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Innovative Economy 2007 – 2013

National Strategic Reference Framework 2007 – 2013

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INTRODUCTION

The Innovative Economy Operational Programme 2007-2013 (OP IE) is one of the instruments for the implementation of the National Strategic Reference Framework for the years 2007-2013 (NSRF)[1]. The NSRF sets out the national framework for intervention within the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund, as well as the rules for coordination of the EU cohesion policy and respective national, sectoral and regional policies. Furthermore, it defines the mechanism for coordination of the programmes co-financed from the ERDF, the ESF and the Cohesion Fund, programmes co-financed from the European Agricultural Fund for Rural Development (EAFRD), the European Fisheries Fund (EFF) and the European Investment Bank (EIB), as well as with the use of other financial instruments.

According to the NSRF implementation system, the minister in charge of regional development is responsible for preparing a draft of the OP IE, acting as coordinator of works carried out by the minister in charge of economy, the minister in charge of tourism, the minister in charge of science and the minister in charge of informatisation.

The OP IE, managed by the minister in charge of regional development, is aimed to contribute to improvement of the intervention cohesion within the scope of competence of the ministers in charge of economy, science, tourism and informatisation. It will allow for adjusting the offer of the science sector to the needs of enterprises, particularly small and medium sized (SMEs) and will eventually contribute to an increased transfer of modern solutions from the science sector to the economy. The resulting synergy will generate an extra impulse that will allow for accelerating the pace of economic growth and for creating the basis for long-term competitiveness of the Polish economy.

All priority axes of the OP IE aim at support for innovativeness and measures that support innovativeness. In the OP IE, innovativeness should be understood as introduction of novelties to economic practice. More precisely, innovativeness should denote introduction of new or significantly improved solutions regarding a product (a good or service), a process, marketing or organisation[2]. According to the scope of an initial investment definition included in the regulation 1628/2006 within OP IE, the investments as a result of which new or significantly improved products arise, will be supported in the first place. In connection with the above the support is mainly given to the investments in the scope of product and process innovations. At the same time, the innovative organizational and marketing solutions constitute eligible expenditures and can also be included in projects. Innovativeness is not of objective but relative nature, with respect to a precise enterprise that implementing the innovation by itself becomes – in a given period – an innovative enterprise. As a result the innovativeness can occur on various levels – both of the enterprise itself and of a given market, country or world. Novelty and a grade of expansion (diffusion) characterize the innovativeness. Supporting first of all these innovations which are characterized by the possibly short term of application worldwide or those characterised by the greatest diffusion potential will be a priority in the OP IE, because they are of the greatest importance for the Polish economy as a whole, for its modernization, improvement of its competitiveness on an international

[1] The document entitled "National Strategic Reference Framework 2007-2013 supporting economic growth and employment" was adopted by the Council of Ministers on 29 November 2006.

[2] Oslo Manual, Guidelines for Collecting and Interpreting Innovation Data, third edition of 2005, joint publication of the Organisation for Economic Cooperation and Development (OECD) and the Statistical Office of the European Communities (Eurostat).

market and ability to create jobs based on the knowledge. In the OP IE a particular emphasis will be put on a product and also process, marketing and organizational innovativeness, connected with a digital economy based on the knowledge, seeing in it the biggest potential of economical increase and export capacities. It is essential for the Programme to support the innovativeness of SMEs which thanks their flexibility and openness to new solutions are capable of particularly fast creating and implementing the innovations.

Simultaneously, the support for business environment institutions (BEI) and scientific units is conditioned by an appropriate demand of innovative enterprises for their services. The innovativeness of a low degree of expansion will be promoted and supported in Regional Operational Programmes (ROPs) and the Operational Programme Development of Eastern Poland, 2007-2013 (EPD OP). The Programme includes measures supporting the innovativeness, offering the support for business environment institutions and scientific units, provided that there is the demand of innovative enterprises for their services.

Within the OP IE, there will also be a possibility to support innovative projects that will be focusing on changes in production or consumption models, and, consequently, will directly or indirectly contribute to reduction of pressures on particular environmental components (air, water, soil, nature, landscape) and the environment as a whole. This will be achieved through limiting emission and eliminating, from economic use, substances that are particularly damaging to the environment and human health, by limiting the amounts of non-recyclable waste, by reducing the demand for non-renewable resources and by limiting, or at least rationalising the use of energy. This also refers to innovative techniques of environmental protection sensu stricto that ensure better effectiveness of the reduction of effects on the environment with reduced costs and outlays of materials and energy.

The OP IE consists of the following components:

- diagnosis of selected areas aimed at establishing and developing a knowledge-based economy,
- SWOT analysis,
- information on present domestic and foreign assistance for the enterprise and science sectors and aimed at creating an information society,
- strategy setting out the main objective and the detailed objectives of the OP IE that will be achieved as a result of its implementation,
- description of individual priority axes defining the extent of public intervention within the framework of the OP IE,
- description of the institutional implementation system,
- financial tables presenting division of resources into particular priority axes and the years of the OP IE implementation,
- annexes.

1. Diagnosis of selected areas aimed at establishing and developing a knowledge-based economy [3]

1.1 Description of the enterprise sector in Poland

1. There were more than 3.6 million economic entities registered in Poland at the end of 2006 out of which 96.2% belonged to the private sector[4]. The largest group among these enterprises were micro-enterprises constituting about 95.1% of all economic operators. Small and medium-sized enterprises constituted 4.1% and 0.8% respectively, whereas large companies accounted for 0.1% of all enterprises operating in Poland. It is estimated that 1.7 million of the registered entities are actually active.

2. The share of small and medium enterprise (SME) sector in generating the GDP is almost 50%, from that the share of small enterprises is 40%, and medium ones - 9%. These enterprises constitute 99.8% of the total number of enterprises active in Poland. About 68% of employees in a private sector work in a small or medium enterprise. The data mentioned above indicates that the SME sector plays a very important role in a national economy.

3. Micro-enterprises operate in particular in crafts, commerce, transport, industrial manufacturing, construction industry, real estate and business services. They employ about 3.2 – 3.5 million people which amounts to nearly 20% of total employment in the economy (on average 2 persons per micro-enterprise).

4. The majority of enterprises in Poland are sole proprietorships, amounting to 76.1% of all existing companies. The second most popular organisational structure is a civil law partnership (a company that has no legal personality) constituting 7.7% of all economic operators. Companies based on the commercial law – mostly limited liability companies (Sp. z o.o.) amount to 6.7% of all economic entities. Other organisational schemes (e.g. cooperatives, associations and foundations) are significantly less popular.

3 The statistical data comes from the Central Statistical Office (GUS), unless otherwise stated. Forecasts presented hereby have been prepared by the Gdansk Institute for Market Economics (IBnGR). Statistical data presented in this chapter will be updated before the adoption of the final version of the OP IE.

4 In the years 2003 – 2004 private enterprises generated about 79% of Gross Domestic Product (GDP) and about 55% of the employment in the economy.

1.2 The enterprise sector in Poland in comparison with the EU[5] enterprise sector

5. The accession of the ten new members into the EU caused an increase in the number of enterprises in the EU by 24%. Prior to the enlargement in 2001, there were around 18.7 million enterprises operating in the EU-15. In the EU-10 countries there were around 6 million enterprises, including some 3.4 million in Poland. Consequently, enterprises operating in Poland constitute about 13.8% of the total number of enterprises operating in the EU-25. In 2003, number of people employed in the Polish enterprise sector amounted to 7% of total EU-25 employmed in enterprises. However, it has to be stressed that, as a result of a downfall of the Polish labour market in the years 2001 – 2004, this share has probably diminished.

6. In 2001, the enterprises operating in the EU-15 and in the EU-10 candidate countries generated the added value of EUR 4,500 billion and the enterprises operating in Poland accounted for around 3.2% of this sum. This index is three times lower for the number of operators and two times lower than the employment, if compared to the said indices. Such data proves that the productivity level of Polish enterprises and the level of their technological development are far lower than those of enterprises operating in the EU-15.

1.3 Innovativeness of enterprises operating in Poland

7. Innovativeness[6] of the sector of industrial enterprises in Poland is still very low which can be reflected by one of the lowest innovation indicators[7] in the European Union[8]. The share of innovative

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5 In order to maintain data comparability, 2001 Eurostat data were used in this chapter. The data cover only active enterprises, i.e. those that really run business operations. Because of methodological reasons they differ from the data published by the Central Statistical Office, used in other chapters of this paper.

6 According to *Oslo Manual* (compare: footnote 2), the notion of innovation refers to introduction of a new or considerably improved solution regarding a product (good or service), process, marketing or organisation to the enterprise's practice. Innovations consist in introducing a novelty in practice. Implementation of a new product (good or service) consists in offering it on the market. Implementation of a new process, new marketing solutions or a new organisation consists in its application in the present functioning of the given enterprise.

- A product innovation is introduction by an enterprise of a new good or service or considerable improvement of previous goods or services with regard to their characteristics or use. Improvement may be connected with technical parameters, components, materials, software, user-friendly maintenance and other functional features.
- A process innovation is introduction of new or significantly improved methods of production or supply in the enterprise's practice.
- A marketing innovation is application of a new marketing method covering significant changes in the product appearance, package, positioning, promotion, price policy or business model, stemming from a new marketing strategy of the enterprise.
- An organisational innovation is application of a new method of organisation of the enterprise's business activity, new organisation of workplaces or new organisation of external relations.

Innovative solutions (a product, a process, marketing or an organisation) may result form the enterprise's own R&D activity, cooperation with other enterprises and institutions, or may result from acquisition of knowledge of intangible nature (patents, licences, software, know-how, technical, marketing, organisational or training services), or of tangible nature (machines and equipment with better parameters).

7 An innovation indicator determines the share of a given sector of enterprises in the analyzed population of industrial enterprises which within three year period introduced innovations.

8 The indicator for Poland amounts to 0.22, whereas the EU-25 average is 0.45; Poland is situated on the last position in the EU (together with Greece and Latvia) in terms of the size of this indicator. *European Innovation Scoreboard 2006. Comparative Analysis of Innovation Performance*, European Commission, Luxembourg 2006.

enterprises[9] in an industrial enterprise sector, in the 1998-2000 period, amounted to 17.1%[10] and it was low in comparison with the EU-15 average of the 1994-1996 period, amounted to 51%. It is worth to note that in the 2002-2004 period the share of innovative enterprises among all industrial enterprises increased to the level of 26.6%, when for the same period for the UE-27 this share decreased to 41.5%[11]. Despite the fact Poland was still situated in terms of that on a far position, overtaking only such countries as Malta, Romania, Hungary, Bulgaria and Latvia. At the same time in a group of medium and large enterprises in Poland (over 49 employees) the share of innovative enterprises was significantly higher and amounted for the 1998-2000, 2002-2004 and 2003-2005 periods to 33.1%, 45.6% and 41.5% respectively[12]. However, the position of Poland is much better in case of the indicator determining the share of enterprises introducing a new product to a market in the group of innovative enterprises in total. In 2004 this share amounted to 44.1%, as the EU-27 average amounted to 37.4%[13]. In 2005 the share of enterprises that run an innovative activity[14], amounted to 38.2% and decreased by 0.5 percentage points in comparison with 2004. Additionally, we also observe a lower total share of industrial enterprises running an innovative activity in a private sector (37.0% in 2005) than in a public sector (48.4% in the same year). A generally low innovativeness performance of Polish enterprises results from their poor financial condition and too little interest in undertaking research and development activities that are characterized by a high risk of failure. Additionally, mentioned data indicate that an innovative performance of enterprises is positively correlated with their size. In case of small enterprises, employing from 10 to 49 persons, we deal with a particular low performance of innovativeness.

9 An innovative enterprise is an enterprise in which in the given period of observation (e.g. within the last three years) an innovation was made, i.e. a novelty was introduced to the practice in relation to a product (goods or service), process, marketing or organization. In accordance with the above definition, an enterprise which has at its disposal certain advanced technology and sells it to other enterprises but which does not develop it, is not an innovative enterprise.
The number of innovative enterprises, i.e. which in the analyzed period introduced at least one new or improved product and/or process, as % of the totality of enterprises in the given sector.

10 Statistical researches covered economic operators having over 9 employees and included into sections C, D and E according to the Polish Classification of Activities. Central Statistical Office: *Innovative Activity of Industrial Enterprises in 2002-2004,* tables 2.1 and 2.2.

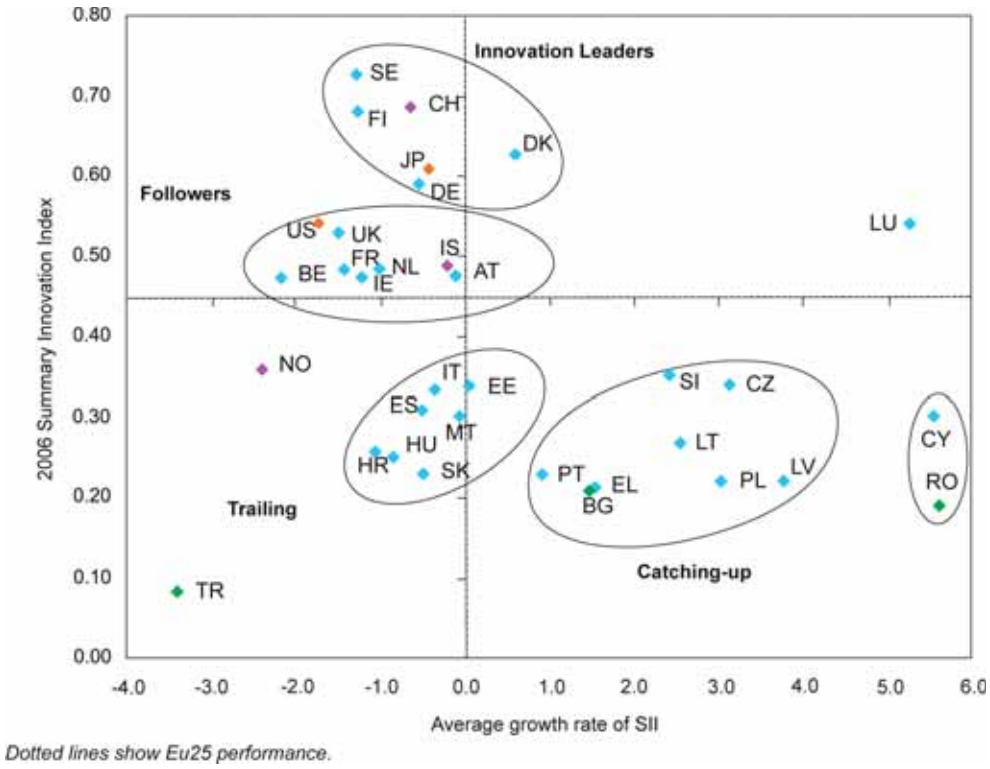
11 Eurostat: *Statistics in focus – Science and Technology 61/2007*, diagram 1.

12 Central Statistical Office: *Innovative Activity of Industrial Enterprises in 2002-2004*, tables 2.1 and 2.2. and Central Statistical Office Science and Technology in 2005, table 2.2.

13 Eurostat: *Statistics in focus – Science and Technology 61/2007*, table 2.

14 The number of enterprises undertaking an innovative activity, i.e. enterprises that in the given reporting year have incurred expenses for an innovative activity, as % of the totality of enterprises in the given sector. Compare: footnote 7.

Figure 1.3.1. Innovation indicators and their dynamics in selected countries



Dotted lines show Eu25 performance.

