mostly produced in large hydro power plants. In Romania, the valorisation of renewable sources (except hydro resources used in large hydro power plants) is low due to high investment costs. Use of RES could lead to a decreased financial effort to acquire primary energy resources (fossil fuels: coal, gas, oil) and environment benefits (green energy). Despite the diversity of RES available, resources other than hydro have been exploited only to a small extent till now (not even the small hydro). It is necessary to increase the valorisation of as many types of available RES as possible.

Romania has 5 main types of renewable energy resources: wind, hydro, solar, biomass, geothermal.

The country's technically exploitable hydro energy potential is 36 TWh/year. The economically exploitable hydro energy potential is estimated at about 23-25 TWh, with an installed capacity of 8,000 MW. In 2005 approximately 70% of the economic potential was capitalized and hydro capacities comprising 600 MW installed capacity are being built, with a production potential of 1,870 GWh/year.



The wind technically exploitable energy potential is estimated at about 8 TWh/year.

The energy potential of solar-thermal systems is estimated at about 1,434 thousand toe/year and that of the photovoltaic systems is about 1,200 GWh/year.

The energy potential of biomass is about 7,594 thousand toe/year (agricultural and wood wastes).

Romania has a potential of about 167 thousand toe/year geothermal resources of low enthalpy, out of which about 30 thousand toe/year are valorised at present.

### **Environmental impact**

The negative impact of the energy sector on environment is a source of concern. In case the commitments undertaken during the accession negotiations are not fulfilled, and the energy production capacities will not be modernized /refurbished with less polluting equipment, a number of large combustion plants will have to be closed, which will compromise the safe operation of the National Electricity System. According to a 2004 study of ICIM Bucharest<sup>11</sup>, from the 72 large combustion plants (LCP) coordinated by the Ministry of Economy and Trade, no one complies with the provisions of the EC Directive 2001/80.

Large combustion plants release in the atmosphere a significant quantity of pollutants emissions (about 88% of all NO<sub>x</sub> and CO<sub>2</sub> emissions, over 90% of all SO<sub>2</sub> emissions and about 72% of dust emissions are generated from the coal based electricity production capacities, Annex 4, table 4). The programs for environmental protection in the energy sector are extremely expensive. Targeted investments consist of flue gas desulphurization (DeSO<sub>x</sub>) installations, burners for reduction of nitrogen oxides from flue gases (DeNO<sub>x</sub>) and filters for dust retention (see Annex 4, Table 3).

### **1.7 Tourism**

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

In the development of this sector, Romania has competitive advantages, that are also provided by its unique characteristics:

- various relief forms with a concentrated, symmetrical and gradual disposal, from centre to edges (mountains, hills, sea and delta);
- Danube's river inferior flow, the Danube Delta and access to the Black Sea, with a generous 70 km of sea shore;
- richness of the mineral water resources (1/3 of the total Europe mineral water resources);
- the largest continental virgin forests surface, with natural essences components and ecological grass lands;

---

<sup>11</sup> National Institute of Research and Development in Environment Protection

- natural environment preserved, not altered by human activities, rare wild flora and fauna, that has been extinct, or animals which can be seen only in captivity in other countries; temperate continental climate with Mediterranean influence in south west;
- rural areas preserving the cultural and heritage traditions in daily life;
- cultural patrimony of national and international interest, part of the universal patrimony, under UNESCO protection (fortified churches, churches with exterior frescoes, wood churches from Transylvania, Maramures, Salaj, Saxon fortified citadels, Dacian fortress, archaeological parks, and so on);
- large accommodation capacity, built before 1990, which in those times allowed Romania, to be an important supplier on the European tourist market, contributing both to Romania's international image promotion and advertising for Romanian' products.

After 1990, the tourism sector has crossed two periods, with distinct characteristics, both being marked by acute instability of institutional framework, which determined an uneven rhythm in the progress of measures, programs and projects for long and medium term tourism development. The 1990-2000 period was characterized by a slow privatization process, covering only 55.3% of the accommodation infrastructure; tourism development was mainly due to profit from other activities, reinvested in tourism sector. Although referred to as a development priority by all the governments of the period, the tourism sector was confronted with a lack of incentives and state subsidies, and particularly with insufficient funding of tourism promotion. As a result, Romanian tourism industry was characterized by major weak points, such as: insufficient tourism promotion; poor valorisation of the natural and anthropic resources; loss of international market segments from Eastern states and of big tour operators from international tourism market; decrease of internal market share and strong penetration of foreign tourism offers.

Additionally because of the weak promotion of Romania as a tourism destination, the sector insignificantly contributed to correcting the country's negative international image.

The period starting with 2001 means, for Romanian tourism, the beginning of a continuous ascending trend, due to the almost complete privatization process (about 92%), the increase of modernisation investments in accommodations and restaurants structures of the tourism privatised companies, and green-field investments growth (Annex no. 4). As a result, the turnover increased 2.3 times in 2003 in comparison with 2000. Along with, it remarks also a slightly increase trend of the tourism share in GDP and of foreign currency income from tourism. Nevertheless, both indicators are very low compared to the Romanian tourism potential (2.19% of GDP in 2003 and 700 mil. USD foreign currency income from tourism).

At the same time, big international tourism operators entered on the Romanian tourism market (Marriot, Hilton, Best Western, Howard Johnson, Golden Tulip, Accor, Cendant, IBIS, Ramada, Sofitel, Hunguest etc.), producing a significant impact both on the consolidation of Romanian tourism development and on the growth of tourism services quality. In 2004 accommodation capacity(number of places) in 5 and 4 stars hotels has increased 2.6 times in comparison with 2000 (10,880 in 2004 in comparison with 4,244 in 2000), and in 3 stars hotels it has increased about 2 times (36,216 in 2004 in comparison with 17,928 in 2000).

The accommodation capacity(number of places) have also been increased in the case of urban pensions - 2.5 times (8,100 in 2004 in comparison to 3,197 in 2000), tourist stopovers – 4.7 times

(1,226 in 2004 in comparison to 263 in 2000) and hostels – 7.6 times (694 capacity in 2004 in comparison to 91 in 2000).

Taking into account the principles of sustainable development, the accommodation capacity (number of places) in the Danube Delta and Tulcea city, the most concentrated and developed ecotourism area from Romania, increased by about 28% in 2004 compared to 2000, respectively from 2,485 to 3,180. The Reservation of Danube Delta Biosphere is a protected area of world wide importance and the ecotourism development is carefully monitored.

The evolution of arrivals in tourism accommodation structures, by main tourism forms, reflects five relevant characteristics of the Romanian tourism market:

- MICE (meetings, incentives, congress, exhibition) and business tourism are the main generator of tourist arrivals (2.63 million tourists in 2004, respectively 46.6% of the total number of accommodated tourists, but with short stay duration);
- Mountain tourism had a revival in 2004, with an increase of 10.6% in comparison with 2000. This increase was due to investments in developing and improving the ski area (increase of surface/number of ski slopes, new installations for artificial snow, more après-ski services, a.s.o.)
- Spa tourism accounted for 12.1% from total tourists in accommodation establishments. Due to investments made in this area, national interest spa resorts, as Eforie Nord, Băile Felix, Covasna, Băile Herculane are now up to international tourism standards.
- Seaside tourism - although it recorded a growth of 12.5% in 2004 compared to 2000, its development is still low in terms of Black Sea coast valorisation, one of the reasons being the weak and sporadic promotion, corroborated to the loss of important tour operators (TUI, Neckerman, Thomas Cook etc.)
- Rural tourism has a substantial growth from the point of view of accommodation capacity (5,351 places in 2004 in comparison with 1,815 in 2000) as well as of overnight stays (193,361 in 2004 in comparison with 37,738 in 2000). This is due to several factors, among which: the large population in the rural area, the wealth of Romanian traditions and customs, the diversity of the rural tourism resources as well as the great existing cultural potential to be exploited.

The trends of external tourism demand suggest that there is a market share where Romania can become competitive. The great number of German tourists (especially in the seaside resorts), the Italian, French, Russian and Israelian tourists preference for mountain and spa tourism may turn to a great advantage in improving the business relationship with these countries and in developing a marketing policy targeted at this market share.

Moreover, the large number of foreign tourists visiting Bucharest and other big cities as a consequence of urban tourism, business and congress (MICE) tourism development could be an indicator of business people interest for Romania and a good way of promoting Romania's economy through tourism.

Concerning the experience in pre-accession instruments, the central public administration for tourism benefited from Phare funds through the Tourism Development Programme, which ran during the period 1993 – 1998. The total budget of this programme was approximately 10 MECU.

The PHARE assistance consisted of two phases. The first phase of this programme has ended in June 1995 and it was focused on the following broad directions:

- Institutional development;
- Personnel training;
- Marketing and promotion;
- Tourism product development;

The budget of this phase was 4.785 MECU and the Ministry of Tourism was the responsible authority. One of the most important results of the 1<sup>st</sup> phase was the elaboration of the Tourism Master Plan for Romania.

The second phase of the Romania Tourism Development Programme was developed using the results of the 1<sup>st</sup> phase. The assistance of this second phase was planned under two broad headings:

1. centralised level - national measures, which would permit continued assistance required by the ministry in restructuring:
  - modernisation of tourism legislation;
  - human resource development;
  - marketing and promotion;
  - investment promotion.
2. decentralised level – local measures which included three major components:
  - rural tourism product development;
  - the promotion of local tourism initiatives;
  - strengthening of professional and trade bodies.

In this phase the Ministry was the recipient agency for centralised measures and NGOs have been appointed to manage the decentralised measures for the development of rural tourism and for the promotion of local tourism initiatives. The budget allocated for this phase was 5 MECU.

For 2006 the total financial support from the national budget dedicated to the tourism and the preparation for EU integration is about 28 MEURO. Part of this allocation is for development of tourism products (about 7.5 MEURO) and part for marketing and tourism promotion (about 20 MEURO).

## **1.8 Previous Experience in Programmes and Pre-accession instruments**

From the pre-accession financing instruments supporting Romania since 1998, Phare programmes are the most relevant ones. The Ministry of Economy and Trade, through the Directorate for Programmes with International Organizations (DPIO) was appointed as Implementing Authority and coordinated the Phare funds dedicated to the specific fields of the ministry's activity such as: energy, quality infrastructure, industrial policy, nuclear safety etc. DPIO is currently appointed as Managing Authority for SOP IEC.

Since 1998 DPIO prepared and directly coordinated the implementation of more than 50 different types of projects (technical assistance, supply, works, twinning and grant schemes) with a total Phare financial allocation exceeding 92 MEuro.

The projects targeted to strengthen the administrative capacity of Romanian key institutions in the energy sector (OPCOM, Termoelectrica, Transgaz, Transelectrica ANRE, ANRGN, MET, etc); the energy sector was supported through investments and quality infrastructure.

MET is also managing, through the General Directorate for Industrial Policies, the national funds for “Increasing the Economic Competitiveness of Industrial Products”, targeted to prepare Romanian companies for European market competition. The programme supports the implementation and certification of different types of standards (quality/environment management systems, health and job security, testing laboratories, ecological) and other activities related to industrial licenses/patents.

#### *Research, Development and Innovation*

The Ministry of Education and Research (MER)-National Authority for Scientific Research (NASR) coordinates the national RDI programmes, the main instruments for implementing the RDI policies.

It also supports the participation of the Romanian scientific community to international research programmes as: the EU research framework programmes (FPs), COST, EUREKA, the scientific programme of NATO.

Romania has 211 participations to FP6, in 165 projects. The total financial contribution of the Community to these projects is 617.17 MEuro. Within the FP6/INCO call for the development of research excellence centres in the candidate countries (Romania, Bulgaria, Turkey) Romania obtained the financing for 8 projects, with a community contribution of 6,500,000 Euro. The R&D fields covered by these projects are: ICT, biotechnology, nanosciences, new production processes and biology. NASR participates directly in 9 European ERA-NET and Coordination-Actions projects implemented at national level.

In the period 2004-2006 NASR also implemented 2 Phare projects, one for nuclear safety, and the second for strengthening Romania’s participation to FP6.

#### *Information Technology*

The experience in managing e-learning, e-government, broadband programmes is best represented by the “Knowledge based economy” project, initiated by the Romanian Government, through the Ministry of Communications and Information Technology, with the support of the World Bank. The project is financed by a loan of 70 million USD, for a period of more than 5 years.

The mission of the project is to facilitate the participation of the disadvantaged communities to accession to knowledge based economy and society.

The Project will finance the setting up of an e-networks (LCENs) comprising approximately 200 local communities through which they will have access to services and technologies, including computers, Internet and communication services and other specific services for local administration, citizens, businesses and pupils in rural and small urban communities. The network is planned to have multiple nodes in schools, public administrations, libraries and a Public Point of Access to Information. Currently the second phase of the project is under development.

### *Small and Medium Enterprises*

In terms of managing the national funded programmes for SMEs, National Agency for SMEs and Cooperation (NASMEC) was in charge with the implementation of several multi-annual programmes such as: SME's support for exports, SMEs start-ups, SMEs access to training and consulting services, development of the National Credit Guarantee Fund for SMEs, entrepreneurial culture for women and support for young entrepreneurs "START", SMEs' competitiveness through implementing and certifying quality systems, SMEs support through gross reinvested profit. The total budget for 2006 is estimated at 60 MEuro.

In 2001-2006 NASMEC was responsible for managing Phare technical assistance projects of about 9 MEuro, and for 2004-2006 the contracted value is about 7 MEuro under the Phare Fiche 2004-2006.

The institution was also involved in international co-operation programmes in SMEs development financed by UNDP, UNIDO, Government of Japan, UNCTAD, etc.

### *Tourism*

The Ministry of Tourism managed in the period 1993 – 1998 the Phare project for Tourism Development Programme, of about 10 MECU. The project had 2 phases: the first was focused on institutional development, training, marketing and promotion, tourism product development and the final result of this phase was the drawing up of the Tourism Master Plan for Romania; the second phase focused both on administrative capacity building at centralized level (Ministry of Tourism: modernisation of tourism legislation, human resource development, marketing and promotion, investment promotion) and at local level (rural tourism product development, the promotion of local tourism initiatives, strengthening the professional and trade bodies in tourism).

For this second phase of the project the ministry was the recipient agency for the centralised measures and several NGOs managed the decentralised measures for the development of rural tourism and for the promotion of local tourism initiatives.

For 2006 the total financial support from the national budget dedicated to the tourism and the preparation for EU integration is about 28 MEuro. Part of this allocation is for the development of tourism products (about 7.5 MEuro) and part for marketing and tourism promotion (about 20 MEuro).

### *Energy*

The 2000-2006 programmes for energy efficiency and for valorisation of renewable energy resources financed from national and international funds were as follows:

- The energy efficiency programme QIII: 14 projects for investment in energy efficiency (in district heating systems, industry, public lighting, and health) co-financed by Global Environment Fund which managed the funds allocated for Romania by BIRD (6.910 MEuro). The implementation of the projects will lead to estimated reduction of emissions of 33 884 t for CO<sub>2</sub> and 27 t for SO<sub>2</sub> annually, and to savings of energy of about 12803 toe.

- *SAWDUST 2000* financed jointly by Denmark within the cooperation and common application of Framework Convention regarding prevention of climate changes and by Phare Programme 2001-Regional Development, Special Fund for Energy Development of MET. The total value is of about 14 MEuro.
- The National Programme for reducing the energy costs for population, by increasing the energy efficiency and use of renewable energy in 2006 was approved by GD 320/2006. The programme stimulates investments by co-financing maximum 30% of the projects' related to urban systems' heating rehabilitation; the contribution of the state budget is 250 million RON/year.

The programme is implemented by the Romanian Agency for Energy Conservation and promotes the use of renewable energy sources for producing thermal power for heating and hot water: biomass, solar energy, geothermal energy and also includes the high efficiency cogeneration in small and medium capacities.

## 2. SWOT ANALYSIS

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Macroeconomic stability</li> <li>• Sustained GDP growth at an average of 6.1% per year between 2001-2004, due mainly to industry's contribution (5.2%) and services' (5.5%)</li> <li>• Positive trend of private sector contribution in Romanian economy (70.8% of GDP in 2004)</li> <li>• Advanced restructuring and privatization processes of enterprises</li> <li>• Acceptable skilled workforce</li> <li>• Positive trend of foreign direct investments</li> <li>• Natural and energy resources (oil, gas, salt, wood, sands, clays, marble) of good quality</li> <li>• Positive trend of SMEs development in various fields of activity</li> <li>• Positive trend of SMEs development as weight of industry and services sectors' turnover in total SMEs turnover</li> <li>• Highly skilled human resources in R&amp;D sector</li> <li>• Sustained growth of ICT sector</li> <li>• Energy sector liberalization in advance of other European countries; privatisation -oil sector - totally privatised, energy distribution - partly privatised, energy production - soon to be privatised)</li> <li>• Well-skilled workforce in energy sector with low migration to other sectors</li> <li>• Liberalization of telecommunications market)</li> <li>• Significant tourism potential</li> </ul>	<ul style="list-style-type: none"> <li>• Competitiveness and technological gaps compared to EU</li> <li>• Low investments in modernization</li> <li>• High concentration in low added value sectors</li> <li>• Low productivity</li> <li>• Reduced number of certified enterprises ISO 9000, ISO 14000, EMAS</li> <li>• Export mainly based on low and medium value-added products</li> <li>• Low development of business infrastructure and consulting services</li> <li>• Low SMEs capital and access to finance</li> <li>• Low promotion of companies' brands</li> <li>• Insufficient financing of R&amp;D activity from public or private sources</li> <li>• Low R&amp;D demand orientation</li> <li>• Enterprises competitiveness based on low costs, not on innovation capacity</li> <li>• Reduced absorption capacity of research results and, consequently, low innovation of enterprises</li> <li>• Insufficient cooperation between research centers /universities and industry</li> <li>• Weak development of TT and RD infrastructure</li> <li>• Reduced performance level compared to EU25 average terms of patenting</li> <li>• Low IT spending (per GDP and person)</li> <li>• Insufficient IT infrastructure (hardware, software, communication)</li> <li>• Low Internet penetration rate and small number of PCs</li> </ul>



	<ul style="list-style-type: none"> <li>• Significant gap between urban and rural areas regarding ICT infrastructure</li> <li>• Insufficient use of e-commerce and e-banking services in the business community</li> <li>• Low use of electronic public services</li> <li>• Outdated and polluting energy production technologies</li> <li>• High energy intensity</li> <li>• High losses in electricity/thermal energy, oil and gas transport and distribution networks.</li> <li>• Low valorisation of RES, other than big hydro capacities</li> <li>• Insufficient tourism information and promotion</li> <li>• Low development of complex tourism products</li> </ul>
<b>OPPORTUNITIES</b>	<b>THREATS</b>
<ul style="list-style-type: none"> <li>• New EU member state</li> <li>• New investment sources, including Structural Instruments</li> <li>• Second largest country (population) of NMS</li> <li>• High absorption potential of domestic market</li> <li>• Supply chain for foreign companies 3% objective for R&amp;D according to Lisbon Strategy</li> <li>• Participation in European research programs and implementing the European Research Space</li> <li>• Potential regional hub in gas and energy transport</li> <li>• Integration of the national energy system within regional networks</li> <li>• Increased access to global market by ICT and e-commerce development</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous increase of natural resources and energy costs (including imported ones)</li> <li>• International economic slowdown</li> <li>• Exposure to global markets</li> <li>• Industrial sectors outsourcing to locations with lower workforce costs</li> <li>• Romania's identity as a low value-added economic system</li> <li>• Migration abroad of high-skilled workforce</li> <li>• Growing trend of energy consumption on medium and long term</li> <li>• Increase of pollution due to industrial processes, especially the energy ones</li> </ul>

### 3. STRATEGY

**The Sectoral Operational Programme - Increase of Economic Competitiveness (further referred to as SOP IEC)** is the main instrument for achieving the first national thematic priority of NDP 2007 – 2013, i.e. **Increasing of Economic Competitiveness and Development of Knowledge Based Economy**. It also contributes, although to different extents, to the implementation of all priorities of the NSRF.

Romania is targeting not only political integration in EU, but also the convergence with the development of EU countries, both in nominal and in real terms. This process of reducing gaps involves for Romania sustained growth rates in the period 2007-2013, maintaining at the same time macroeconomic equilibrium as stable as possible. The driving factor of economic growth when acting on a market open to strong competition is the increase of economic competitiveness. Moreover, increasing the competitive advantages should be a permanent objective, taking into account both the European trends and the challenges of globalisation.

Hence, improving competitiveness should not be seen as a process of taking advantage of short term opportunities (e.g. lower labour cost), but more as a process of building of an economic structure based on capital investments and on research, development and innovation. In other words, the prospect of convergence on medium and long term relies on the development of the knowledge-based economy.

Although Romania has registered substantial progresses in the last years, the competitiveness gaps when compared with the states of Western and Central Europe are still very large. 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 PPP<sup>12</sup> stands at 50% of new member states average.

The assessment of the current situation shows unfavourable development of certain factors supporting competitiveness. Despite the progress in privatisation, in increasing the efficiency and the regulation of the financial sector, the access of companies to capital remains limited. Also, the use of outdated physical capital, with high energy-intensity, is drastically influencing the productivity in most economic sectors.

The SME sector is probably the most affected, given its relatively low orientation towards productive activities, reflected in recent analyses. Despite a certain positive evolution, which proves the potential of entrepreneurship at national level and an increasing participation in the manufacturing sector, the contribution of SME to GDP remains low, calling for stimulation of both the quantitative and qualitative dimension of SME sector. SME's access to capital, technology and infrastructure is much below the level enabling a proper role played by SME for economic competitiveness, mostly in what regards their expected adaptability to market needs, including by innovation.

As for enterprise strategies, the low level of managerial skills raises serious concerns. Most of the companies are basing their strategies on reducing costs, and not on increasing productivity. The

---

<sup>12</sup> Purchasing Power Parity

business infrastructure is weak and business support services are in the early stages. The SME sector, although covers half of employment, has limited access to dedicated consultancy.

The level of sophistication and the purchasing power of domestic demand are low in many fields. Hence, the domestic market is not pushing the companies towards certification, affecting their ability not only to penetrate external markets, but also to adapt to the standards imposed by EU integration and by global competition.

Scientific research is affected by a long period of under-financing, both from public and private sector; by the reducing number of highly qualified specialists; and nonetheless by the low efficiency of technological transfer. With regard to the latter, it has a double source: the insufficient orientation of research towards demand and the lack of a proper infrastructure for enabling research results to be transformed in applied innovation.

The share of innovative companies is three to four times less than EU average. The protection of property rights has registered progresses at the level of regulations, but the implementation is still lagging behind. There is no structure supporting innovative start-ups and the initiatives from the past (e.g. business incubators) did not have the necessary continuity because of inefficient planning and management.

As regards industry and supporting services, the Romanian economy shows little development. Many economic fields are based on natural resources (e.g. wood industry, construction materials, tourism), or historically resulted from the artificial state push for industrialisation (e.g. machinery, metallurgy, chemistry, oil industry). Both driving factors did not stimulate a strong cohesion and cooperation inside these industries, affecting the reliability of the production chain and the ability to create added value.

Moreover, there are certain factors that are not the subject of this strategy, but which have a large impact on competitiveness. Transport infrastructure and environment protection are in very poor conditions, as result of decades of under investments. Access to tertiary education and life long learning remains below the regional average, the situation being worse when it comes to rural population (also confronted with the lack of minimal urban-like facilities).

The SWOT analysis confirms the weaknesses identified by the current situation assessment, but also reveals some of the strengths and opportunities, which Romania can take in order to increase its competitiveness. For instance, the liberalisation of certain sectors, even beyond the EU level, as in energy or telecommunications would enable larger investments, stimulating also horizontal development.

The available human capital represents an important asset for Romanian competitiveness, taking into account not only the low labour cost, but also the level of qualification that creates the basis for developing high-skilled specialists.

The SWOT analysis reveals also other positive evolutions as the increasing foreign investments, macroeconomic stability, the expansion of ICT sector and the significant potential for tourism, suggesting opportunities in these directions for increasing the potential.

The above-depicted context of competitive development, based on the current situation and SWOT analyses, represents the starting point of the programming exercise and of the elaboration of the SOP IEC strategy. The competitiveness model for Romania to follow in its convergence effort was also based on the analyses of available theoretic and empirical models. Last but not least, the approach was consolidated by calculating the competitiveness gaps between Romania and the EU25 average, based on a complex series of both quantitative and qualitative context indicators (see Annexes 7-9).

In this context, the main goal of the strategy is to increase the competitiveness position of the Country in a context of overall macroeconomic stability, while accompanying at the same time the natural process of FDI growth.

Moreover, the strategy will have to realistically consider and address the fact that Romania has become a part of globalised production chains and, rather than sectoral expertise, is developing sub sectoral specialisation in certain productive phases only and its products are hardly recognisable in international markets through a self-evident branding strategy. So one of the final objectives of the strategy will be to gradually modify the position of Romanian production in the international division of productive activities by increasing the quota of internal quality processing.

To achieve this goal, the 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 minimize the risk of shocks from sectorial overdependence;
- 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.

This will require an articulated and synergic set of actions in capital investment, research and innovation and services differently addressing both traditional (mainly low value added) sectors and higher value added ones.

This will imply a generalised improvement of manufacturing processes including an upgrading and broadening of Romanian traditional range of products (by bringing them more upmarket and include more value added) and actions to make them more recognisable in international markets, and a parallel effort towards sectoral diversification (better and new products). In other words, it is essential to create the premises, through SOP IEC, for further action oriented towards innovation. In particular, with regards to traditional sectors, the strategy will support a gradual transition from the present specialisation in low value-added productive phases and anonymous subcontracting activities towards more integrated control of production (intermediate and final) and final customer-oriented and upmarket productions (including related marketing strategies), so as to answer to the demand for new markets at both the national and international level.

Besides intrasectoral upgrading and product innovation in traditional sectors for the Romanian economy - whose contribution to turnover and employment remains presently substantial - it is also necessary to decrease the risk that cyclical crisis or excessively prolonged reliance on low production costs could ultimately jeopardise macroeconomic stability and result in a loss of jobs. At the same time it is of paramount importance to foster a major diversification of productive activities both by supporting investments in insufficiently explored manufacturing fields in Romania and sustaining new firms (start ups and spin offs).

Opportunities for further diversification will come not only by a more explicit support to final customer-oriented and marketing conscious activities aimed at addressing - for example - to the increasingly more sophisticated future consumer preferences, but also from the need to improve environmental performance – and from opportunities generated by the results of R&D&I activities. Moreover, further opportunities for major technological improvements and transition from mere low labour cost-related competitive advantages will be strictly linked to energy efficiency requirements, as lower energy-intensive processes will entail the adoption of advanced technologies and ultimately result in operational cost savings and an overall restructuring of firms.

Finally, the pervasive and horizontal introduction of ICT in the productive processes can represent, as well, not only a way to innovate the traditional means and techniques of producing and commercializing goods and services, but also of improving relations and networking among firms. The investment in ICT and energy infrastructure represent preconditions to stimulate the demand and, more generally, to create an attracting environment for businesses and citizens alike.

This strategy will focus on SMEs but will also address large enterprises. The innovative potential of SMEs in terms of new activities and adaptability to the market, together with the obstacles and constraints they have to cope with in a broader competition, makes them a major target of the programme. But investment in large enterprises will also be required to allow reaching a critical mass of capital investments to diversify the manufacturing industry and improve overall energy efficiency. The two targets are expected to act in synergy, as large enterprises are one of the main actors in formal and informal technology and quality transfer processes having a large potential fallout among the Romanian SMEs.

The strategy is consistent with the CSG where it is recognized that the Community's aims for growth and job creation will require a structural shift in the economy towards knowledge-based activities<sup>13</sup>. For Romania, considering its high gaps with regards to EU 25, the cohesion goals can be reached through a transitional phase which can gradually push Romania towards a knowledge based-economy in the medium and long terms.

The entire territory of Romania is under the convergence objective and in these circumstances direct grants to enterprises retain their importance in order to improve their capacity in R&D and innovation absorption - as the guidelines underline; this is also true in traditional sectors exposed to global competition, which need additional efforts in order to be competitive, as well as in SMEs. It is important, as well, to reduce intensive use of traditional energy sources and to foster sustainable development. In addition, financial instruments to improve access to finance of SMEs

---

<sup>13</sup> Council Decision on Community Strategic Guideline on Cohesion, no 11807/06, Brussels, 18 August 2006.