There are five groups of countries marked in the figure:

- at the top: the most innovative countries,
- in the middle: countries with over average innovation performance,
- at the bottom in the middle: countries catching up in terms of innovation performance,
- at the bottom on the left: countries whose distance in relation to the top performers is extending,
- at the bottom on the right: countries quickly catching up in terms of innovation performance because of their particular conditionings

Source: European Innovation Scoreboard 2006. Comparative Analysis of Innovation Performance, European Commission, Luxembourg 2006.

8. In the analysis of industrial enterprise expenditures on innovative activities in the years 2000-2004, the variation in the size do expenditures, expressed both in face categories and with reference to the GDP are clearly noticeable. In the years 2000-2005 the ratio of expenditures on the innovative activity of industrial enterprises to the GDP varied between 1.48% (in 2001) and 1.87% (in 2003). Despite the noted increase of expenditures on the innovation activity in the years 2002-2004, these expenditures are still relatively low, and in 2005 they dropped by nearly PLN 1 billion in comparison with the previous year.

9. In the structure of expenditures on the innovative activity according to the resources of their financing (compare: table 1.3.1.) the share of own sources of enterprises, whose share together with a bank credit varies around 90%, is dominating. It is necessary to underline a slight share of resources coming from the venture capital in financing the innovative activity.

Table 1.3.1. Structure of expenditure on innovative activities in the manufacturing sector according to sources of financing in 2001-2005

Year	Own funds	Bank loans	Non-returnable foreign funds	Budgetary funds	Venture capital funds	Other
2001	71,9%	17,7%	2,7%	1,5%	no data available	6,2%
2002	65,4%	22,4%	0,7%	1,0%	no data available	10,5%
2003	66,8%	13,7%	1,0%	0,7%	0,1%	17,7
2004	78,9%	15,6%	1,1%	1,1%	0,0%	3,3%
2005	76,2%	13,6%	1,0%	1,7%	-	7,5%

Source: GUS: Science and Technology in 2001, 2002, 2003, 2004, 2005, GUS, Warsaw.

10. The structure of expenditures on the innovative activity in 2005 indicates that a technological progress took place mainly through the modernization of machines – less than 60% of the totality of investments constituted the expenditures on purchases of machines and devices. However, the share of R&D spending, constituting one of the major sources of innovation was considerably lower than in other developed countries – it amounted merely to 9.6%. Similarly, for the purchase of ready technologies in the form of documentations and rights the enterprises have assigned only about 2.4% of expenditures assigned for the innovative activity. This structure of expenditures shows that the innovative activity in Poland is mainly based on purchasing a so-called hard technology what is rational in the context of the need to reduce a technological gap.

11. Innovativeness[15] of enterprises in the service sector in Poland has significantly improved over recent years. It grew from 16%[16] in the years 1997-1999 to 22% in the years 2002-2003. Such a substantial growth in the service sector innovativeness, however, has to be considered in view of a new methodological approach that was adopted, namely the inclusion of entities from the science sector into the examined population (their level of innovativeness stands at 74.9%). Moreover, a significant increase in the innovativeness level of enterprises operating in the area of financial intermediary (from 23% in the years 1997-1999 to 45.8% in the years 2001-2003) also contributed to innovativeness growth in the service sector. To compare, the share of innovative enterprises in the service sector in the 1998-2000 period in the EU-15 amounted to 36%, and in the EU-27 for the 2002-2004 period – 37%. In particular states this share was diverse and for example in Germany it amounted to 57.5% and in Luxemburg – 53.2%, in Italy and Spain 33.5% and 32.1% respectively[17]. At the same time, analogically as in case of industrial sector enterprises, the service sector enterprises take a good position in the EU in relation to the indicator of the share of enterprises introducing a new product on the market in the group of innovative enterprises in total – in 2004 the indicator for Poland amounted to 50.5%, as the EU-27 average amounted to 33.7%[18]. Also factors hampering the innovative activity of enterprises in the service sector are similar as in the industrial sector, a similar correlation between an innovation performance of enterprise and its size appears as well.

[15] Measured with the share indicator of innovative enterprises in the totality of enterprises of the given sector – compare: footnote 4. The number of innovative enterprises, i.e. theses which in the analyzed period introduced at least one new or improved product and/or process as % of the totality of enterprises.

[16] All statistical data come from the GUS's study entitled *Innovative activities of enterprises in the service sector in 2001-2003*, Warsaw 2005.

[17] Eurostat: *Stastistics in focus – Science and Technology 61/2007*, table 2.

[18] Eurostat: *Stastistics in focus – Science and Technology 61/2007*, table 2.

12. The key factor determining the innovativeness of an economy is its ability to implement and commercialise new technologies. Among the major indicators measuring this ability there is, e.g. the share of exports and imports of high-tech products in total exports and imports. In Poland, the share of high-tech products since the beginning of 90s has maintained at the level of circa 2-3% (in 2005 it amounted to scarcely 3.2%).To compare, in 2003 this share amounted in the EU-15 to 17.8%, in the United States – 26.9%, in Japan – 22.7% and in Ireland – 29.9%. According to analyses of the OECD, Poland ranks among the countries with the highest relative advantage in the sectors of medium-low and low technology and simultaneously among the countries with the highest relative lack of advantage in the sectors of high and medium-high technology[19]. Poland's balance of payment in the area of technology has also been negative for many years. It refers to industrial property rights, services in the R&D area and technological services as well.

13. The share of new and modernised products in the total production sold also reflects Polish enterprises' ability to implement R&D results. Table 1.3.2. presents the share of new or substantially modernised products in total production sold. In the analyzed period it can be noticed a weak tendency in terms of the share growth of new products, both in the industry in total and in the section of industrial processing (according to the Polish Classification of Activity). The highest shares of new and modernized products in sale in 2005 in total were noted in manufacturing of coke, petroleum products and nuclear fuel (57.4%), in production of motor vehicles, trailers and semi-trailers (52.1%), in production of radio, television and telecommunication equipment and facilities (49.3%) and in production of office equipment and computers (42.5%). The mentioned branches can be recognized as the most advanced in the Polish economy.

Table 1.3.2. Share of new and modernised products sold in total production sold in 2002-2005 (%)

Title	2002	2003	2004	2005
	Products the production of which started in the years			
	2000-2002	2001-2003	2002-2004	2003-2005
Industry in total	16,7	20,7	20,9	21,8
Industrial processing in the industry	19,1	23,8	23,8	25,1

Source: GUS Science and Technology 2005, GUS, Warsaw.

14. Other important indicators of innovative performance are indices related to patent statistics, e.g. the number of submitted patent applications and the number of patents granted. The number of patent applications filed at the Patent Office of the Republic of Poland (UP RP) by Polish inventors over last years has maintained a very low level, barely over 2,000 annually[20]. Moreover, out of the total number of 6,593 patent applications submitted at the UP RP in 2005, 69.2% were related to foreign inventions, which is similar to the phenomenon observed in Western European countries as well. As regards the invention ratio, that is the number of patent applications submitted by Polish inventors per 10,000 inhabitants, in Poland in 1998 it was four times lower than the EU-15 average amounting to 2.6, and over nine times lower than the average of this ratio for the OECD which was 6.0. Altogether in 2005 in Poland 2,522 patents were granted, including 1,054 for domestic inventors[21].

[19] *Science and Technology in 2003. Information and Statistics of the Central Statistical Office,* Warsaw 2005.
[20] In 2005, 2381 2028 patent applications were filed.
[21] Science and Technology in *2005 r.*, GUS, Warsaw 2006, tabl. 3.1.

15. The number of patents granted abroad to Polish inventors in 2002 amounted to 142, including 10 granted by the European Patent Office[22] (EPO). Poland also has a very low ratio of both the number of patent applications submitted and patents granted in the United States (123 and 11 respectively in 2002).

16. The level of innovativeness of the economy clearly mirrors the share of import and export of advanced technologies (on the basis of the OECD list of 1995) in total import and export (Table 1.3.3.).

Table 1.3.3. Share of import and export of advanced technology products in total import and export in the years 2001-2005

Year	Import	Export
	in %	
2001	11,4	2,7
2002	10,1	2,2
2003	9,5	2,6
2004	9,2	2,3
2005	10,3	3,2

Source: Science and Technology in 2001, 2002, 2003, 2004 and 2005, GUS, Warsaw.

17. The share of export of advanced technology products in foreign trade has been maintaining since the beginning of 1990s at a relatively stable low level. For the EU, this value for export (in 2003) stood at 17.8%, having grown in 1990s by about ten percent points.

1.4 Financial results of the Polish enterprise sector

18. The diagnosis of the financial situation of the enterprise sector for enterprises employing over 9 persons in Poland has been based on three elements: total revenue analysis, financial results and turnover profitability[23].

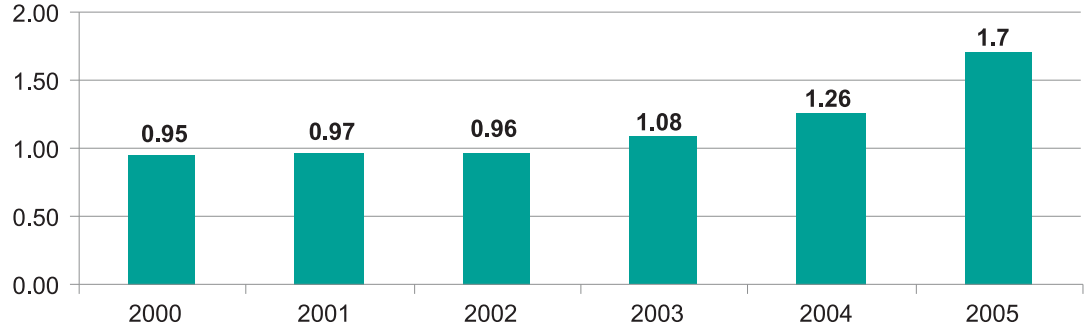
19. Following a good economic situation, the revenues of enterprises consolidated their high quotations. Although the revenue dynamics of the whole of enterprise activities in 2005 was lower than in the previous year, yet it is necessary to remember that there were exceptionally high economic and financial results of enterprises quoted in that year, so it is connected with a so-called base effect. After the period of economic situation weakness of economic operators, observed in the years 2001-2002, the enterprises note a high growth of revenues, and initial data of 2006[24] show that their situation has undergone a further improvement.

[22] Science and Technology in *2005 r.*, GUS, Warsaw 2006, tabl. 3.4.

[23] The data does not cover banks, insurance companies, brokerage houses, investment and pension funds, national investment funds, higher education institutions, independent public healthcare institutions, culture centres with legal personality, individual farmers.

[24] The value of revenues in 2006 amounts to PLN 1.8 billion, on the basis of CISG based on the form GUS F-01 (2006).

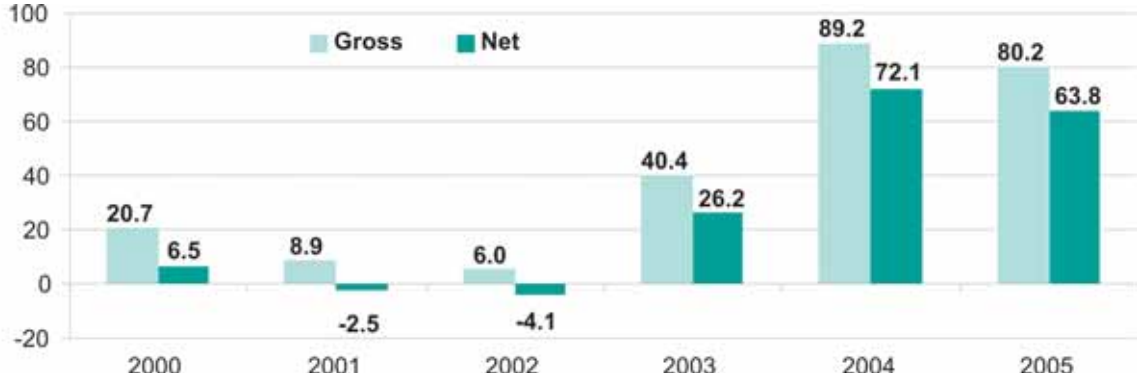
Figure 1.4.1 Total revenue of enterprises in Poland in the years 2000 – 2005 (PLN billion, current prices)



Source: GUS Statistical Yearbooks, Warsaw 2001, 2001, 2003, 2004, 2005, 2006.

20. An upturn in the Polish economy observed in recent years resulted also in an improvement of financial results of enterprises. The gross financial result increased by more than ten times in the years 2001-2005. According to the initial data, the upward tendency of financial results continued also in 2006, when the gross result grew to PLN 101.2 billion, and the net result to PLN 82.1 billion[25] (compare: Figure 1.4.2).

Figure 1.4.2 Financial results of enterprises in Poland in the years 2000-2005 (in PLN billion, current prices)



Source: GUS Statistical Yearbooks.

21. Significant ameliorations of financial results caused a visible profitability increase (compare Table 1.4.1). After two years of negative net profitability (2001 – 2002), the index became positive again in 2003. In 2004, profitability further improved: gross profitability amounted to 5.6% and net profitability – to 4.5%. In 2005 the turnover profitability slightly dropped, reaching the levels of 4.8% - gross profitability and 3.8% - net profitability respectively. The initial data of 2006 show a further improvement of enterprise profitability[26]. Although the favourable financial situation in the years 2003 – 2004 allowed entrepreneurs to accumulate substantial financial means, the level of investment increased only narrowly[27].

[25] CISG on the basis of the form GUS F-01 (2006).

[26] Net turnover profitability: 4.5, however, gross turnover profitability: 5.6 on the basis of CISG based on the form GUS F-01 (2006).

[27] Compare Chapter 1.5. Investments in the enterprise sector.

Gross and net turnover profitability indices of the enterprise sector in Poland in the years 2000-2005 (%)

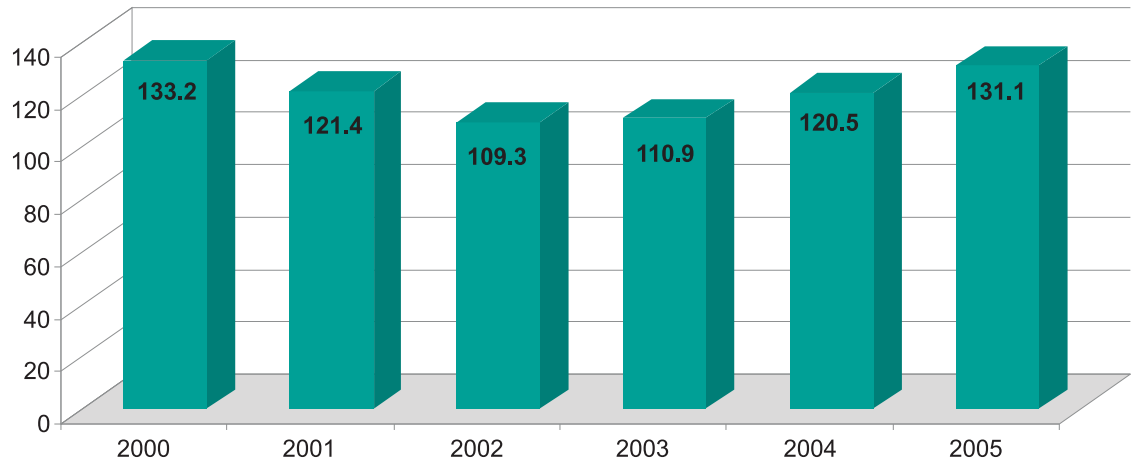
	2000	2001	2002	2003	2004	2005
Gross turnover profitability index	1,7	0,7	0,5	2,9	5,6	4,8
Net turnover profitability index	0,5	-0,2	-0,3	1,9	4,5	3,8

Source: GUS Statistical Yearbooks, Warsaw 2001, 2001, 2003, 2004, 2005, 2006.

1.5 Investments in the enterprise sector

22. The year 2000 was a peak year for investments in the enterprise sector (see Figure 1.5.1). In the following years (2001 – 2002), investment outlays started to fall due to the unfavourable economic situation. Negative effects of a market slump were enhanced by a restrictive monetary policy and a fall in foreign direct investments (FDI). An improvement in the condition of enterprises in 2003 and 2004 allowed for a break in the negative trend and for an increase in investment outlays in comparison with 2002. It is, however, necessary to emphasise that the level of investment outlays in 2003, despite a growth in comparison with 2002, was significantly lower than those observed in 2000 and 2001. First signs of a scant improvement of investment dynamics appeared already in 2004 – the gross outlays on fixed assets increased by 5.1% in real terms (as compared to 2003), and in 2005 by 7.7%. The lack of certainty about the development of economic situation and the presence of barriers for economic activity resulted in a slow increase of investment outlays, disproportionate to the opportunities created by the improvement of both domestic and international market situation.

Figure 1.5.1 Investment outlays in the enterprise sector in the years 2000-2005 (PLN billion, current prices)



Source: GUS Statistical Yearbooks, Warsaw 2001, 2001, 2003, 2004, 2005, 2006.

23. The sector of small and medium enterprises (SMEs) has a significant share in total investment of the enterprise sector. In 2000, about 50% of all private enterprises investment outlays were made by SMEs. However, this share decreased significantly in 2001 – 2002. In 2002, investment

outlays of SMEs constituted only 43.8% of all enterprise investment outlays[28], while their share increased narrowly in 2003 to 45.5%[29].

24. The wear ratio of fixed assets in the economy stands at over 50%. In the industry, the level of wear of machines, technical equipment and tools in 2005 stood at the level of 62.3%.

25. One of the reasons underlying the downfall of investments in the years 2001 – 2002 was a decrease of foreign investors' interest in the Polish economy in comparison to 2000 (see Table 1.5.1). In 2000-2003, the flow of FDI to Poland declined by ca. 60% (in PLN). FDI reached again the level above ca. EUR 10 billion in 2004. After the period of decline in 2005, in 2006 the value of foreign direct investments in Poland, counted in Euro, reached a not yet noted level of over 11 billion. The drop in investments in 2005 resulted among others from transactions involving repurchases of shares in Polish enterprises from non-residents by Polish companies.

Table 1.5.1 Foreign Direct Investments in Poland in the years 2000 – 2006

	2000	2001	2002	2003	2004	2005	2006
FDI (USD million)	10 334	6 372	4 371	a – 3 671 b – 4 313[51]	9 983	7 668	11 093
FDI (PLN million)	41 050	23 340	16 821	17 842	46 594	30922	43 014

Source: National Bank of Poland (NBP), Foreign direct investments in Poland in 2000, 2001, 2002, 2003, 2004, 2005; inflow of foreign investments in Poland in 2006 (initial data).

26. Stimulation of FDI flow to innovative areas with the potential for development and export is one of the most important challenges of the economic policy and one of the most important factors contributing to the improvement of the competitiveness of the enterprise sector. On the list of 100 most innovative enterprises in Poland in 2005, 18 companies (i.e. 18%) are foreign investors operating in Poland. At the same time, the share of products of new and modernised foreign enterprises in the sold production of the Polish industry stands at over 20% and tends to go up. The main investors in Poland are EU countries. The value of investment outlays of investors registered in the "old" EU Member States in 2005 constituted 85.1% of the FDI inflow to Poland, that is EUR 75.7 billion in total. The biggest amounts were invested by the Netherlands – EUR 16.4 billion, Germany – EUR 12.3 billion and France – EUR 9.6 billion, which totalled EUR 38.4 billion (50.7% of the total value of FDI in Poland). It is worth stressing that the position of the USA, although it has been decreasing, in still strong, despite the large geographical distance. The USA invested in Poland EUR 5.6 billion, which makes 7.4% of the total value of FDI[30].

27. In 2000 – 2003, the share of foreign companies in investment outlays in both the industry and the industrial manufacturing sector systematically grew which proved that foreign companies were widening the range and scale of their economic activity in Poland. The interest in the Polish economy on the part of foreign capital (both of concerns and SMEs) should be mainly attributed to cheap and qualified workforce, the low CIT rate, as well as availability of lands for investments and attractive prices of land. Over 50% of foreign investments are the so called *greenfield* investments. In 2004, this share fell a little, while in 2005 an increase of share of foreign companies in the investment outlays was observed. The structure of investment outlays, including those of companies with foreign capital, is presented in Table 1.5.2.

[28] Data based on *Report on the State of the Sector of Small and Medium-Sized Enterprises in Poland in the Years 2002-2003*, Ministry of Economy and Labour (MGiP) and Polish Agency for Enterprise Development (PARP), Warsaw 2004.
[29] *Report on the State of the SME Sector in Poland in the years 2003-2004*, Ministry of Economy (MG), Warsaw 2005.
[30] Draft *Assumptions for the Strategy for Promotion of the Polish Economy 2007-2015*, November 2006.

Table 1.5.2 Investment outlays in Poland, including investments by companies with foreign share in the years 2000 – 2005 (PLN million)

Title	2000	2001	2002	2003	2004	2005
Total investment outlays		121,362.9	109,265.9	110,859.8	120,467.0	131 055,0
Share of investment outlays of companies with foreign share in total investment outlays (%)	39.6	39.3	40.0	41.3	38.7	42,0
Investment outlays in the industry	37,707.5	35,888.5	34,621.6	37,387.3	41,911.0	45 211,0
Share of investment outlays of companies with foreign share in investment outlays in the industry (%)	49.1	47.2	54.1	56.2	51.2	52,5
Investment outlays in industrial manufacturing	26,522.8	23,235.2	23,068.0	26,041.5	30,227.0	32 413,0
Share of investment outlays of companies with foreign share in investment outlays in industrial manufacturing (%)	67.1	67.8	73.7	75.2	66.0	65,9
Number of investing companies with foreign share	8,475	8,230	8,251	9,164	9,540	9 950

Source: GUS Yearbooks, Business Activity of Companies with Foreign Share, GUS, Warsaw 2001, 2002, 2003, 2004, 2005, 2006.

28. Over recent years, a significant increase in the number of foreigners arriving in Poland has been observed, which adds to an increase of currency incomes in the tourist sector. In 2005, 64.6 million foreigners arrived in Poland, according to the records of the Border Guard (by 4.3% more than in 2004), including 15.2 million tourists, according to the estimations of the Institute of Tourism (growth by 6.4%).

Figure 1.5.2 Arrivals of foreigners and tourists in Poland in the years 2000-2005 (in thousand)

Source: Institute of Tourism in Warsaw, 2006.

29. In 2005, total income under arrivals of foreigners stood at USD 6,200 million, out of which USD* 3.3 billion (i.e. 53.5%) refers to tourist, and the rest to one-day visitors. The data shows a small development potential of the sector. However, it is necessary to modernise tourist products in order to increase Poland's attractiveness. The lacks of financial outlays in this respect in a long-term perspective may negatively affect arrivals of tourists and foreigners, and, consequently, incomes from tourism.

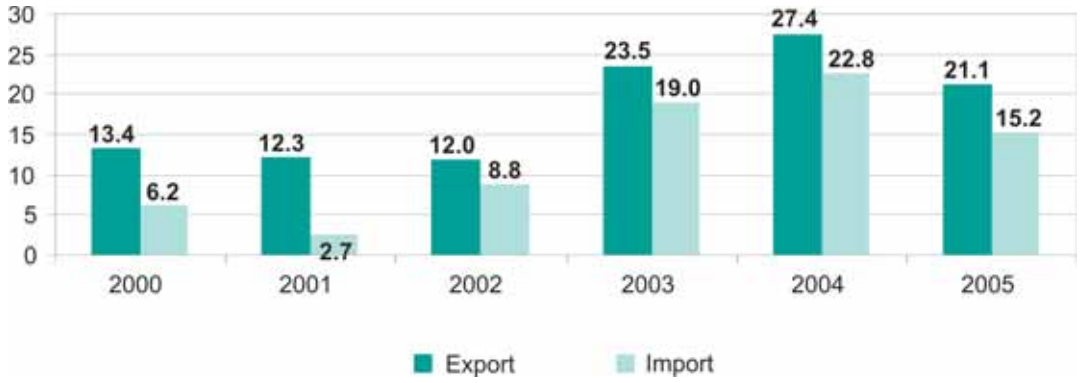
1.6 Foreign trade

30. Since 2002, a fast growth of exports of enterprises operating in Poland has been observed (compare Figure 1.6.1). In 2005, the value of their exports amounted to PLN 288.8 billion[31] and the value of imports amounted to PLN 328.2 billion. Hence, the value of foreign trade deficit stood at PLN 39.4 billion, constituting an improvement in foreign trade balance as compared to PLN 53.5 billion in the previous year. Since 2001, the negative balance of foreign trade has been constantly decreasing due to maintained export dynamics that exceeded import dynamics.

[31] Companies with foreign share account for a significant share in exports – in 2004 their exports constituted over 62% of the entire export of Polish enterprises.

* Reports of the Institute of Tourism are prepared only in USD so it is impossible to give amounts in Euro

Figure 1.6.1 Export (dark green) and import (bright green) dynamics in the years 2000 – 2005 (in %)



Source: GUS Statistical Yearbooks.

31. Despite a relatively high total value of export, Poland has a low level of export per capita in comparison with both the EU-15 and the new Member States. This is not a consequence of weaker competitiveness of Polish enterprises but of dynamically growing consumption on the Polish market, which makes some enterprises less interested in exporting, as in this way they reduce the risk related to their activity (especially small enterprises). A growth in consumption is accompanied by a strong zloty, which makes export profitability lower to some enterprises, particularly to small enterprises and to those whose exports do not require import. Furthermore, the costs of operating on foreign markets are for small enterprises relatively high in comparison with revenues from sales. Therefore, if there is an opportunity to concentrate on sales on the Polish market, many enterprises take advantage of it.

32. The export per capita increased from about EUR 0.9 thousand in 2000 to about EUR 1.9 thousand in 2006 and it was more than 3 times lower than in the Czech Republic (about EUR 6 thousand), more than 2.5-times lower than in Hungary and Slovakia (over EUR 4.5 thousand) and 5 times lower than in Germany (EUR 9.8 thousand).

33. The main reasons for a fast growth in export include among others the reduction of production costs caused by restructuring processes of enterprises running the economic activity in Poland and modernization of Polish economy affecting the growth of competitiveness of a Polish product offer on foreign markets.

34. Despite a disadvantageous zloty-euro exchange rate, in 2005 Poland belonged to the group of countries with the fastest export growth, almost three time exceeding the world export rate, which substantially added to our share in the world export (from 0.71% in 2003 to 0.86% in 2005), and Poland moved on the thirtieth position among the world's top exporters. The significance of exports in the economy (measured with the share of export in GDP) grew from 21.4% in 2002 to 29.5% in 2005.

35. The SME sector has a relatively large share in Polish sales on the Single European Market (SEM)[32]. In 2002 the sector's share in total exports amounted to 44.5% and in imports to 60.7%. In 2003, this index changed insignificantly, amounting to 44.3% in exports and to 60.3% in imports[33].

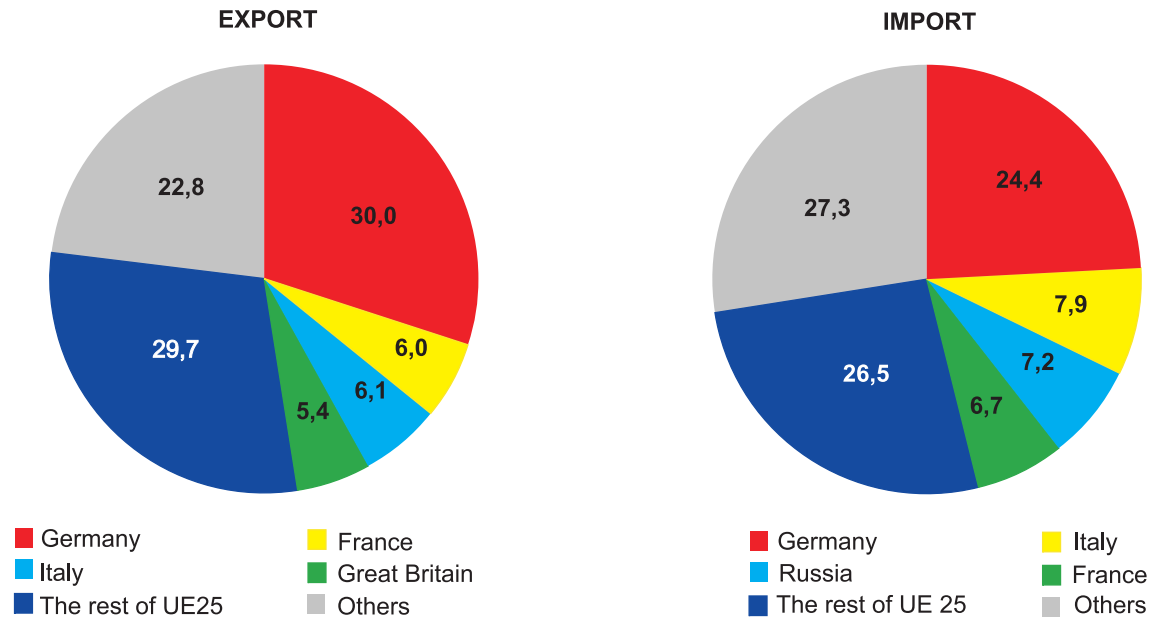
[32] The share of SMEs is significant in comparison with the whole sector but much smaller than the share of SMEs in the total number of enterprises.

[33] Data based on *The Report on the State of the Sector of Small and Medium-Sized Enterprises in Poland in the Years 2002-2003*, Ministry of Economy and Labour (MGiP) and Polish Agency for Enterprise Development (PARP), Warsaw 2004 which covers the period until 2002. It may be assumed that in the years 2003 – 2004, due to a depreciation of zloty with regard to Euro and a consecutive increase in export profitability and decrease in import profitability, the negative

Improvement of modernity and openness of the economy to the world is confirmed by a systematic growth of the share of highly developed markets in Polish exports. The dynamic growth of exports to highly developed countries (by 127%) exceeds the growth of imports from these markets (by 58%). Exports to developed markets in the years 2000-2005 grew annually by 2.2 percent points faster than exports in total, while average annual imports from this direction turned to be only by 0.8% faster than the average imports in total.

36. Germany has been Poland's largest trade partner, both in terms of the share in export and import, since the beginning to the system transformation. Apart from Germany, Poland's main trade partners are other European countries. The exchange deficit with the EU member states on the level of about EUR 1.4 billion has turned into surplus reaching up to EUR 1.9 billion, what caused the improvement of the exchange balance with the union markets by EUR 3.3 billion. The value of export to the EU markets in 2005 grew to EUR 55.1 billion, and the growth of export (by EUR 8 billion in total) was to 20 of 24 Community countries, in it mainly to Germany by EUR 2 233 million, i.e. by 12.5%, France by EUR 836 million, i.e. by 23.2%, Great Britain by EUR 761 million, i.e. by 23.6%, Italy by 729 EUR million, i.e. by 20.0% and the Czech Republic by EUR 685 million, i.e. by 26.6%.

Figure 1.6.2 Geographic structure of Polish exports (left) and import (right) in 2005



Source: Foreign Trade Statistical Yearbook, GUS, Warsaw 2006.