**Guideline: Improving knowledge and innovation for growth.**

will be put in place, with close cooperation with the EIF under the JEREMIE initiative. Within the programme, direct support is combined with significant actions reinforcing business support services and actions in both the supply and the demand side to foster entrepreneurship and R&D activities and promote the information society for all. Infrastructural endowments in remote areas (for ICT) and interconnections (for energy) to make Romania a more attractive place to invest and work have also an important role<sup>14</sup>. The strategy is also consistent with the objective of attract and retain more people in employment since it avoids that a sharp shift in the economic structure could turn out a consistent share of labour force from production processes<sup>15</sup>(more detailed references in the table on consistency with the CSG and NSRF).

---

<sup>14</sup> **Guideline: Making Europe and its regions more attractive places in which to invest and work.**

<sup>15</sup> **Guideline: More and better jobs.**

### 3.1. Objectives

#### General objective

The present situation analysis as well as the conclusions of the SWOT analysis showed that Romania's economy competitiveness is much lower than the EU-25 average. Romania has to recover the significant disparities with regard to the knowledge-based society.

Productivity is a major component of competitiveness and determines both the level of an economy's well being at a certain moment, and its growth potential in the future.

Thus, the **general objective** of SOP is **the increase of Romanian companies' productivity and reducing 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 (see Annex 6 for the methodology used).

#### Specific objectives

*a) Consolidation and growth of the Romanian productive sector*

The key point of this specific objective is the support to the upgrading and innovation of existing enterprises and the creation of new ones, especially SMEs in the manufacturing and business services sectors. The valorisation and the qualification of the productive equipment, based on its enlargement, the innovation of productive processes, and the support for the adoption of international standards, foster the increase of the products range. Improvement of specialized advisory offer and the support to internationalisation give a contribution to the process of increasing the market share.

*b) Establishment of a favourable environment for enterprises' development*

The key point of this specific objective is to provide a favourable framework for entrepreneurship by reducing the existing constraints in the areas of market failure - access to finance, innovative financial instruments, availability of incubators and qualified services, cooperation among firms – for the creation of new enterprises and for the development of the existing ones.

The fulfilment of the two above objectives may be quantified by the increase of SME's share within GDP by 10% in 2015.

*c) Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises, and increase of enterprises' access to RDI.*

The key points of this objective are the funding of R&D projects that will generate results directly applicable in the economy, the upgrading and development of RDI capacity and infrastructure, the improvement of the quality and range of the supply of innovative services, the stimulation of the potential demand of innovation coming from enterprises.

The achievement of this objective will contribute to Romania's aim to increase the gross domestic R&D expenditures (GERD) to 3% of GDP by 2015.

*d) Valorisation of the ICT potential and its application to the public (administration) and private sector (citizens, enterprises)*

The key points are the full use exploitation of qualified human resources and know-how and the improvement of infrastructure endowment, especially in market failure areas. The scope is to

promote the introduction of ICT in the productive system, in the administrative processes, in day-to-day life, and to develop a market for a new generation of products and services. The target is the increase of Internet users' number (enterprises' access to on-line services) from 52% in 2003 to 70% in 2015.

*e) Increased energy efficiency and sustainable development of the energy system.*

The key points are to contribute to reducing the energy intensity through the implementation of new technologies in order to increase productivity; to improve energy efficiency within the whole cycle; to increase the use of renewable energy. An important support will be given to implementing new technologies in order to reduce emissions of energy plants. The envisaged objective is to contribute to the following national targets: the reduction of the primary energy intensity by 40% compared to 2001, the 33% share of electricity produced from renewable energy resources in the gross national electricity consumption by 2010 and the reduction of emissions in the energy sector according to the National Programme for the reduction of sulphur dioxide (SO<sub>2</sub>), Nitrogen Oxide (NO<sub>x</sub>) and dust emissions from large combustion plants.

*f) Promotion of Romanian tourism potential*

The key point of this specific objective is the promotion of the image of the country and the valorisation of its natural and cultural assets in order to promote Romania abroad and to increase its attractiveness as a place for work and tourism and the creation of an integrated system of Romanian tourism offer.

The target is to increase tourism flows in Romania by 20%, by 2015.

### **3.2. List of Priority Axes**

Taking into account both the identified possibilities for improvement of the competitive position of Romanian enterprises to cope with the challenge and to be able to use the opportunities arising from operating on the European Single Market and the areas eligible for the ERDF support, the following Priority axes have been identified in the SOP IEC:

**Priority Axis 1: An innovative productive system**

**Priority Axis 2: Research, Technological Development and Innovation for competitiveness**

**Priority Axis 3: IT&C for private and public sectors**

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

**Priority Axis 5: Romania, an attractive destination for people and businesses**

**Priority Axis 6: Technical Assistance**

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 as shown in the above-referred table.



### 3.2.1. Priority Axis 1: An innovative productive system

#### Objectives

- Consolidation and growth of the Romanian productive sector
- Establishment of a favourable environment for enterprises' development

#### Rationale

Enterprises are the engine of economic growth and their performance is decisive to the entire economy competitiveness. Increasing productive investments and improving access to market according to the principles of sustainable development are the key conditions of the competitive functioning of Romanian economy in the European Union.

The second part of the economic enlargement criterion established in Copenhagen in 1993 highlights the imperative necessity that Romanian enterprises must be prepared to face the competition pressures within the Internal Market. The Internal Market competition may be beneficial to local enterprises only if they will manage to profit from the advantages created by the free movement of goods, services, people and capital.

The market liberalization puts new competitive pressure on enterprises, especially in the traditional industrial sectors. The transition towards an open market needs an adaptation effort for all Romanian firms. SMEs will be exposed to most of the changes in the business environment. Therefore the access to the market, by productive investments, proper financing instruments and qualified services becomes a *sine qua non* condition for the competitive success of SMEs. Support to productive investments will also be addressed to large enterprises which will face the competition of high technology companies.

Despite certain progresses in the SMEs sector, which Romania registered in implementing the European Chart for Small Enterprises, difficulties are still encountered, due to limited access to financing, significant technological gap and the lack of know-how in business development, that hinder the capacity of SMEs to rapidly adapt to the European Market requirements.

It is obvious that, at present, most SMEs in Romania are not well prepared to answer their mission of economic engine. The low competitiveness is caused by the limited capacity to adapt to European standards, limited access to financial sources for investments in new technologies and implementing the quality systems as well as to the poor access to consultancy services supporting their adequate orientation on the market.

The document published by the European Union in November 2005 – “**Implementing the Community Lisbon Programme - Modern SME Policy for Growth and Employment**” (COM (2005)551 recommends the national policy makers to integrate the policy instruments designed for SMEs, especially the European Charter for Small Enterprises and of *Think small first* concept, in order to maximize the SMEs growth potential from innovative start-ups to dynamic SMEs, which must not be blocked on local market and have real possibilities to integrate on the market segments offered by an ever-changing global economy).

The present strategy aims at joining the efforts to transpose the EU policies into Romanian SMEs policy that means to foster the competitiveness and entrepreneurship capacities of enterprises, especially SMEs and the increase of their contribution to economic growth.

This priority axis refers to the efforts of supporting enterprises, especially SMEs, and will concentrate both on improving the market conditions linked to the development of the industrial base, in order to revive the business environment, and generate new innovative enterprises and on the development of the business sector, improving the access to capital and fostering technological development.

In order to meet market requirements and opportunities in terms of quality and range of products and service, within this priority axis support will be granted to tangible and intangible competitiveness factors including technological innovation. Capital accumulation of SMEs will be promoted as well as access to loans. At the same time, actions to favour the access of enterprises to specialised service, know-how and management skills will be put in place.

In the above presented context the target beneficiaries are both existing enterprises that need to modernize and develop their products and technological processes and new enterprises, especially from processing industry and specialized services that need qualified and integrated assistance by a proper development of business environment

Considering the significance of large enterprises in Romania in terms of both turnover and employment in processing industry and the role that they can play in the diversification of the range of products and services, the operation addressed to direct productive investments will also target large enterprises, together with SMEs. Nevertheless, at least 2/3 of the operation allocation shall be devoted to SMEs.

#### Key Areas of Intervention

- **Productive investments and preparation for market competition, especially of SMEs**
- **Access to credit and financing instruments for SMEs**
- **Entrepreneurship development**

#### Indicators

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Output</b>					
Assisted SMEs for direct investments	number	-	-	SMIS	1,000
Assisted SMEs for certifications	number	-	-		1,500
SMEs that participated in international fairs	number	-	-	SMIS	1,200
Local guarantee funds participating in the grant scheme	number	-	-	NCGF for SMEs	10
Newly created/or empowered incubators	number	-	-	SMIS	20
<b>Result</b>					
Jobs created in assisted enterprises	number	-	-	SMIS	2,500
Firms that implemented ISO 9001	number	-	-	SMIS	1,000

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
Firms that implemented ISO 14001 or EMAS					500
Increase in exports of assisted SMEs.	%	-	-	SMIS	10%
SMEs recipients of guarantees	number	-	-	SMIS	600
Volume of granted guarantees	MEuro				120
Incubated start-ups	number	-	-	SMIS	700
Enterprises benefiting of consulting services	number	-	-	MET	2,000

### 3.2.1.1. Productive investments and preparation for market competition, especially of SMEs

Given the tough competition on the Internal Market and the increasing level of consumer protection, the Romanian enterprises will have to improve the quality and range of their products and services contributing to the assurance of an increased level of consumer and environment security and protection.

The consolidation and development of enterprises largely depend on the permanent acquisition of new equipment and technologies that allow the adaptation of production to the requirements of Internal Market. The support granted to enterprises in order to increase productivity is a key element in the acceleration of the process of convergence, with due consideration of state aid rules.

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

Thus, together with the support to investments, the implementation of quality, environmental management and product certification is essential to ensure the entrance of Romanian products and services to the Internal Market and to third markets.

Obviously, the existence of an adequate certification infrastructure is an essential condition to overpass the financial difficulties involved by the certification process and implementation of quality and environmental management systems.

The following **indicative operations** are envisaged:

**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.

For operation a), two state aid schemes will be designed, for large enterprises and for SMEs with more than 9 employees (microenterprises will be supported under a similar operation in the Regional Operational Programme)

**b) Support in the implementation of European standards**

- Support for implementing and certification of quality management systems
- Support for implementing and certification of environment management systems of (or EMAS registration)
- Support for voluntary certification and eco-labelling of products, and services (if the case)
- 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 (logistic services for promoting products and services and identification of external suppliers and clients, websites, access to business networks)
- Support for participation to international fairs and exhibitions and economic missions.

As mentioned above, the indicative operations of this key area of intervention will be complemented by activities implemented within the Regional Operational Programme (priority axis 3 - Enhancement of the regional and local business environment).

**3.2.1.2. Access to credit and financing instruments for SMEs**

Financial assistance for new enterprises is crucial for the increase of their competitiveness.

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

The access to credit is generally difficult for SMEs, credit granting conditions imposed by banks are hardly accessible to them due to their under capitalization and to the absence of the required collaterals. These are major obstacles in the increase and development of new and small businesses.

In particular start up enterprises and small business undertaken by certain disadvantaged categories without tangible profits to be collaterally used, bear considerable risks, which prohibit the cost of a typical bank loan financing.

There is the need to overcome these obstacles since innovative ideas, products and services, business models are often generated by start-ups and new companies.

Due to the fact that financial markets do not cover high risks for certain SME categories, the guarantee system needs to be part of the economic SMEs support policy. Thus, within this key area of intervention, the present solutions offered by the existing Loan Guarantee Funds for SMEs shall be improved. The National Loan Guarantee Fund must develop a more efficient financial risk management approach and a strong collaboration with an increasing number of local guarantee funds.

At the same time a stronger involvement of financial institutions in risk financing is needed. In fact, the financing of enterprises' projects by financial institutions, ensures high expertise and competence in the selection and validation process of competitive business models.

Nevertheless there is a need of intervention instruments especially for certain categories of SMEs, such as innovative financial means offered by risk capital funds.

Although providing innovative financial instruments is crucial to exploit the growth potential of SMEs, the programming and implementation of these instruments request specific know-how in the evaluation of market failures and good financial management.

Romania is working closely with the European Investment Fund in order to identify market failures in the SMEs innovative finance sector with a view to establishing a JEREMIE holding fund.

The **indicative operations** are:

- support to development of the co-guarantee function of the National Loan Guarantee Fund for SMEs
- set up and development of local guarantee funds for SMEs investments;
- innovative financing instruments in partnership with the private sector, possibly under the JEREMIE holding fund (e.g. a portfolio of seed funds, risk capital, equity capital, venture capital, to be decided according to the results of the market failures evaluation).

Within this area, resources will be provided for an awareness/promotion campaign regarding the opportunities of enterprises access to finance.

### **3.2.1.3. Entrepreneurship development**

Important factors in fostering entrepreneurship are an adequate business culture, a favourable environment for enterprise creation, the availability of qualified services, high degree of interaction and cooperation between enterprises to disseminate knowledge and strengthen potentials.

The growth of entrepreneurship largely depends on the development of an adequate business environment through measures of animation and information followed by specific support for the development of business ideas (mentoring, coaching, tutoring).

Moreover, in the process of enterprise creation further obstacles have to be overcome such as: availability of an equipped location, lack of financial resources, low managerial skills.

Besides, a key element of business development is the availability of consulting and entrepreneurship support services. The support services market for enterprises has to be large enough, competitive and diversified to allow SMEs to benefit of consultancy, to become more competitive on a market open to opportunities.

The support to existing and emerging clusters is also important since it consolidates the interaction process among firms favouring knowledge spread, increased external economies (lower costs of production factors and raw materials, lower transaction costs), higher productivity of activities, increase of suppliers and clients of the cluster.

The financing of *soft* and *hard* investments is envisaged, tuned with SMEs needs. Thus they will benefit of an integrated approach including the advantages of corporate management, of proper

financing sources, associated guarantees, technical advantages of information society services and of the active cooperation with different actors: competitors, organisations, institutions, including R&D entities.

The **indicative operations** envisaged can be classified as follows:

- a. Development of business incubators<sup>16</sup>:
  - Consolidation and development of incubators, financing infrastructure endowment and equipments (building of new infrastructures and consolidations, refurbishing and modernization, equipments acquisition) and management costs. At the same time incubators will offer a set of services aiming at reinforcing the entrepreneurship culture such as: dissemination and information, best practices exchange, mentoring and coaching activities; know-how transfer; seminars and workshops;
  - Support to incubees (focused on high and medium tech economic sectors) in the seed and start up phase of enterprise development sustaining initial investments and training for incubees.
- b. Consultancy support.

SMEs will be supported for the acquisition of consultancy in the fields like: elaboration of projects/business plans; products/services and enterprise strategies development; investments and financial issues; marketing and promotion activities; HR management; 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. Support will be granted for the development of joint projects in the fields of production, consultancy and specialized services, logistics.

Complementarity with other Operational Programmes will be ensured as follows:

- Regional Operational Programme (priority axis 3: Strengthening of the regional and local business environment) will support hard investments in all other types of business infrastructures, except incubators. SOP Human Resources Development will support the promotion of vocational education for SMEs employees and the development of entrepreneurial abilities of would-be entrepreneurs.

To improve the effectiveness of the priority axis, actions falling within the scope of assistance of the ESF will be financed in the limits of 10% of community funding for this priority axis, according to the *flexibility mechanism* (art. 34 (2) of the Council Regulation (EC) No 1083/2006). Assistance will mainly concern highly-qualified training related to the needed skills and knowledge for projects financed under this priority axis.

---

<sup>16</sup>Incubators encourage entrepreneurship and minimize obstacles to new business formation and growth, particularly for high technology firms, by housing in one facility a number of fledging enterprises which share an array of services. These shared services may include: meeting areas, secretarial services, accounting, research library, on-site professional and management counseling, and computer word processing facilities.

### 3.2.2. Priority Axis 2: Research, Technological Development and Innovation for Competitiveness

#### Objective

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

#### Rationale

The low level of funding (both public, and private) for research, technological development, and innovation (RDI) had as direct results the obsolete RDI infrastructure, the decreasing number and increasing average age of researchers, and the low performance of RDI activities.

The lack of funding also hindered enterprises' access to RDI activities and technology transfer.

These weak points together with the low participation of the private sector in funding RDI activities resulted in a large technology deficit of Romanian companies and in a low innovation score in enterprises.

In order to address these weaknesses this priority axis focuses on several issues meant to contribute to the following aims: the increase of research capacity by investing in the development of R&D infrastructure and attracting young researchers and high-level specialists both in R&D institutions (universities and research institutes) and in companies with research departments; the strengthening of knowledge supply from universities and research institutes; the stimulation of the technology transfer based on the cooperation between R&D institutions, and enterprises; the stimulation of innovation demand of enterprises; the creation and reinforcement of high-tech firms and the development of poles of excellence.

#### Key Areas of Intervention:

- **R&D partnerships between universities/research institutes, and enterprises for generating results directly applicable in economy**
- **Investments in RDI infrastructure**
- **RDI support for enterprises (with special focus on SMEs)**

#### Indicators

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Output</b>					
Joint projects realized by R&D institutions and enterprises	number	-	-	SMIS	200
Total funded projects	number	-	-	SMIS	800
Enterprises involved	number	-	-	SMIS	300
Public expenditures in assisted RDI projects	mil EUR	-	-	SMIS	495

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Result</b>					
New jobs created in assisted beneficiaries	number	-	-	SMIS/beneficiaries	200
Direct private expenditures in supported RDI projects	mil EUR	-	-	SMIS/beneficiaries	240

### 3.2.2.1 R&D partnerships between universities/research institutes, and enterprises for generating results directly applicable in the economy

The enterprises' technological development, as prime factor for increasing their competitiveness, is supported through R&D activities that will generate results directly applicable in economy with the aim of creating new or improved products, technologies and services of high added-value.

Support for technological development through industrial research and pre-competitive development will be offered within this key area of intervention in fields with high technological-development potential.

The enhancement of the R&D cooperation between research institutes/universities, and enterprises is the basis for the future development of enterprises' international competitiveness.

#### Indicative operations

- **Joint R&D projects between universities/research institutes and enterprises**

This operation will fund mainly industrial research and pre-competitive development (demonstration) 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 (research provider-beneficiary partnerships, networks, etc).

The projects will ensure the knowledge transfer from R&D institutions to the personnel applying the research results in enterprises. At the same time, the enterprises can apply for training support under the flexibility facility.

- **Complex research projects fostering the participation of high-level international experts**

This operation has the same general aim as the previous one, namely to generate results of economic interest and to initiate the transformation of the research results into new or improved products, technologies and services.

The projects will be designed together by the host institutions and the high-level international specialists. The host institution must fulfil certain selection criteria like having a high-tech field of activity and being able to ensure all the necessary conditions for performing R&D activity.



### **3.2.2.2. Investments in RDI infrastructure**

The research infrastructure in public universities and research institutes is in general old from the technical point of view and does not cover many of the new research fields and technological areas of interest. The development of the knowledge base is closely related to the development of R&D infrastructure, which contributes directly to the increase of research capacity, and further on to the technological development of enterprises.

This area of intervention will contribute to an increased efficiency of R&D activity in universities and research institutes by supporting the procurement of new modern equipment, instruments, software, the development of the existing R&D infrastructure and the creation of new infrastructures (laboratories, excellence centres, etc), the development of international R&D partnerships (especially within Europe), and the development of the technological fields of economic interest for Romania.

#### **Indicative operations**

- **Development of existing R&D infrastructure and the creation of new infrastructures (laboratories, excellence 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).

- **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 technological fields of high economic potential. The operation is focused on developing research-driven poles of excellence, known in some member states as poles of competitiveness, grouping together enterprises, research institutions, training centres, etc, which by active partnerships will perform activities with the same market objective, guided by a common development/business strategy.

- **Development of networks of R&D centres, nationally coordinated and linked with European and international networks (GRID, GEANT)**

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.

Support is offered for connecting the R&D centres to European and international networks supported by electronic platforms of GRID -type through procurement of hardware and specific software applications. The operation will also contribute to the increase of the capacity of the research, and education network ROEDUNET close to GEANT standards.

### **3.2.2.3. RDI support for enterprises (with special focus on SMEs)**

With a view to reducing the high technological and competitiveness gaps mainly expressed by the low level of innovation in enterprises, the reduced capacity of enterprises to absorb R&D

results, as well as the slow development of R&D activities in enterprises, the following **indicative operations** will be supported:

- **Support for high-tech start-ups and spin-offs**

The operation will support the innovation activities of high-tech or high added value start-ups and spin-offs (based on R&D results obtained in universities or research institutes) in order to ensure the transfer of knowledge and technology and to assist the respective enterprises in marketing the products and services derived from research. The young enterprises to be assisted will be selected based on a careful analysis of their business plans.

The enterprises can also apply for project-related training support through the above-mentioned flexibility mechanism. The operation is complementary to SOP Human Resources Development, priority axis „Increasing the adaptability of the labour force and enterprises”, which is promoting training programmes for the development of entrepreneurial and managerial skills, as well as consultancy, and assistance services for initiating new businesses. Young researchers up to 35 years old can apply for training under SOP HRD, within this key area of intervention „Competitive human capital in education and research”, part of the priority axis „Education and training in support of growth and development of a knowledge-based society”.

- **Development of R&D infrastructure in enterprises and creation of new R&D jobs**

Support is provided for the development of the research capacities in enterprises, in order to raise their level of innovation and their market competitiveness and to create new R&D jobs. The procurement of instruments, equipment, computers, software, etc necessary for R&D activity will be financed.

- **Promoting innovation in enterprises**

Innovation through R&D is supported in enterprises in order to apply in production new or improved products, technologies and services. 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. Innovative enterprises less than 5 years old will be treated according to the specifications of the new framework for state-aid for RDI concerning young innovative enterprises.

The enterprises involved in these projects can apply for training support through SOP HRD, if new jobs are created. For project-related training activities, the flexibility facility may be activated.

To improve the effectiveness of the priority axis, actions falling within the scope of assistance of the ESF will be financed in the limits of 10% of community funding for this priority axis, according to the *flexibility mechanism* (art. 34 (2) of the Council Regulation (EC) No 1083/2006). Assistance will mainly concern highly-qualified training related to the needed skills and knowledge for projects financed under this priority axis.

### **3.2.3. Priority Axis 3: ICT for private and public sectors**

#### **Objective**

- To support the economic competitiveness and to promote the interactions between the public sector and enterprises/citizens by improving and fully exploiting the ICT potential and applications.

The main actions to be carried out in order to achieve this objective address the need to improve the ICT infrastructure, particularly in market failure areas and the process of efficiently managing more qualified human resources and know-how. From this perspective, it will be necessary to introduce and sustain innovative productive systems in the administrative process, in day-to-day life and to develop a competitive market for a new generation of products and services.

#### **Rationale**

In the new global economy, taking into consideration the need of reinforcing competitiveness at different levels, the Romanian companies, public administrations and other economic and social players are facing major challenges. Productivity growth may be considered a decisive factor for a successful market development and the positive impact of the ICT on this is well known.

In accordance with the specific objectives established by the Lisbon Agenda and the i2010 strategy ("i2010 – A European Information Society for growth and employment"), it is essential to underline the crucial importance of accessibility improvement and broadband infrastructure development as main priorities for developing the Information Society in Romania.

In Romania, growth in broadband connections is mainly taking place in urban areas. In scarcely populated areas or where the distance from the exchanges to the final user is too long, the operators did not find it profitable to invest and upgrade or roll-out infrastructure in these areas on the grounds that expected demand is insufficient to ensure a positive return on investment. For this reason, and according to the „Guidelines on criteria and modalities of implementation of structural funds in support of electronic communications” (European Commission, 2003), it is considered that public funding in under-served areas plays a vital role in stimulating investments in broadband infrastructure and services, boosting competitiveness and innovation (stated also in EC Communication “Bridging the broadband gap”).

Taking into account that public funding can also play an important role in encouraging broadband deployment through policies that stimulate demand, support will be offered to stimulate the demand-side of ICT services, including:

- Initiatives aiming at increasing usage in the public sector and developing content such as e-government, e-health, e-learning
- stimulating the creation of applications specifically targeted to SMEs

The National Broadband strategy that is to be soon finalized, will design a complete set of measures for ensuring the sustainability of the Information Society development, in accordance with the objectives established by the NDP and the NSRF in terms of economic competitiveness increase. All these actions will be in line with the “Guidelines on Criteria and Modalities of Implementation of Structural Funds in support of electronic communication”.

The main contribution of the ICT sector to economic growth is mainly sustained through the companies' uptake. The ICT usage stimulates extensive and intensive growth for goods and services production. Concerning the extensive growth, ICT provides, for the Romanian companies, the opportunity to access new regional and global markets and to promote and commercialize goods and services inland by electronic means. An intensive development is also due to the decrease of production, administration and marketing costs, deriving from ICT use, which can determine a significant increase of productivity.

The major disparities regarding Internet access have been pointed out in the analysis chapter. Although the European policies are mainly directed towards free competition, a delay in ensuring the appropriate infrastructure is observed in some cases, which suggests the need for public intervention.

Development of E-Government, E-Health and E-Learning applications should also be addressed within this framework in order to sustain the economic growth and competitiveness in Romania. These applications will contribute to the creation of a positive environment for the deployment of innovative products and services, by improving and increasing the interactions between the different social and economic players.

E-economy provides benefits for a wide range of activities that are specific to the business environment. At companies' level, the ICT applications are essential for the corporation internal and external communication, as well as a more efficient management of resources and customers. Thus, the low weight of electronic commerce percentage in the total turnover (2004 – 1.3% in Romania, as compared to 2.1% in EU25) reflects the companies' reduced efficiency rate. In order to reduce disparities, it is necessary to support companies' ICT uptake along with measures for increasing the electronic security.

#### Key Areas of Intervention

- **Supporting the Information Technology use**
- **Developing and increasing the efficiency of electronic public services**
- **Sustaining the E-Economy**

#### Indicators

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Output</b>					
Broadband networks projects supported in market failure areas	number	-	-	SMIS	100
Public internet access points projects supported in market failure areas	number	-	-	SMIS	100
Public services projects supported	number	-	-	SMIS/beneficiaries	100
E-Business projects supported	number	-	-	SMIS/beneficiaries	40
Adopting integrated management solutions financed projects	number	-	-	SMIS	1,000

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Result</b>					
SMEs benefiting of broadband Internet access	number	-	-	SMIS/beneficiaries	500
SMEs connected to broadband networks in the market failure areas	number	-	-	SMIS/beneficiaries	1,000
Users of public internet access points in the market failure areas	number	-	-	SMIS/beneficiaries	5,000
Users of public services applications	number	-	-	SMIS/beneficiaries	700,000
SMEs using the supported E-Business projects	number	-	-	SMIS/beneficiaries	1,800

### 3.2.3.1. Supporting the Information Technology use

Taking into consideration that the ICT penetration in Romania is low due to the insufficient development of infrastructure, determined by low investments and low purchasing power of population, this key area of intervention will support the access to broadband connections especially in the market failure areas (e.g. under-served rural and small urban areas) complying with structural funds regulations regarding electronic communications. The broadband connections extension and data security increase, that are compulsory conditions for the knowledge-based economy, are also to be supported. The interventions aiming to support the broadband infrastructure development will address the competitiveness consolidation as a target for higher potential areas.

The following **indicative operations** will be pursued:

- Supporting access to Internet and to connected services.  
It is envisaged to offer support to SME's for connecting to Internet through broadband connections and purchasing related hardware and software.
- Supporting local authorities/electronic communications network providers to set up a broadband network, especially in the market failure areas.
- Supporting local authorities/SMEs for setting up public access points, especially in the market failure areas, through broadband connections.

### 3.2.3.2. Developing and increasing the efficiency of public electronic services

The indicative operations of this key area of intervention will pursue the implementation of electronic public services (E-Government, E-Learning and E-Health) solutions.

Use of modern, innovative and efficient e-government services contribute to increased productivity by better internal performance and by multiplier effects that enable companies to lower their administrative costs and raise their competitiveness. They reinforce innovation across

the economy by being pro-active in delivering high quality and new services and producing leverage effect.

By adopting E-Learning applications, also by ensuring the services' availability, the citizens' access to the Internet educational resources will be promoted. For businesses to be competitive in the knowledge-based society, it is essential that employees have access to continuing education. Supporting the development of e-learning will generate a better trained work force, more flexible and more adapted to the market requirements.

E-Health plays an important role in European competitiveness as recognized in the Lisbon Strategy since 2000. It impacts the life of all citizens by improving access to healthcare and the quality and effectiveness of the services offered. When combined with organizational changes and the development of new skills, e-Health can help to deliver better care for less money within citizen-centered delivery systems. The E-Health services' implementation will bring benefits both in terms of savings in the medical system and in improving the medical services offered to citizens, and ultimately will contribute to a healthier workforce.