37. The most significant product groups in the export product structure are cars and spare car parts, base metals and products made of them, electric and electronic machines and facilities, furniture, internal combustion engines, ships and boats. In the import to Poland - mineral fuels, oils and products of their distillation, non-rail vehicles and their spare parts, electric and electronic machines and facilities, medicines are dominant. In recent years the share of processed products has grown in the Polish export (sections 5-9 according to the SITC classification[34]).

38. Within the last five years, no important changes have been observed in the structure of turnover

foreign trade balance of the SME sector dwindled.

[34] SITC – Standard International Trade Classification.

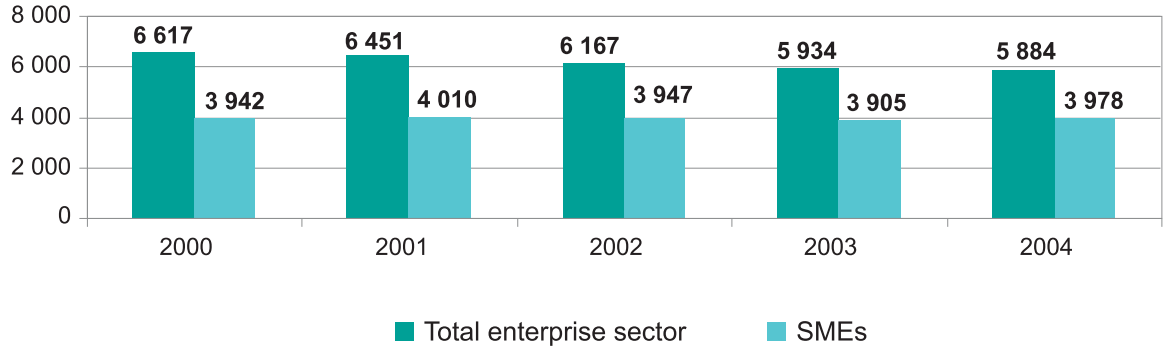
in terms of goods, yet in some groups of products there have appeared some changes. On the basis of a rather small export growth in the last five years, the following observations have been made: relatively fast (by 147.9%) growth of exports of farm and food products, and a consequent increase of their share in exports from 8.4% in 2000 to 10% in 2005; a considerably higher growth than the average in export of electrical machines that reached about 140%, which improved the share of these products in total exports from 35.1% to 40.6%; and the export growth index in the chemical industry, especially plastics and rubber goods, which exceeded the average export in total by 19 percent points.

39. Polish trade has two main opposing tendencies: a systematic growth in trading with developed markets accompanied by improvement of the state of trade balance, whereas in trading with relatively less developed countries a reverse situation is observable, namely exports are disproportionately low in comparison with imports, which leads to a dynamic growth of the trade deficit.

1.7 Employment and work efficiency in the enterprise sector

40. In 2005, the number of people working in the enterprises employing more than 9 workers amounted to some 4.8 million people[35]. Therefore, the employment level was by 1.9% higher than in previous year. In the recent years, the number of enterprise employees decreased. The estimated decrease in enterprise employment in 2002 was around 4.5%, in 2003 nearly 3%, and in 2004 around 1%. The changes in the SME employment level (a growth by nearly 2% in 2004 and slight decreases in the years 2002 – 2003) indicate more significant employment reductions in large enterprises, caused mostly by restructuring processes of large companies.

Figure 1.7.1 Total employment in the enterprise sector and in SMEs in the years 2000-2004 (thousand people)



Source: Estimates of the IBnGR based on the data of the GUS and the Polish Agency for Enterprise Development (PARP)[36].

41. The decrease of employment that was observed in the enterprise sector in the years 2000 – 2004 stemmed from several reasons:

    a) the necessity to reduce production costs (including labour costs), incurred by the need to search for foreign markets;

[35] GUS Statistical Bulletin. The data does not cover micro-enterprises which are estimated to employ 3.2-3.5 million people. The figure covers both company owners and employees.

[36] The data presented in the figure covers all types of enterprises. For companies employing over 9 people, the data comes from the GUS Statistical Bulletin, and for micro-enterprise it was collected by the IBnGR.

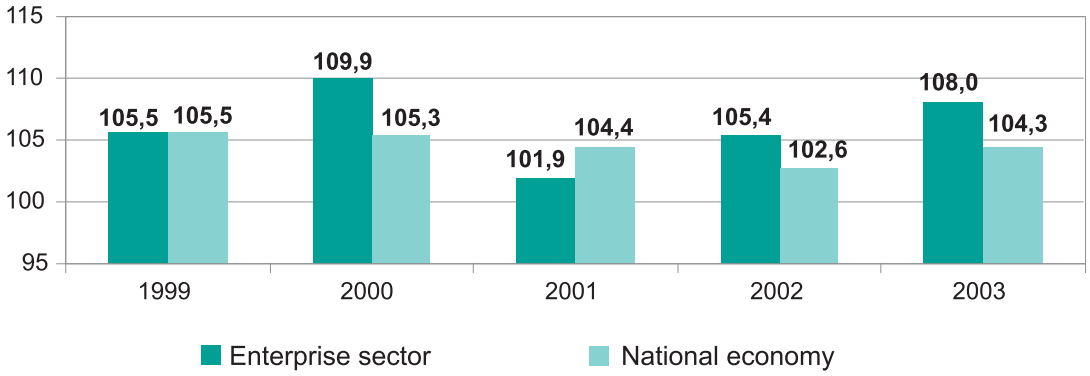
b) high non-wage labour costs and low elasticity of the labour market which force employers to save up by discharging employees and which increase both the risk of new employments and total business costs;

c) delayed effects of the system transformation incurred by collective agreement arrangements which obliged new owners of state-owned enterprises to either keep employment at a constant level or to reduce employment in a more limited manner than economic management rules would suggest.

42. The insignificant employment rise in the enterprise sector in 2005 (by ca. 2% in comparison to the previous year[37]) resulted from an improvement in the economic situation, a rise of demand and consequently increased demand for workforce. This rise in employment might be considered as a sign of improvement of the entrepreneurs' expectations towards development possibilities in consecutive periods.

43. The employment rate, which has been decreasing until 2004, combined with an increase of the enterprise sector production volume, has resulted in a rapid work efficiency growth. Figure 1.7.2 shows the dynamics of work efficiency in the enterprise sector[38] and in the national economy in the years 1999 – 2003. The figure shows that during the analysed period (with the exception of the year 2001) work efficiency in enterprises improved faster than in the economy in total (annual average efficiency growth in enterprises – 6.1%, whereas in the national economy – 4.5%).

Figure 1.7.2 Work efficiency dynamics in the enterprise sector and in the national economy in the years 1999-2003 (constant prices)



Source: Calculations of the IBnGR based on data of the GUS.

44. The most important factor that affects work efficiency is the necessity to maintain constantly or improve the competitive position of enterprises operating in Poland against companies from other countries. According to approximate estimates, the average work efficiency in enterprises operating in Poland is still nearly 50% lower than in the EU-15. As far as the EU-25 is concerned, only in the three Baltic states (Lithuania, Latvia and Estonia) the level of work efficiency is lower than the one in Poland[39]. This means that the main competitive advantage of enterprises operating in Poland is a comparatively low remuneration level. However, since Poland entered the Single European Market (SEM), which encompasses free movement of goods, capital and services as well as freedom of establishment, this situation is to change.

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[37] Ministry of Economy: *Poland 2006. Report on the State of Economy,* Warsaw 2006; table 36.

[38] For enterprises employing over 9 people.

[39] *Facing the Challenge. The Lisbon Strategy for Growth and Employment, Report from the High Level Group chaired by Wim Kok*, November 2004.

1.8 Regulatory framework of the enterprise sector

45. The regulatory system, being an important factor influencing the situation and development of the enterprise sector, is very unstable. Frequent amendments and changes in legal acts vital for running a business (e.g. tax regulations) increase the risk of business operations. Instability of the regulatory system hinders development and implementation of mid- and long-term strategies and boosts the costs of running a business.

46. In order to remove the barriers related to economic activity, such as too many regulations in the area of economic processes, unfriendly administration, inflexible labour market and high extra payments, it is necessary to introduce changes in the legal and administrative environment.

47. The most important legal regulations regarding the functioning of enterprises adopted in the years 2004 – 2005 include:

    a) Act on Economic Freedom of 2 July 2004[40] which aims to simplify the rules governing company establishment and functioning,

    b) amendment to the regulations on corporate income tax (CIT) – a tax reduction and introduction of the same tax rate for entrepreneurs paying PIT and CIT[41],

    c) Act of 8 October 2004 on the Principles of Science Financing[42] which aims to shape an active scientific, technological and innovation policy of the state, as well as to adjust scientific activities to the needs of the economy,

    d) Act of 29 July 2005 on Certain Forms of Support for Innovative Activity[43] which aims to improve effectiveness of the management of public funds allocated for R&D, as well as to encourage the private sector to increase outlays for innovation.

48. The above-mentioned changes to the regulatory framework should facilitate running a business and stimulate innovativeness in enterprises operating in Poland. However, since they have been introduced only recently, it is not possible to assess their impact yet.

49. Consequences of adaptation of Polish law to the *acquis communautaire*, a vital part of pre-accession preparations, are important for the business regulatory system. The harmonisation process entailed high costs for entrepreneurs, but on the other hand it forced many companies to accelerate their restructuring and modernisation, what resulted in their improved competitiveness. Moreover, adaptation of Polish law to the *acquis communautaire* allowed the entrepreneurs operating in Poland to get, in many aspects, the same conditions for functioning on the SEM as their EU counterparts enjoy. In order to ensure high quality of law, the rule of running a regulation impact assessment (RIA) was introduced in 2002 covering four areas: budget, labour market, competitiveness and regional development. The rule pertains to all drafted legal regulations. However, the quality of RIAs has been low, partially due to a lack of experience in their development. In 2005, the government took intense actions aimed to improve the RIA quality, in particular with regard to the administrative burden imposed upon the entrepreneurs.

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[40] Journal of Laws No. 173, item 1807 with amendments.
[41] The Act of 12 November 2003 amending the Act on legal persons' income tax act and other acts, Journal of Laws No. 202, item 1957.
[42] Journal of Laws No. 238, item 2390.
[43] Journal of Laws No. 179, item 1484.

1.9 Business support institutions

50. Business support institutions (BSI) have the following tasks: to support entrepreneurship, to facilitate business take up (e.g. to companies such as start-ups and spin-offs), to provide assistance to newly established enterprises (business incubators, technology incubators), to facilitate transfer of new technological solutions (technology transfer centres (TTC, technology incubators), to improve the quality of human capital through training and counselling services (training and counselling centres), to support networking and clustering, including mobilisation of innovative business environment (science and technology parks), and to provide access to external financing, in particular for SMEs which undertake investments (guarantee and micro-loan funds, venture capital funds).

51. In Poland, the majority of business support institutions are situated in cities with 50,000 to 250,000 inhabitants (about 36%), about 34% of BSIs operate in cities with more than 250,000 inhabitants and the smallest part (30%) is located in cities with population below 50,000 inhabitants[44]. They are distributed irregularly throughout the country and despite relatively high number of these institutions their networks are rather weak. BSIs, usually operating on a non-for-profit basis, are most often faced with the following problems: insufficient financial resources to perform their activities, and – consequently – difficulties in hiring and maintaining experienced staff, as well as the tendency to operate on a project-to-project basis (as a result, in periods between two consecutive projects, problems of these institutions become even more intense). At the same time, these organisations, focused on support for SMEs, especially those operating at the local and regional level, have a very important role to play in the area of activities improving the performance of local and regional economies.

52. A particular role in strengthening of the business support system is played by the National SME Services Network (KSU) developed and coordinated since 1996 by the Polish Foundation for the Promotion and Development of Small and Medium-Sized Enterprises (transformed into the Polish Agency for Enterprise Development (PARP) in 2001). Within the KSU networks, there are various groups of institutions, rendering particular types of services: counselling and information, financial services (loans and credit guarantees), pro-innovative services (including creating conditions for technological solutions transfer and commercialisation) and training. In 2004, the KSU encompassed 206 centres. On average, one centre provides support for 652 entrepreneurs (SMEs) and 115 persons undertaking business activity a year.

53. Systemic activities supporting innovativeness and investment. Support for entrepreneurship, in particular for SMEs, is the main task of the Polish Agency for Enterprise Development (PARP), established in 2001. The PARP implements programmes financed with funds from the national budget as well as from the EU budget (pre-accession and structural funds) aimed at developing entrepreneurship and human resources. The tasks of the PARP also cover support for the use of new techniques and technologies, regional development and export development. Regional support for SMEs is performed in cooperation with Regional Financing Institutions (RFIs), which perform counselling, promotion and administrative tasks. The PARP also functions as the Implementing Authority for some measures of the Sectoral Operational Programme – Improvement of the Competitiveness of Enterprises 2004 – 2006 (SOP ICE) and the Sectoral Operational Programme – Human Resources Development 2004 – 2006 (SOP HRD), collaborating in some measures with the RFIs.

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[44] *Report on the State of the Sector of Small and Medium-Sized Enterprises in Poland in the Years 2002-2003*, Ministry of Economy and Labour (MGiP) and Polish Agency for Enterprise Development (PARP), Warsaw 2004. The study covered the following entities providing support for the SME sector: loan guarantee funds, loan funds, organisations grouping entrepreneurs, national and local organisations representing the interests of business environment, the most active business incubators and technology transfer centres. The sample consisted of 322 entities, the effective sample size was 113 entities. Sampling allowed for examining one third of the population of business support institutions.

54. A major role in supporting industrial and innovative businesses is played by the Industrial Development Agency (IDA S.A.) established in 1991 whose main tasks are to support restructuring processes of Polish economic operators and to adjust them to the conditions of international competition, as well as to take actions aimed at economic infrastructure development, which directly contribute to unemployment combat through maintenance of existing workplaces and creation of new ones. The activities of the IDA S.A. also cover support for regional development through initiating establishment of industrial and technology parks and technology incubators. The IDA S.A. also exercises corporate supervision over 33 local and regional development agencies. Besides, the activities of the IDA S.A. cover support for establishment of innovative companies in the area of new technologies via the FIRE Innovation Centre. The IDA S.A. also acts as one of the Implementing Authorities for the SOP ICE.

55. Substantial support for SMEs' innovative activities is offered by the Polish Federation of Engineering Associations (NOT) with the use of goal-oriented projects, implemented on the basis of an agreement with the minister in charge of science. These projects encompass funds for R&D works, but their receipt is conditioned on implementation works[45].

56. Investment inflow support is the main task of the Polish Information and Foreign Investment Agency (PAIiIZ), established in 2003. The PAIiIZ offers potential investors information on lands suitable for investments and on conditions of business activity in Poland. It is also helpful in negotiations with central and local administration.

57. Support for tourism development in Poland and for promotion of Poland as a country attractive for tourists is rendered by the Polish Tourism Organisation (POT) established by the Act of 25 July 1999 on the Polish Tourism Organisation[46]. The POT is the main shareholder of the Polish Tourism Development Agency (PART) which is active in tourist infrastructure development and strategic counselling for tourist product development.

58. The Polish Chamber of Commerce (KIG) is an institution of economic self-government, active since 1990, encompassing more than 130 business organisations which group about 300,000 domestic enterprises. The KIG's activities concentrate on 16 problem committees, assembling experts, scientists and practitioners of business life. Moreover, the Polish Chamber of Commerce possesses its own research facility – the Institute for Research on Democracy and Private Enterprise. The main task of the KIG is to represent the interests of Polish entrepreneurs vis-à-vis state bodies and domestic organisations, as well as to represent enterprises operating in Poland abroad. The Polish Chamber of Commerce took part in preparing Poland's participation in EXPO 2000 in Hanover and EXPO 2005 in Aichi, as well as organised events promoting Poland in countries that presided over the European Union.