To support the **development of modern public electronic services**, the following **indicative operations** will be taken into consideration:

- Supporting the setting-up of e-government applications and Internet connection where needed
- Setting-up ICT systems in order to increase the information systems' interoperability
- Supporting broadband connections for schools (primary, secondary and high schools)
- Setting-up E-Learning applications
- Supporting the creation of a portal related to jobs available and offered to citizens through public access points
- Sustaining the setting-up of electronic medical services, applications and tools

The operation regarding schools Internet broadband connection is complementary to operations within the Regional Operational Programme (computers acquisitions). Under SOP IEC, together with the broadband connection of the school, a limited number of computers will be purchased so as to ensure a minimum use of the connection, while further IT equipment acquisition for the school will be possible under ROP. The operation is also complementary to the Human Resources Development Operational Programme (IT applications used for educational purposes).

Projects for development of efficient electronic services (E-Government, E-Education and E-Health) will integrate specific human resources training components, if needed.

### **3.2.3.3 E-Economy Development**

In the framework of this key area of intervention, financial support is directed towards ICT applications and their interoperability, adoption of integrated solutions for companies leading to long term cost-cutting, thus facilitating the access to Internal and international market and sustaining more efficient management processes, observing at the same time the increased

security of the electronic networks and the adoption of anti-fraud solutions in order to develop a secure and dynamic E-Business sector.

For sustaining the e-economy development, the following **indicative operations** are foreseen:

- Support for integrated business systems
- Sustaining electronic applications for businesses
- Introducing electronic tender systems
- Ensuring secured electronic transactions.

To improve the effectiveness of the priority axis, actions falling within the scope of assistance of the ESF will be financed in the limits of 10% of community funding for this priority axis, according to the *flexibility mechanism* (art. 34 (2) of the Council Regulation (EC) No 1083/2006). Assistance will mainly concern highly-qualified training related to the needed skills and knowledge for projects financed under this priority axis.

#### ***3.2.4. Priority Axis 4: Improvement of energy efficiency and sustainable development of the energy sector***

##### **Objective**

- 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.

##### **Rationale**

The objectives of the Romanian Energy Policy are in line with the Lisbon Strategy, the Green Paper for “A European Strategy for Sustainable, Competitive and Secure Energy”, EU New Energy Policy, Kyoto Protocol to the United Nations Framework Convention on Climate Changes, Gothenburg Protocol (2001), Community Strategic Guidelines for Cohesion Policy 2007 – 2013 and the obligations undertaken during the accession process (Chapters 14 and 22) and are focused on the improvement of energy efficiency, the security of energy supply the environmental protection, all these factors contributing to the achievement of sustainable economic development.

Investment in energy field can lead in a medium and long term to increasing competitiveness in other economic sectors, thus being an income multiplier. Economic competitiveness and sustainable development are based also on the efficient use of energy on the whole chain (natural resources, production, transport, distribution, end use) and on technological development which will lead to energy saving.

Economic competitiveness implies the following approaches: competitiveness of companies operating in the energy sector and also competitiveness of the economy as a whole through energy services meeting consumers’ demand. Economic competitiveness can be achieved when both economic agents from energy sector and the rest of the economy are competitive.

Several programmes of energy efficiency were implemented in 2000-2005 period, but at present the economic situation is still characterized by high energy intensity. Although the energy sector

is liberalized to a high degree, in order to increase competitiveness there is a need for energy efficiency investment to be recognized as a priority.

As indicated in the economic situation analysis, energy intensity is the indicator where Romania has the biggest gap compared to EU average; such a gap, if not properly addressed, could be an important impediment for the competitiveness of the national economy on the Single Market and on the South-East European Market, especially in view of the gradual increase of energy prices (alignment with European levels).

Within its national strategies for energy efficiency and valorisation of renewable energy, Romania's targets are to reduce the primary energy intensity and to increase the share of electricity produced from renewable resources in the national gross electricity consumption. These objectives are achievable only through significant investments in the refurbishment, upgrading and rehabilitation of energy production capacities, in expansion/upgrading of transport and distribution grids, in energy efficiency equipment at the end-user and in environmental protection.

For an adequate integration in the South-East European Market and in the European Single Market it is necessary to continue the expansion of the interconnection capacity of electricity and gas transmission networks with European networks, which requires the operation of the national energy system at standardized parameters. The rehabilitation and expansion of national electricity transmission grids and gas networks must be made along with the interconnection of national networks with European ones, thus ensuring a higher degree of security of supply.

Taking into account that Romania has a significant technical potential for the use of RES and only a small part is economically capitalized (except hydro resources used in large plants), the diversification in valorisation of RES needs to increase.

Consideration should be also given to the supporting capacity of the environment – the quantity and quality of the energy resources and the pollution problems generated by the energy sector. In order to minimize the impact of energy production on the environment, it is necessary to reduce emissions from large combustion plants whose functioning is essential for the National Energy System, and which are the main polluters in the energy sector.

The proposed actions for improving energy efficiency, better valorisation of RES and reducing the negative impact on environment are core objectives of the “National Energy Policy” (NEP)<sup>17</sup>.

### **Key Areas of Intervention**

- **Improvement of energy efficiency**
- **Valorisation of renewable energy resources**
- **Reducing the negative environmental impact of the energy system functioning**

---

<sup>17</sup> To be approved by the Romanian Government in early 2007



## Indicators

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Output</b>					
Projects for improving energy efficiency	number	-	-	SMIS	20
Projects for the valorisation of RES	number	-	-	SMIS	25
Projects for reducing the negative environmental impact in large combustion plants	number	-	-	SMIS	5
<b>Result</b>					
Decrease of energy intensity in assisted beneficiaries	%	-	-	SMIS	10%
Installed capacity for RES valorisation in assisted beneficiaries	MW	-	-	-	120 MW
Reduction of polluting emissions in assisted enterprises	%	-	-	-	30%

### 3.2.4.1. Improvement of energy efficiency

Improving energy efficiency contributes to the three core objectives of the EU energy policy: sustainable development, competitiveness, and security of supply. Actions on energy efficiency will reduce waste of energy resources and will strengthen the security of supply. It is also the most cost-effective manner to mitigate climate change due to CO<sub>2</sub> emissions.

According to the Green Paper, the potential for improving energy efficiency exists in all sectors, from production to end use.

Romania intends to reduce the energy intensity by improving the energy efficiency over the whole chain-natural resources, production, transport, distribution, end-use of electricity and heat, according to the commitments undertaken during EU accession negotiations. Focus on improvement of energy efficiency is also to be taken into account when investing in expansion and upgrading of oil and gas transport and distribution grids. The implementation of projects targeting the improvement of energy efficiency will lead to a decrease of the primary energy intensity, contributing to the achievement of the national target of decreasing by 40% until 2015, compared with 2001. They will also contribute to the innovation and research efforts, since the potential for energy improvement will continue to grow as economic development progresses and technologies improve. An associated effect is that new jobs can be created.

Taking into account the estimated increase of energy consumption in Romania and the usage degree of the equipment currently in use, there is a need for refurbishment, upgrading and rehabilitation of the existing plants with a longer lifetime, including cogeneration capacities.

In view of increasing energy efficiency, the technological modernization of installations and equipment for industry (other than energy sector) in order to improve the energy management of economic operators and reduce their specific consumption of energy is also envisaged. Energy saving is the cheapest, the easiest to obtain and the most non-polluting energy resource.

The expansion and modernization of the energy transport and distribution grids will lead to a decrease in energy losses, avoiding crisis situations and will meet the economic performance and quality standards required by electricity consumers; at the same time it will contribute to the creation of the necessary infrastructure for developing economic activities leading, in the future, to increasing Romanian products and services access on the EU market.

At the same time, it is necessary to expand the interconnections of electricity, oil and gas networks with European networks in order to facilitate the access of Romanian companies and consumers to the European energy market (see Annex 4 -map -*Interconnected network of UCTE*).

#### **Indicative operations**

- 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).
- supporting investment in installations and equipment for enterprises in order to improve energy efficiency leading to specified energy savings.
- supporting investments in expanding and upgrading electricity, oil and gas transport and distribution grids in order to reduce losses and secure the continuity and safety of transport and distribution services.
- supporting investments for interconnecting the national electricity, gas and oil transport networks to European networks.

#### **3.2.4.2. Valorisation of renewable energy sources (RES)**

Romania has an important exploitable potential of RES (wind, solar, biomass, hydro and geothermal and other resources). The valorisation of RES may offer a long-term competitive advantage, while substantially contributing to sustainable development.

While the EU target for 2010 is to achieve 22% of the total Community electricity consumption from RES, Romania sets out an even more ambitious goal of 33% as share of electricity produced from renewable energy resources in the national gross electricity consumption and subsequently must intensify its efforts to use renewable energy resources (as defined according to the Directive EC/2001/77).

Furthermore, the valorisation of renewable energy resources is needed for introducing into the economic system some isolated areas by using the technical potential of the country and to reduce the environmental impact by producing green energy. Moreover, the various locations of renewable energy resources in Romania may lead to a diversification of the energy production capacities/sites and to increasing employment opportunities in less economically developed areas. In this context, new job opportunities can be created locally for the production, installation and maintenance of RES capacities. The valorisation of RES will also significantly contribute to the national technological progress.

Government Decision no.1844/2005 is in accordance with Directive no.2003/30/CE and establishes a target level of 5.75% as minimum proportion of biofuels placed on the Romanian market by 31 December 2010, calculated on the basis of energy content, of all petrol and diesel for transport purposes.

The valorisation of RES under SOP Competitiveness complements the actions under National Programme for Rural Development which will support RES projects of companies involved in the first processing of agricultural products and integrated projects involving both first and second processing.

#### **Indicative operation**

- investments in upgrading, rehabilitation and building new power and heating production capacities by valorisation of renewable energy resources: wind, hydro (in small scale hydro capacities), biomass, biofuels, solar, geothermal, and other.

#### **3.2.4.3. Reducing the negative environmental impact of the energy system functioning**

A criterion for sustainable development is the improvement of the quality of life at the lowest economic, social and environmental costs.

The energy sector is one of the main polluters in economy and needs substantial financial resources for environment protection.

Romania has to make significant efforts in order to comply with the commitments undertaken during the accession negotiations and to make the environmental investments for emissions' reduction in large combustion plants from National Energy System according to Directive EC / 2001/80. Due consideration will be given to large combustion plants (LCPs) with transition periods for compliance with the Directive emissions level. The LCPs coordinated by the Ministry of Economy and Trade are not only essential for the operation of the National Energy System, but also provide technological steam and thermal energy for the population.

LCPs under the coordination of the Ministry of Administration and Interior (to be supported under SOP Environment) belong to 26 public local authorities and are the only providers of thermal energy (heat and hot water) for the population in areas where they are located.

The distinction between the interventions in the field of environment for LCPs in the SOP Environment and SOP IEC is based on the character of the service provided, as previously mentioned, the main type of infrastructure and type of beneficiaries.

In accordance with the principle of preventing or reducing pollution at source, it is necessary to introduce modern technologies for the reduction of flue gas emissions, to endow power and heating plants with flue gas desulphurization installations, to install electro filters for reducing powder emissions and to replace existing burners with new ones that could reduce the NOx emissions (see Annex 4, Table 4). The financial resources needed for these investments exceed by far the current possibilities of companies.

If these investments are not made, there is a perspective of closing down the energy production capacities of large combustion plants and that could be a risk for the safe operation of the National Energy System. Furthermore, there might be distortions on the energy market, an increase of energy price, staff layoffs with negative social impact and the impossibility to provide heat to the population.

#### **Indicative operation**

- Investments in flue gas de-sulphurization installations, burners with reduced NOx and filters for large combustion plants.

Under this key area of intervention, mostly major projects will be submitted, individually, for the Commission approval, in compliance with art. 39-40 of Council Regulation (EC) No 1083/2006.

### ***3.2.5. Priority Axis 5: Romania, an attractive destination for tourism and business***

#### **Objective:**

The major objective of this axis is to sustain the growth of economic competitiveness through improving Romania's image by promoting the tourism potential and the development of Romanian tourism competitiveness. In this respect, the specific objectives are the increase of the interest in Romania as a tourism destination and the development of domestic tourism through promotional activities matching the country's tourism potential.

#### **Rationale**

Romania has to promote a tourism potential of great diversity, which offers all tourism products and for all seasons. Privatization in tourism has contributed to investments for tourism infrastructure modernization and, as result, to the improvement of quality and diversity of the tourism services offer. New tourism products/types, such as rural/agro, adventure tourism, spa/wellness tourism and other niche types of tourism are under development. The business tourism is also developing as a result of different activities like congresses, symposia, exhibitions, diplomatic meetings based on Romania accession to EU and NATO, cultural-scientific events, other business meetings (MICE products).

On the other hand, the awareness of Romanian products through tourism is an important factor for international promotion of Romanian economy and for the development of its national market. The development of the tourism brand is a priority considering its effect both on attracting foreign businesses and on the expansion of domestic tourism with its beneficial economic leverage impact.

Romania does not have yet a well-defined profile as tourism destination and the domestic promotion is insufficient and undersized compared to the demand.

Currently, neither foreign tourists nor Romanian ones may get information from specialized tourism promotion and information centres on news concerning the country, tourism attractions, cultural events or business activities, archaeological sites, accommodation, restaurants, recreation possibilities or any kind of facilities they can enjoy. In the same context, foreign tour operators also need this information available on internet or websites for creating their Romanian tourism programmes.

### Key Areas of Intervention

- Promotion of Romanian tourism potential
- Development of a National Tourism Information and Promotion Centres network

### Indicators

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Output</b>					
Promotional campaigns for advertising the tourism brand at national and international level	number	-	-	SMIS / National Authority of Tourism	10 - 12
National Tourism Information and Promotion Centres	number	-	-	SMIS / National Authority of Tourism	7 - 10
<b>Result</b>					
Tourists visiting the Information and Promotion Centres	number	-	-	SMIS / National Authority of Tourism	1 mil.
Web site visitors	number	-	-	SMIS / National Authority of Tourism	1.5 mil.

#### 3.2.5.1 Promotion of Romanian tourism potential

This key area of intervention addresses activities meant to make Romania an attractive destination for tourism and business, together with the sustainable development of tourism products, the increase of internet use in promoting and booking tourism services (E-tourism).

The **indicative operations** envisaged are:

- Creation of a positive image of Romania as a tourism destination by defining and promoting the national tourism brand, attracting business investors and other strategic partners in order to develop the tourism industry and to increase its attractiveness. The activities for creating a real and complex tourism image by introducing new promotion methods and diversifying promotion materials.
- Development and consolidation of domestic tourism by supporting tourism promotion of specific products and specific marketing activities. The aim is to develop the concept of tourism recreation in Romania, to increase the number of holidays in Romania by promoting specific tourism products.

#### 3.2.5.2 Development of a National Tourism Information and Promotion Centres network

This key area of intervention will support the tourism information and promotion infrastructure in the country and the supply of tourism information to and from tourists and tour operators. The main aim of this key area of intervention is to build a national level network of tourism information and promotion centres in areas with high tourism potential (as identified in the relevant section of the National Spatial Plan), which do not overlap with development regions.

The **indicative operations** are:

- investments in TIPCs set up – activities such as building, purchase of equipment, IT and software in order to create a unitary tourism information and statistics system with public on-line access; the operation will be complemented by support for local tourism info centres under the National Rural Development Programme.
- setting up a national tourism information database
- setting up an integrated national system, with on-line access, for collecting and distributing tourism information.

### **3.2.6. Priority Axis 6: Technical Assistance**

#### **Objective**

The objective of this priority axis is to provide support for the programme implementation process and effective use of the Community financial input and national co-financing through:

- ensuring high quality and coherence of key areas of intervention aimed at programme implementation;
- providing compatibility of the realised projects with the *acquis* and EU policies;
- organisation of a system of information and promotion of programme objectives and operations.

#### **Rationale**

The technical assistance under the SOP IEC is complementary to the scope of support of the Operational Programme Technical Assistance 2007-2013 and, pursuant to the Council Regulation (EC) No 1083/2006, will be applied to strengthen the system of management, monitoring, control and evaluation of implementation of the SOP, in accordance with the provision of the Commission Regulation .....

The technical assistance priority axis of SOP IEC provides specific assistance for project preparation, monitoring, evaluation and control as well as communication activities, only with regard to the specificity of SOP IEC. The technical assistance of SOP IEC is complemented with the horizontal support of the OP TA, which provides assistance for the common needs of all the structures and actors involved in the management and implementation of the structural funds and ensures the general public awareness on the role of the community support.

The expected result is the establishment of an efficient system of implementation, conducing to the fulfilment of SOP objectives.

#### **Key Areas of Intervention**

- **Support to SOP management, implementation, monitoring and control**
- **Support for communication, evaluation and IT development**

## Indicators

Indicator	Unit	Baseline	Baseline Year	Source	Target (2015)
<b>Output</b>					
SOP monitoring committee meetings	number	-	-	SMIS	14
Staff participating in training actions	number	50	2006	MA records	500
Communication campaigns (TV, radio, press etc.)	number	-	-	SMIS	20
SOP website visits	number	-	-	MET server	200,000
Assistance actions towards beneficiaries	number	-	-	SMIS	70
<b>Result</b>					
Participants in information events	number	-	-	MA records	500-600
Participants reached by communications campaigns	number	-	-	survey	2000-2500
Studies, surveys, polls financed	number	-	-	SMIS	20
Beneficiaries trained	number	-	-	SMIS	700 - 1000

### 3.2.6.1. Support to the SOP management, implementation, monitoring and control

The objective of this key area of intervention is to provide technical and financial assistance for the processes of designing, monitoring, evaluation and control, aimed at reaching an effective implementation of the SOP and the efficient use of the European Regional Development Fund. Under this key area of intervention, financial resources will be provided for external experts required in relation to the above-mentioned processes.

The support is mainly designed to address the following processes:

#### *Management and implementation*

- research, studies, surveys, polls to support the higher quality and more effective implementation of the SOP IEC (improving the integration of the sectoral policies with the IEC OP);
- using external experts (long or short term consultations) on professional, operational, methodological, organisational/institutional issues at every management level; using external and specialised experts (long or short term consultations) for supporting selection process;
- using contractual staff, employed by the Managing Authority and Intermediate Bodies in order to support their functioning in connection to structural funds management and control;

- providing specific training for the employees of the organisations participating in the planning, management and implementation of the Operational Programme, both for the Managing Authority and Intermediate bodies staff; training in order to support the project selection and verification, both for the Managing Authority and Intermediate bodies staff;
- improving the IT skills of the staff of the Managing Authority and Intermediate Bodies for the successful implementation of the POS IEC;
- supporting the skill development and professional exchange of information (e.g. study tours, internships, specialised courses etc.), national and abroad, in relation to planning, management, implementation, monitoring issues and to the evaluation of the Operational Programme, both for the Managing Authority and Intermediate bodies staff;
- providing information and assistance to potential beneficiaries on the application process (preparation, requirements, feedback) – courses, workshops etc. in order to support project generation;
- organisation of seminars, trainings, workshops for discussions and debates with the representatives of economic and social partners in order to increase the effectiveness of the OP;
- providing assistance in SOP implementation, while eventually establishing a form of partnership responsible for implementation on regional and local levels;
- providing adequate logistic support (i.e. office space, vehicle etc.) for the functioning of the entities involved in SOP IEC management and implementation;
- remuneration costs, including social insurance contributions for:
  - civil servants within the Managing Authority, Intermediary Bodies and Implementing Agencies of the SOP to implement the tasks relating to preparation, selection, verification, audit and monitoring of measures,
  - other employees dealing with performance of the above mentioned tasks.

### ***Monitoring***

- technical service and secretariat support for the Monitoring Committee and its sub-committees/working groups (preparation/duplication, translation of documents organising meetings, preparing minutes, interpretation, maintaining contacts etc.);
- training of members of the Monitoring Committee;
- collecting data from sources other than national statistics (expertise on the methodology of effective and efficient monitoring of elements of the SOP IEC).

### ***Control process***

- system control and risk management of the intermediate bodies;
- carrying out an external audit (organisational and financial) by independent auditors as commissioned by the financial control unit of the OP Managing Authority;
- carrying out on-the-spot checks.



### **3.2.6.2. Support for communication, evaluation and equipment**

The objective of this key area of intervention is the implementation by the SOP Managing Authority of obligations arising from Article 46 of Council Regulation 1083/2006 concerning the promotion of the Programme and its operations and informing entities interested in receiving support from the Funds, as well as the general public, about the opportunities afforded by the assistance and its outcomes.

The key area of intervention also targets to support the evaluation of the SOP, as well as setting up operational standards for each type of evaluation. Under this key area of intervention, financial sources will be provided for external evaluators to elaborate reports, analyses, studies and outlines etc., in order to support the Evaluation unit to fulfil its task.

Another objective is to build administrative capacity for the management of the SOP through the provision of a sufficient amount of computer and office equipment, including software, for the purpose of management, monitoring, control and evaluation, complementary to the SMIS system.

#### **Indicative operation**

- The communication activities financed under this area of intervention will ensure the appropriate publicity with regard to the specificity of SOP IEC, as the general public awareness on the role of the community support and the overview on the intervention of structural funds will be covered by OP TA.

#### *Communication*

- issuing and distributing information, promotional and educational awareness raising material (publication and distribution of the official texts of the SOP IEC with a manual containing guidelines for the use of the OP assistance package, as well as information on the scope of intervention and the effects of aid);
- organising conferences, seminars, trainings and workshops (trainings and workshops for Intermediate Bodies and possibly, other Implementing Institutions Bodies of the SOP IEC, trainings and workshops for the recipients of the assistance, press conferences, regional conferences and information meetings for the representatives of business associations, groups and organisations, media etc.);
- workshops for the staff of the SOP Managing Authority, who will carry out promotion and external communication tasks;
- setting up an information exchange system (through the media, brochures, folders, CDs, a dedicated web site, etc.) for potential beneficiaries, economic, commercial, professional and other institutions on the content of the assistance package and accessibility of the structural funds for implementation of specific projects, on OP implementation, the changes made and the reallocations.

#### *Evaluation*

- covering eligible administrative costs for the operations of the Evaluation Unit (excluding salary costs);
- supporting costs of evaluations carried out by external evaluators;
- covering translation costs for the purpose of SOP IEC evaluation process;
- bearing costs of expert assistance, including experts' fees, drawing up of expertise; analyses, studies and ideas to develop and improve methods and standards.

*IT/other equipments*

- purchase of computers, other than SMIS;
- purchase of the necessary office equipment, such as copiers, faxes, audiovisual conference equipment (including overhead projectors, equipment for presentations etc.);
- maintenance of the monitoring system;
- purchase of software for management, monitoring, controlling and evaluation purposes.

The institution responsible for implementing the key areas of intervention will be the Ministry of Economy and Trade as Managing Authority. The operations are managed by the Ministry of Economy and Trade, which will define the implementation rules and related documents, accept applications on a continuous basis, organize the selection committee, appraise the projects, award the grants/sign the contracts, monitor the implementation according to standard rules and make the payments (while ensuring the appropriate separation of functions).

### 3.3. Coherence and compliance with Community and national policies

#### 3.3.1. Coherence with Community Strategic Guidelines and National Strategic Reference Framework (NSRF)

Community Strategic Guidelines - Cohesion Policy in Support of Growth of Jobs 2007-2013	NSRF		Policy Reflection in SOP IEC
	NSRF Priority	NSRF Section	
	<b>Thematic priorities</b>		
Guideline 1.1.2 “ <i>Strengthen the synergies between environmental protection and growth</i> ”	<b>Develop Basic Infrastructure to European Standards</b>	Strengthen synergies between environmental protection and growth	<b>Priority Axis 4:</b> Increased energy efficiency and sustainable development of the energy system. <ul style="list-style-type: none"> <li>• Key Area 2 - Valorisation of renewable energy sources</li> <li>• Key Area 3 - Reducing the negative environmental impact of the energy system</li> </ul>
Guideline 1.1.3 “ <i>Address Europe’s intensive use of traditional energy sources</i> ” Guideline 1.1.2 “ <i>Strengthen the synergies between environmental protection and growth</i> ”		The efficient use of energy	<b>Priority Axis 4:</b> Increased energy efficiency and sustainable development of the energy system. <ul style="list-style-type: none"> <li>• Key Area 1 - Improvement of energy efficiency</li> </ul>
Guideline 1.2.2 “ <i>Facilitate innovation and promote entrepreneurship</i> ”	<b>Increase the Long-Term Competitiveness of the Romanian Economy</b>	Productivity growth and creation of a dynamic base	<b>Priority Axis 1:</b> An innovative productive system <ul style="list-style-type: none"> <li>• Key Area 1 - Productive investments and preparation for market competition, especially of SMEs</li> </ul> <b>Priority Axis 3:</b> IT&C for private and public sectors <ul style="list-style-type: none"> <li>• Key Area 1 - Supporting the Information Technology use</li> </ul>

Community Strategic Guidelines - Cohesion Policy in Support of Growth of Jobs 2007-2013	NSRF		Policy Reflection in SOP IEC
	NSRF Priority	NSRF Section	
		Business support services and infrastructure	<p><b>Priority Axis 1:</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 3 - Entrepreneurship development</li> </ul> <p><b>Priority Axis 2:</b> Research and Development for competitiveness</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Investments in RDI infrastructure</li> <li>• Key Area 3-RDI support for enterprises</li> </ul>
		Certification and eco-innovation	<p><b>Priority Axis 1:</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 1- Productive investments and preparation for market competition, especially of SMEs</li> </ul> <p><b>Priority Axis 2:</b> Research and Development for competitiveness</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Investments in RDI infrastructure</li> </ul>
<p>Guideline 1.2.2 “Facilitate innovation and promote entrepreneurship”</p> <p>Guideline 1.3.3 “Increase investment in human capital through better education and skills”</p>		Entrepreneurial development	<p><b>Priority Axis 1:</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 3 - Entrepreneurship development</li> </ul> <p><b>Priority Axis 2:</b> Research and Development for competitiveness</p> <ul style="list-style-type: none"> <li>• Key Area 3 - RDI support for enterprises</li> </ul>
Guideline 1.2.4 “Improve access to finance”		Access to finance	<p><b>Priority Axis 1:</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Access to credit and financing instruments for SMEs</li> </ul>

Community Strategic Guidelines - Cohesion Policy in Support of Growth of Jobs 2007-2013	NSRF		Policy Reflection in SOP IEC
	NSRF Priority	NSRF Section	
Guideline 1.2.1 <i>“Increase and better target investment in RTD”</i>		Research, technological development and innovation	<p><b>Priority Axis 2:</b> Research and Development for competitiveness</p> <ul style="list-style-type: none"> <li>• Key Area 1 - R&amp;D partnerships between universities/research institutes, and enterprises (industry) for generating results directly applicable in economy</li> <li>• Key Area 2 - Investments in RDI infrastructure</li> <li>• Key Area 3 - RDI support for enterprises</li> </ul>
Guideline 1.2.3 <i>“Promote the information society for all”</i>		Information and Communication Technology	<p><b>Priority Axis 3:</b> IT&amp;C for private and public sectors</p> <ul style="list-style-type: none"> <li>• Key Area 1- Supporting the Information Technology use</li> <li>• Key Area 2 - Developing and increasing the efficiency of modern electronic public services (E-Government, E-Education and E-Health)</li> <li>• Key Area 3 - Sustaining the E-Economy</li> </ul>
Guideline 1.1.2 <i>“Strengthen the synergies between environmental protection and growth”</i>		Tourism	<p><b>Priority Axis 5:</b> Romania, an attractive destination for people and businesses</p> <ul style="list-style-type: none"> <li>• Key Area 1 - Promotion of Romanian tourism potential</li> <li>• Key Area 2 - Development of the national network of Tourism Information and Promotion Centres</li> </ul>

Community Strategic Guidelines - Cohesion Policy in Support of Growth of Jobs 2007-2013	NSRF		Policy Reflection in SOP IEC
	NSRF Priority	NSRF Section	
Guideline 1.3.3 <i>“Increase investment in human capital through better education and skills”</i> Guideline 1.3.1 <i>“Attract and retain more people in employment and modernize social protection systems”</i>	<b>Development and More Efficient Use of Romania’s Human Capital</b>	Education and training	<p><b>Priority Axis 1:</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 1 - Productive investments and preparation for market competition, especially of SMEs (use of cross financing)</li> <li>• Key Area 3 - Entrepreneurship development (operation ref. to development of business incubators: mentoring and coaching activities)</li> </ul> <p><b>Priority Axis 3:</b> IT&amp;C for private and public sectors</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Developing and increasing the efficiency of modern electronic public services (E-Government, E-Education and E-Health)</li> </ul> <p><b>Priority Axis 6:</b> Technical Assistance</p> <ul style="list-style-type: none"> <li>• Key Area 1 – Support to the SOP management, implementation, monitoring and control.</li> </ul>
Guideline 1.3.5 <i>“Help maintain a healthy labor force”</i>		Health and welfare	<p><b>Priority Axis 3:</b> IT&amp;C for private and public sectors</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Developing and increasing the efficiency of modern electronic public services (E-Health operation)</li> </ul>
Guideline 1.3.4 <i>“Administrative capacity”</i>	<b>Building Effective Administrative Capacity</b>		<p><b>Priority Axis 3:</b> IT&amp;C for private and public sectors</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Developing and increasing the efficiency of modern electronic public services (E-Government operation)</li> </ul> <p><b>Priority Axis 6:</b> Technical Assistance</p> <ul style="list-style-type: none"> <li>• Key Area 1 – Support to the SOP management, implementation, monitoring and control.</li> <li>• Key area 2 – Support for communication, evaluation and IT</li> </ul>

Community Strategic Guidelines - Cohesion Policy in Support of Growth of Jobs 2007-2013	NSRF		Policy Reflection in SOP IEC
	NSRF Priority	NSRF Section	
	<b>Territorial priority</b>		
<p>Guideline 2.1 <i>“The contribution of cities to growth and jobs”</i></p> <p>Guideline 2.2 <i>“Support the economic diversification of rural areas, fisheries areas and areas with natural handicaps</i></p>	<b>Promoting Balanced Territorial Development</b>	Regional cohesion	<p><b>Priority Axis 1 :</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 1- Productive investments and preparation for market competition, especially of SMEs</li> <li>• Key area 2 : Access to credit and financing instruments for SMEs</li> <li>• Key Area 3 - Entrepreneurship development</li> </ul> <p><b>Priority Axis 2:</b> Research, Technological Development and Innovation for Competitiveness</p> <ul style="list-style-type: none"> <li>• Key Area 1 – R&amp;D partnerships between universities/research institutes, and enterprises (industry) for generating results directly applicable in the economy</li> <li>• Key Area 2 – Investments in infrastructure</li> <li>• Key Area 3 – RDI support for enterprises</li> </ul> <p><b>Priority Axis 3:</b> IT&amp;C for private and public sectors</p> <ul style="list-style-type: none"> <li>• Key Area 1 - Supporting the Information Technology use</li> </ul> <p><b>Priority Axis 4:</b> Increased energy efficiency and sustainable development of the energy system.</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Valorisation of renewable energy sources</li> </ul>

Community Strategic Guidelines - Cohesion Policy in Support of Growth of Jobs 2007-2013	NSRF		Policy Reflection in SOP IEC
	NSRF Priority	NSRF Section	
Guideline 2.1 <i>“The contribution of cities to growth and jobs”</i>		Sustainable urban development	<p><b>Priority Axis 2:</b> Research, Technological Development, and Innovation for Competitiveness</p> <ul style="list-style-type: none"> <li>• Key Area 1 – R&amp;D partnerships between universities/research institutes, and enterprises (industry) for generating results directly applicable in the economy</li> <li>• Key Area 2 – Investments in infrastructure</li> <li>• Key Area 3 – RDI support for enterprises</li> </ul>
Guideline 2.2 <i>“Support the economic diversification of rural areas, fisheries areas and areas with natural handicaps”</i>		Sustainable rural development	<p><b>Priority Axis 1:</b> An innovative productive system</p> <ul style="list-style-type: none"> <li>• Key Area 1- Productive investments and preparation for market competition, especially of SMEs</li> <li>• Key Area 3 – Entrepreneurship development</li> </ul> <p><b>Priority Axis 4:</b> Increased energy efficiency and sustainable development of the energy system.</p> <ul style="list-style-type: none"> <li>• Key Area 2 - Valorisation of renewable energy sources</li> </ul>
Guideline 2.3 <i>“Cooperation”</i> Guideline 2.4 <i>“Cross-border cooperation”</i>		Promote European Territorial Cooperation	<p><b>Priority Axis 4:</b> Increased energy efficiency and sustainable development of the energy system.</p> <ul style="list-style-type: none"> <li>• Key Area 1 - Improvement of energy efficiency (operation for interconnecting national networks to European ones)</li> </ul>



### 3.3.2. Coherence with other European and national development policies

<b>Provisions related to SMEs</b>		
<ul style="list-style-type: none"> <li>• 2000/819/CE Decision concerning „Multiannual programme for enterprise and entrepreneurship”, and in particular for small and medium-sized enterprises (2001-2005) - main actions:               <ul style="list-style-type: none"> <li>– Enhancing the growth and competitiveness of business in a knowledge-based internationalized economy;</li> <li>– Promoting entrepreneurship;</li> <li>– Simplifying and improving the administrative and regulatory framework for business so that research, innovation and business creation in particular can flourish;</li> <li>– Improving the financial environment for business, especially SMEs;</li> <li>– Giving business easier access to Community support services, programmes and networks and improving the coordination of these facilities;</li> </ul> </li> <li>• The implementation of European Charter for small enterprises:</li> </ul>	<ul style="list-style-type: none"> <li>• Government Strategy for period 2004-2008 for supporting small and medium-sized enterprises (GD no.1280/2004) structured on 5 strategic priorities:               <ul style="list-style-type: none"> <li>– <b>Creating business environment for encouraging SME’s set up and the development</b></li> <li>– <b>Enhancing SME’s competitiveness</b></li> <li>– Improving SME’s access to finance</li> <li>– Improving SME’s access on external market</li> <li>– Promoting entrepreneurial culture and managerial performances strengthening</li> </ul> </li> <li>• Yearly budgetary allocation for the Euro Info Centres</li> <li>• The allocation of 0.2% of GDP for programmes supporting the Strategy for SME’s set up and development (Law nr. 346/2004, on encouraging the set-up and development of SME’s, art. 26)</li> <li>• GD 656/2002 for approving European Charter for small enterprises. Annual implementation of the Action Plan for Charter has as main results:               <ul style="list-style-type: none"> <li>- one-stop-shops set up and organization at the Commercial Registry Offices;</li> <li>- the national multi annual NASMEC programmes for training and consultancy in export promotion; Start programme; investment programme; development of business incubators;</li> <li>- the school of arts and crafts, the ECONET network;</li> </ul> </li> </ul>	<p><b>Priority Axis 1: An innovative productive system</b></p> <p><i>Key areas of interventions:</i></p> <ul style="list-style-type: none"> <li>- Productive investments and preparation for market competition, especially of SMEs</li> <li>- Access to credit and finance for SMEs</li> <li>- Entrepreneurship development</li> </ul>

<ul style="list-style-type: none"> <li>• 2003/361/CE Decision on the Definition of SME's</li> </ul>	<ul style="list-style-type: none"> <li>- GED 75/2004 on reducing the registration time for enterprises;</li> <li>- the new Fiscal code; Bankruptcy law, the taxation of micro-enterprises; e-taxes programme, launched by MCTI;</li> <li>- Sunshine law nr. 52/2003</li> <li>- Campaign on the impact of EU joining;</li> <li>- Consultative Committee on Development of SME's set up and organization.</li> <li>• GD 27/2006 concerning the amending and completion of the Law no. 346/2004 on Encouraging SME's set up and development</li> </ul>	
<b>Provisions related to Industrial Policy</b>		
<ul style="list-style-type: none"> <li>• Council Decision 96/413/EEC on implementation of a Community action programme to strengthen the competitiveness of European industry.</li> <li>• Commission Communication COM(2002) 714 "Industrial policy in an Enlarged Europe"</li> <li>• Commission Communication COM(2003) 704 "Some Key Issues in Europe's Competitiveness - Towards an Integrated Approach"</li> <li>• Commission Communication COM(2004) 274 "Fostering structural change: an industrial policy for an enlarged Europe"</li> </ul>	<ul style="list-style-type: none"> <li>• GD 1172/2005 approving the Industrial Policy of Romania and the Implementation Action Plan</li> </ul>	<p><b>Priority Axis 1: An innovative productive system</b></p> <p><i>Key areas of interventions:</i></p> <ul style="list-style-type: none"> <li>- Productive investments and preparation for market competition, especially of SMEs</li> <li>- Entrepreneurship development</li> </ul>
<b>Provisions related to research-development-innovation (RDI)</b>		
<ul style="list-style-type: none"> <li>• Commission Communication COM (2002) 499 „More Research for Europe - Objective 3% of GDP”</li> </ul>	<ul style="list-style-type: none"> <li>• National RDI Strategy</li> <li>• National Plan for RDI</li> <li>• INFRATECH programme</li> </ul>	<p><b>Priority Axis 2: Research, Technological Development and Innovation for Competitiveness</b></p>

<ul style="list-style-type: none"> <li>• Commission Communication COM (2005)141 „Integrated Guidelines for Growth and Jobs 2005-2008”</li> <li>• Proposal for a „Decision of the European Parliament and of the Council establishing a Competitiveness and Innovation Framework Programme (2007-2013)” {SEC(2005) 433}</li> <li>• Proposal for „Competitiveness and innovation framework programme (2007-2013)“ with specific: „The Entrepreneurship and Innovation Programme”</li> </ul>		<p><b>Key areas of intervention:</b></p> <ul style="list-style-type: none"> <li>- R&amp;D partnerships between universities/research institutes, and enterprises (industry) for generating results directly applicable in the economy</li> <li>- Investments in RDI infrastructure</li> <li>- RDI support for enterprises</li> </ul>
<b>Provisions related to information technology and communication (ITC)</b>		
<ul style="list-style-type: none"> <li>• Commission Communication COM(2002) 263 „eEurope 2005: An information society for all”</li> <li>• <b>Council Resolution 5197/2003</b> on the implementation of the eEurope 2005 Action Plan which has as main targets: <ul style="list-style-type: none"> <li>- modern online public services <ul style="list-style-type: none"> <li>○ e-government</li> <li>○ e-learning services</li> <li>○ e-health services</li> </ul> </li> <li>- a dynamic e-business environment and, as an enabler for these</li> <li>- widespread availability of broadband access at competitive prices</li> <li>- a secure information infrastructure</li> </ul> </li> <li>• Commission Communication COM(2005) 229 „i-2010 A European Information Society for growth and employment”</li> <li>• Proposal for „Competitiveness and innovation framework programme (2007-2013)“ with specific: „ICT Policy Support Programme”</li> </ul>		<p><b>Priority Axis 3: ICT for private and public sectors</b></p> <p><b>Key areas of intervention:</b></p> <ul style="list-style-type: none"> <li>- Increased Information Technology use</li> <li>- Development and increased efficiency of modern public electronic services (E-Government, E-Education and E-Health)</li> <li>- Development of E-Business</li> </ul>

<b>Provisions related to the energy sector</b>		
<ul style="list-style-type: none"> <li>• EU Treaty – Art. 174, underlines that one of the objectives of community policy is to ensure the prudent and rational use of resources</li> <li>• Commission Communication COM (2000) 247: „Action Plan to improve Energy Efficiency in the European Community “</li> <li>• Commission Communication COM(1998) 246 „Energy Efficiency in the European Community - Towards a Strategy for the Rational Use of Energy”</li> <li>• Commission Communication COM (2005)265 „Green Paper on Energy Efficiency or Doing More with Less”</li> <li>• Proposal for a „Directive of the European Parliament and of the Council on energy end-use efficiency and energy services” COM(2003) 739</li> <li>• New Framework Programme “Intelligent Energy for Europe” Programme (2003 – 2006), COM (2002)162 Decision no. 1230/2003/EC;</li> <li>• The Treaty of Amsterdam (1995) concerning the community initiative in the energy field, the „Trans-European Energy Networks (TENs)”;</li> <li>• Council Decision 96/391/EC concerning a series of measures aimed at creating a more favourable context for the development of trans-European networks in the energy sector.</li> <li>• Decision No 1229/2003/EC concerning a series of guidelines for trans-European energy networks which repealing Decision No 1254/96/EC</li> <li>• „Energy for the future: renewable energy sources” - White Paper laying down a Community strategy and action plan.</li> <li>• Commission Green Paper “A European Strategy for Sustainable, Competitive and Secure Energy” 2006</li> </ul>	<ul style="list-style-type: none"> <li>• Roadmap for the energy sector in Romania, approved by Government Decision no. 890/2003;</li> <li>• National Strategy for energy efficiency, approved by GD no. 163/2004;</li> <li>• Law 199/2000 regarding the efficient use of energy;</li> <li>• Provisions of the Draft GD for approving the National Energy Policy 2006-2009 and of the Draft Law for amending Law 199/2000 regarding the efficient use of energy.</li> <li>• Strategy for the utilization of renewable energy resources, approved by GD no. 1535/2003,</li> <li>• GD 443/2003 regarding the promotion of energy production from renewable energy resources.</li> </ul>	<p><b>Priority Axis 4: Increased energy efficiency and sustainable development of the energy system</b></p> <p><b>Key areas of intervention:</b></p> <ul style="list-style-type: none"> <li>- Improvement of energy efficiency</li> <li>- Valorisation of renewable energy sources (RES)</li> <li>- Reducing the negative environment impact of the energy system</li> </ul>

<ul style="list-style-type: none"> <li>• Directive no. 2001/77/EC of the European Parliament and of the Council on the promotion of electricity produced from renewable energy sources in the internal electricity market</li> <li>• Directive no. 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants</li> <li>• Directive no. 96/61/ EC concerning integrated pollution prevention and control</li> </ul>		
---	--	--

### **3.3.3. Horizontal policies**

Every effort has been made to ensure that interventions under SOP IEC comply with European horizontal principles such as: sustainable development and equal opportunities. Similarly, the co-financed operations will be implemented in strict compliance with public procurement and state aid regulations.

#### **Sustainable development**

Sustainable development assumes satisfying the needs of the present without jeopardizing the capacity of the future generations of satisfying their own development needs.

The SOP IEC includes a set of measures which will contribute to the achievement of Romania's sustainable development objectives. These measures are meant to support part of the activities recommended at the Johannesburg UN Summit referring to sustainable development, such as: cooperation between the R&D sector and companies, production of clean energy, higher use of renewable resources and of alternative technologies.

Priority Axis 1 aims to promote high value added innovative activities using advanced technologies and equipment. These activities will promote the development of industries that have a lower impact on environment. An indirect support will be granted to those activities and projects that promote the upgrading of existing technologies in order to mitigate their environmental impact and the introduction of environmental-friendly technologies.

- Priority Axis 1, through its key areas of intervention, provides support for investments, especially in SMEs, that are expected to produce also a positive and direct impact on environment protection. This operation supports not only the acquisition of new equipments and technologies that have a lower impact on the environment but also activities of implementation of European environment standards and of environment management systems by enterprises.
- Priority Axis 2, through its key areas of intervention that aim to stimulate the transfer of modern technologies, adapted to the European environmental standards, will lead not only to an improvement in the competitiveness of Romanian enterprises but also to a reduction in the environmental pollution.
- Priority Axis 3, through its key areas of intervention indirectly contributes to sustainable development by the reduction of resources consumption.
- Priority Axis 4, through its key areas of intervention directed at improving energy efficiency and at increasing the use of renewable resources will contribute to the mitigation of green-house effect and will promote the use of green energy. The third key area of intervention addresses directly and specifically environment-related issues in the energy sector.
- Implementation - In order to become eligible for co-financing, the projects should be environmentally friendly, a minimal requirement being the conformity with the environment protection laws in force. Additionally, environment protection will be considered a project selection criterion (where applicable) so as to encourage initiatives related to the environment protection. Therefore, the selection will favour the projects which will have a minimum negative impact on the environment or which will take

special account of environment protection when developing technologies, services and products.

### **Equal opportunities**

The SOP IEC will promote the principle of equality of chances not only for women but also for other disadvantaged categories: young people, older workers, ex-offenders, ethnic minorities, in full compliance with the European strategies with respect to employment and social inclusion.

Wherever possible, the projects will be assessed with respect to their strategic impact on equal opportunities based on four criteria: improvement in living conditions of excluded or disadvantaged categories; improvement in access to labour market and training of excluded or disadvantaged categories; improvement in the situation at work and promotion of disadvantaged categories to create social and economic activities. Given the specificity of competitiveness programme a higher weight will be given to the last criterion.

- Priority Axis 1 will promote equality of chances by encouraging the inclusion of this principle, where possible, as a selection criteria. For example, the selection will encourage projects that promote the employment of disadvantaged categories (e.g. by allowing part-time and flexible work schedules, working from home etc).
- Priority Axis 3 through the promotion of information society will support equality of chances through the inclusion of specific selection criteria.

Additionally, the development of information society, particularly of broadband infrastructure, will support the equality of chances by facilitating the access of small and/or isolated communities and of disadvantaged social groups to information and labour market.

In general, the operations under Priority Axis 3 will generate an increased access of all social categories to information, education, professional qualification, managerial consultancy. Indirectly, these measures will contribute to the creation of new opportunities for all disadvantaged categories. For example, the development of the information society and of the ICT sector can offer women or disabled persons new opportunities for working at home, in a flexible regime or to continue their education and professional qualification during the periods of absence from the labour market.

### **Competition Policy and State Aid**

This Operational Programme has been developed having regard to the Commission's Guide to the Community rules on State aid. The provisions of Articles 87 and 88 of the Treaty in relation to competition rules are fully respected.

Acting according to its competence set out in the national legislation, the Competition Council, the national State aid authority<sup>18</sup>, has provided support to the SOP IEC Managing Authority and its Intermediate Bodies in respect of State aid applicable rules and it is providing on-going operational advice and guidance. A special Task Force has been created at the level of the Competition Council in order to undertake these activities on a permanent basis.

---

<sup>18</sup> Competition Law no. 21/1996, republished and the Law no. 143/1999 on State aid, republished.

The Competition Council, acting as the Contact Point with the European Commission, shall ensure the strict observance of the notification requirements and of the “*standstill principle*”. For those operations covered by a Block Exemption Regulations, the Competition Council shall provide the European Commission with all the information required by the relevant regulations. For the operations supported by State aid measures that, according to the Romania’s Accession Treaty, can be considered as existing aid, the Competition Council shall use the Interim Mechanism, once this mechanism is opened.

State aid schemes under article 87 of the Treaty are expected to be submitted to the Commission within the programming period, whenever the EC rules request an *ex-ante* approval from the Commission. Specific obligations with regard to individual notification of aid granted under aid schemes, which apply to certain sectors and for certain large investment projects will be respected.

Authorities will have the responsibility to ensure compliance with State Aid rules. The actual implementation will be the responsibility of the Managing Authority. In case the responsibility for implementation of the state aid rules is delegated to the Intermediate Bodies the Managing Authority will discharge its responsibility for compliance with state aid aids by ensuring that appraisal systems include the analysis of potential state aid issues and the compliance with the relevant notification or block exemption as appropriate. Questions demanded of applicants and guidance given will ensure that the applicants understand the limitations on assistance given and provide sufficient information to highlight any potential issues. Procedures will ensure that compliance is checked during claim checks and on the spot checks during certification and verification. Where delegated, spot checks on the work of the Intermediate Bodies will ensure compliance and consistency.

The Annual Implementation Reports will detail the measures undertaken in order to ensure the compliance of all operations with State Aid rules with respect to the provisions of block exemptions, “de minimis”, aid for Small and Medium-Sized Enterprises, regional aid, risk capital aid and environmental aid. In addition, the information required by the Commission for each block exemption and the information required by the Commission and by the World Trade Organization for notified schemes will be provided annually as required.

## **Public procurement**

The procurement for all operations financed through SOP IEC will be done in compliance with the provisions of the Law No 337/2006 for the approval of the EO No 34/2006 on public procurement and secondary legislation in this field.

The National Authority for Regulating and Monitoring Public Procurement (N.A.R.M.P.P.) has as main responsibility to create, to promote and to implement the public procurement policy. N.A.R.M.P.P. is organised as a public institution with legal personality, being subordinated to the Government and being directly coordinated by the Prime – Minister.

Therefore, N.A.R.M.P.P. has the following responsibilities:

- the elaboration of the strategy in the public procurement field;



- ensuring a coherent and harmonized national legal framework with the community acquis in the field of public procurement, by regulating the procedures for awarding public procurement contracts;
- ensuring a coherent application of the legislation in the field of public procurement by developing the implementing capacity at the level of the contracting authority;
- the fulfilment of the correlative obligations derived by applying the provisions of the E.U. Directives in the field of public procurement;
- monitoring, analysis, evaluation and supervision of the methods used for awarding public procurement contracts;
- ensuring a permanent communication channel with the structures within the European Commission, with the correspondent institutions from the member States of the European Union and with the national public interest organisms and representing Romania within the Consultative Committees, working groups and communication networks organised by the European Commission;
- methodological counselling of the contracting authorities in the process of awarding public procurement contracts, having a supportive role in order to ensure the correct application of the legislation in this field;
- initiation/sustaining projects or actions for training the personnel involved in specific activities related to public procurement, having a supportive role in developing the implementation capacity of the legislation at the level of the contracting authorities.

The mechanism for the ex-ante control has been established at the level of the Ministry of Public Finance through the following legal framework:

- GO No 30/2006 on the control attribution of the procedural issues regarding public procurement;
- GD No 942/2006 for approving the methodological norms of GO No 30/2006 on the control attribution of the procedural issues regarding public procurement

This mechanism provides for an independent observatory system which will ensure the analysis and quality review of the tendering and contracting documents for all public procurement contracts on sample basis/selectively (services, supply and works contracts). Central Unit for Verification of Public Procurement (C.U.V.P.P.) within MPF and the subordinated bodies, is the authority responsible for controlling the procedural aspects of the public procurement procedure developed at the level of the Beneficiary as Contracting Authority.

Once the secondary legislation is in force, and in accordance with art 4. paragraph 3 from GO No 30/2006, the Managing Authority will conclude Protocols with Ex-ante Control Unit (Central Unit for Verification of Public Procurement within MPF) and with N.A.R.M.P.P, as well, regarding the verification of the public procurement process. These Protocols shall lay down specific provisions regarding the cooperation between the Managing Authority for SOP IEC and C.U.V.P.P on the one hand, and between MA for SOP IEC and N.A.R.M.P.P on the other, for an efficient and effective control of the tendering and contracting procedure developed at the level of the Beneficiary for projects financed from Structural or Cohesion Funds.

### **3.4. Complementarities with other Operational Programmes and operations financed by EAFRD and EFF**

SOP IEC is one of the instruments identified at national policy level in order to implement the NSRF 2007-2013 priorities. The long term objectives of SOP IEC are strongly related to other SOPs 'objectives and may be fulfilled only in a well tuned cooperation.

Thus SOP IEC's strategy aims to provide an efficient intervention and also to ensure the complementarities of ERDF used for co financing both with other structural funds operations (ESF) and EAFRD, within National Strategic Plan for Rural Development.

Overlapping avoidance and complementarities of interventions are essential in ensuring coherence and efficiency in the management of financial instruments during the programming period.

Priority axes of SOP IEC are complementary to other key interventions included in SOP Human Resources Development, Regional Operational Programme, OP Administrative Capacity Development, SOP Environment and OP Technical Assistance.

#### **SOP Human Resources Development**

The global objective of SOP IEC must be considered in correlation with human capital development that offers a long term and sustainable value to operations to be co financed. The staff ability to adapt to the changing economic environment is becoming a crucial factor for economic strength. To improve enterprises' competitiveness, it is necessary to ensure highly qualified staff, including management staff.

SOP HRD comprises key fields of intervention oriented towards employers, employees and their associations that complement the operations of:

- *Priority Axis 1: An innovative productive system (Key area of intervention 1.3. Entrepreneurship development)* – by supporting the promotion of vocational education for SMEs' employees and the development of entrepreneurial abilities of would-be entrepreneurs.
- *Priority Axis 2: Research, Technological Development and Innovation for Competitiveness (Key area of intervention 2.3. RDI support for enterprises (with special focus on SMEs);* enterprises can apply for SOP HRD priority axis "Increasing the adaptability of the labour force and enterprises", which finances training programmes for the development of entrepreneurial and managerial skills, as well as consultancy services, and assistance for development of new businesses  
Young researchers up to 35 years old can apply for training under SOP HRD, priority axis „Education and training in support of growth and development of a knowledge-based society” within the area of intervention „Competitive human capital in education and research”.
- *Priority Axis 3: ICT for private and public sectors (Key area of intervention 3.2. Developing and increasing the efficiency of electronic public services);* the operations regarding schools Internet broadband connection is complementary to SOP HRD, i.e. applications used for educational purposes.  
Projects under electronic public services key area will integrate specific training components.

## **Regional Operational Programme**

Aiming to reduce socio-economic development disparities between regions in Romania, operations within SOP IEC complement ROP co financed interventions:

- *Priority Axis 1 An innovative productive system*  
*Key area of intervention 1.1. Productive investments and preparation for market competition, especially of SMEs.*  
The demarcation between ROP (Priority axis 3 - Strengthening the regional and local business environment) and SOP IEC is by enterprise's size, i.e. SMEs – small and medium and large enterprises will be financed under SOP IEC and micro enterprises are considered under ROP (irrespective of age). For other operations in SOP IEC (which are not present in ROP), all sizes of SMEs will be eligible under SOP.  
*Key area of intervention 1.3. Entrepreneurship development*  
Under the above mentioned Priority axis 3, ROP will finance operations related to all types of business infrastructures except for incubators. SOP IEC will support “development of business incubators”, as defined at page 50 (footnote 16).
- *Priority Axis 3 : ICT for private and public sectors*  
*Key area of intervention.3.2. Developing and increasing the efficiency of electronic public services*  
The operation regarding schools Internet broadband connection is complementary to operations within the Regional Operational Programme (computers acquisitions). Under SOP IEC, together with the broadband connection of the school, a limited number of computers will be purchased so as to ensure a minimum use of the connection, while further IT equipment acquisition for the school will be possible under ROP Priority axis 1.
- *Priority Axis 5: Romania as an attractive destination for tourism and business.* The indicative operations under this priority axis complement both ROP (development of regional and local tourism) and EAFRD (development of rural economy and increase of agriculture sector). Operations under ROP and National Strategic Plan for Rural Development will finance projects of valorisation of natural and anthropic tourism resources and development of tourism infrastructure, while SOP IEC will focus on national promotion.

## **SOP Strengthening Administrative Capacity**

In the context of supporting operations towards strengthening the institutional management capacity of the central and local administration and developing a government strategy, SOP AC complements:

- *Priority Axis 3: ICT for private and public sectors, Key area of intervention 3.2. Developing and increasing the efficiency of electronic public services*  
The operation concerning the support granted to local administration for building up integrated Information Systems is correlated with the supply of general training for the E-Government field in the SOP “Administrative Capacity Development”.

## **SOP Environment**

- *Priority Axis 4: Improvement of energy efficiency and sustainable development of the energy sector, Key area of intervention 4.3. Reducing the negative environmental impact of the energy system functioning* is coherent with one of the objectives of Priority Axis 3 of SOP ENV „Improvement of municipal heating systems in selected priority areas”. While SOP IEC provides for investments of re-technologisation of the LCPs of national importance with the view to improve the energetic efficiency, the SOP ENV is focussed on investments on rehabilitation of LCPs at municipal level, with the view to reduce their negative environmental impact in the most polluted localities.

## **OP Technical Assistance**

- *Priority Axis 6* under SOP IEC is complementary to the scope of support of the Operational Programme Technical Assistance 2007-2013 and, pursuant to the Council Regulation (EC) 1083/2006, will be applied to strengthen the system of management, monitoring, control and evaluation of implementation of the SOP.

## **National Rural Development Programme (NRDP)**

- *Priority Axis 4: Improvement of energy efficiency and sustainable development of the energy sector, Key area of intervention 4.2. Valorisation of renewable energy resources (RES)*  
The valorisation of RES under SOP Competitiveness complements the actions under the National Rural Development Programme which will support RES projects of companies involved in the first processing of agricultural products and integrated projects involving both first and second processing.
- With respect to enterprises' support in the food industry field, SOP IEC complements the operations financed under NRDP by co financing second processing enterprises (according to the specificities involved by each priority axis of SOP IEC).

#### 4. FINANCIAL PLAN

The ERDF contribution to the SOP IEC is 2,554 million Euro, representing about 66.11% of the total budget.