59. Another forum of discussion between employers' organisations, government and trade unions is the Tripartite Commission, where the entrepreneurs' community is represented by the "Lewiatan" Polish Confederation of Private Employers (PKPP), the Confederation of Polish Employers (KPP), the Polish Craft Association (ZRP) and the Business Centre Club.

[45] Between 6 November 2001 and 28 February 2005, 348 co-financing agreements granting support for goal-oriented projects implemented by SMEs were signed (an average project grant amounts to PLN 154,288).

[46] Journal of Laws No. 62, item 689.

1.10 Financing of enterprises at early stages of development

60. Access to external sources of financing is one of the key factors for developing a knowledge-based economy since innovative undertakings are often capital consuming and involve high risk levels. Therefore, entrepreneurs are hardly ever able to start such an activity basing on their own resources only. Meanwhile, in Poland opportunities to obtain capital at the value from PLN 0.1-2 million to PLN 8-10 million are rather limited[47]. Usually, entrepreneurs are able to gain financing below the lower limit of the above-mentioned range from private sources (savings, family and friends, etc.), while the sums exceeding the upper limit are to a certain degree easily available on the venture capital (VC) / private equity (PE) market.

61. The main reasons for the VC/PE funds reluctance to invest within the equity gap range are:

    I. high risks related to investments in undertakings with unclear market chances (lack of enterprise history, unknown products, etc.);

    II. high costs of due diligence analyses and of development of legal documentation necessary to start investments (in comparison with the investment value);

    III. high costs of fund management in comparison with the investment value.

62. The development of the venture capital market in Poland shows that investments tend to concentrate on later stages of enterprise development (expansion, buyout and replacement), and, at the same time, the number of capital interventions in enterprises at early stage of their development decreases – in 2004 in Poland no intervention of this kind was recorded[48] (the so-called seed and start-up phases; see Table 1.10.1). This trend is observable throughout Europe, but it is especially visible on the markets of Central and Eastern Europe, including Poland[49]. Investments in enterprises at later stages of their development involve significantly lower risk, and they usually require a higher value of single capital entry, therefore the funds more willingly engage in such undertakings.

Table 1.10.1 Value of investments by the VC funds in Poland at different stages of enterprise development in the years 2000-2005 (EUR million)

Phase of enterprise's development	2000	2001	2002	2003	2004	2005
Seed	2,9	2,2	0	15,1	0	0
Start-up	38,8	22,7	9,8	2,0	0	0,7
Expansion	158,2	73,9	53,7	40,4	44,1	2,2
Replacement	1,9	47,8	34,6	42,7	59,5	55,3
Buyout	0	3,8	19,5	32,9	30,8	49,7
Total	201,8	150,4	117,6	133,1	134,4	107,8

Source: Central and Eastern Europe Statistics 2000, 2001, 2002, 2003, 2004, 2005, European Venture Capital Association (EVCA).

[47] The report entitled *Equity Gap in the Polish Economy*, developed at the request of the Ministry of Economy and Labour (MGiP) by Dr Paweł Tamowicz, Gdańsk 2005.

[48] It seems that the high value of investments at seed phase in 2003 might have resulted from misclassification of investments which in fact pertained to undertakings at much later stages of development (see *Equity Gap in the Polish Economy*, op. cit.).

[49] *Central and Eastern Europe. Statistics 2004*, EVCA, Zaventem, Belgium 2005.

63. The equity gap existing at early stages of enterprise development is almost completely independent of the sector in which the given enterprise operates. Access to finance within the range of the equity gap is easier only in the information and communication technology (ICT) sector, due to, exclusively, the policy of one of VC funds and long-lasting good economic situation in this sector.

64. In 2004, the Polish Private Equity Association (PSIK) grouped 28 VC/PE funds, but in fact none of them invested in enterprises at the start-up or seed stage. Due to persistence of the above described situation, it was decided to undertake public intervention in this area within Sub-measure 1.2.3 of the SOP ICE *Support for establishment of seed capital funds*. This sub-measure is envisaged to provide assistance to funds which invest in SMEs at the earliest stages of their development. As a pilot undertaking, it should result in creation of about five new funds which will offer financing within the equity gap range. A combination of public funds and private capital with the preference of the latter at the stage of the exit from the investment should encourage private investors to invest in origin funds.

65. Apart from VC funds, other potential sources of financing within the equity gap range (especially within the bottom part of the spectrum) are the so-called Business Angels, i.e. private persons who invest their own capital, knowledge and experience in start-ups, which often is rather risky. In Poland, organisations associating and supporting Business Angels have been developing intensely. These are the Polish Business Angels Network (PolBAN) which groups 43 investors ready to invest PLN 25-40 million and the Lewiatan Business Angels (the network created by the "Lewiatan" Polish Confederation of Private Employers) grouping 50 investors capable of investing some PLN 300 million. Their activity has already brought about first positive results, such as contacts between investors and start-ups, as well as first investments. The total value of investments realised with the participation of the PolBAN in 2005 stood at over PLN 1 million. Business Angels may become a very valuable source of financing within the bottom part of the equity gap range, since their assistance is not limited to making an investment only. Establishing and developing networks of Business Angels and organisations supporting such investors, which will assure supplies of feasible projects, should allow for a rapid development of this market.

1.11 Cooperation of entrepreneurs

66. The competitiveness of enterprises operating in Poland is weaker in comparison with the EU-15 due to their limited resources. Their competitiveness might be increased through cooperation, which allows for obtaining results that are impossible for single entities (SMEs in particular). Nevertheless, enterprises operating in Poland do not show propensity for cooperation with one another and with the science sector and business support institutions. The main reason for this may be the fact that the enterprise sector in Poland remains at an early stage of development, which is characterised by intense competition on the local market which does not favour cooperation. Development of cooperative relations between enterprises and scientific entities started as late as in 2004 with an analysis of industrial clusters in Poland and support instruments that could be possibly provided by the state. The development of a policy supporting clusters was to a large extent supported by studies of the European Commission related to identification of cooperative relations in the new Member States. Finally, the need to support and develop cooperative relations in Poland was highlighted in the strategic document entitled "Directions for improvement of the economy's innovativeness in the years 2007 – 2013" which was adopted by the government on 4 September 2006. The part of the document entitled "Infrastructure for innovation" stressed the need to assist joint actions taken by entrepreneurs related to support for the science sector, directed towards implementation of innovative undertakings.

67. In this context, it is extremely important to support various types of interaction between the industrial sector and the scientific and research sector and with the administration, which is

characteristic of clusters. However, the level of clustering development in Poland is still relatively low. At present, studies are carried out aimed at diagnosing the state of clustering in Poland. The best developed cluster initiatives are the following:

I. Aviation Valley cluster in the Podkarpackie Voivodship,

II. Industrial automation and control cluster in Gdansk,

III. Printing cluster in Warsaw,

IV. Construction cluster in the Świętokrzyskie Voivodship,

V. Furniture cluster (Wielkopolskie and Zachodniopomorskie Voivodships).

1.12 Economic promotion of Poland

68. Economic promotion of Poland encompasses promotion of trade on the SEM, promotion of Poland as an attractive place for investment and general promotion of the country addressed mainly to tourists and people interested in Poland.

69. In the area of trade exchange and export promotion, there are several support instruments accessible (including instruments implemented within the SOP ICE). Trade exchange and export promotion is also lead by Polish diplomatic missions abroad. Furthermore, actions encompassing general economic promotion of Poland aiming at creation of a positive image of the country are also taken, involving public administration entities and other institutions, such as e.g. the Polish Chamber of Commerce, and support for foreign investment inflow is, in turn, provided by the PAIiIZ.

70. Information and coordination of activities related to Poland's tourist promotion lies with the Polish Tourism Organisation (POT). It carries out its promotional tasks abroad with the use of the network of 13 Polish Tourist Information Centres and one branch in Japan. Moreover, the POT constantly cooperates with regional and local tourist organisations in the area of creation and promotion of tourist products in Poland and abroad. Other public institutions also run activities in the field of tourist promotion.

71. The results of the activities undertaken so far are assessed as insufficient in the context of the actual needs. For example, there is no unified countrywide system of support for exporters and investors, nor a national system of services for tourists (tourist information and promotion). The lack of a clear positive image of Poland results in measurable economic losses. It aggravates the opinion on investment conditions in Poland and negatively affects the demand for exported products. Poland is viewed through the prism of many prejudices and stereotypes, as the knowledge of our country is scarce. It is necessary to increase the number of complex promotion projects (e.g. participation in / organisation of EXPO or other prestigious events of international importance) and to promote the image of Poland in global media[50]. According to estimations made by the Ministry of Economy, the level of public expenditure on export promotion in Poland in 2003 was by almost twelve times lower than the level of such expenditure in the EU-15[51]. A system for creation and promotion of the Polish national brand (the "Poland" brand), which would allow for a significant increase in the brand's recognition, and, consequently would lead to an increase in its value, should be created as soon as possible.

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[50] *Polish Economy Promotion Programme to the year 2005*, Ministry of Economy and Labour (MGiP), Warsaw 2003.
[51] *Ibidem.*

1.13 Cooperation between scientific entities and the economy

72. Diffusion of innovation in Poland is hampered due to poor cooperation between the science sector and the economy. On the one hand, the supply of new technological solutions that would match the needs of the economy is very low. On the other hand, entrepreneurs rarely seek for solutions to their technological or organisational problems in Polish scientific entities[52]. Although in some sectors, such as, for example biotechnology and eco-innovation, cooperation has been introduced, the economy in general still lacks such tendencies. Moreover, entities acting in favour of cooperation between the science sector and the economy in Poland are relatively poorly developed, and their activities are often aimed at the incubation phase rather then at increasing and improving cooperation.

73. In 2004, there were 537 centres dealing with support for innovation in Poland[53]. Although since 2000 their number has increased by as much as 91%, still over half of these centres (55%) offers mainly training, counselling and information services. Only one out of ten innovation centres was able to support innovative activities of enterprises within technology transfer. As a result, their impact is still limited. Moreover, in every second self-government of poviats (counties) as well as in 75% of self-governments of *gminas* (municipalities), none of the innovation support institutions are operating[54].

74. It is worth stressing that the European Commission's initiatives aimed at strengthening cooperation between the science sector and the economy have considerably enhanced the performance of R&D aimed at practical application in the Polish economy, as well as cooperation between Polish scientific entities and enterprises. New financial instruments under the 5th and 6th Framework Programmes created an opportunity to co-finance the programme of Centres of Excellence and Centres of Advanced Technologies. As a result, a few hundred Centres of Excellence were established in Poland, out of which 90 received co-financing from the European Union's Framework Programmes (67% of all co-financed Centres of Excellence from the candidate countries). Centres of Advanced Technologies and Centres of Excellences may also apply for support from the structural funds under sub-measure 1.4.3. of the SOP ICE 2004-2006 for implementation of investment projects related to the creation and modernisation of research laboratories, as well as to acquisition of scientific and research equipment.

75. The implementation of Regional Innovation Strategies (RIS) may also help to overcome these unfavourable tendencies. The aim of RIS is to establish close partnership between scientific entities and industry in the regions and to increase competitiveness of SME. This should be based on introduction of new technologies and development of professional skills of staff in the area of research and innovation. These strategies have been prepared in 15 regions (except for the Mazovian Voivodship) and, being approved by self-governments, they are currently implemented under the sub-measure 2.6. *Regional Innovation Strategies and Technology Transfer* of the Integrated Regional Operational Programme (ZPORR). In turn, the Regional Innovation and Development Strategy for Mazovia – RIS MAZOVIA is implemented as a project of the 6th Framework Programme (FP6, 2002-2006).

76. RIS identifies problems related to cooperation between scientific entities and enterprises, and considers them as the main reason for poor innovativeness of local economies. Most of the re-

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[52] SMEs are not an attractive partner for scientific entities because of their low technological advancement and inability to spend substantial funds on R&D projects, whereas large enterprises are not interested in introducing new technologies or they have their own R&D base. *An Analysis of Development Opportunities of Industrial Clusters in Poland and Proposals for Support Instruments*, a study developed at the request of the Ministry of Economy and Labour, T. Brodzicki, M. Dzierżanowski, K. Erlandsson, S. Szultka, Gdańsk – Stockholm 2004.

[53] Data of the Polish Association of Capital Investors.

[54] The report entitled *Centres for Innovation and Entrepreneurship in Poland*, Association of Organisers of Innovation and Entrepreneurship Centres in Poland, 2004, p. 23-24.

gional innovation strategies, however, do not specify what kind of instruments of intervention will be applied in the area of collaboration between scientific entities and entreprises with a view to attain the objectives of the strategies. Instruments of intervention envisaged in RIS are often formulated in a rather general manner and determined as objectives rather than as implementation mechanisms.

77. Poland needs to establish a National Innovation System[55] that would be open to the international environment and would be based on interlinked connected regional innovation systems. The development of RISes may be considered as the first step towards the establishment of such national system.

1.14 Diagnosis of Research and Development activities

78. Establishment of a knowledge-based economy in Poland requires a substantial increase in the expenditures on research and development (R&D), as well as infrastructure and information technology services. It is also necessary to provide a high level of innovativeness of the industry, through, e.g. development of advanced competitive technologies.

79. The Polish science and technology sector has not yet fully benefited from opportunities after the European Union accession. The majority of indicators measuring science and technology performance in Poland show that there is a significant gap between Poland and both the UE-15 as well as the UE-25. It is valid also in comparison with the countries that joined the European Union together with Poland in 2004[56].

80. The main characteristics of R&D financing in Poland are as follows:

    a) very low outlays on R&D in relation to GDP,

    b) predominance of budgetary expenditure and low participation of economic entities in the structure of R&D financing ,

    c) relatively low level of financing for applied research and development works in comparison with basic research.

81. In 2005, budgetary expenditure on R&D amounted to 0.30% of GDP, whereas non-budgetary – to 0.27% of GDP. The value of the GERD indicator (Gross Domestic Expenditure on R&D) in 2005 went up as compared to 2004[57], but the value of the GERD/GDP relation remained unchanged and stood at 0.57%[58]. To compare, in 2004 in the UE-25 this indicator stood at 1.90%. The highest amount of money was spent on R&D in Sweden (3.74% of GDP) and Finland (3.51%), and the lowest in Malta (0.29%), Cyprus (0.37%) and Latvia (0.42%). Average annual expenditures on R&D in real terms in the years 2001 – 2004 in Poland stood at 0.4%, while for the EU-25 they amounted to 1.3%, e.g. in Finland – 4% and in Cyprus – 15.2%[59].

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[55] National Innovation System is a set of institutions that jointly or individually contribute to development and diffusion of new technologies, forming the basis in the framework of which the governments formulate and implement a policy aimed at influencing innovation processes. It is a system of interrelated intuitions that are to create, transfer and store knowledge and skills constituting the foundation of new technologies. (*Proposed Guidelines for Collecting and Interpreting Technological Innovation Data – Oslo Manual, second edition*; OECD/EC/Eurostat, 1997, p. 132).

[56] *European Innovation Scoreboard 2005,* European Commission, Brussels 2005.

[57] The GERD index in current prices in 2004 amounted to PLN 5,155.4 million, whereas in 2005 to PLN 5,574 million; see: *Science and Technology in 2005,* GUS, Warsaw 2006. The majority of the data presented in the chapter dedicated to the diagnosis of the R&D sector come from this document.

[58] *The Statistical Yearbook of the Republic of Poland 2005*, GUS, Warsaw 2006, p. 423.

[59] EUROSTAT News Release, 156/2005, 6 December 2005.