#### Financing Plan of the SOP IEC giving the annual commitment of Each Fund in the Operational Programme

Operational programme reference (CCI number):

*Year by source for the programme, in EUR:*

	<b>Structural Funding (ERDF) (1)</b>	<b>Cohesion Fund (2)</b>	<b>Total (3) = (1)+(2)</b>
2007	74,709,043	0	74,709,043
2008	194,837,789	0	194,837,789
2009	386,097,057	0	386,097,057
2010	506,773,089	0	506,773,089
2011	528,395,407	0	528,395,407
2012	456,947,159	0	456,947,159
2013	406,462,565	0	406,462,565
<b>Grand Total 2007-2013</b>	<b>2,554,222,109</b>	<b>0</b>	<b>2,554,222,109</b>

*Note: All fundings are for regions without transitional support*

**Financial plan of the SOP IEC giving, for the whole programming period, the amount of the total financial allocation of each fund in the operational programme, the national counterpart and the rate of reimbursement by priority axis**

*Operational programme reference (CCI number):*

*Priority axes by source of funding (in EUR)*

	Community Funding (a)	National counterpart (b) (= (c) + (d))	Indicative breakdown of the national counterpart		Total funding (e) = (a)+(b)	Co-financing rate* (f) = (a)/(e)	For information	
			National Public funding (c)	National private funding (d)			EIB contributions	Other funding
<b>Priority Axis 1 ERDF</b>	791,898,632	407,634,250	35,012,113	372,622,137	1,199,532,882	66.02%	-	-
<b>Priority Axis 2 ERDF</b>	536,395,116	303,692,008	28,231,321	275,460,687	840,087,124	63.85%	-	-
<b>Priority Axis 3 ERDF</b>	383,170,103	136,536,859	34,020,435	102,516,424	519,706,962	73.73%	-	-
<b>Priority Axis 4 ERDF</b>	638,475,370	506,325,818	8,315,028	498,010,790	1,144,801,188	56.00%	-	-
<b>Priority Axis 5 ERDF</b>	127,748,627	22,543,875	22,543,875	0,000000	150,292,502	85.00%	-	-
<b>Priority Axis 6 ERDF</b>	76,534,261	13,506,046	13,506,046	0,000000	90,040,307	85.00%	-	-
<b>Total</b>	<b>2,554,222,109</b>	<b>1,390,238,856</b>	<b>141,628,818</b>	<b>1,248,610,038</b>	<b>3,944,460,965</b>	<b>64.75%</b>	-	-

*\*The co-financing rate for all Priority Axes are calculated on a total cost basis (public and private).*

Based on the methodological approach laid out in Annexes 7-9, the following allocation (ERDF), including technical assistance, was established:

- Priority Axis 1: 31%
- Priority Axis 2: 21%
- Priority Axis 3: 15%
- Priority Axis 4: 25%
- Priority Axis 5: 5%
- Priority Axis 6: 3%

The allocation maintains the same relative allocations among the first five Priority Axis, as resulted from the analysis; funds to be allocated to Priority Axis 6 (technical assistance) were set at 3%, by reallocation from the other axis, proportionally.

### **Priority Axis 1**

Priority Axis 1 benefits from the most substantial financial allocation, counting for 31% of total ERDF funds allocated for Competitiveness OP. Such share is justified by two main arguments:

- The envisaged key areas of intervention (and, inherently, the indicators selected for initial lagging behind calculation) are among the actions targeting factors (financing, human resources) and investment conditions (technological improvement, certifications). Therefore, they are the best match with Romania's competitive development stage and should be considered priorities in improving competitiveness.
- Concomitantly, key areas of intervention under Priority Axis 1 are converging with existing EU policies. Thus, the Union's preoccupation with a unitary action framework and a common vision is captured in the corresponding weighting of the priority axis. Main fields of intervention such as supporting the development of SMEs, better access to financing, or encouraging business support services are priorities set by the present agenda of the EU.

### **Priority Axis 2**

With a 21% allocation, Priority Axis 2 targets:

- Setting the stage for a qualitative leap forward as regards the competitive development stage for Romania, towards an innovation-based competitiveness (research and development, patenting,).
- Linking the Romanian competitiveness agenda to that of the Union (Lisbon Strategy), with a high degree of compatibility and convergence (public spending on R&D, involving enterprises in cooperation for innovation).

### **Priority Axis 3**

The allocation of 15% of ERDF funds is justified by the fact that the global objective, i.e. productivity growth - a decisive factor for a successful market development may be empowered by:

- the positive impact of ICT on competitiveness

- In accordance with the specific objectives established by the Lisbon Agenda and the i2010 Strategy, it is essential to underline the crucial importance of the accessibility and broadband infrastructure development as a main priority for developing the Information Society in Romania

#### **Priority Axis 4**

Initial lags – of medium magnitude – between Romania and EU countries were adjusted according to specificities of the field:

- In principle, energy sector interventions are susceptible of changing the competitive environment for the worst; private capital should be allowed to correct market failures, within an established regulatory framework.
- Proposed key areas of intervention are implemented in parallel with the Romanian energy sector liberalisation, as a direct consequence of the European integration process. Operations covered by priority Axis 1 will have a positive impact on this priority axis as well, in terms of increased energy efficiency.
- Most importantly, compliance with environmental EU directives implies significant efforts for Romania to undertake environmental related investments for emissions' reduction in large combustion plants.

#### **Priority Axis 5**

The small financial allocation for tourism is justified by the fact that the operations envisaged cover only national level promotion activities; moreover, this particular sector will be supported also by interventions under the Regional Operational Programme and National Rural Development Programme.



### Indicative breakdown of the Community contribution by category in the SOP IEC

Commission reference No.: \_\_\_\_\_

Name of the programme: Sectoral Operational Programme Increase of Economic Competitiveness

Date of the last Commission decision for the Operational Programme concerned: \_\_/\_\_/\_\_  
(in euros)

Dimension 1 Priority Theme		Dimension 2 Form of Finance		Dimension 3 Territory	
Code	Amount	Code	Amount	Code	Amount
01*	99,233,073	01	2355,820,133	00	2503,149,435
02*	181,033,180	02	188,481,877	01	51,072,674
03*	56,321,464	03	9,920,099		
04*	49,616,583				
05*	75,279,597				
06*	49,329,312				
07*	150,190,816				
08*	625,625,308				
09*	41,664,414				
10*	68,970,617				
13*	153,268,047				
14*	114,951,028				
15*	45,980,411				
33	11,492,557				
34*	28,731,392				
35	4,309,709				
36*	25,858,253				
37	1,436,570				
38*	2,873,139				
39*	38,308,521				
40*	12,769,507				
41*	31,923,768				
42*	44,693,275				
43*	212,612,302				
48	223,466,377				
55	76,436,936				
57	51,311,691				
85	45,920,560				
86	30,613,701				
<b>Total</b>	<b>2,554,222,109</b>	<b>Total</b>	<b>2,554,222,109</b>	<b>Total</b>	<b>2,554,222,109</b>

\* Lisbon earmarking (EC 1083/2006 – Annex IV Categories of expenditure, referred to in Article 9(3)) for SOP IEC represents about **82.57%** of the total ERDF allocation.

## **5. IMPLEMENTATION**

This Chapter contains arrangements with respect to the system of implementation of the Sectoral Operational Programme *Improvement of Economic Competitiveness* pursuant to requirements defined of Council Regulation (EC) No.1083/2006 laying down general provisions on Structural Funds.

### **5.1. Management**

#### **Overall responsibility**

The Romanian Government, represented by the Ministry of Public Finance and the Managing Authorities, has overall responsibility for the commitments embodied in the documents concerning Structural Funds and their correct and efficient implementation. In particular, it will ensure the availability and system of access to the financial and other resources necessary to target the priorities described in the SOP IEC.

#### **Managing Authority for the SOP IEC**

Management and implementation of the SOP IEC is subject to Council Regulation (EC) No 1083/2006 laying down the general provisions on the Structural Funds and Commission Regulation No....., setting out rules for the implementation of Council Regulation (EC) No 1083/2006.

The function of Managing Authority for the SOP IEC is performed by the Ministry of Economy and Trade – Directorate for Programmes with International Organisations, based on Government Decision 738/2004 and 497/2004 amended by 1179/2004 and 128/2006.

According to the requirements of Article 60 of Council Regulation (EC) No 1083/2006, the SOP IEC Managing Authority is responsible for managing and implementing the operational programme in accordance with the principle of sound financial management and in particular for:

- a) ensuring that operations are selected for funding in accordance with the criteria applicable to the operational programme and that they comply with applicable Community and national rules for the whole of their implementation period;
- b) verifying that the co-financed products and services are delivered and that the expenditure declared by the beneficiaries for operations has actually been incurred and complies with Community and national rules; verifications on-the-spot of individual operations may be carried out on a sample basis in accordance with the detailed rules to be adopted by the Commission in accordance with the procedure referred to in Article 103(3);
- c) ensuring that there is a system for recording and storing in computerised form accounting records for each operation under the operational programme and that the data on implementation necessary for financial management, monitoring, verifications, audits and evaluation are collected;
- d) ensuring that beneficiaries and other bodies involved in the implementation of operations maintain either a separate accounting system or an adequate accounting code for all transactions relating to the operation without prejudice to national accounting rules;

- e) ensuring that the evaluations of operational programmes referred to in Article 48(3) are carried out in accordance with Article 47;
- f) setting up procedures to ensure that all documents regarding expenditure and audits required to ensure an adequate audit trail are held in accordance with the requirements of Article 90;
- g) ensuring that the certifying authority receives all necessary information on the procedures and verifications carried out in relation to expenditure for the purpose of certification;
- h) guiding the work of the monitoring committee and providing it with the documents required to permit the quality of the implementation of the operational programme to be monitored in the light of its specific goals;
- i) drawing up and, after approval by the monitoring committee, submitting to the Commission the annual and final reports on implementation;
- j) ensuring compliance with the information and publicity requirements laid down in Article 69;
- k) providing the Commission with information to allow it to appraise major projects.

Other responsibilities of the MA will be :

- to ensure that the elaboration of the SOP is made in partnership with all stakeholders, in compliance with European and national policies and complementary to other OPs;
- to set up an adequate management and control system at the level of SOP IEC;
- to ensure that the tasks delegated to IBs are properly carried out;
- to ensure the secretariat of the Monitoring Committee;
- reporting to Monitoring Committee;
- collecting progress reports from IBs.

The internal structure of the MA will reflect the principle of separation of functions.

### **Intermediate Bodies**

In line with articles 37.1.g.i. and 59.2 of Council Regulation (EC) No 1083/2006, the SOP IEC Managing Authority delegates the implementation of designated SOP priority axes/key areas of intervention to Intermediate Bodies (as construed by Article 2.6 of Council Regulation (EC) No 1083/2006).

IBs are to undertake, on a Delegation agreement basis, according to their expertise and specificity of the priority axis, responsibilities delegated from the Managing Authority for SOP IEC, such as:

- a) Provide guidance to beneficiaries on SOP procedures related to programming and implementation of measures
- b) Carry out project receivability check
- c) Project appraisal and selection, contract preparation and signing (unless conflict of interest occurs)
- d) Gather data necessary for monitoring and evaluation of programme implementation
- e) Prepare supporting documents for the annual and final reports of the SOP
- f) Monitor the projects under SOP IEC implementation;

- g) Based on applications for reimbursement from the beneficiaries, carry out controls as delegated by the MA to confirm the correctness of claims in terms of eligibility, reality and legality of the expenditures
- h) Detect the potential irregularities and report them to the MA;
- i) Ensure the awareness and publicity actions, for the relevant priority axis/key area of intervention; ensure dissemination of information on SOP financing opportunities.
- j) Ensure input of data into SMIS system

Two of the IBs (National Agency for SMEs and National Authority for Scientific Research) have established regional offices (8 for each IB) which may be entrusted with some of the above-mentioned delegated tasks. Subject to adequate staffing and expertise level, the territorial offices will be entrusted other tasks like project receivability check, project eligibility, on the spot verification (mainly collection of applications, formal eligibility check, information and communication tasks).

An agreement is established between the Managing Authority and the Intermediate Bodies to define and detail the responsibilities of the Intermediate Body resulting from the delegation of tasks.

Where tasks are delegated to Intermediate Bodies, the Managing Authority retains overall responsibility and is fully responsible for the efficiency and accuracy of management and implementation of the Programme.

- Based on Government Decision No.497/2004 establishing the institutional framework for co-ordination, implementation and administration of Structural Funds, amended by Government Decisions 1179/2004 and 128/2006, the intermediate bodies designated for SOP-IEC are:

<b>Intermediate Body</b>	<b>Priority Axis</b>
National Agency for SMEs and Cooperatives	Priority Axis 1: An innovative productive system (except for the operation for large enterprises under “Productive investments” key area of intervention.
Ministry of Education and Research (National Authority for Scientific Research)	Priority Axis 2: Research, Technological Development and Innovation for competitiveness
Ministry of Communications and IT	Priority Axis 3: IT&C for private and public sectors
Ministry of Economy and Trade – General Directorate for Energy Policy	Priority Axis 4: Increased energy efficiency and sustainable development of the energy system
National Authority for Tourism	Priority Axis 5: Romania, an attractive destination for tourism and businesses

## **Implementing Agencies**

For selected operations, implementing agencies may be designated by the Managing Authority, in consultation with Intermediate Bodies, to carry out activities like, but not restricted to: receipt of applications from potential recipients, formal eligibility check, recording project-related data in the SMIS, monitoring, collection of payment applications, preliminary verification of eligibility of expenditure, preparation of reports, storage of documentation, etc.

Details on activities to be carried out by Implementing Agencies (if any) will be provided in the SOP Operational Manual and Guide to beneficiaries.

## **Beneficiaries**

The beneficiaries under the SOP IEC are the entities applying for support to implement projects (enterprises, public authorities, NGOs).

The beneficiary will be responsible mainly for:

- a) elaboration of the application for the provision of assistance (as potential beneficiary);
- b) proper implementation of the project according to the contract;
- c) operating of a separate project accounting system or of an adequate accounting code for all transactions;
- d) carry out verifications of invoices from contractors and fill the application for reimbursement
- e) reporting to the Intermediate Body on the progress in the project;
- f) elaboration and submission of data to the Intermediate Body for monitoring;
- g) compliance with publicity and information requirements in accordance with appropriate EU rules and with the Communication Plan.

The beneficiaries will be responsible for the eligibility of proposed and claimed project expenditures and, during the implementation of the projects, for complying with the contract terms.

In submitting the applications for reimbursement, the Beneficiaries will substantiate the incurred expenditures and their compliance with the project requirements contained in the financing decision on the funds to be allocated within the assistance. All applications for reimbursement must be supported by confirmed invoices and other documents of equal probative value.

The beneficiaries must keep project dossiers providing adequate audit trail. Guidelines for beneficiaries will include detailed provisions for audit trail.

The beneficiaries must make the documents on projects available at any time for inspections carried out by authorized persons or entities. The documents will be archived in compliance with applicable regulations.

## **Project assessment and principles of assistance**

In the overall process of implementation of the programme, the Managing Authority ensures the compliance of the operations with EC and national rules (art. 60(a) of the general regulation).

The Managing Authority will verify that selection procedures are transparent, objective and efficient in order to guarantee the viability and quality of financed projects.

The projects' selection procedure is organised around the following phases: eligibility and formal check, assessment on the basis of selection criteria, selection of projects and contracting.

Selection committees (SC) for projects' assessment are established by the IB (or by the MA when the priority/key area/operation is managed by the latter) in agreement with the SOP IEC Managing Authority.

Other members of the SC are internal and/or external experts. The composition of the groups is decided according to the dimension, number and complexity of projects and the specific skills required for their assessment.

After the eligibility and formal check of projects, carried out by the IB/MA, the SC carries out detailed assessment of projects on the basis of the selection criteria as approved by the SOP IEC Monitoring Committee. Selection criteria, shall be clear and objective, to facilitate the selection process. Selection criteria will be designed so as to ensure the financial, economic and technical viability of projects.

The assessment methods and procedures will be suited to the contents and dimension of projects. To ensure objectivity of project assessment, members of the SC and experts who are in any way connected with the assessed application, do not participate in the assessment process. SF rules and state aid rules referring to sectors, projects and expenditure eligibility will be followed.

The received applications following the call for proposals shall be checked first from administrative and eligibility point of view. If successful, they would be subject to further assessment against pre-defined criteria.

Before appraisal in line with pre-defined criteria, all projects must be checked for criteria like:

- occur within the eligible SOP area;
- take place within the permitted time-scale;
- are submitted by an eligible applicant as defined in the call for proposal;
- have necessary co-financing resources in place;;
- the applicant does not benefit of another EU financing for the project etc.
- the applicant does not have outstanding liabilities as defined by national rules

Besides the specific project selection criteria for the concerned operation, core criteria should be assessed for all projects, among which:

- relevant contribution to one or more of the objectives of the SOP;
- have measurable outputs and detail clear, attainable and verifiable targets;
- are economically viable;
- integrate aspects of environmental protection and equal of opportunities;
- ensure compliance with EU rules on state aid and public procurement;

The effectiveness of the selection procedure will be monitored during the programme period and might be adapted, if needed, on the basis of gained experience.

The project promoters/beneficiaries will be informed about the final selection of projects (including reasons of rejection for the non-successful ones and information about the next selection sessions).

## **5.2. Monitoring and Evaluation**

### **Monitoring**

In order to obtain efficient monitoring and evaluation of all public expenditures (both EU and national), dedicated units– monitoring expenditures and tangible effects of public intervention will be located in the long term within the SOP Managing Authority and Intermediate bodies.

There are monitoring and control units within the Managing Authority and Intermediate bodies. Units involved in the process of the funds flows at all levels of management shall apply uniform monitoring principles, both in tangible and financial monitoring, limited to certain indicators and present information and reports in agreed format.

Monitoring of the SOP IEC is the responsibility of the SOP Managing Authority under the control of the SOP IEC Monitoring Committee.

Monitoring is carried out under the partnership principle. The Monitoring Committee shall be set up by the Member State, in agreement with the Managing Authority after consultation with the partners and in accordance with its own institutional arrangements and practice.

### **Membership and role of the SOP IEC Monitoring Committee**

The Monitoring Committee shall be set up within three months after the decision approving the operational programme, as per art.63 of Council Regulation 1083/2006. The main responsibility of the Monitoring Committee is to ensure the effectiveness and quality of the implementation of the SOP IEC.

Membership of the SOP IEC Monitoring Committee will comprise representatives of SOP - IEC Managing Authority, representatives of the Ministry of Public Finance (ANCIS), of Certifying and Paying Authority, Intermediate Bodies, other managing authorities, the National Equal Opportunities Agency, Competition Council, social partners, relevant NGOs, among them representatives of national and regional organizations interested in active participation in SOP's implementation. Representatives of the European Commission, and the European Investment Bank when appropriate, participate in an advisory capacity in the committee. Each institution must nominate one full member for the MC and one substitute member, at high decision level. The composition of the SOP Monitoring Committee will consider the requirements of gender balance.

Subsequent changes in the membership or composition of the Committee may be agreed by the Committee, subject to national legislation, without any requirement to amend the SOP.

Under Article 65 of the Council Regulation 1083/2006, the SOP IEC Monitoring Committee shall satisfy itself as to the effectiveness and quality of the implementation of the Structural Funds. This will include, as appropriate:

- a) it shall consider and approve the criteria for selecting the operations financed through the SOP IEC; the selection criteria shall be revised in accordance with programming needs;
- b) it shall periodically review progress made towards achieving the specific targets of the operational programme on the basis of documents submitted by the Managing Authority;
- c) it shall examine the results of implementation, particularly achievement of the targets set for each priority axis and the evaluations referred to in the Art. 48 (3) of the Council Regulation No 1083/2006;
- d) it shall consider and approve the annual and final reports before they are sent to the Commission;
- e) it shall be informed of the annual control report and of any comments the Commission may make after examining that report;
- f) it may propose to the Managing Authority any adjustment or review of the operational programme likely to make possible the attainment of the Funds' objectives or to improve its management, including its financial management.
- g) it shall consider and approve any proposal to amend the content of the Commission decision on the contribution from the Funds.

The SOP IEC Monitoring Committee may decide the reallocation of co-funded expenditure between key areas/operations within the same priority axis. Any amendment to the contribution of the ERDF and transfers among priority axes within SOP is decided by the European Commission, in agreement with the Member State.

The MC shall draw up and adopt its own rules of procedure within the national institutional, legal and financial framework, as well as the decision-making procedure. The MA SOP IEC ensures the Secretariat of the Monitoring Committee.

For adequate evaluation, the SOP IEC Monitoring Committee may appoint permanent working groups, particularly for monitoring activities of horizontal nature and seek opinions of independent experts.

### **Modalities and procedures for Monitoring**

The SOP IEC Managing Authority together with the Monitoring Committee pursuant to art. 66 of Council Regulation No 1083/2006, shall ensure the quality of the implementation of the OP. To this end, monitoring is carried out on the basis of a set of indicators to measure the progress in terms of implementation and effectiveness of the operational programme at the level of each priority axis.

The indicator system reflects the objectives of SOP IEC. Criteria of indicators choice take into account rules recommended by the European Commission (correctness, appropriateness, availability, reliability, measurement, comparability).



According to art. 66.3 of the general regulation, data exchange with the Commission for the purpose of monitoring will be carried out electronically, following the provisions of the Commission Regulation No..... setting out rules for the implementation of Council Regulation (EC) No 1083/2006.

Monitoring activities will be realised through the Single Management Information System. The Single Management Information System is a nation-wide web-based information system, supporting all organisations implementing the Operational Programme. The system is addressing the needs of all management levels and through all the stages of the programme cycle (further details under subchapter 5.5.)

## **Evaluation**

### ***Regulatory framework***

SOP IEC evaluation will be carried out in accordance with the Council Regulation No 1083/2006, with the aim to improve the quality, effectiveness and consistency of Community assistance and implementation of the programme.

In accordance with Articles 47-49 of the Council Regulation No 1083/2006, three main types of evaluations will be carried out for SOP IEC:

- *An ex-ante evaluation* (before SOP implementation commences)
- *Ongoing evaluations* (during the period of implementation of the SOP)
- *Ex-post evaluation.*

### **Ex-ante evaluation**

*Ex-ante* evaluation shall aim to optimize the allocation of budgetary resources and improve programming quality. It shall identify and appraise medium- and long-term needs, the goals to be achieved, the results expected, the quantified targets of the SOP IEC, the coherence of the strategy proposed with the Community's priorities and the quality of the procedures for implementation, monitoring, evaluation and financial management.

Ex-ante evaluation for SOP IEC is ongoing, with support of PHARE RO-2004/016-772.04.03.01.06- EuropeAid/121373/D/SV/RO "Ex ante evaluation", project that carries out the ex-ante evaluation for all the operational programmes and is coordinated by the Ministry of Public Finance (ANCIS) through the Evaluation Central Unit. Close cooperation with the Managing Authorities and other main stakeholders is ensured throughout the ex-ante process. The project started at the beginning of August and the Inception Report was elaborated. Several meetings took place with the project experts and documents were provided by the MA for ex-ante evaluation. A first draft of the ex-ante report is foreseen for mid November.

An important part of the ex-ante evaluation is represented by the strategic environmental assessment (SEA) which will be done in accordance with the provisions of the Directive No 2001/42 and the national legislation through the GD No 1076/2004. The above-mentioned TA provides also assistance to support the strategic environmental assessment, including the

elaboration of the environmental report and organization of public consultation. Co-ordination with environmental authorities is ensured during the SEA procedure. The first stages of this procedure, notification and screening, have already been finalized. MA SOP IEC set up a working group on SEA formed by representatives of relevant ministries and other institutions. Two meetings of the working group on SEA for SOP IEC took place. The SEA experts will draft the first SEA report by the end of October.

### **Ongoing evaluations**

Ongoing evaluations carried out during the period of implementation of the SOP IEC shall be of three types – a) *interim*, b) *ad hoc* and c) *with a cross-cutting theme*, as follows:

*The Interim Evaluation* will aim at improving the quality, effectiveness and consistency of the assistance and the strategy and implementation of operational programme. The interim evaluations will support the OP management process by analyzing problems which occur during the implementation and propose specific solutions to improve the operation of the system.

There will be 2 interim evaluations of the OP: one evaluation to be carried out in the end of 2009 or beginning of 2010 and one in 2012. The first interim evaluation will examine progress to date in implementing the OP, looking particularly at issues such as management of the OP, whereas the second interim evaluation will focus more on priorities, looking towards the next programming period.

*Ad-hoc evaluations* will be carried out where programme monitoring reveals a significant departure from the goals initially set or where proposals are made for the revision of operational programmes. *Ad-hoc evaluations* will be carried out, if needed, to address either implementation or management issues of an individual priority or key area of intervention, or can be “thematic”.

*Interim* and *ad hoc evaluations* will be managed by the evaluation function of the Managing Authority and will be conducted externally, by independent evaluators.

*Evaluations with a cross-cutting theme* will be carried out where the evaluation is of a horizontal nature and completion of the evaluation demands involvement from more than one operational programme. These evaluations may examine the evolution of all or a group of Operational Programmes in relation to Community and national priorities. They may also examine particular management issues across all OPs. Evaluation with cross-cutting themes will be managed by Evaluation Central Unit of the Ministry for Public Finance and will be commissioned to external consultants.

Specific objectives, evaluation questions, tasks and expected results of *interim*, *ad-hoc* and *cross-cutting evaluations* will be defined separately for each evaluation to be conducted.

### **Ex-post evaluation**

Ex-post evaluations shall be carried out by the Commission, for each objective, in close cooperation with the Member State and Managing Authorities, according to art. 47 par. 3 of the Council Regulation No 1083/2006.

The Commission may also carry out *strategic evaluations*, as well as evaluations linked to the monitoring of operational programmes, in accordance to art. 49 of the Council Regulation No 1083/2006.

### **Institutional framework for evaluation**

The national institutional framework for evaluation comprises 2 levels:

- an overall coordination level, ensured by the **Evaluation Central Unit** established within ANCIS, Ministry of Public Finance
- a functional level, composed of the **evaluation unit established within the MA SOP IEC**.

The **coordination role** of the Evaluation Central Unit can be summarized as follows:

- (i) Carrying out cross-cutting evaluations;
- (ii) Providing capacity building activities to support and develop the operational capacity of the evaluation units established in the Operational Programmes Managing Authorities.
- (iii) Providing overall quality assurance activities to ensure the quality of all evaluations.

The evaluation unit established within the SOP IEC Managing Authority will be responsible for managing the following types of ongoing evaluations:

- (i) *Interim evaluations* and
- (ii) *Ad hoc evaluations*.

The evaluation unit will act in co-operation with the Monitoring Committee and will interact on a constant basis with the Evaluation Central Unit. The executive summary of the evaluation reports will be made available to the public through the internet page of the MET.

### ***Evaluation Plans***

The MA evaluation unit will draft an Evaluation Plan, which will comprise the indicative evaluation activities it intends to carry out in the different phases of the programme implementation, the indicative human and financial resources allocated for each evaluation activity, the actions aimed at capacity building, as well as the incumbent responsibilities. This planning shall be done in accordance with the new Regulations on Structural Instruments, the methodological working papers on evaluation issued by DG Regio, and the methodological working papers on evaluation issued by ANCIS- Evaluation Central Unit.

### ***Operating arrangements***

Steering Committees will be established for each evaluation, in order to fulfil, as a minimum, the following tasks: set the terms of reference for individual evaluations, facilitate the evaluator's access to the information needed to perform his/her work; support the evaluation work, particularly from the methodological standpoint; ensure that the terms of reference are correctly respected and followed; exercise quality control in relation to evaluation performed.

Under the coordination of Evaluation Central Unit, a follow-up mechanism of the evaluation recommendations will be set-up in the SOP IEC Managing Authority.

### 5.3. Financial management and control

The MA SOP IEC jointly with the Certifying and Paying Authority is responsible for the existence of a proper financial management of the operational programme and is accountable for the legality of the transactions concluded on the basis of funds received.

**Certifying and Paying Authority** – shall be responsible in particular for:

- 1) Certification – draw up and submit to the Commission certified statement of expenditure and payment claims in computerized form;

It is certifying that:

- the statement of expenditure is accurate, results from reliable accounting systems and is based on verifiable supporting documents;
- the stated expenditure complies with applicable Community and national rules and was incurred in respect of operations selected for funding in accordance with the criteria applicable to the programme and complying with Community and national rules.

Within this purpose, the tasks of the Certifying and Paying Authority are as follows:

- to ensure that the information received from MA on the procedures and verifications carried out in relation to expenditure and included in expenditure statements provides an adequate basis for certification, which entails:
- to verify the compliance of the claimed figures with the database;
- to verify the correct calculation of the total amount of eligible expenditures;
- to take account of the results of all audits carried out by or under the responsibility of the Audit Authority/Public internal audit or European Commission
- maintaining accounting records in computerised form of expenditure declared to the Commission;
- keeping an account of amounts recoverable and of amounts withdrawn following cancellation of all or part of the contribution for an operation. Amounts recovered shall be repaid to the general budget of the European Union prior to the closure of the operational programme by deducting them from the next statement of expenditure.

- 2) Payments – with this purpose will be performed the following activities:

- receives the ERDF, ESF and CF funds;
- transfers the ERDF, ESF and CF funds and the co-financing amounts (if is the case) to the beneficiaries/paying units;
- draws up and submits the estimation of expenditures to the EC;
- based on MA assessment, compiles and submits to the EC updated payment forecasts;
- returns the EC non-eligible expenditures or the funds that were not used, including interest on late payment;
- keeps a debtor ledger.

The Managing Authority SOP IEC is responsible for managing and implementing its Operational Programme efficiently, effectively and correctly in line with the provisions of Article 60 of the Council Regulation No. 1083/2006. The Managing Authority will work closely with the designated Certifying and Paying Authority in fulfilling the responsibilities of financial management and control to ensure that:

- funds are used effectively and in the most efficient way to achieve the objectives of each OP;
- use of resources is publicly accountable to the EU and the Member State;
- budgetary control is effective so that commitment is sustainable within each OP and financial planning profiles are adhered to;
- contracting is within budget;
- procurement of goods and services under projects financed:
  - takes place;
  - conforms to EU and Member State rules;
  - represents value for money;
- payments to Beneficiaries are made regularly and without undue delay or deductions;
- co-financing resources are provided as planned;
- payments are properly accounted for;
- irregularities are notified in line with EU regulations;
- any sums wrongly paid out are recovered swiftly and in full;
- unused or recovered resources are re-committed within the respective OP;
- de-commitment is avoided – particularly in relation to the n+3/n+2 rule;
- closure of each OP takes place smoothly and on time.

Within the purpose of expenditure certification to the European Commission, verifications are carried out on four levels:

- 1) verification of expenditure at Beneficiary level;
- 2) verification of expenditures at IB level;
- 3) verification of expenditures at MA level;
- 4) certification of expenditure at Certifying and Paying Authority level.

Verifications carried out at the IBs level are based on the delegated tasks from the MA. The MA will base it on a reasonable assurance that the delegated tasks are properly performed by the IBs. The MA will remain responsible for the tasks delegated to the IBs.

Regarding the payment process at the Ministry of Public Finance level, the decision was made to have two payment flows:

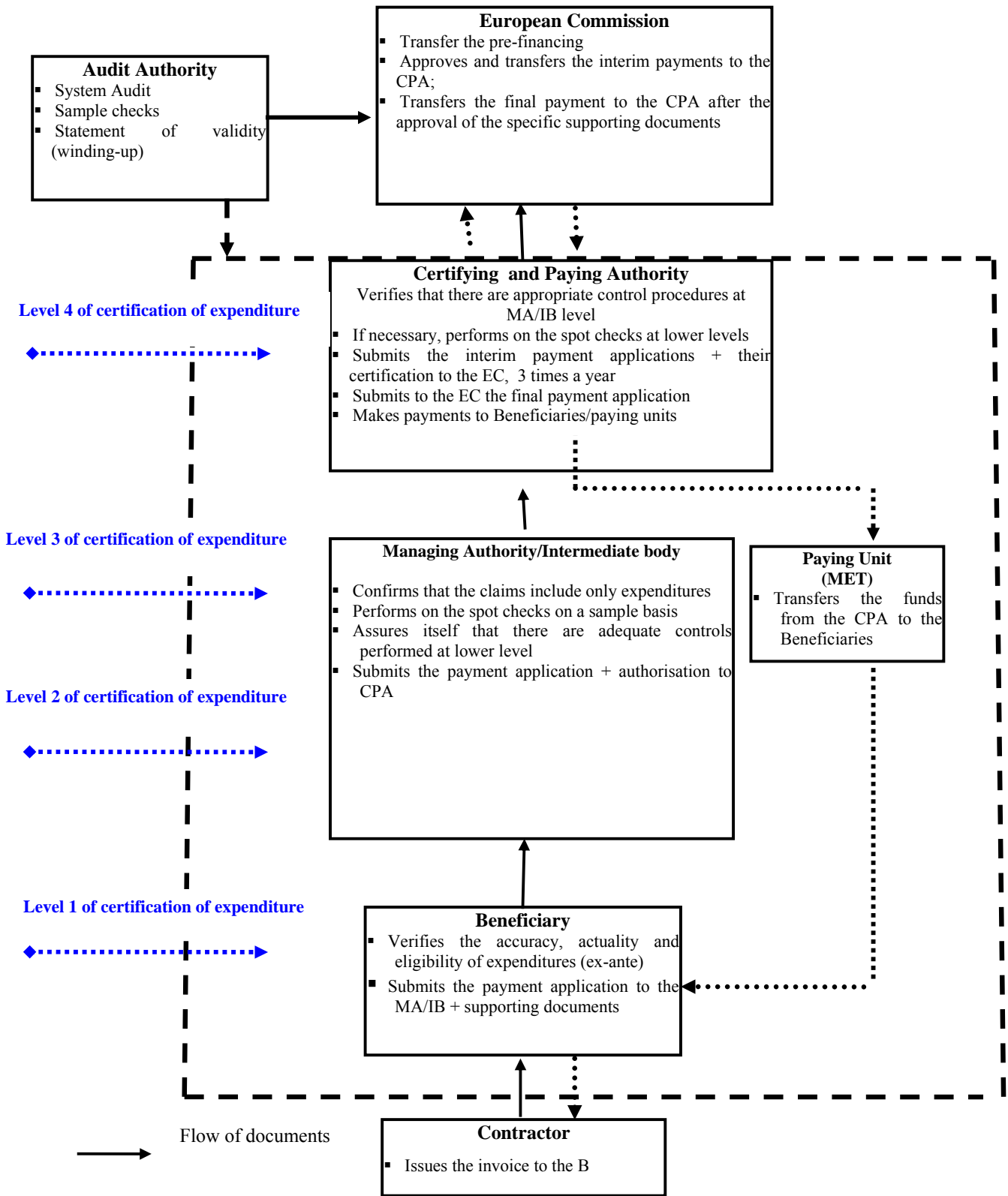
- a) direct payment for European Union financial contribution and co-financing amounts (where applicable) from the Certifying and Paying Authority to the beneficiaries, in the case of SOP Environment and SOP Transport, and
- b) indirect payment, through the paying units that are established near Managing Authorities, for the other operational programmes (SOP Competitiveness, Regional Operational Programme, SOP Technical Assistance, SOP Development of Human Resources, SOP Administrative Capacity) .

### **Description of the financial flows for the SOP IEC**

- 1 – The Managing Authority notifies the Certifying and Paying Authority regarding the pre-financing award
- 2 – The Certifying and Paying Authority transfers the pre-financing funds to the Paying unit
3. – Paying unit transfers pre-financing to eligible beneficiaries.
- 4 – The Beneficiaries make the payment to the Contractor

- 5 – The Beneficiaries submit the Claim for Reimbursement together with supporting documents to the IB for financial & technical verification and the IB submits it further to the MA for payment authorization.
- 6 – The MA forwards the Payment Request to the Certifying and Paying Authority after payment authorization
- 7 – The Certifying and Paying Authority reimburses the eligible expenditure to the Paying unit after payment certification
- 8 - The Paying unit reimburses the eligible expenditures to the Beneficiaries
- 9 – The Certifying and Paying Authority forwards the Payment Application to the European Commission.
- 10 – The European Commission reimburses incurred expenditure - intermediate & final payments - to the Certifying and Paying Authority.

## Financial flow of the SOP IEC



## **Identification and reporting of irregularities**

The legal basis is represented by the proposal for a Commission Regulation setting out rules for the implementation of Council Regulation (EC) No 1083/2006 and of Regulation No 1080/2006, the Council Regulation no. 2988/95 on the protection of the European Communities' financial interests and the Romanian Government Ordinance no. 79/2003 which settles the ways of control and recovery of sums resulted from non-reimbursable EU financial assistance.

The objective of this section is to describe the identification and reporting of any suspected fraud or other irregularity. This section will also deal with the importance of the immediate implementation of corrective action (including sanctions and launching of civil or criminal proceedings) deemed necessary as a consequence of the investigation of an irregularity.

Irregularities involving loss of EU funds of less than 10,000 Euro are not required to be reported to the Commission under the new EU legislation unless the Commission expressly requests it.

Therefore, irregularities of over 10,000 Euro and all irregularities committed intentionally must be reported to the European Commission. These reports are accumulated and checked by the Certifying and Paying Authority and then are forwarded to the Anti-Fraud Coordination Service (AFCOS) for transmission to OLAF on a quarterly basis. The Certifying and Paying Authority receives the reports from the MAs and it must include any reports on irregularities within the Certifying and Paying Authority itself.

In order to allow a proper process of prevention, detection and reporting of irregularities, at the level of SOP IEC, irregularities officers are appointed at the level of MA and each IB. Quarterly and ad-hoc reports prepared by Beneficiaries will include information on irregularities. The irregularities officers take action from their own initiative or on the complaints received. The irregularities officers carry out their activity based on the Irregularities Manuals that is prepared by the MA/IB.

## **Internal audit**

Within all ministries involved in the implementation of the Operational Programmes have been established Internal Audit Units that are independent from the structures performing the tasks of Managing Authorities (or Intermediate Bodies) and are directly subordinated to the head of the institutions concerned.

Consequently, the internal audit for SOP IEC will be carried out by the Public Internal Audit Unit which is subordinated directly to the minister and at IBs level by the existing audit functions within the relevant institutions..

The methodological coordination of these Units is ensured by a special unit within the Ministry of Public Finance, namely the Central Harmonizing Unit for Public Internal Audit.



## **Attributions of Central Harmonizing Unit for Public Internal Audit**

- Developing and implementing uniform procedures and methodologies based on international standards agreed by the European Union, including internal audit manuals and audit trails.
- Developing risk management methodologies.
- Developing the Ethical Code of the internal auditor.
- Endorsing the methodological norms on PIA, specific to the different domains of activity in the field of public internal audit.
- Developing a reporting system for the results of all public internal audit activities and elaborating an annual report.
- Verifying whether norms, instructions, as well as the Ethical Code are respected by internal audit services in public entities; it may initiate the necessary corrective measures in co-operation with the Head of the respective public entity.
- Co-ordinating the system of recruiting and training in the field of public internal audit.

## **Tasks of the Public Internal Audit Unit**

Public Internal Audit Units within the ministries that implement Structural Funds and Cohesion Funds, have specific audit manuals for the European Funds.

According to the law, the tasks of the Internal Audit Unit are the following.

- Performing internal audits activities in order to assess whether the financial management and control systems of the public entity are transparent and comply with the norms of lawfulness, regularity, cost-effectiveness, effectiveness and efficiency;
- Informing CHUIA on the recommendations not followed- by the head of the audited public entity and of their consequences
- Reporting periodically on the findings, conclusions and recommendations resulted from its audit activities.
- Preparing an annual overview of its activities in the annual report.
- Reporting immediately to the Head of the public entity and to the inspection unit in case of detecting any serious irregularities or fraud cases.

## **Audit Authority**

Romania has established an Audit Authority for all Operational Programmes through Law no 200/2005. The Audit Authority is an associated body to the Court of Accounts, without legal capacity, operationally independent from the Court of Accounts and at the same time independent from all the Managing Authorities and Certifying and Paying Authority.

In accordance with to the provisions of the Law 200/2005, art. 14, the Audit Authority has the following responsibilities:

- system audit, sample checks and final audit;
- checks and external audit for the structural funds;
- annual checks of the management and control systems;
- checks of the statements of expenditure, on the basis of an appropriate sample;
- carries out appropriate checks in order to issue winding-up declarations at the closure of measures and programmes;
- checks the existence and correctness of the national co-financing.

#### 5.4. Information and publicity

The access to the information relative to the interventions of the Funds is essential for the effectiveness of the co-financed operations. In accordance with art.69 of the Council Regulation (EC) No 1083/2006 and Chapter II – *Information and communication* of the implementing Commission Regulation (EC) No.../.....of....., the MA of the SOP-Increasing Economy Competitiveness will ensure that appropriate action will be undertaken *to highlight the role of the Community and to ensure that the assistance from the Funds is transparent.*

In compliance with Art. 4 of the Commission Regulation (EC) No .../... of...., the Managing Authority shall:

- inform the Monitoring Committee of SOP IEC on the Communication Plan and its progress, on the information and communication measures carried out (providing examples of such measures) and on the means of communication used.
- include in the Annual Reports and in the Final Report to be submitted to the Commission examples of information and publicity measures, the arrangements for the publication of the list of beneficiaries (referred to in Art. 8 of the Commission Regulation (EC) No .../... of .... ) and the content of major amendments to the Communication Plan.
- Include in the Annual Report for the year 2010 and in the Final Report a chapter evaluating the results of the information and publicity measures in terms of transparency, awareness of SOP and of the role played by the Community.

For the implementation of the communication activities of the SOP “Increase of Economic Competitiveness”, the Managing Authority has established an “Information and Publicity Unit”, carrying the following responsibilities:

- preparing the *Communication Plan and submitting it to the Commission within four months of the date of adoption of the OP*;
- managing the communication activities of the *Plan* and related budget;
- Implementing the communication actions foreseen in the *Communication Plan with due consideration for the actions referred to in art.7 of Commission Regulation (EC) No / 2006*;
- Monitoring the advancements and the impact of the communication actions;
- Monitoring the communication actions of Intermediate Bodies, Implementing Agencies, and beneficiaries particularly with regards to Articles 8 and 9 of the Commission Regulation (EC) No /2006.
- Drafting the surveys and reports referred to in Article 4 of the Commission Regulation (EC) No .../... of.... to be presented by the Managing Authority to the Monitoring Committee and to the European Commission;
- Informing the Managing Authority about the need for possible amendments to the *Communication Plan*;
- Participating to the *Communication Working Group* established at central level by ANCIS;
- involving bodies that can widely disseminate information;
- Participating to the *Structural Funds Information Team (SFIT)* established by the Information and Communication Unit of DG Regional Policy.

The Intermediate Bodies support the Managing Authority in:

- Informing potential beneficiaries about eligibility criteria, selection procedures, evaluation criteria, operations selected for financing, and budget;
- Informing the general public about the projects implemented;
- Offering all useful information for drafting the surveys and reports referred to in Article 4 of the Commission Regulation (EC) No .../... of... to be presented by the Managing Authority to the Monitoring Committee and to the European Commission.

The promotion of activities is supported by using and developing information tools adapted to specific target groups as they are defined in the *Communication Plan*. Operations envisaged are specified under the Technical Assistance priority axis of the programme. SOP-Increasing Economy Competitiveness includes a budgetary allocation to cover costs of information and publicity for SOP-IEC according to the *Communication Plan*.

Information and publicity actions of the SOP IEC included in the *Communication Plan* aim to:

- raise public awareness on EU Cohesion Policy and on the opportunities offered by Structural Funds in Romania;
- highlight the role played by the European Union in co-financing the SOP IEC's activities, in supporting Romania's economic competitiveness, in fostering economic development and reducing regional disparities;
- raise public awareness on the SOP IEC and its priority axes, objectives, mechanisms;
- inform potential beneficiaries on: conditions of eligibility for financing under SOP IEC; procedures for examining applications for funding and of the timeframe foreseen; criteria for selecting the operations to be financed; contacts at national, regional or local level providing information on the SOP IEC;
- disseminate information on approved and financed projects as well as on results achieved and best practices;
- ensure access to information to all target groups;
- ensure maximum transparency to the information provided to the public on Funds' allocation and management.

The following target groups have been identified for the information and communication actions of SOP IEC:

- a) the general public*, further segmented, if needed, according to age, professional background and geographic location;
- b) the (potential) beneficiaries*, such as SMEs and associations of SMEs; organisations representing business and trade, non-governmental organisations; universities, educational institutions, research centres; tourism information operators; local and central authorities
- c) the opinion leaders and the media system*, with particular reference to: leading economic and financial newspapers, leading TV and radio stations; key local media.
- d) the "partners for communication"*, i.e. all those bodies that can help the Managing Authority to widely disseminate information, such as: Intermediate Bodies, chambers of

commerce, Employers unions, Trade unions, other professional associations; Information centres on Europe and Commission representation in Romania.

Beneficiaries will be informed about their responsibilities, such as: informing the public about the assistance obtained from Structural Funds, displaying billboards, permanent explanatory plaques and the European flag referred to in Art. 8 of the Commission Regulation (EC) No .../... of..., complying with the technical characteristics of information and publicity measures referred to in Art. 9 of the Commission Regulation (EC) No .../... of....

Also the beneficiaries must be informed that the project for which they are responsible forms part of a priority axis in an operational programme co-financed by the ERDF and that their name, the name of the operation and the amount of public funding that is allocated to the operation will be published.

The tasks of the SOP-IEC Monitoring Committee, with relation to information and publicity issues, include adopting the information and publicity strategy and monitoring the way in which the arrangements concerning communication and promotion, contained in the *Communication Plan* are implemented.

The working group organised by the Ministry of Public Finance (ANCIS) will ensure coordination of communication activities among institutions engaged in OPs information and publicity activities.

Information and publicity activities will be subject to evaluations made by the MA SOP-IEC and by the SOP Monitoring Committee.

The annual reports, the mid-term report and the final report on implementation of the SOP will include examples of information and publicity operations for the operational programme adopted in order to ensure the effective implementation of the communication plan and the assessment of the implemented operations.

## 5.5. Single Management Information System

### Concept of the Single Management Information System

The Single Management Information System is a nation-wide web-based information system, supporting all Romanian organisations implementing the National Strategic Reference Framework and Operational Programmes. The system is addressing the needs of all management levels (Managing Authorities, Intermediate Bodies, Certifying Authority etc.) and through all the stages of the programme cycle (programming, tendering, contracting, monitoring, evaluation, payments, audit and control). SMIS main characteristic is that it provides its users with a single mechanism for assisting them in accomplishing their everyday tasks.

### SMIS design and functionalities

The SMIS design follows the main principles: data *availability* (data are directly available following the request of an authorized user); data *confidentiality* (data are provided only to those users authorized for accessing that specific piece of information); data *integrity* (data processing should occur only by authorized users under authorized means). As means for implementing the aforementioned principles, the system supports multiple users categorized into a number of user groups/roles. In that way user permissions are easily organized and managed and the access to information can be thoroughly audited and logged in a flexible way.

In order to provide an effective management tool, the functional model of the SMIS is based on a set of subsystems, which together reflect the broad range of functionalities the System is designed to perform, as follows:

- *Programming* which allows the registration and the modification of the main information on the NSRF broken down at lower levels on OPs, priority axis, key area of intervention and operation;
- *Project accession and modification* (registration and the modification of the main information on projects, including the contracts) ;
- *Monitoring* which allows observing the NSRF progress at all levels, where appropriate against targets previously set; It also allows automatically bottom-up aggregation of the *actual value* of the core data which are registered at lower levels of the System
- *Audit* which registers the control and audit findings and generates the audit reports;
- *Funds flow management* which deals with payment request forecasts, inflows, project revenues, suspensions and recoveries of funds.

**Electronic data exchange with the European Commission** will be done through an interface between SMIS and the EC management information system which is currently under development within the project SFC2007 – Electronic Data Exchange.

## 6. PARTNERSHIP

The partnership principle is at the basis of structural funds management. As it is stated in article 11 of the Council Regulation (EC) No. 1083/2006, *“The objectives of the Funds are pursued in the framework of close co-operation, (hereinafter partnership), between the Commission and the Member State”*.

The same article specifies that each Member State shall organise, where appropriate and in accordance with current national rules and practices, a partnership with different actors.

The Partnership process covers the entire programme cycle from the programming phase to the implementation, monitoring and evaluation. In the future it is important to create a multilevel partnership among all the subjects involved that could interact in the next phases of the SOP programming and implementation, ensuring a high level of implication of the administration in partnership and appropriate input by various partners.

In line with EC regulation and national rules and practices, the objectives of partnership will be to: promote the culture of participative development, which will contribute to the definition of strategic choices and of programming documents; allow the protection of different interest of the actors, through confrontation and coordination among different institutional and non-institutional partners; improve the transparency of administrative action and the quality of such action through the contribution of the knowledge held by partners; extend the methods and the existing praxis regarding co-financed interventions also to the interventions achieved with national resources;

Partnership was organised around three lines: the **institutional partnership**, made up from public, national, regional administrations involved in the SOP elaboration, including bodies dealing with horizontal priorities; **the socio-economic partnership** - composed by the organizations of representatives of enterprises and workers; **the „third sector” partnership**, concerning NGOs, non-profit organizations, organisations for promoting equal opportunities and environmental sustainability and any other suitable bodies representing the civil society.

As required in art. 11 of the general regulation, the MA identified the most representative partners in accordance with national rules and practices. In particular, socio-economic partners are identified according to the following principles: representativeness of partners; equality and balance in the representation of different socio-economic interests; expertise in the fields of SOP interventions;

Socio-economic partners are involved at appropriate levels of partnership, in such a number that both representativeness and efficiency of participation can be ensured.

In line with these provisions, the formal institutional partnership process was launched in March 2005 by setting up the SOP IEC elaboration working group, under the coordination of the Managing Authority for SOP IEC (Ministry of Economy and Trade, Government Ordinance no. 1115/2004). The permanent working group includes representatives of all intermediate bodies and other involved institutions, whose main responsibility lies in identifying the SOP priority axes and key areas of intervention. The working group’s meetings were held periodically and they produced the draft versions of the various chapters of the SOP-IEC: socio-economic analysis, SWOT analysis, strategy, implementation, financial allocation, etc. The general coordination targeting consistency with NSRF and complementarity with other funds was ensured by the Ministry of Public Finance (ANCIS).

Besides, starting with the very beginning of programming activities, the SOP-IEC Managing Authority had frequent consultations with other Managing Authorities for OPs from fields connected to economic competitiveness. The objectives were both to identify the appropriate operations and intervention fields and to find complementarities and avoid overlapping between different programmes. The following MAs were involved in this process: Ministry of European Integration (Regional Operational Programme – SMEs, R&D, tourism), Ministry of Environment (SOP Environment – energy). For the same purpose the SOP-IEC inter-institutional working group was enlarged (i.e., Competition Council, Ministry of Administration and Interior, Ministry of Labour, Social Solidarity and Family, Ministry of Agriculture and Forestry, etc).

With reference to the socio-economic partnership, in accordance with the regulation in force (Government Ordinance 314/2001 modified by the Government Ordinance 569/2002), the Social Dialogue Commissions, composed by representatives of the employers' associations and of the trade unions (law 109/1997), have been involved in the programming process and expressed their opinion on SOP contents.

A primary goal of consultation on the Operational Programme is to offer the information to the broadest possible public, in order to ensure the largest possible social support for SOP-IEC, in accordance to the relevant EC Regulations. More specifically, the consultation/information activities ensure: the transparency of the programming/implementing process, the feedback necessary to justify the orientation of structural funds co-financing towards specific economic needs and the timely preparation of the project pipeline to allow the impact and absorption of funds.

Consequently, the programming documents were made accessible so as to gather comments and suggestions and, if relevant, integrate them in the texts. The intermediate outputs, i.e. the consultative documents, have been published on the web page of the Ministry of Economy and Trade and of the IBs for comments, observation and large socio-economic consultation. The Managing Authority for SOP-IEC created a link on the MET homepage that includes a large set of information such as: programme text, strategy summary, suggestions from partners to a dedicated e-mail address, questionnaires to check the level of information of potential beneficiaries and the degree of interest in structural funds-related issues and proposed SOP IEC Strategy.

Based on to the above-mentioned questionnaires posted between November 2005 and August 2006, MA SOP-IEC made an analysis with the objective to focus on the target group of potential beneficiaries for this programme to verify their reaction to the opportunities offered by the SOP and define a suitable timing in the activation of operation. At the same time a database was built up. To this questionnaires have answered a total of some 320 respondents- mainly SMEs, NGO's, universities, professional associations, The quantitative and qualitative data analysis revealed among others, a level of awareness about structural funds of about 50%, a 100% interest in the issue and a marked preference (60%) for the enterprise-dedicated priority axis.

The SOP IEC draft was also the subject of presentations/consultations during several targeted events. At the first stage (August – December 2005) the Managing Authority for SOP-IEC participated at the communication/consultation campaign organized by the Ministry of Public

Finances in the 8 Development Regions and presented in details the priority axes, key areas of intervention and indicative operations to be co-financed by SOP-IEC.

Next, within the territorial information and consultation activities scheduled by the MA, in November 2005, the Ministry of Economy and Commerce started its own campaign to present the SOP-IEC strategy in the 8 development regions. The dissemination of information regarding structural funds and the projects to be co-financed was developed in partnership with RDAs, local authorities, banks, other institutions and organizations with territorial representation (mainly Chambers of Commerce) and were addressed to economic and social partners, civil society organizations and general public.

In the same time, the MA participated at various meetings, seminars and other events in order to present and submit to consultations the SOP-IEC during the period between April 2006-October 2006 (around 22 presentations made in this period). All observations and comments received have been carefully analyzed by both MA and IBs and, where the case, led to documents improvement.

At the level of the five Intermediate Bodies a large consultation process of numerous relevant partners, with regard to their roles and responsibility under the SOP and the opportunities offered under the relevant priority axes, took place.

Each Intermediate Body, in its specific area of expertise and activity, set up active consultation programmes and working groups, mostly at national level, including a large socio-economic partnership basis: professional associations, employers' and trade unions' organizations, Regional Development Agencies, territorial Chambers of Commerce, NGOs, enterprises, as well as partners and organizations from the scientific and academic environment with relevant profile within the coordinated field. Consultations were organised over the period March 2005- October 2006. During the consultation meetings, relevant documents and different drafts of SOP Competitiveness have been presented and discussed. Whenever possible, the Intermediate Bodies and other partners published on their web pages links to the site of the Managing Authority.

The **Monitoring Committee** will enable the partnership participation in all the activities of SOP programming and implementation. The tasks of the MC are the ones stated by the general regulation on SF and specified in the SOP IEC. The representatives of both institutional and socio-economic partnership take part in the activities related to such tasks.

Additional places for partnership are represented by thematic working groups analysing the specific aspects of the implementation phase identified on the basis of emerging needs, even temporary ones.

When required by specific needs, other methods or instruments could be considered for the consultation of socio-economic partners such as: focus groups, surveys, interviews with relevant actors.