82. In 2003, GERD per capita in Poland amounted to 36.4 EUR PPP[60] whereas in the UE-25 to 434.7 EUR PPP. As a result, R&D expenditure per capita in Poland constituted only circa 8.5% of the UE's average.

83. Simultaneously, the breakdown of R&D financing in Poland, according to the source of financing, was reverse to the one set out in the Lisbon Strategy, which outlined that 2/3 of GERD should be represented by the non-budgetary sector. In fact, the majority of R&D expenditure in Poland comes from the state budget (in 2005, circa 57.7% of total expenditure). The share of economic entities in expenditure on R&D represents only 26%, whereas 6% is financed from abroad. To compare, in the UE-25 budgetary means spent on R&D constituted 35% of total outlays, with the business sector financing reaching 54.3% and financial resources from abroad at the level of 8.5% (data for the year 2003).

84. The situation of science in Poland is determined by an ineffective structure of budgetary expenditures – the majority of means (68% in 2006) was assigned within the framework of statutory activity for the protection of basic needs of scientific entities[61]. The remaining resources were assigned mainly for: research projects (17.7%), goal-oriented projects (4.18%), investments (6.52%) and international scientific and technological cooperation (1.96%). Such a distribution of resources indicates that the budgetary financing is to a very small extent linked to the effectiveness and applicability of researches performed by subsided scientific entities, with respect to the needs of the economy. It should be stressed that changes in this scope consisting in a substantial increase of demand for competition – "project" funding (it refers both to enterprises and scientific entities) would not be possible in a short period of time because this requires wider systemic reforms.

85. In 2005, 37.4% of total current expenditure on R&D in Poland was allocated for basic research, mainly financed from the state budget. As regards applied research and development works, they represented 38.4% and 24.2% respectively. Such a distribution of expenditures ranks Poland, along with the Czech Republic, among the countries with the highest share of basic research in the structure of R&D financing, which is characteristic of developing countries. The main performers of basic research, likewise in previous years, were scientific entities of the Polish Academy of Sciences (PAN) and higher education institutions.

86. In 2005, out of 1097 entities performing R&D in Poland as many as 194 were research and development entities (JBR), 143 – higher education institutions, 76 – scientific entities of the PAN, and 603 – development entities (economic operators dealing with R&D within their basic activity, i.e. 2 million enterprises). Such structure does not enhance the integration of research in Poland nor the performance of R&D programmes in priority areas. It stems from unsatisfactory cooperation between R&D entities from different areas, which often results in ineffective utilisation of human resources potential, financial resources and research equipment alike. It should be stressed that apart from development entities, in Poland there are not any private scientific entities, and there are only 22 non public higher education institutions (applying for additional finance in respect of the statutory activity) undertaking R&D works.

1.15 Human resources potential in Research and Development

87. The main characteristics of human resources potential in science and technology are as follows:

    a) lower than the EU average share of researchers in the working population,

[60] EUR PPP – according to Euro Purchasing Power Parity.

[61] *Report on the Execution of Budget in 2006, Part 28 – Science*, Ministry of Science and Higher Education, Warsaw, March 2007, p. 12.

b) low share of research and scientific staff employed in the enterprise sector in comparison with the total number of the country's research personnel,

c) relatively old age of those receiving post-doctoral and professorial scientific titles,

d) increasing number of doctorates (but still lower than the EU average),

e) tendency of researchers to hold numerous university positions as a result of low salaries, and too many educational duties (since 1990, the number of students has grown by almost five times).

88. The total number of people employed in R&D in 2005 stood at 123,431[62], although over the last ten years, this figure changed frequently, ranging from 120,000 to 127,000[63]. In Poland the number of researchers per 1,000 employed people in 2005 stood at 4.4 and was by a few times lower then in Finland where it stood at 17.7 (in 2003). To compare, the average for the EU-25 was at 5.8 (2003)[64].

89. In Poland only 6.5% of the total number of people employed in R&D are workers of enterprises, whereas in the EU-15 this ratio amounts to 50%[65].

90. In the years 1998 – 2002, the number of scientists with the professor title has significantly increased. However, the majority of professors (51.7%) are people aged 50 – 59. Barely 24% received the title of professor below the age of 50, whereas 14.4% received their post-doctoral title (in Polish: *doktor habilitowany*) below the age of 40. As regards the latter, 63.5% of doctors are people below the age of 35. However, in all fields of science (according to the data for the year 2003) the most numerous group are scientists holding the title of professor aged 60-70.

91. While analysing the quality of human resources potential in R&D in Poland some bibliometric data should be recalled. In 2003, Poland's share in the world scientific publications stood at 1.45% (11,600 citations) and was the highest over the last twenty years. However, as compared to other EU countries, the number of citations of Polish scientists per one thousand inhabitants was substantially lower. The average for the EU-15 in 2002 accounted for 673, whereas for Poland it was 266.

1.16 Research and Development equipment

92. Research and scientific laboratories in Poland are poorly equipped. The wear rate of R&D equipment constituting fixed assets (at the disposal of scientific entities) in 2005 accounted for almost 78.5%. The highest share in the total value of R&D equipment in the sector for 2005 had tertiary education institutions (48.7%) and scientific and research institutes included in JBRs (27.7%). Obsolete R&D infrastructure does not enable Polish scientists to conduct scientific research to such an extent as their colleagues in more developed countries do.

93. Apart from the low level of budgetary spending on acquisition of R&D equipment, the major problem is also the model of distribution of public resources designated for co-financing of such purchases. Resources earmarked for R&D infrastructure are allocated in a dispersed way to a relatively small infrastructural investments. Acquisition of R&D infrastructure of interdisciplinary character is financed to a very small extent (e.g. due to the low number of submitted applica-

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[62] Including 71,906 in higher schools, 13,238 in research and development centres, 4,843 in institutes of the Polish Academy of Sciences (PAN) and 5,957 in development units (enterprises).

[63] *Science and Technology in 2005*, GUS, Warsaw 2006, p. 30.

[64] *OECD in figures. Statistics on the member countries*, OECD Observer 2005, Supplement 1, p. 72-73.

[65] *Statistics on Science and Technology in Europe. Data 1991-2002. Part 1.* European Commission, Eurostat, Luxembourg 2003, p. 34.

tions). Such equipment is used by several scientific entities on the basis of formalised agreements. In 2004, some 13.6% of total budgetary expenditure on R&D equipment purchase were of interdisciplinary character. In 2005, this ratio increased to 19%. A similar level of spending on R&D infrastructure is observed in the case of the Polish Science and Technology Fund[66].

1.17 IT infrastructure of science

94. The present IT and information infrastructure of the science sector is to a large extent based on resources obtained during implementation of IT infrastructure development programmes for scientific and academic communities introduced in 1995[67] and 2000[68]. These initiatives are an element of a wider strategy implemented since 1993 by the State Committee for Scientific Research (KBN), and then subsequently by the minister in charge of science. The strategy has been continued through the implementation of *Programme for development and maintenance of IT and information infrastructure of science and its digital resources for the years 2006 – 2009* and presented in June 2007, coming into the framework of a new financial perspective: "Programme for Development of Informative Infrastructure of Science for 2007-2013"[69].

95. Information technology infrastructure of science mainly covers equipment, networks and digital resources facilities located in five high performance computing centres (Gdansk, Krakow, Poznan, Warsaw, Wroclaw) and 21 MAN, so called Metropolitan Area Networks. Those leading entities are situated in the biggest academic and scientific centres in Poland and have numerous local resources in scientific entities and universities. The foundation for such an infrastructure is the PIONIER national optical network which provides scientific and research community with access to worldwide Internet resources and links with domestic and foreign centres. PIONIER is based on its own optical fibres with current total length accounting to over 4,000 km[70]. Recently a strong open grid services infrastructure has been developed. A net of scattered digital libraries, with the access to over 60 000 digitaled publications, in 8 regional and 7 institutional digital libraries and so-called the Virtual Library of Science is operating.

96. It should be underlined that information technology infrastructure of science sector in Poland is relatively modern and has been recently constantly developed, however there are also some low performance areas with poor coverage in terms of IT infrastructure (particularly in Eastern Poland). Moreover, the level of innovative solutions and applications utilised by particular entities is also unsatisfactorily low.

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[66] Polish Science and Technology Fund (previously: Science Development Fund) was established on the basis of the Regulation by the Minister of Science and Informatisation of 29 April 2005 on the detailed principles of financial management of the Polish Science and Technology Fund (Journal of Laws No. 81, item 714). The resources of the Fund come, e.g. from revenues from privatisation (2% in the given budget year) and are spent mainly on financing of investments for the needs of R&D works.

[67] *Programme for IT infrastructure development in Polish scientific circles.*

[68] Programme for IT infrastructure development in Polish scientific circles for the years 2001 – 2005 called "PIONIER: Polish Optical Internet – Advanced Applications, Services and Technologies for Information Society".

[69] Minister of Science and Higher Education on 28th June 2007 established the "Programme for Development of Informative Infrastructure of Science for 2007-2013". The Programme is the continuation of former programmes and strategies in respect informative infrastructure of science.

[70] *Assessment of data communication technology infrastructure of science in Poland,* OPI, Warsaw, December 2005, p. 2.

1.18 International scientific and technical cooperation

97. In the framework of multilateral scientific cooperation, particular importance should be attached to Poland' participation (since September 1999) in the Fifth Framework Programme for Research, Technological Development and Demonstration Activities of the EU (FP5, 1998-2002) and in the Sixth Framework Programme for Research, Technological Development and Demonstration Activities of the EU (FP6, 2002-2006).

98. Poland's participation over the first two years of the FP5 was limited[71]. In the years 1999 – 2000, participants from Poland, Hungary, the Czech Republic and Austria (states with similar research potential) constituted about 0.8% to 0.9% of all participants in the FP5. However, in spite of this, Poland's participation in the FP5 was a success, mainly due to joining running programmes. Participation of Polish entities in the FP6, although the rules were changed (focus was placed on financing of strong industrial consortia concentrating on solving priority technological problems), has been constantly growing. In 2005, Polish participants in the FP6 constituted almost 3% of all participants, which placed Poland on the tenth position among all EU Member States. Besides, Poland's share in financed projects is also big – it grew by 15%, although the leader in the area is Hungary with a 22% growth.

99. However, it should be noted that an average cost of a Polish project is two times lower (50.1%) than the EU-25 average. It is caused by significantly lower salaries in the R&D area, constituting an essential element of costs for research projects, in the science sector in Poland.

100. Poland is also a member of the Multi-annual Framework Programme of the European Atomic Energy Community, and it participates in the works of many other international organisations, such as, in particular, the European Scientific Foundation (ESF, the Polish Academy of Sciences has been its member since 1992), the NATO Scientific Programme, the OECD (since 1996), UNESCO (since 1946), and the Eureka initiative (as a member since 1995). Many Polish research teams also conduct contracted research for foreign companies, whereas universities and scientific institutes implement a number of bilateral agreements with foreign partners.

1.19 IT market in Poland

101. In 2005[72] in Poland the level of investments in information and communication technologies per capita amounted to EUR 374, in comparison to the Czech Republic (EUR 563), Hungary (EUR 639) and to EUR 1,376 in the EU-25, which proves still high underinvestment of the sector. The pace of growth of the IT services sector accounting for 13.2% in 2004 was the highest among the New Member States. Poland was ranked 32 (out of 65 surveyed countries)[73] among countries which were best adjusted to the era of new technologies. Among six main categories, Poland achieved the best score in the category "Economic surrounding" and was ranked 30th with 7.34 points (out of 10), while average note for Eastern and Central European countries amounted to 6.71.

102. However, it has to be taken into account that, according to the World Economic Forum, strategic assessment of Poland's readiness for transformation into the information society phase is very weak. Under this ranking, in 2004 Poland was placed on the 72nd position out of 104 classified countries, and this rate has been worsening since then. In reference to the public sector, Poland ranks on the 95th position (behind all the EU-25+2 states), which proves exceptionally bad situation and insufficient readiness of the Polish administration for functioning

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[71] A. Siemaszko, J. Supel, *Assessment of Poland's Participation in the EU Framework Programmes,* http://www.6pr.pl/statystyki/udzial_pl.html, Warsaw, 22 August 2006 and http://www.6pr.pl/statystyki/ 2006grudzien.html.

[72] Report: *European Information Technology Observatory ITC Markets,* March 2006.

[73] *The 2005 eReadiness Rankings,* Economist Intelligence Unit, The IBM Institute for Business Value, 2005.

in an information society. The weakest point is the readiness of the administration to provide electronic services – in 2004 the level of access to electronic services in the administration in Poland stood at 34%[74]. However, in 2005 Poland received a much better note and was ranked on the 53rd position (growth by 19 positions, the highest among the countries included in the ranking). In spite of this, Poland still lags behind all countries of the EU-25.

1.20 Level of the country's data communication infrastructure

103. In 2002, investments in telecommunication per capita in Poland amounted to USD 35.4 – a lot less than in the best-developed EU countries[75]. The indicator of digital access at the end of 2002 stood at the level of 0.59, which, in comparison with the highest EU indicators (e.g. Sweden – 0.85, Denmark – 0.83), also gives much weaker results.[76] In 2003, Poland was ranked on the 57th place in the ranking of competitiveness of world economies[77]. This competitiveness is remarkably influenced by development of telecommunication infrastructure and services.

104. In 2004, the ration of fixed telephone line subscribers per 100 residents amounted to 73.8, while the ratio of mobile phones subscribers per 100 residents – to 60.5. The number of subscribers and users amounted to 23 million and was by 32.7% higher than that recorded at the end of 2003[78]. In 2004, there were 12.54 million active telephone lines, i.e. 328.46 per 1,000 persons. There were also 7,932 automatic digital local exchanges, including 3,655 in the countryside, as well as 97 automatic digital inter-zone exchanges. The number of subscribers for special communication systems revealed a tendency to grow, in the years 1999-2003 there was an increment of fixed phone line subscribers by 9.5% (including by 26% in rural areas), as well as an increment of mobile phone subscribers by 339.8%. An increase in the number of subscribers was also observed for cable TVs (in the years 1999-2003 by 9.1%)[79].

1.21 Level of development of eServices of the public administration

105. The level of advancement of public service development among the EU-25 amounts to 68% and in Poland to 34%[80]. The level of full interactivity of public on-line services in EU-25 amounts to 40%, in Poland – 9% (3rd position from the end). The highest level of development of public eServices for citizens is observable in the following areas: job search (74%), personal income tax (50%), registering for institutions of higher education (36%) and certificates of registry (29%). The lowest level of development is, in turn, noticed in health services (2%) and registration of reports to the police (2%). The level of access to public services on regional level is little higher than in the central administration (34% against 33%). The widest range of services is available in the Pomorskie Voivodship (45%) and the smallest – in the Śląskie Voivodship (27%). The majority of activities in this respect is undertaken at the local level, that is why big differences in the access to services in individual regions are observable (e.g. services in the area of eHealth from 0% to 13%).

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[74] *eGovernment Development in Poland* – 3rd edition of eEurope Studies, Capgemini, Warsaw 2004.

[75] To compare, Denmark – USD 238.9; United Kingdom – USD 227.3; Portugal – USD 191.1; Sweden – USD 166; Spain – USD 128; the Czech Republic – USD 80; Slovenia – USD 75; Hungary – USD 67; *World Telecommunication Development Reports*, 2003, International Telecommunications Union (ITU).

[76] http://www.itu.int/newsarchive/press_releases/2003/30.html; IDC includes four elements: information infrastructure, knowledge and skills of the society, quality of ICT access, influence of income on ICT.

[77] *The World Competitiveness Yearbook 2004*; 2001, IMD.

[78] *The State of Telecommunication in Poland*, data as at the end of the third quarter 2004, http://www.mi.gov.pl/departamenty/1/analizy/943.html.