## 7. LIST OF ANNEXES

### A. SOCIO-ECONOMIC ANALYSIS

#### 1. Manufacturing industry

- **Annex 1 - Table 1** Evolution of Industrial production indices
- **Annex 1 - Table 2** Export Evolution on activities
- **Annex 1 - Table 3** Structure of export and import
- **Annex 1 - Table 4** Labour productivity index in industry per employee, by sector (%)

#### 2. Small and medium enterprises' sector

- **Annex 2 – Table 1** Number of active SMEs by size
- **Annex 2 – Table 2** Number of private active SMEs by sector
- **Annex 2 – Map 1** Number of SMEs / 1000 inhabitants per development regions, in 2004
- **Annex 2 – Graph 1** SMEs turnover per economic sectors, million Euro, 2000-2004
- **Annex 2 – Map 2** Geographical distribution of business incubators, 2004

#### 3. Research, Development and Innovation sector

- **Annex 3 – Table 1** The weight of sales of new or improved products (%)
- **Annex 3 – Table 2** Innovative activities in 2002
- **Annex 3 – Table 3** Structure of innovative enterprises

#### 4. Energy sector

- **Annex 4 - Table 1** Electricity production and structure by type of fuel
- **Annex 4 - Graph 1** Production capacities in thermoelectric sector
- **Annex 4 - Table 2** Final energy intensity - EU, 2001
- **Annex 4 - Table 3** Necessary investments for implementing environment directives in the power sector (heating power plants under MET's coordination), 2005-2017
- **Annex 4 - Table 4** Emission targets

#### 5. Tourism sector

- **Annex 5 - Evolution of main tourism indicators**

### B. METHODOLOGIES USED WITHIN SOP COMPETITIVENESS

- **Annex 6** - Methodology for setting the general objective of the SOP Competitiveness
- **Annex 7** - Methodology for the programming exercise within the SOP Competitiveness
- **Annex 8** - Gap indicators used in the programming exercise
- **Annex 9** - Methodology for gap calculation in IT sector

### C. INDICATIVE LIST OF MAJOR PROJECTS

- **Annex 10** – Indicative list of major projects

## A. SOCIO-ECONOMIC ANALYSIS

### 1. Manufacturing industry

Annex 1

Table 1  
Evolution of Industrial production indices

(% change compared to previous year)

	2001	2002	2003	2004
<b>TOTAL INDUSTRY</b>	<b>108.4</b>	<b>106.0</b>	<b>103.2</b>	<b>105.3</b>
<b>Mining and quarrying</b>	<b>105.0</b>	<b>96.1</b>	<b>98.6</b>	<b>102.4</b>
<b>MANUFACTURING</b>	<b>109.9</b>	<b>107.9</b>	<b>103.9</b>	<b>106.3</b>
Food industry	114.6	112.9	113.6	95.4
Textile industry	103.2	101.5	93.0	103.5
Clothing articles	115.1	110.0	100.3	95.8
Leather goods and footwear	104.1	103.3	101.0	97.8
Wood and wooden products manufacturing	108.1	104.2	114.6	142.0
Pulp, paper and paper products	111.3	110.5	102.3	97.1
Crud oil processing	110.5	112.7	92.5	106.2
Chemical substances and products	102.7	105.0	102.8	134.4
Rubber and plastic products	126.3	103.0	140.8	109.9
Manufacturing of construction materials and other products of non-metallic minerals	100.3	94.4	95.3	116.8
Metallurgy	116.2	129.7	78.8	113.5
Metallic constructions and metal products	99.5	100.6	97.6	99.6
Machinery and equipment	115.1	100.5	95.9	107.1
Electrical machinery and appliances	110.7	107.4	106.0	115.8
Radio, TV and communication equipment and apparatus	92.6	83.3	160.8	113.6
Medical, precision, optical instruments and apparatus	108.7	88.5	90.0	90.1
Means of road transport	98.8	109.1	112.7	124.3
Means of transport not included in road transport	104.5	101.7	112.6	93.9
Furniture and other	102.1	110.7	103.4	89.7
<b>Electric and thermal energy</b>	<b>98.7</b>	<b>98.3</b>	<b>101.1</b>	<b>96.8</b>

Table 2  
Export Evolution by activities

(mil. Euro)

Activity	2000	2001	2002	2003	2004
<b>Total EXPORT</b>	<b>11,273</b>	<b>12,722</b>	<b>14,675</b>	<b>15,613.7</b>	<b>18,935</b>
<b>AGRICULTURE, HUNTING, SYLVICULTURE AND FISHERY</b>	<b>289</b>	<b>324</b>	<b>311</b>	<b>334.1</b>	<b>361.5</b>
<b>TOTAL INDUSTRY</b>	<b>10,978</b>	<b>12,391</b>	<b>14,355</b>	<b>15,250</b>	<b>18,560</b>
<b>Mining and quarrying</b>	<b>37</b>	<b>42</b>	<b>44</b>	<b>45.5</b>	<b>49.3</b>
<b>MANUFACTURING</b>	<b>10,890</b>	<b>12,280</b>	<b>14,205</b>	<b>15,135</b>	<b>18,432</b>
Clothing articles	2,258	2,787	3,079	3,224.9	4,254.2
Leather goods and footwear	908	1,176	1,343	1,391.8	1,368.5
Crud oil processing	758	724	1050	947.9	1196
Chemical substances and products	687	982	697	744.9	1030.8
Rubber and plastic products	98	126	218	340.9	434.6
Metallurgy	1,725	1,565	1,679	1,818	2,647
Manufacturing of construction materials and other products of non-metallic minerals	178	208	244	266.6	355.5
Machinery and equipment	562	750	858	939.7	1354.8
Electrical machinery and appliances	403	575	825	1,029.4	1,366.2
Furniture and other activities not elsewhere classified	560	668	767	841.7	1005.1
<b>Electric and thermal energy</b>	<b>51</b>	<b>69</b>	<b>106</b>	<b>69.7</b>	<b>78.4</b>
Other activities {Informatics, services for enterprises, entertainment, sportive and cultural activities )	<b>6</b>	<b>7</b>	<b>9</b>	<b>28.9</b>	<b>13.7</b>

Table 3  
Structure of export and import

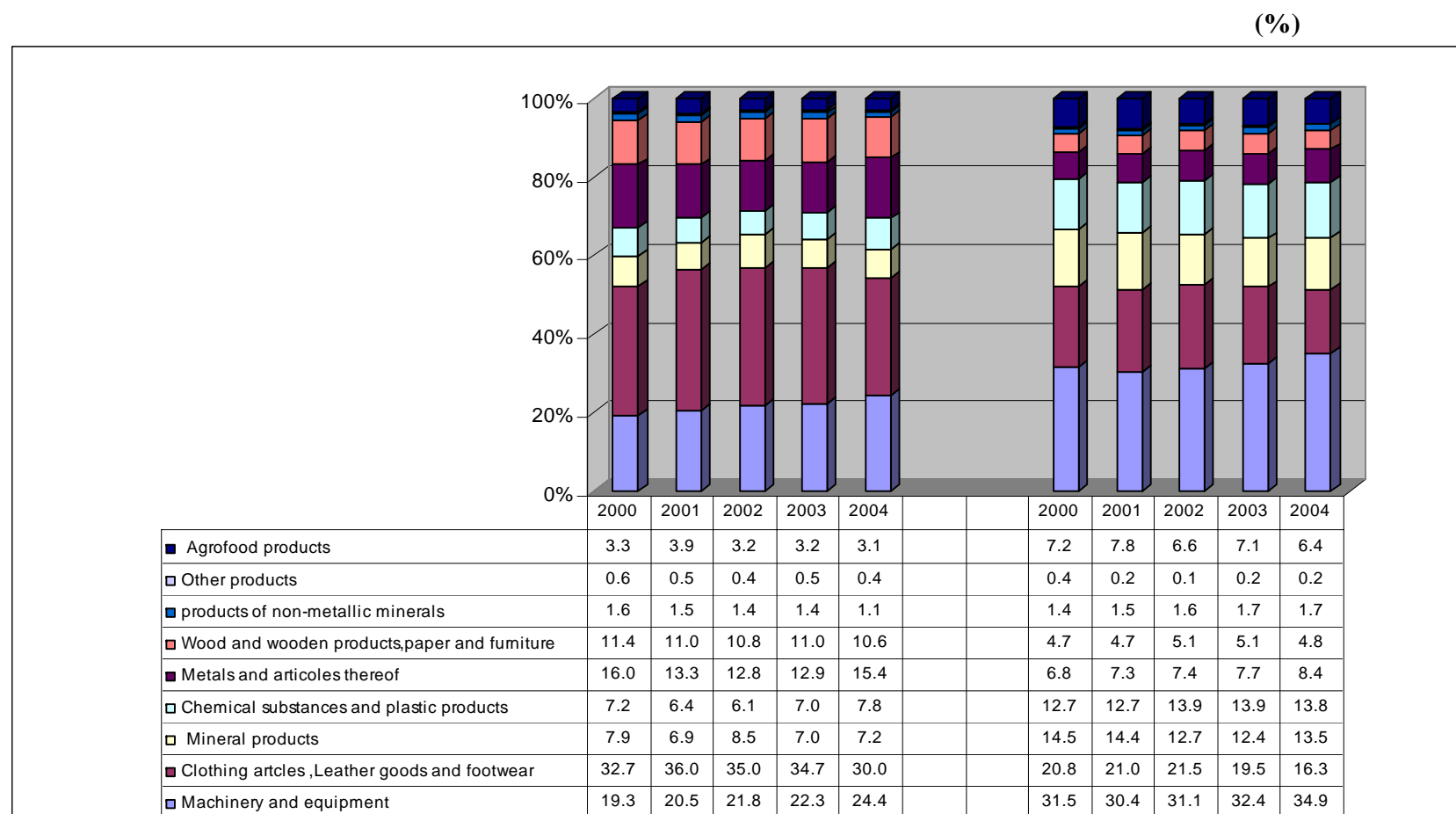


Table 4  
Labour productivity index in industry per employee, by sector (%)

2000=100

	2001	2002	2003	2004
<b>TOTAL INDUSTRY</b>	<b>106.7</b>	<b>112.0</b>	<b>118.0</b>	<b>132.0</b>
<b>Mining and quarrying</b>	<b>105.1</b>	<b>102.9</b>	<b>109.1</b>	<b>117.1</b>
<b>MANUFACTURING</b>	<b>107.8</b>	<b>114.4</b>	<b>119.4</b>	<b>135.3</b>
Food industry	126.6	139.4	148.3	140.6
Textile industry	97.2	107.8	163.7	186.5
Clothing articles	105.6	105.6	106.7	107.9
Leather goods and footwear	91.3	92.1	94.3	101.6
Wood and wooden products manufacturing	86.1	72.7	76.5	106.9
Pulp, paper and paper products	114.9	123.2	127.9	132.0
Crud oil processing	110.0	155.8	162.4	178.8
Chemical substances and products	96.6	107.1	123.9	188.3
Rubber and plastic products	1.9	119.8	145.6	162.3
Manufacturing of construction materials and other products of non-metallic minerals	103.1	116.5	123.4	162.6
Metallurgy	113.6	153.9	139.8	187.3
Metallic constructions and metal products	92.4	86.8	76.9	81.7
Machinery and equipment	121.2	125.2	116.1	138.3
Electrical machinery and appliances	107.0	107.6	112.8	118.0
Radio, TV and communication equipment and apparatus	111.6	112.3	128.9	183.3
Medical, precision, optical instruments and apparatus	135.3	120.1	140.1	136.3
Means of road transport	97.5	112.0	149.6	209.4
Means of transport not included in road transport	101.4	91.6	108.4	105.9
Furniture and other	106.1	121.4	118.2	109.5
<b>Electric and thermal energy</b>	<b>98.8</b>	<b>100.6</b>	<b>118.7</b>	<b>119.3</b>

## 2. Small and medium enterprises' sector

Annex 2

Table 1  
Number of active SMEs by size

Size	1999	2000	2001	2002	2003	2004
<b>Micro</b>	294,597(90.2%)	279,893(88.5%)	280,448(87.9%)	285,207(87.7%)	313,485(87.9%)	358,242(89%)
<b>Small</b>	25,987(8.0%)	29,417(9.3%)	31,249(9.8%)	32,010(9.84%)	34,883(9.8%)	36,080(8%)
<b>Medium</b>	6,102(1.8%)	6,864(2.17%)	7,455(2.3%)	7,989(2.45%)	8,342(2.3%)	8,674(2%)
<b>Total</b>	326,686(100%)	316,174(100%)	319,152(100%)	325,206(100%)	356,710(100%)	402,996(100%)

Source: Ministry of Public Finance and NIS

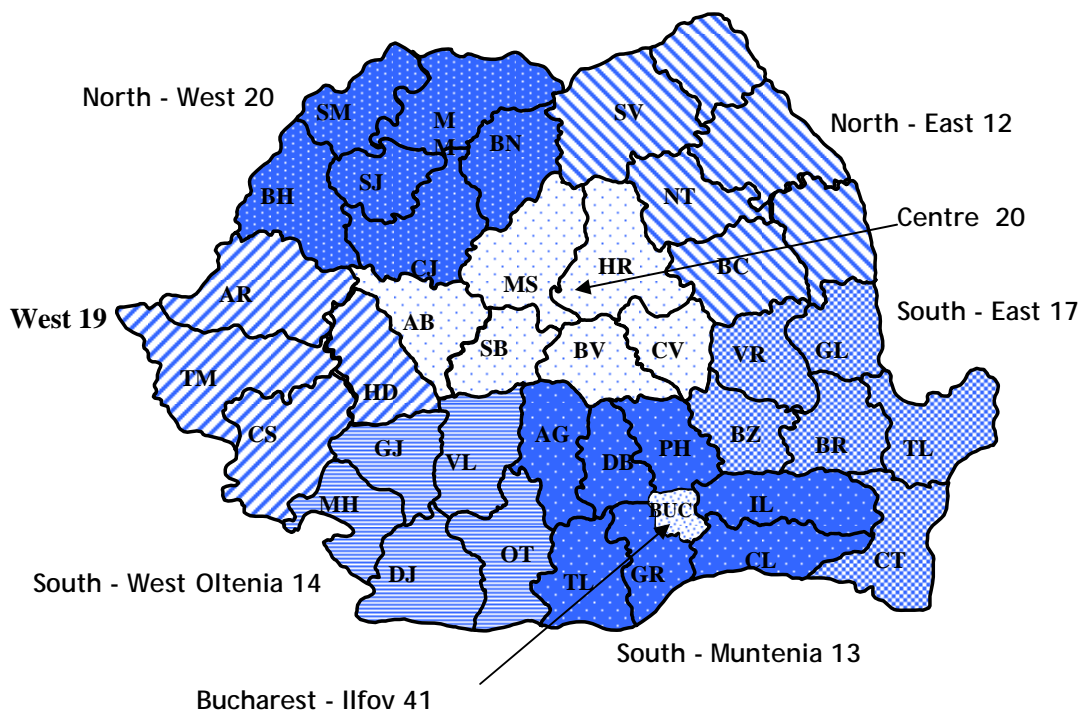
Table 2  
Number of private active SMEs by sector

Activity	1999	2000	2001	2002	2003	2004
<b>Agriculture</b>	10,055	9,494	8,929	10,011	10,430	11,390
<b>Industry</b>	39,457	40,252	41,609	45,586	50,117	54,657
<b>Construction</b>	10,956	11,705	13,990	16,312	20,378	25,115
<b>Services</b>	266,218	254,723	254,625	253,297	275,785	311,834
<b>Total</b>	326,686	316,174	319,152	325,206	356,710	402,996

Source: Ministry of Public Finance and NIS

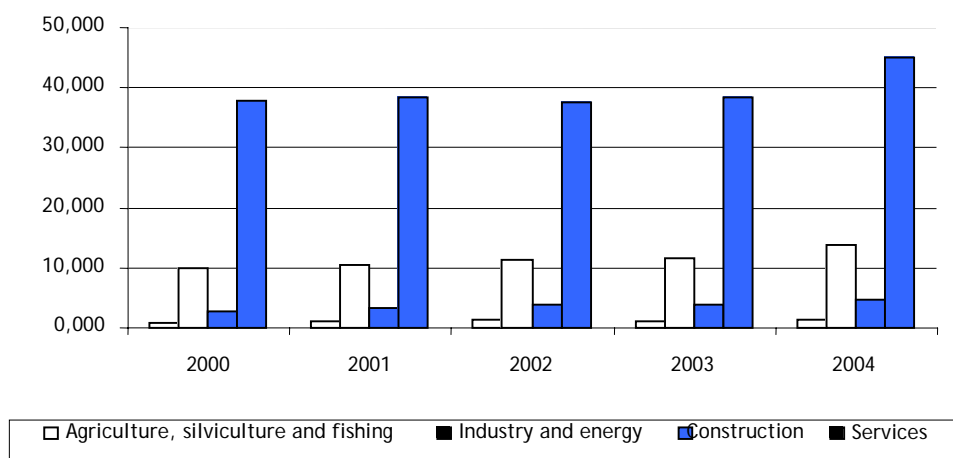
Map 1

Number of SMEs / 1000 inhabitants per development regions, in 2004



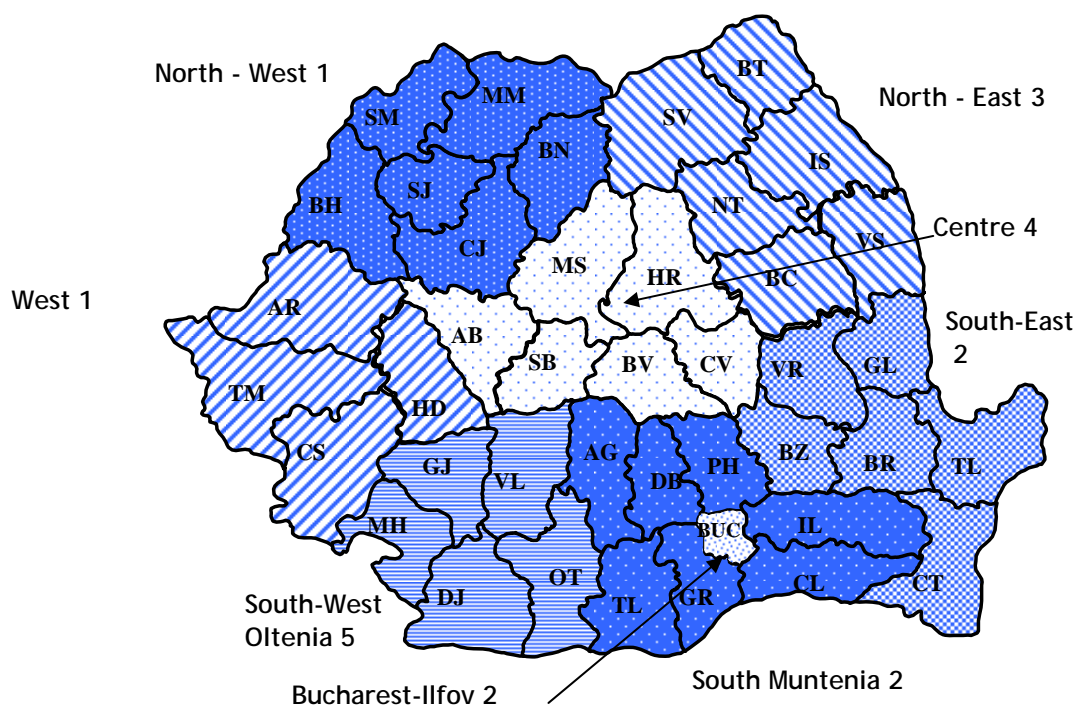
Graph 1

SMEs turnover per economic sectors, million Euro, 2000-2004



Source: Ministry of Public Finance, NIS and NASMEC

Map 2  
 Geographical distribution of business incubators, 2004





### 3. Research, Development and Innovation sector

#### Annex 3

Table 1  
The weight of sales of new or improved products (%)

Country	The weight of sales of new or improved products, new for enterprises							
	but not new for market, as % from total turnover				and new for market, as % from total turnover			
	Manufacturing	Services	High technology	High Technology services	Manufacturing	Services	High technology	High Technology services
Denmark*	26.0	25.4	14.0	13.8	11.0	3.6	21.1	12.7
Finland*	27.0	5.0	78.0	13.0	7.0	3.0	11.0	8.0
Poland	17.4	1.7	33.3	1.0	3.9	2.9	10.5	26.2
Holland*	4.5	1.6	20.5	13.5	9.3	1.2	17.2	6,7
Italy*	7.6	4.0	13.4	4.2	9.8	6.5	17.4	13.3
Czech Republic	5.0	6.6	6.4	12.1	1.4	1.3	2.8	6.4
Estonia*	10.6	3.2	11.5	10.0	4.7	1.2	10.0	2.5
Slovenia*	5.5	1.3	7.8	2.9	4.2	2.6	9.6	8.0
Slovakia	4.4	1.8	4.1	2.7	18.7	4.7	8.0	13.1
<b>Romania*</b>	2.0	1.0	4.0	4.0	11.0	5.0	10.0	12.0

Source: Eurostat, Statistics in Focus, Science and Technology , 8/2005, August GÖTZFRIED

Note: reference year is 2003; for countries with \* reference year is 2002

Sectors of activity :

Manufacturing: NACE code d;

Services: NACE codes g-k;

High Tech Industries: NACE codes 24.4, 30, 32, 33, 35.3

High Tech Services: NACE codes 64, 72, 73

Table 2  
Innovative activities in 2002

- Euro -

	No of enterprises with innovation activities	Innovation expenditure	of which:				
			Expenditure for internal R&D	Expenditure for external R&D	Equipment	Licenses, patents	Other expenditures*
<b>ROMANIA</b>	3,983	782,736,679	173,490,829	19,348,195	418,332,059	51,282,360	120,280,879
North-East Region	607	61,481,178	12,072,198	728,917	39,527,978	2,685,283	6,466,803
South-East Region	395	69,451,450	15,792,189	385,197	48,011,589	1,131,511	4,130,964
South Region	391	88,310,505	24,110,561	3,561,595	47,726,042	1,389,396	11,522,912
South -West Region	247	56,999,971	12,557,108	1,436,726	36,171,693	2,987,908	3,846,535
West Region	291	35,911,409	8,008,935	431,312	16,131,079	691,180	10,648,903
North-West Region	440	73,379,246	11,232,247	864,447	40,194,821	1,769,828	19,317,902
Centre Region	764	70,824,248	15,150,449	496,359	37,930,457	3,413,144	13,833,839
Bucharest Ilfov Region	848	326,378,667	74,569,120	11,444,018	152,638,401	37,214,108	50,513,021

Source: The National Institute of Statistics, the Innovation investigation 2003

Notes: - the statistic data per development region are related to the legal entities registered according to the central unit.

- the number of enterprises with innovation activity corresponds to the period 2000-2002, for which the investigation took place according to CIS III (EU) rules. 9,500 units were investigated out of a total of 23,404 units;

\*) - other expenditure includes: personnel development, product design and development, marketing of new products resulting from R&D activities.

Table 3  
Structure of innovative enterprises

Activities according to NACE	Enterprise size (no of employees)	Number of enterprises	Innovative enterprises		Enterprises innovation (products and processes)		with activity
			No	% of total	No	% of total	
Total	Total	23,404	3,983	17%	2,968	13%	
	10-49	16,235	2,137	13%	1,580	10%	
	50 - 249	5,547	1,183	21%	868	16%	
	>250	1,622	663	41%	520	32%	
Total industry (excluding constructions) of which:	Total	15,122	2,907	19%	2,229	15%	
	10-49	9,556	1,411	15%	1,067	11%	
	50 - 249	4,171	911	22%	694	17%	
	>250	1,395	585	42%	469	34%	
-quarrying industry	Total	174	23	13%	21	12%	
-manufacturing industry	Total	14,629	2,832	19%	2,174	15%	
	10-49	9,381	1,406	15%	1,061	11%	
	50-249	4,000	882	22%	669	17%	
	>250	1,248	545	44%	443	35%	
-thermo and electric energy, gas, water	Total	319	52	16%	34	11%	

Activities according to NACE	Enterprise size (no of employees)	Number of enterprises	Innovative enterprises		Enterprises innovation (products and processes)		with activity
			No	% of total	No	% of total	
Services(excluding public administration) of which:	Total	8,282	1,076	13%	739	9%	
	10-49	6,679	726	11%	513	8%	
	50 - 249	1,376	272	20%	174	13%	
	>250	227	78	34%	51	22%	
- trade	Total	4,853	485	10%	334	7%	
-transport, storing, and communications	Total	2,061	187	9%	135	7%	
- financial intermediaries	Total	319	23	7%	13	4%	
real-estate transactions, and other services	Total	1,049	382	36%	257	24%	

Source: The National Institute of Statistics, the innovation investigation 2003

#### 4. Energy sector

Annex 4

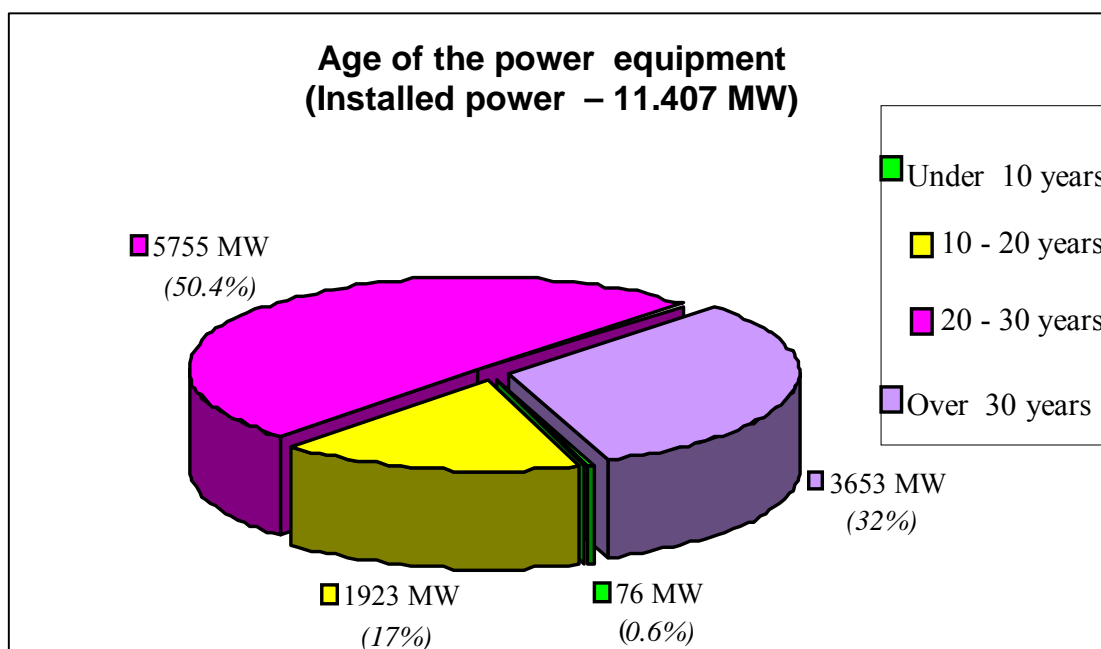
Table 1  
Electricity production and structure by type of fuel

	2003	2004	2004 (value %)
Total internal gross consumption	54,821	55,710	
Balance import/export	- 2,085	- 1,189	
Total production, of which:	56,906	56,899	100%
- coal	25,816	23,478	41%
- oil and natural gas	12,922	11,274	20%
- hydro	13,262	16,591	29%
- nuclear	4,906	5,556	10%

Source: National Energy Dispatcher (2004)

Graph 1

#### Production capacities in thermoelectric sector



Source: Termoelectrica SA

Table 2  
Final energy intensity - EU, 2001

Energy Intensity (toe/ 10 <sup>3</sup> USD <sub>95</sub> )	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Holland	Portugal	Spain	Sweden	UK	Romania
Final	0.095	0.135	0.073	0.151	0.096	0.091	0.139	0.105	0.109	0.120	0.149	0.129	0.119	0.121	0.637
Industry	0.024	0.055	0.014	0.068	0.025	0.027	0.032	0.024	0.035	0.039	0.052	0.044	0.045	0.030	0.282
Transport	0.027	0.030	0.022	0.028	0.030	0.024	0.052	0.039	0.035	0.029	0.051	0.048	0.028	0.039	0.120
Agriculture	0.003	0.002	0.005	0.005	0.002	0.001	0.008	0.002	0.003	0.008	0.006	0.003	0.002	0.001	0.009
Residential	0.027	0.031	0.021	0.030	0.023	0.026	0.033	0.024	0.029	0.021	0.022	0.017	0.026	0.033	0.217
Tertiary	0.009	0.012	0.009	0.010	0.013	0.009	0.010	0.014	0.004	0.016	0.012	0.010	0.015	0.013	0.039

Source: Energy Balances of OECD Countries 2000-2001, International Energy Agency, 1999-2002 Editions, Paris, France, 2002

Table 3  
Necessary investments for implementing environment directives in the power sector  
(heating power plants under MET's coordination), 2005-2017

Implementation plan for directive :	Expenditure (euro)
2001/80/EC Directive on the limitation of emissions of certain pollutants into the air from large combustion plants	1,514,920,000
96/61/ EC Directive concerning integrated pollution prevention and control	358,400,000
99/31/EC Directive on the landfill of waste	496,900,000
<b>Total</b>	<b>2,370,220,000</b>

Source: Chapter 22 „Environment protection “

Table 4

EMISSION TARGETS FOR SULPHUR DIOXIDE (SO<sub>2</sub>), NITROGEN OXIDES (NO<sub>x</sub>) AND DUST

National Coordinator or Owner	EMISSION TARGETS																				
	ton																				
	2007			2008			2010			2013			2015			2016			2017		
	SO <sub>2</sub>	NO <sub>x</sub>	Dust	SO <sub>2</sub>	NO <sub>x</sub>	Dust	SO <sub>2</sub>	NO <sub>x</sub>	Dust	SO <sub>2</sub>	NO <sub>x</sub>	Dust	SO <sub>2</sub>	NO <sub>x</sub>	Dust	SO <sub>2</sub>	NO <sub>x</sub>	Dust	SO <sub>2</sub>	NO <sub>x</sub>	Dust
<b>MET</b>	387,969	90,137	21,915	367,303	84,422	17,845	183,945	82,179	11,442	61,360	81,855	10,926	62,317	69,412	11,014	69,597	58,396	10,864	62,317	52,260	10,864
<b>MAI</b>	138,673	22,159	11,517	136,684	21,471	10,649	136,593	17,310	9,720	75,051	15,966	2,621	25,375	14,685	2,621	25,374	14,326	2,621	25,374	14,264	2,621
<b>others agents</b>	8,056	4,868	1,367	8,056	4,615	1,367	7,514	4,244	1,286	7,589	3,393	1,114	7,589	3,393	1,114	7,589	3,393	1,114	7,589	3,393	1,114
<b>EMISSIONS TARGETS Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Oxides (NO<sub>x</sub>) and Dust</b>	<b>534,698</b>	<b>117,164</b>	<b>34,799</b>	<b>512,043</b>	<b>110,508</b>	<b>29,861</b>	<b>328,052</b>	<b>103,733</b>	<b>22,448</b>	<b>144,000</b>	<b>101,214</b>	<b>14,661</b>	<b>95,281</b>	<b>87,490</b>	<b>14,749</b>	<b>102,560</b>	<b>76,115</b>	<b>14,599</b>	<b>95,280</b>	<b>69,917</b>	<b>14,599</b>

Source: National Programme for the Reduction of Emissions of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and dust from Installations of flue gas desulphurization approved by Order of the minister of MEC no.545/2005 (the same Order was approved by MEWM – no.833/2005 and MAI – no.859/2005)

## 5. Tourism sector

Anexa 5

### Evolution of main tourism indicators

Indicators	1999	2000	2001	2002	2003	2004
Arrivals of foreign tourists in Romania (thousands)- visitors to the border	5,224	5,264	4,938	4,794	5,595	6,600
Departures of Romanian visitors (thousands)- registered on the border	6,274	6,388	6,408	5,757	6,497	6,972
Turnover of hotels, other tourism accommodation units and restaurants included in these units structure (bil. ROL)	4,612	6,143	8,700	11,637	14,133	-
Tourism agencies and tourism assistance turnover (bil. ROL)	2,514	5,154	6,557	7,071	7,010	-
Number of accommodation units – total, of which:	3,250	3,121	3,266	3,338	3,569	3,900
- private propriety (%)	353	55.3	60.3	92.0	92.0	92.0
Places in the accommodation units in operation (thou places-days)	51,275	50,197	51,882	50,752	51,632	53,989
Average index of using the tourism accommodation capacity in operation (%)	34.5	35.2	34.9	34.0	34.6	34.3
Tourists in accommodation units, of which:	5,109	4,920	4,875	4,847	5,057	5,639
- Romanian (thou)	4,314	4,053	3,960	3,848	3,952	4,279
- foreign (thou)	795	867	915	999	1,105	1,359
Tourists in hotels, of which:	4,074	3,882	3,829	3,835	3,984	4,341
- Romanian (thou)	3,337	3,086	3,000	2,935	2,990	3,125
- foreign (thou)	737	796	829	900	994	1,216
Employment in hotels and restaurants (thou. peoples)	100	93	79	95	105	-

Source: National Institute of Statistics (exhaustive research)



## B. METHODOLOGIES USED WITHIN SOP COMPETITIVENESS

### ANNEX 6: Methodology for setting the general objective of the Competitiveness SOP

*“The general objective of POS is to increase Romanian labour productivity in order to reduce the productivity gap with respect to EU. The measures included in this OP will generate a 5.5% average annual increase in GDP per population employed and, by 2013, will allow Romania to reach a GDP per employee level of about 55% of the EU average.”*

The impact of competitiveness OP can be assessed as the increase in labour productivity, calculated as changes in GDP per population employed. The increase in labour productivity per person employed can be expressed as:

$$\% \Delta \text{ labor productivity} = \% \Delta \text{ real GDP} - \% \Delta \text{ employed population}$$

The increase in labour productivity per employee can also be theoretically decomposed in the variation of two factors: the change in capital per employee and the change in the Solow residual, also known as total factor productivity.<sup>19</sup> The later reflects the effect of other factors than capital and labour on the growth of GDP per employee. As a result, this indicator shows the changes in the efficiency with which the factors are employed in the economy.