[79] *Communication – Results of Activity in 2003; 2002; 2001; 2000*. GUS, Warsaw 2005.

[80] Data based on the survey *Web-based survey on electronic public services* conducted by Capgemini at the request of the European Commission, July 2004.

106. The state of the development of public eServices addressed to legal persons is better than of those addressed to individuals (43% and 31% respectively). The highest indicator refers to obligatory social insurance (100%), service of customs declarations (100%) and VAT (50%). In the case of obligatory social insurances such a high level stems from legal requirements, but in the case of the two remaining services, the development was achieved mainly thanks to own initiatives of the public administration entities in regions. Services in the area of payments for environment exploitation and for enterprise registering remain still at a low level – 25% and 5% respectively.

107. The majority of public administration institutions reached the information level that does not require transformations in the internal functioning of offices and is relatively easy to achieve. However, transactional services remain at a low level of development as they demand adjusting of internal procedures, integration of state registers and databases, changes in legal provisions and creation of new organisational regulations, classifications and standards. Moreover, the lack of experience in managing electronic administration projects and the lack of vision of its development result in the low level of eServices development. 99.4% of public offices have Internet access, however as much as 80% of local government (municipal) offices use only an analogue modem connection [81]. ICT development is not their priority – in over 56.6% of offices the percentage of budgetary resources earmarked for this purpose did not exceed 1% in 2005 (although it grew in comparison to 2004 when it stood at 29%).

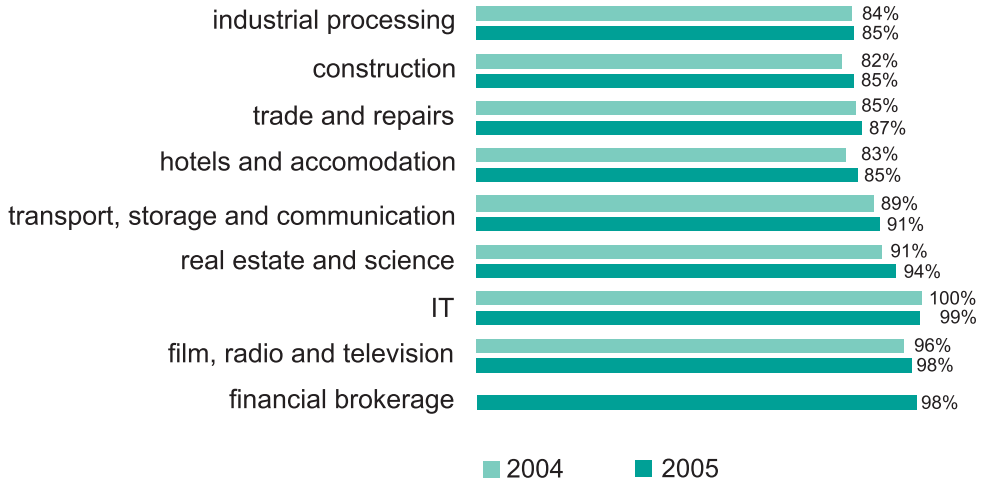
1.22 Activities in the area of eEconomy[82]

108. The results of the surveys on the use of ICT in enterprises, carried out in 2004 and 2005, showed that the overall level of indicators of computer use and access to the Internet was high.

109. In 2005, computers were used in 93% of enterprises, and 87% of enterprises had access to the Internet. Almost all large enterprises (over 250 employees) used computers and had access to the Internet. Almost all (99%) medium-sized enterprises (number of employees between 50 and 249) had computers and 98% of them had access to the Internet. The number of on-line eServices available to citizens, businesses and general public is by 2-3 times lower than the average in the EU-15.

[81] Report *ARC Market and Opinion for the Ministry of Science and Informatisation,* September 2004.
[82] *Use of Information and Communication Technologies in 2005,* GUS, Warsaw 2005.

Figure 1.22.1 Percentage of enterprises that use computers broken into sectors in the years 2004 and 2005



Source: GUS Study entitled "Use of IT Technologies in 2005", http://www.stat.gov.pl/ dane_spol-gosp/spoleczenstwo_informacyjne/ index.htm. chart no. 3.

110. In 2005, the share of enterprises using analogue modems fell by 9 percentage points in comparison with the previous year and amounted to 43%. Enterprises started to invest on a wider scale in broadband connections, the use of which increased by 15 percentage points over the year and also amounted to 43%.

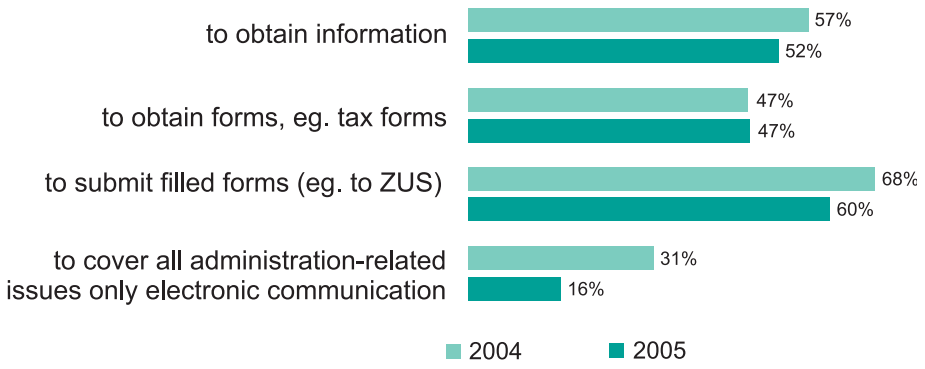
111. In 2005, 38% of employees working in enterprise surveyed admitted to use computers in their work routine at least once a week, out of which 27% used computers with access to the Internet. Compared to the data from the previous year, these indicators increased by 5 and 6 percentage points respectively, which gives 35,000 employees.

112. The biggest ratio of employees using computers in their work routine amounting to 41% was recorded in large enterprises, while in small and medium-sized enterprises it stood at 36% and 35% respectively. The index of employees having access to the Internet does not differ a lot in enterprises classified according to their size and fluctuates between 26% and 28%.

113. An analysis of enterprises by their activity shows that the highest ratio of employees using computers in their work routine was observed in the financial intermediary sector (96%), followed by the IT sector (95%). However, in the IT sector 91% of employees using computers had access to the Internet, while in financial enterprises this ratio was almost two times lower and amounted to 47%.

114. The data on enterprises using Internet in contacts with public administration in 2005 indicates a fall in comparison with 2004. The share of enterprises using Internet to acquire information from public administration amounted to 52% and decreased by 5 percentage points in comparison with 2004. In the case of access to applications, e.g. tax applications, this indicator remained at the level of 47%. The ratio of enterprises which submitted such applications to public administration institutions via the Internet fell by 8 percentage points and in 2005 accounted for 60% (68% in 2004). The use of the Internet to handle all official matters only via an electronic way decreased by as many as 15 percentage points to the level of 16% (31% in 2004).

Figure 1.22.2. Share of enterprises that use the Internet in contacts with public administration in 2004 and 2005



Source: GUS Study entitled "Use of IT Technologies in 2005", http://www.stat.gov.pl/ dane_spol-gosp/spoleczenstwo_informacyjne/ index.htm, chart no. 24.

115. In general, in 2005 the share of people ordering or buying things via the Internet grew in comparison to 2004, however eCommerce is still not very popular in our country. Goods that are most frequently bought via the Internet, i.e. books and magazines, were purchased only by 3% of people at the age of 16-74, which constitutes almost 900,000 people.

116. The total value of goods and services ordered or bought via the Internet surpassed one billion zloty in 2005. To compare, in 2004 the value of purchases made via the Internet by Polish inhabitants aged 16-74 amounted in total to nearly PLN 360 million.

117. As far as enterprises that buy products via the Internet are concerned [83], comparing the years 2003 and 2004, we can observe an increase of the share of enterprises that placed orders via the Internet by 7 percentage points. In 2004, 17% of all enterprises chose this form of shopping. This means that the group of over 6,800 companies ordering things via the Internet in 2003 was joined by 5,700 companies in 2004. On-line payments for orders made via the Internet are still not very popular, but this has been changing gradually (an increase from 3% to 5%).

118. In 2004, the share of enterprises selling things via the Internet (exclusive of orders obtained via e-mails) and those receiving on-line payments did not change radically in comparison to 2003 and amounted to 4% and 1% respectively. In 2004, 4% of small, 6% of medium-sized and 8% of large enterprises surveyed sold their products via the Internet, including 1% of companies in all the three groups that received payments via the Internet as well.

1.23 eCitizen

119. Technically, access to the Internet in 2005 was available in 30% of households in Poland. In urban areas this ratio stood at 36%, and in the countryside – at 19%. Access to the Internet is closely related to incomes – 71% of households with net income exceeding PLN 7,200 had access to the Internet, while for households generating income below PLN 1,440 – only 14%. Only 40% of households have computers, which, in comparison to the average for new Member States (55%)[84] is still a very low result. The number of computers depends on income. Over 68%

[83] In the survey on ICT use in enterprises, conducted by the GUS, similarly to the situation in other EU Member States, the category of orders via the Internet does not include orders placed via electronic mail. The information collected in this area refers to the year preceding the year when the survey was conducted, that is to 2003 and 2004.

[84] Eurostat Internet portal: http://epp.eurostat.cec.eu.int, Data, link 1: information society statistics, folder: *Computers and the Internet in households and enterprises, Availability of Computers, Households.*

of households with average monthly income exceeding PLN 7,200 had a computer, whereas households with incomes between PLN 1,441 and 3,360 and below PLN 1,440 had relatively fewer computers – 48% and 21% respectively.

120. Almost half of the households that had technical conditions to access the Internet in 2005 used broadband connections (allowing for data transmission at a speed over 128 kb/s). In the group of households with the highest monthly net income, 100% used broadband connections, while in the group of those with the lowest income – only 50%. Differences are also visible when we compare the place of residence: in urban areas (both in cities with more and fewer than 100,000 inhabitants) over half of Internet users have broadband connections, but in rural areas – only one user in four[85]. According to the data for 2004, the level of access to the broadband Internet in Polish households (then 26%) was lower than the EU-25 average where it stood at 43%. To compare, the highest ratio of access to the Internet was recorded in Denmark (69%), and the lowest in Lithuania (12%)[86].

121. In the first quarter of 2005, 12% of people looked for information on public administration websites, 6% loaded forms and applications, and 3% sent their forms via the Internet[87].

[85] *Use of Information and Telecommunication Technologies in Enterprises and Households in 2005*, GUS, Warsaw 2006.
[86] *Use of Information and Telecommunication Technologies in Enterprises and Households in 2005*, GUS, Warsaw 2005.
[87] *Use of Information and Telecommunication Technologies in Enterprises and Households in 2005*, GUS, Warsaw 2006.

2. SWOT analysis

122. A SWOT analysis assumes that Strengths and Weaknesses refer to characteristic features of the enterprise and science sectors, as well as information society, whereas Opportunities and Threats describe external factors that influence these three sectors of the Polish economy.

123. Strengths point to elements which constitute competitive advantages of the sectors and upon which the implementation of the OP IE will rely, while Weaknesses are flaws of the sectors that the OP IE should remove or reduce.

124. Opportunities are events that take place in the environment of the enterprise and science sectors, and in the area of information society which will be used to obtain the objectives of the OP IE, both general and detailed. Threats stem from external factors. The implementation of the OP IE is to contribute to limitation of their influence on these sectors.

STRENGTHS	WEAKNESSES
a) Dynamic increases of sales of products and services of Polish enterprises on markets of the EU-25 following 1 May 2004 b) Considerably high ability of Polish companies to adjust to changing external conditions of business activity, especially to competition on the SEM (despite growing labour costs) c) Substantial economic potential of the Polish economy d) Transformation of FDI structure towards *greenfield* investments (realised from scratch) e) Attractive location for foreign investments in some branches (including innovative activities) f) Large number of qualified workers g) High and steady share of researchers in the total number of people employed in R&D in scientific entities h) Increasing number of doctoral students and employees with a doctorate in the R&D sector i) Relatively modern and constantly extended IT infrastructure of science j) Regulated legal environment of administration informatisation – Act of 17 February 2005 on informatisation of the activity of entities that perform public tasks[88] and respective executive acts k) Electronic registers of the administration l) Increasing number of entrepreneurs constantly using ICT in their economic activity (trade via the Internet, business contacts, creating of www pages) m) High interest in and knowledge of IT technologies among young people n) Modern system of Public Internet Access Points (PIAPs)	a) Low share of highly processed goods and high-tech industry in the export structure b) Low share of new and modernised products in production sold c) High level of fixed assets wear in enterprises and high decapitalization of research equipment d) Low level of investment outlays of entrepreneurs, especially in SMEs e) Insufficient development of the service sector f) Low level of productivity of enterprises operating in Poland (in comparison to the EU-15) g) Insufficient recognition of the *Poland* brand and Polish brand and company names abroad h) Low level of internationalisation of enterprises (lack of a unified systemic support) i) Low propensity for cooperation between enterprises and scientific entities j) Low level of cooperation between entrepreneurs k) Maladjustment of the business support system to the needs of entrepreneurs and the R&D sphere l) Low level of companies' innovativeness and their low propensity for innovativeness m) Low awareness in the area of necessity to compete through application of innovative solutions n) Limited access to external sources of financing for innovative activities of enterprises, especially SMEs (in particular limited access to external sources of financing for innovative start-ups) o) Lack of pro-innovation and pro-entrepreneurship educational programmes at Polish universities p) Insufficient saturation of the enterprise sector with modern technologies, including information and communication technologies q) Low level of inventiveness and limited awareness of intellectual property rights and their use among entrepreneurs r) Maladjustment of R&D works to the needs of enterprises (resulting from, e.g., reluctance of scientific staff in this respect) s) Low number of patent rights granted t) Low level of total R&D outlays, including a much lower than optimal level of non-budgetary outlays u) Ineffective structure of budgetary financing of R&D activities (domination of financing granted to entities rather than for specific projects, relatively low level of budgetary outlays on applied research and development works) v) Unfavourable age structure of scientific workers w) Unsuitable organisational structure of the R&D sector and fragmented structure of the R&D sector x) Limited experience of Polish teams in implementation of large international research projects y) Low level of infrastructure development, particularly in rural areas z) Limited access and low level of eAdministration services aa) Low share of Polish contents on the Internet bb) Obsolete and dispersed public registers cc) Insufficient development of the country's data communication infrastructure

[88] Journal of Laws No 64, item 565.