The increase in GDP per employee is an indicator often employed in the international practice. The National Commission for Forecast (CNP) calculates this indicator as the *increase in GDP per employee in comparable prices*.

Eurostat calculates for UE-25 an indicator called “GDP in PPS per person employed (EU25 = 100)” that is the fraction of countries’ GDP per employee, in equivalent purchasing power parity, in the EU-25 average. This indicator is also calculated and forecasted for Romania. However, the forecast is calculated only up to 2006 and its based on 2003 or earlier data.

CNP has forecasted that Romanian GDP per employee will increase at a rate of 5.6 per year during 2007-2013<sup>20</sup>. This forecast does not take into account the impact of structural funds on the Romanian labour productivity. The assessment of this impact is a difficult task that will not be undertaken here. However, a recent analysis from World Bank<sup>21</sup> estimates the growth potential of Romanian GDP for the next few years around 4.5 percent per year, without further improvement in total factor productivity, and around 5.5 percent per year, with improvements in total factor productivity. Assuming a change in the employed population in Romania between +/- 0.5 percent per year; an increase in total factor productivity due to the impact of structural funds and extrapolating a 5.5 percent annual increase in GDP to the next 10 years we can expect Romanian GDP per employee to increase between 2007-2013 at a pace of 5-6 percent per year.

If the labour productivity in European Union will increase until 2013 at pace of about 1 percent per year, the *relative* increase in Romanian GDP per employee would be between 4 to 5 percent

---

<sup>19</sup> The decomposition is too technical to be provided here;

<sup>20</sup> The forecast can be found in the current situation analysis;

<sup>21</sup> Romania, restructuring for EU integration, Country Economic Memorandum, World Bank Report No. 29123- RO, June 2004, p. 18;

per year. This rate would allow Romania to reach about 55 percent of the average GDP per employee in the European Union by 2013.<sup>22</sup>

	2004	2007	2008	2009	2010	2011	2012	2013
Total active population	+0.5	+0.1	-0.2	-0.2	-0.2	-0.2	-0,2	-0,2
Total employment	+0.6	+0.3	-0.1	-0.1	-0.1	-0.1	-0,1	-0,1
Employees	+1.0	+0.6	+0.5	+0.7	+0.8	+0.8	+0.9	+1.0
- %								
Rate of activity	46.0	46.8	46.9	47.1	47.3	47.5	47.60	47.8
Rate of employment	42.9	43.9	44.1	44.3	44.5	44.9	44.8	45.0
Labour productivity	6.9	5.0	5.7	5.4	5.6	5.7	5.9	5.7
Unemployment rate ILO	6.8	6.1	6.0	6.0	5.9	5.9	5.80	5.8

Source: NIS

<sup>22</sup> An accurate forecast of the increase in the labour productivity in the European Union over the next 8 years is a difficult task. The level of 55 percent in 2013 assumes a relative increase of 4.5 percent per year in the GDP per employee in Romania and a relative level of Romanian GDP per employee in 2006 of 38.8, as forecasted by EUROSTAT.

## **ANNEX 7: Methodology for the programming exercise within the SOP Competitiveness**

### **Methodological premises**

It is impossible to formulate a national competitiveness strategy while lacking clearly defined and applied methodological criteria. Such a methodology must be economically justified, fitting at the same time the theoretical framework described in the analysis part.

The chosen methodology sought to provide an objective criterion for the prioritization of competitiveness enhancing measures, by calculating the gaps between Romania and the EU average at the level of indicators and sub-indicators. This was the main methodological premise.

The second methodological premise consisted of the fact that a greater gap points at a greater necessity for intervention and financing. Of course, there are some limitations to this premise. For example, a smaller gap may not indicate a Romanian performance, but an EU underperformance. Still, the initial assumption was that all indicators are equal and they all have the same level of *ab initio* importance.

The third methodological premise was the connection between hard indicators (statistical data) and soft indicators (survey answers). In this way, statistical data – which may sometimes be two or three years old, is combined with the way reality is perceived by those directly interested in enhancing competitiveness: the managers.

The fourth and last premise is that one cannot skip the stages of the competitiveness growth process, for all sectors. Considering that the methodological approach (see below) was horizontal (not sector-oriented), the weight characteristic to Romania's current development stage (according to the Porter model) was used in the calculations. Given to the fact that Romania's economy is largely based on factors and to a certain extent on investment, while innovation has only a scarce presence, the weight chosen for the indicators in use will take into account the existent situation by observing the transition from factors to investment rather than the idealist shift from investment to innovation.

### **Methodological approach**

In the priorities setting process, similar competitiveness strategies from most of the EU countries have been reviewed, leading to the conclusion that there is no single unitary methodological approach. Under these circumstances, The European Commission Proposal regarding "The establishment of a Framework Programme for Competitiveness and Innovation 2007 – 2013" dating from 6<sup>th</sup> of April 2005 was used as main document. It was a natural choice: if EU is to assign funds depending on this framework programme, Romania must have comparable and compatible priorities in order to be able to access European funds. According to the above-mentioned document, four crucial domains have been identified: enterprise competitiveness, especially SMEs; innovation; information society; energetic efficiency. In order to simplify, the four priorities have been reduced to three, by merging innovation and information society into a single one.

The same above-mentioned document of the European Commission named the statistical indicators specific to each priority. The favourite information source were Eurostat (Eurobarometer, European Innovation Scoreboard, Structural Indicators, etc), OECD and various

national data bases. The analysis included those statistical indicators whose values could be compared at the EU and Romania level, not older than 2002. Then the soft indicators, based on surveys, were introduced. Their purpose was not only to replace the statistical indicators for which no data was available, but also to supplement the necessary information for each crucial domain. These soft indicators were selected and took from the Global Competitiveness Report 2004-2005, done by the International Economic Forum, one of the most frequently cited sources at a worldwide scale and one of the most reliable as well. This soft indicators source was also a natural choice, as the Global Competitiveness Report has the same theoretical framework as the one used in this strategy, namely Porter's work. All indicators have been selected so that they would be financed through structural funds.

After obtaining the data for each indicator, both at Romania and EU level, the EU-25 average was calculated. Then, the same scale used for the soft indicators was applied to the hard indicators in order to compare them. The following formula was used for scaling:

$$\text{Scaled indicator} = 6 * (\text{original value} - \text{minimum}) / (\text{maximum} - \text{minimum}) + 1$$

The minimum and maximum values included the data on Romania. The next step consisted of calculating the gap between the values characteristic to Romania and the EU-25 average. Finally, the indicators were arranged in accordance to the determined gaps.

In accordance with the methodological premises, all indicators have been equally weighted within each of the priorities. Regardless their hard or soft nature, all indicators were weighted with  $1/n$ , where  $n$  is the total number of indicators. This method is the most statistically-neutral, in the absence of conclusive econometric tests (allowing the calculation of regression coefficients).

The prioritisation is then resulting from the calculation of indicator-based gaps. As all indicators are financeable, the starting premise will be that the largest amount of funds will be allocated to measures covered by indicators with largest gaps. Moreover, as all indicators are equally weighted within each priority, a top of priorities may be established according to the weight of the aggregated priority gap in the total SOP gap.

In conjunction with the determining the relative lag on the basis of indicators, a more sophisticated, double weighting system was used:

- weighting according to the competitive development phase
- weighting according to the economic development priorities set by EU for itself (program convergence weighting)

The first weighting procedure takes into account the development stage of the Romanian economy. Each measure of the SOP is related to a certain factor endowment, which in turn corresponds to a specific development stage (according to the theoretic framework, based on Porter's competitive diamond, there are three stages: factor-based economy, investment-based economy and innovation-based economy). These development stages have a specific weight (set as part of the model used by Porter in the Global Competitiveness Report), in function of the current level of the analysed economy (the Romanian economy is currently in transition from a

factor-based stage to an investment-based one. The weights vary between 50% for the investment related indicators and only 10% for innovation related indicators. The rationale is given by the difficulty of Romania to focus on innovation directly, without proper investments and a sound economic base. Burning stages is possible, but in terms of absorbing structural funds, it is by far more likely to absorb funds with investment-type measures, rather than with innovation-type measures.

The second weighting procedure provides the following procedure:

- more than par weight of 115% (coefficient of 1.15) for measures that coincide with current EU priorities (coordination of competitiveness policy, research and development, SMEs, information society)
- par weight of 100% (coefficient of 1) for measures that lead to convergence with existent EU policies (quality certification etc.)
- below par weighting of 85% (coefficient of 0.85) for measures which do not constitute EU priorities (e.g. tourism, energy – horizontal sectors where interventions are susceptible of damaging the competitive environment; private capital plays the main part here)

Initially, the existing lags are captured by way of indicators. Subsequently, the double weighting system reconciles Romania's standpoint, as a candidate state in a different competitive phase than the Union, with that of the EU, which has in place a series of priorities set within the existing policies or the approved agenda, as part of the Revised Lisbon Strategy.

## ANNEX 8: Gap indicators used in the programming exercise

### Priority Axis 1: An innovative productive system

Nr.	Indicator	Romania	EU 25	Gap compared to EU 25
I1	ISO 9001(2003) certification [quality standards] / 1000 inhabitants	0.077	0.840	-2.5
I2	Number of ISO 14001(2003) certifications [environment standards] / 1000 enterprises	0.0002	1.8	-2.3
I3	Weight of risk capital for <i>start-up-s</i> in GDP <sup>23</sup>	0.003	0.025	-1.7
I4	Financial market development degree (sophistication)	3.4	4.9	-1.5
I5	Clusters' development stage	2.7	3.7	-1.0
I6	Access to credits/loans	3.2	4.1	-0.9
I7	Local existence of research services and specific training	3.9	4.8	-0.9
I8	Access to financing on capital market	4.6	5.2	-0.6
I9	Efforts' coordination for increased competitiveness	3.9	4.0	-0.1
I10	Rate of new companies' registration	12.58	10.1	0.9

### Priority Axis 2: Research and Development for competitiveness

No.	Indicator	Romania	EU 25	Gap compared to EU 25
IIA1	Sales of new-to-firm, but not new-to-market products (% of turnover)	1.61	16.80	-4.2
IIA2	Employment in high-tech services (% of total workforce)	1.45	3.19	-3.2
IIA3	Business R&D expenditures (% of GDP)	0.23	1.27	-2.6

<sup>23</sup> This is an EUROSTAT statistics indicator (hard) that is also confirmed, as priority, by a pool indicator (soft) [2.06 *Venture capital availability* – gap -1.3] from Global Competitiveness Report (GCR 2004) drawn up based on Porter methodology;

IIA4	EPO patent applications (per million population)	0.85	133.59	-2.6
IIA5	Sales of new-to-market products (% of turnover)	0	0.03	-2.1
IIA6	USPTO patent applications (per million population)	0.17	59.92	-1.9
IIA7	Level of usage of own trade marks	3.1	4.7	-1.6
IIA8	SMEs involved in innovation co-operation (% of all SMEs)	2.92	7.08	-1.5
IIA9	Protection of intellectual property	3.3	4.8	-1.5
IIA10	Level of usage of marketing techniques	3.9	5.1	-1.2
IIA11	Research co-operation between universities and industry	2.7	3.8	-1.1
IIA12	Innovation capacity	3.4	4.4	-1
IIA13	Employment in medium-high, and high-tech manufacturing (% of total workforce)	5.32	6.60	-0.8
IIA14	Co-operation level between clusters	3.5	4.3	-0.8

### Priority Axis 3: IT&C for private and public sectors

Nr.	Composite Indicator <sup>24</sup>	Gap compared to UE 25
IIB1	ITC usage in the private sector	-3.1
IIB2	Citizens' access and Internet use	-1.9
IIB3	e-Government	-2.5
IIB4	e-Education	-1.0
IIB5	e-Health	-0.3
IIB6	Electronic commerce	-0.7
IIB7	Informatics security	-0.5

<sup>24</sup> These composite indicators have been calculated by aggregating a number of 29 sub-indicators taken up from EU statistics (Eurostat). Dates for Romania and for EU 25 cannot be presented in the table because of the composite character of indicators;

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

Nr.	Indicator	Romania	EU 25	Gap compared to EU 25
III1	Economy's energy intensity <sup>25</sup>	1,266.5	209.9	-5.5
III2	Eco-efficiency development in energy consumption field (million EUR/ktoe), 1990-2002	0.9	4.2	-1.4
III3	Energy efficiency's prioritization at society level	3.4	4.5	-1.1
III4	Renewable energy weight –Contribution of electricity from renewable sources in total energy consumption (%)	24.3	12.8	1.2

**Priority Axis 5: Romania, an attractive destination for tourism and business**

I11	Tourism weight in GDP	1.4	4.6	-1.5
I12	Tourism weight in exports	3.6	11.7	-1.0

Priority Axis	Indicators	Gap (not weighted)	Weighting				Gap (weighted)	Financial allocation (%)
			Weighting competitive phase		Weighting agenda convergence			
			Competitive phase	Phase weighting	Convergence degree	Coefficient		
<b>Pr.A 1</b>	<b>Indicators - enterprises</b>						<b>-0.54</b>	<b>41.1%</b>
Interv. Field 1	Organized efforts for increasing competitiveness	-0.1	Composite	45%	High	1.15	-0.1	
Interv. Field 1	Number of ISO 14001(2003) certifications at 1000 enterprises	-2.3	Investments	50%	Par	1.00	-1.1	

<sup>25</sup> Energy gross domestic consumption reported to GDP (constant prices, 1995=100) – kg oil equivalent to 1000 euros



Interv. Field 1	Number of ISO 9000(2003) certifications at 1000 inhabitants	-2.5	Investments	50%	Par	1.00	-1.2	
Interv. Field 1	Final energy intensity	-2.8	Composite	30%	Low	0.85	-0.7	
Interv. Field 2	Development degree (sophistication) of financial market	-1.5	Factors	40%	Par	1.00	-0.6	
Interv. Field 2	Access to financing on the capital market	-0.6	Factors	40%	High	1.15	-0.3	
Interv. Field 2	Access to credits/loans	-0.9	Factors	40%	Par	1.00	-0.4	
Interv. Field 2	Venture capital invested in start-ups (% in GDP)	-1.7	Investments	50%	High	1.15	-1.0	
Interv. Field 3	Stage of clusters development	-1.0	Composite	45%	High	1.15	-0.5	
Interv. Field 3	Ratio of new enterprises registration	0.9	Composite	45%	High	1.15	0.5	
<b>Pr. A 2</b>	<b>Indicators - R,D&amp;I</b>						<b>-0.51</b>	<b>39.1%</b>
	<b>R,D&amp;I</b>						<b>-0.6</b>	<b>53.7%</b>
Interv. Field 1	Sales of new-to-firm, but not new-to-market products	-4.2	Investments	50%	Low	0.85	-1.8	
Interv. Field 1	Local availability of research and specific professional training services	-0.9	Factors	40%	Par	1.00	-0.4	
Interv. Field 1	Capacity for innovation spreading, and exploitation	-1.8	Composite	25%	Par	1.00	-0.5	
Interv. Field 1	Innovation capacity	-1.0	Innovation	10%	High	1.15	-0.1	
Interv. Field 1	Sales of new-to-market products	-2.1	Innovation	10%	High	1.15	-0.2	
Interv. Field 2	Business R&D expenditures (% of GDP)	-3.2	Composite	30%	High	1.15	-1.1	
Interv. Field 2	Public R&D expenditures (% of GDP)	-1.2	Composite	30%	High	1.15	-0.4	
Interv. Field 3	Research co-operation between universities and industry	-1.1	Composite	25%	High	1.15	-0.3	

Interv. Field 3	SMEs involved in innovation co-operation (% of all SMEs)	-1.5	Innovation	10%	High	1.15	-0.2	
<b>Pr. A 3</b>	<b>ITC</b>						<b>-0.5</b>	<b>46.3%</b>
Interv. Field 1	ITC use in the private sector	-3.1	Composite	45%	High	1.15	-1.6	
Interv. Field 1	Citizens' Internet access and use	-1.9	Factors	40%	High	1.15	-0.9	
Interv. Field 2	e-Government	-2.5	Innovation	10%	High	1.15	-0.3	
Interv. Field 2	e-Education	-1.0	Innovation	10%	High	1.15	-0.1	
Interv. Field 2	e-Health	-0.3	Innovation	10%	High	1.15	0.0	
Interv. Field 3	Electronic commerce	-0.7	Composite	33%	High	1.15	-0.3	
Interv. Field 3	Information security	-0.5	Composite	33%	High	1.15	-0.2	
<b>Pr. A 4</b>	<b>Indicators - energy efficiency and renewable resources</b>						<b>-0.26</b>	<b>19,8%</b>
Interv. Field 1	Making energy efficiency a priority of the Romanian society	-1.1	Composite	30%	Low	0.85	-0.3	
Interv. Field 1	Energy intensity	-2.8	Composite	30%	Low	0.85	-0.7	
Interv. Field 1	Developing the eco-efficiency in the energy consumption field	-1.4	Factors	40%	Low	0.85	-0.5	
Interv. Field 2	Weight of electricity produced from renewable resources within the national gross electricity production	1.2	Factors	40%	Low	0.85	0.4	
<b>Pr. A 5</b>	<b>Indicators - tourism</b>							
Interv. Field 1	Tourism weight in exports	-1.0	Composite	45%	Par	1.00	-0.5	
Interv. Field 1	Tourism weight in GDP	-1.5	Composite	45%	Par	1.00	-0.7	

## ANNEX 9: Methodology for gap calculation in IT sector

In order to calculate the gaps for Priority Axis 3, the Eurostat database was used – chapter: “Information society”, “Policy indicators”. In addition to this source, indicators from the Global Competitiveness Report (GCR) have been included. The use of these two sources aimed to provide a full coverage of the domain, as well as create the option of continuous update.

Despite all this, the lack of data for Romania in the case of some indicators brought on the use of SIBIS and eEurope+ reports. Considering that eEurope+ indicators are available only for candidate countries (referring to 2003), and in order to maintain comparability to the EU group, a correction factor was applied to the average, the maximum and the minimum value. Thus, using a very similar Eurostat indicator, the gap between the candidate countries’ average and that of EU was determined. For the cases where the similarity between eEurope+ and Eurostat indicators was not good enough, but even the difference between Romania and the candidate countries was significant, the gap was estimated only with reference to these countries. During future exercises, the data series will be rebuilt on the basis of Eurostat indicators available at that time.

Corrections were applied to the following indicators:

Indicator	Correction
Share of population owning a PC	The Eurostat indicator’s calculation method differs. The difference relative to the candidate countries has been maintained.
Share of population owning a PC connected to the Internet	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar Eurostat indicator. (The share of households with Internet access in 2004).  The average value is multiplied by 1.145; the maximum value multiplied by 1.3.
The share of individuals using the Internet to interact with public authorities (official documents download)	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar EU25 indicator (the same indicator, but observing those who have accessed the Internet during the last 3 months)  The average value is multiplied by 1.213; the maximum value multiplied by 1.41. Observation: Luxembourg was not considered the maximum value.
The share of individuals using the Internet to interact with public authorities (persons who returned filled-in forms)	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar EU25 indicator (the same indicator, but observing those who have accessed the Internet during the last 3 months)  The average value is multiplied by 1.116; the maximum value multiplied by 1.06.
Number of protected Internet servers/ million of inhabitants	With the average value of both EU15 and the candidate countries (of 2003) available, the EU25 average was calculated as a weighted average depending on the

	population of the two entities.
The share of individuals owning an Internet connection who have encountered problems caused by computer viruses during the last 12 months	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar Eurostat indicator. (The share of households with Internet access in 2004).  The average value is multiplied by 1.17; the maximum value multiplied by 4.62 and the minimum is multiplied by 0.92.
The share of Internet users who took measures regarding computer security	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar Eurostat indicator. (The share of households with Internet access in 2004).  The average value is multiplied by 1.02; the maximum value multiplied by 1.27 and the minimum is multiplied by 0.61.
The share of physicians who keep electronic records of their patients	The Eurostat indicator's calculation method differs. The difference relative to the candidate countries has been maintained.
The number of computers/ 100 school students	The Eurostat indicator's calculation method differs. The difference relative to the candidate countries has been maintained.
The number of computers/ 100 high-school students	The Eurostat indicator's calculation method differs. The difference relative to the candidate countries has been maintained.
The number of computers connected to the Internet/ 100 high-school students	The Eurostat indicator's calculation method differs. The difference relative to the candidate countries has been maintained.
The share of Internet users (during the last 3 months) who purchased goods electronically	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar Eurostat indicator. (The share of households with Internet access in 2004).  The average value is multiplied by 1.19; the maximum value multiplied by 4.27.
The share of firms who received on-line trade order	The gap between the candidate countries and the EU25 average was calculated on the basis of a similar Eurostat indicator. (The share of households with Internet access in 2004).  The average value is multiplied by 1.145; the maximum value multiplied by 2.45.
The share of firms with e-commerce accounting for more than 1% of the turnover	The Eurostat indicator's calculation method differs. The difference relative to the candidate countries has been maintained.

### C. INDICATIVE LIST OF MAJOR PROJECTS

Annex 10

#### Indicative list of major projects - proposals in energy sector -

<b>KEY AREA OF INTERVENTION</b>		<b>Improvement of energy efficiency</b>	
<b>INDICATIVE OPERATION</b>		<b>Supporting investments in refurbishment, upgrading and rehabilitation of existing power and heat capacities in order to improve the energy efficiency (capacities for electricity and heat generation, co-generation capacities (CHP), equipment, etc )</b>	
<b>No.</b>	<b>Company</b>	<b>Project name</b>	<b>Total value exclusive VAT (EURO)</b>
<b>1</b>	Romanian Authority for Nuclear Activities - "RAAN"	Installing of 100 MW turbo-generator using the 420 t/h boiler no. 7 as a source in order to produce electricity delivering into Romanian Power System	51,900,000
<b>2</b>	Turceni Power Complex	Rehabilitation and modernization of unit no. 3 from Turceni TPP (Thermal Power Plant)	129,558,030
<b>3</b>	Turceni Power Complex	Rehabilitation and modernization of unit no. 6 from Turceni TPP (Thermal Power Plant)	133,402,830
<b>4</b>	Electrocentrale Deva	Deva TPP (Thermal Power Plant) - Rehabilitation of unit no. 1	93,840,000
<b>5</b>	Craiova Power Complex	Rehabilitation of unit no.1 of 150 MW from Craiova II CHPP (Combined Heat Power Plant)	84,000,000
<b>KEY AREA OF INTEVENTION</b>		<b>Reducing the negative environmental impact of the energy system</b>	
<b>No.</b>	<b>Company</b>	<b>Project name</b>	<b>Total value exclusive VAT (EURO)</b>
<b>6</b>	Romanian Authority for Nuclear Activities - "RAAN"	Installation of flue gas desulphuration at the factory chimney - Large Combustion Plant 2 (LCP 2)	62,200,000

<b>7</b>	Craiova Power Complex	Common installation of flue gas desulphuration at unit no 1 and 2, Craiova II Power Plant	66,000,000
<b>8</b>	Craiova Power Complex	Installation of flue gas desulphuration at unit no 8 - 315 MW from Isalnita Power Plant	50,000,000
<b>9</b>	Electrocentrale Deva S.A.	Installation of flue gas desulphuration at unit no. 1 (210 MW) - Deva Thermal Power Plant	42,600,000
<b>10</b>	Electrocentrale Deva S.A.	Installation of flue gas desulphuration at unit no. 3 (210 MW) - Deva Thermal Power Plant	29,600,000
<b>11</b>	Rovinari Power Complex	Installation of flue gas desulphuration at unit no. 4 at Rovinari Thermal Power Plant	57,140,000
<b>12</b>	Rovinari Power Complex	Installation of flue gas desulphuration at unit no. 5 at Rovinari Thermal Power Plant	57,580,000
<b>13</b>	Electrocentrale Bucuresti SA	Installation of flue gas desulphuration emanated from high sulfur black oil burning - Large Combustion Plant no. 2 at Branch South Bucharest	30,000,000

- according to Managing Authority's indication, the current list excludes major project proposals from TERMOELECTRICA S.A. due to current uncertain financial status

NOTE : 1) This list is written down based on project proposals sent by the beneficiaries up to 03.11.2006  
2) this list is a draft and can be modified depending on new or withdrawn project proposals of the potential beneficiaries