OPPORTUNITIES	THREATS
a) Increasing attractiveness and credibility of Poland consequent upon its membership in the EU b) Openness of the economy and possibilities of easy transfer of goods and capital c) Intensification of actions aiming at implementation of the priorities of the Lisbon Strategy d) Support from EU funds focused on investments favouring economic growth and creation of new jobs e) Access to world achievements in the area of entrepreneurship and innovation f) Favourable trend in transformation of the sectoral structure of the economy towards a growth of the share of the service sector in GDP g) Establishment of a coherent business support system adjusted to the needs of entrepreneurs, especially to the needs of innovative companies h) Increasing work effectiveness i) Inflow of foreign investments in the areas of advanced technologies based on R&D activities j) Improvement of the institutional and legal environment for business activity k) Accelerating modernisation and improvement of effectiveness of the sectors resulting from more efficient transfer of innovative solutions l) Strengthening of scientific networks and consortia, and technological platforms m) Participation of Poland in the establishment of the European Research Area n) Initiated complex reform of the state financed R&D sector o) Restructuring and consolidation of the best scientific entities and teams of researchers around priority-oriented, multi-annual strategic research programmes p) Development of the National Innovation System through coherent policy in the area of innovation q) Implementation of Regional Innovation Strategies stimulating establishment of Regions of Knowledge r) Development of e-services on the basis of highly qualified human resources s) Growing access to public e-services for citizens and enterprises and growing interest in this type of services t) Growing involvement of Polish institutions in European programmes towards information society development u) Falling prices of telephone connections and access to the Internet resulting from technological development and growth in the competitiveness of the sector v) Revolutionary development of ICT technologies foreseen for the years 2010-2015 w)Growth of interest in data communication technologies among people facing digital exclusion (among others older people, disabled, youth from environment threatened by digital exclusion) x) Development of digital communication technologies	a) High state budget deficit in relation to GDP (and the tendency to reduce the value in the coming years) b) Worsening economic situation in the world and EU which may result in a decrease of economic growth pace c) Low purchasing power of the Polish population that limits the demand for data communication services d) Structure of professional qualifications maladjusted to the needs of the economy e) High costs of business activity conducting f) Unstable and non-transparent legal environment g) Overregulated economic procedures h) Administration unfriendly towards entrepreneurs i) Difficulties related to restructuring processes of some branches of the industry j) State aid aimed mainly at declining sectors k) Inflexible labour market and high non-wage costs of employment disadvantageous to those willing to take up their own business activity l) Lack of pro-innovativeness attitude among entrepreneurs m) Brain drain n) Low level of security in economic transactions o) Inconsistent implementation of a policy aimed at increasing R&D outlays resulting in a low level of resources designated for science in the state budget (lack of leverage effect) and insufficient extra-budgetary financing for R&D p) Inability of universities and scientific entities to reorient their research activity so that to satisfy the needs of the economy q) Lack of entrepreneurial attitudes among researchers r) Serious threat of information exclusion, especially in rural areas and in socially threatened groups s) Language barrier that makes it necessary to translate the Polish contents on the Internet t) Too low pace of development of services in the area of eAdministration u) Lack of experience in managing IT projects within administration

3. Assessment of the effectiveness of domestic and foreign support for the enterprise sector in the years 2000-2006

3.1 Characteristics of aid granted to the enterprise sector

125. Support awarded to the enterprise sector in Poland usually takes two forms: state aid or financing activities of business support institutions. State aid accounts for a substantial part of support.

126. In the period of 2000 – 2005, with the exception of 2003, when the value of state aid granted amounted to 3.5% of GDP, the value of aid was between 0.5% of GDP in 2005 and 1.9% of GDP in 2004.

Table 3.1.1. Value of state aid granted (PLN million)[89]

Year	2000	2001	2002	2003	2004	2005
Total value of aid granted	7,712.0	11,194.8	10,277.6	28,627.5	16,400.6	4 795,1
Value of aid granted excluding transport	no data available	no data available	no data available	no data available	8,809.3	3 646,2
Share of aid value in GDP	1.1%	1.5%	1.3%	3.5%	1.9%	0,5%
Share of aid value in GDP excluding transport	no data available	no data available	no data available	no data available	1.0%	0,4%

Source: Report on State Aid in Poland Granted to Entrepreneurs in 2004, Office for Competition and Consumer Protection (UOKiK), Warsaw 2004.

127. The particularly high level of state aid in 2003 resulted mainly from the aid granted for restructuring processes in the coal-mining sector that stood at PLN 17.5 billion.

128. The structure of state aid granted in Poland in the years 2000-2004 was unfavourable. Out of the total amount of the aid awarded in 2004 that reached about PLN 16.4 billion, only 11% (about PLN 1.7 billion) was designated for pro-development objectives (regional aid, horizontal aid for SME development, R&D and jobs creation), whereas the rest, that is ca. 89% (i.e. PLN 14.2 billion) were allocated for restructuring processes in some sectors, especially coal-mining, railway and ship-building, or for their preservation. In 2005 in the structure of state aid,

[89] The data presented in the table does not take into account the aid granted to entrepreneurs from EU resources (pre-accession and operational programmes 2004-2006) which formally do not constitute state aid.

beneficial changes were noted. The aid for development objectives constituted nearly 54% of the totality of state aid.

129. However, a positive tendency is also observable, namely systematic growth in the value of regional aid (from PLN 48 million in 2001 to PLN 764 million in 2005), as well as its share in total value of state aid (from 0.4% in 2001 to 21% in 2005). The main factor behind this trend is tax exemptions awarded to entrepreneurs operating in Special Economic Zones. Since 2005, a more and more significant role has been played by regional aid awarded to entrepreneurs within the framework of operational programmes co-financed from EU funds (mainly SOP ICE).

130. In 2004 a dynamic growth of granted horizontal aid, both in terms of quantity (from PLN 2 840.8 million in 2003 to PLN 4453.1 million in 2004) and in general terms (in 2003 it constituted 10% of total value of aid granted, however, in 2004 it amounted already to 50.5 % of the share in the total value) took place as well. However, it has to be noted that a huge part of this amount was allocated for restructuring processes (PLN 3,597.2 million, i.e. circa 81% in 2004). This results mainly from the implementation of the so-called anti-crisis acts (Act of 30 August 2002 on restructuring of some public dues from entrepreneurs[90] and Act of 30 October 2002 on state aid to entrepreneurs of particular importance to the labour market[91]). In 2005, due to the implementation of programmes financed from the structural funds, the value of horizontal aid designated for SMEs, training, R&D, as well as jobs creation increased significantly.

131. The most frequently used forms of state aid are diminutions of budgetary incomes, i.e. tax exemptions and remissions which accounted for 52.7% of the aid granted in 2000 and for 90.3% in 2003, result in a decrease of state revenues. State aid in the form of direct public expenses, e.g. subsidies, still constitutes less than 50% of the aid granted. In 2005 for the first time for 8 years there were granted decidedly more aid in the form of direct expenditures (77.1%) than in the form of reducing incomes to the budget (22.9%).

3.2 Analysis and assessment of domestic and foreign support for the science sector[92]

132. Public support for R&D from budgetary funds concerns financing of activities aimed at implementing the state's scientific, science and technology and innovation policy, in particular scientific research, development works and other tasks of high importance for its implementation. Funds for science are mainly spent on co-financing of the so-called primary statutory activities of scientific entities, investments in R&D, research projects, goal-oriented projects performed by enterprises (which constitutes state aid) and scientific entities, international scientific cooperation and research-supporting activities. Moreover, budgetary means are also allocated for financing of programmes and initiatives concerning, among other things, professional development of young scientific staff and organisational entities supporting cooperation between science and the economy.

133. The share of budgetary expenditure on R&D in GDP as well as in total budgetary expenditure has been systematically decreasing in recent years. The process over the years 2000-2005 has been illustrated in Figure 3.2.1.

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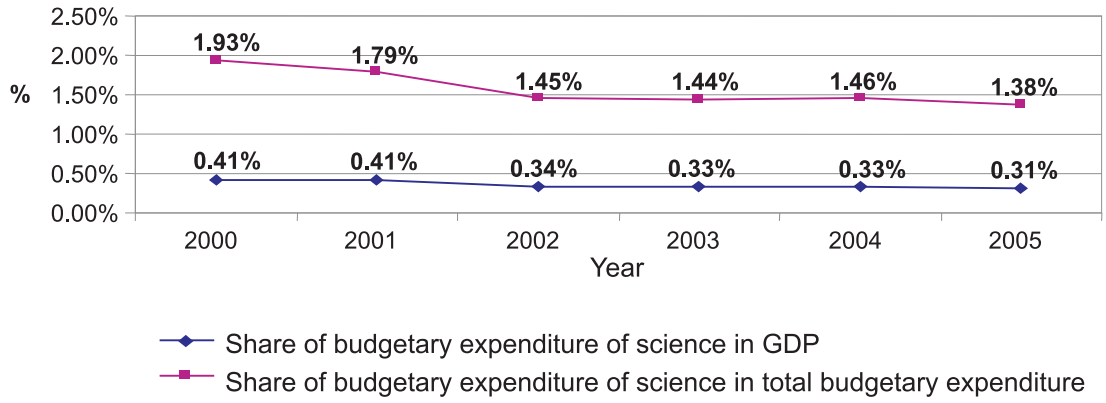
[90] Journal of Laws No. 155, item 1287.

[91] Journal of Laws No. 213, item 1800.

[92] The data presented in chapter 3.2. has been calculated on the basis of information included in *Reports on budget implementation, Part 28 – Science* for the years 2000-2005. Warsaw 2001, 2002, 2003, 2004, 2005, 2006.

Figure 3.2.1. Share of budgetary expenditure on R&D in GDP and in total budgetary expenditure in the years 2000-2005



Source: Study of the Ministry of Science and Higher Education (MNiSW).

Table 3.2.1 Nominal budgetary expenditure on science in the years 2000-2005 (million PLN)

	2000	2001	2002	2003	2004[93]	2005
Expenditure on science	2,916.8	3,089.9	2,661.5	2,729.2	2,893.8	2,901.1

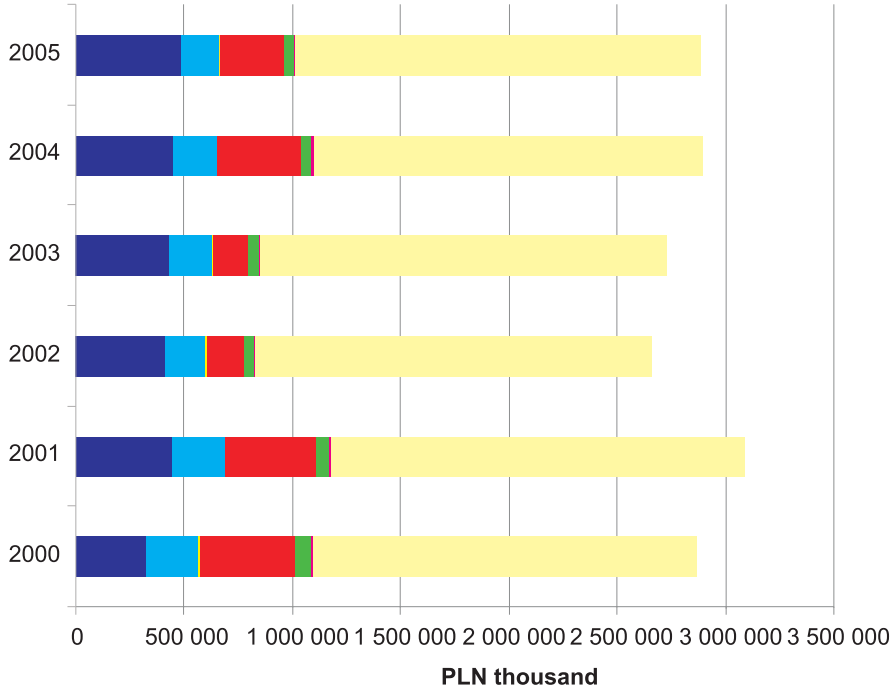
Source: Study of the Ministry of Science and Higher Education.

134. The structure of budgetary expenditure on R&D is also unfavourable, as institutional subsidies for scientific entities prevail. At the same time, the share of expenditure on development activities, such as goal-oriented projects the results of which are aimed at practical application in the economy or investments in R&D, is considerably lower.

135. The data presented below indicate that in the structure of budgetary expenditures on science the recipient specific subsidies, earmarked mainly for financing so-called primary statutory activities of scientific entities, represent on average up to 64.4% of total budgetary expenditures on science in the analyzed period.

[93] In the years 2004-2005, total budgetary expenditure on science, apart from budgetary funds covered by Budget Part 28 – Science, also covered the funds allocated to budgets of the voivodes (regional governors) for performance of tasks and programmes co-financed from the structural funds.

Figure 3.2.2 Structure of expenditure in Section 730-Science, in Budget Part 28 - Science in the years 2000-2005 (nominal values, thousand PLN)[94]



	2000	2001	2002	2003	2004	2005
Recipient-specific subsidies	1,766,076	1,908,487	1,829,896	1,873,953	1,793,042	1,870,351
Other activities	11,057	8,090	8,529	10,028	9,985	10,514
Research supporting activities	73,322	67,329	46,242	47,325	50,436	48,275
Investments	436,795	413,463	175,100	163,926	387,595	299,787
International scientific cooperation	8,950	619	629	1,982	2,567	2,480
Goal oriented projects	238,409	246,029	188,028	198,530	197,043	171,675
Research projects	329,534	445,912	413,042	433,427	451,113	489,427

Source: Study of the Ministry of Science and Higher Education.

136. At the same time, the share of expenditure on implementation of research projects[95] in total budgetary outlays is unsatisfactory; it constitutes 15.3% on average, although shows a slight growth[96].

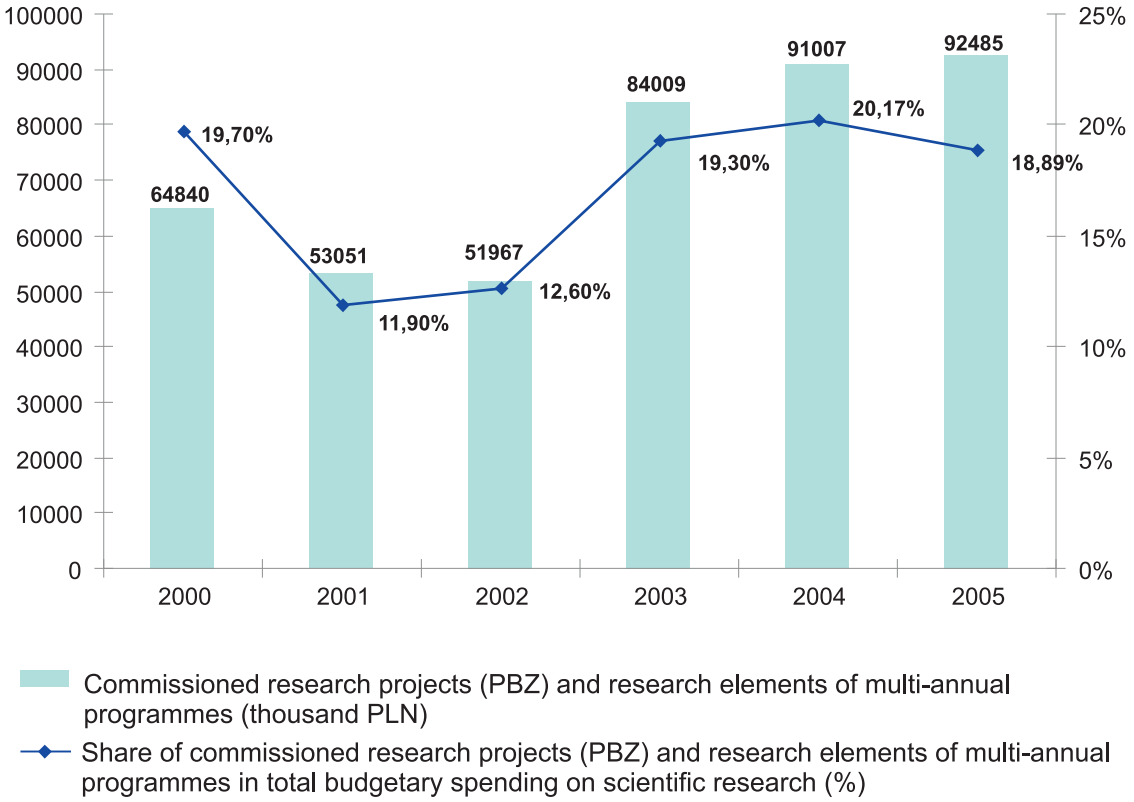
[94] In thousands PLN and in relation to total budgetary expenditure on science. The data presented in the table refers to expenditures on science covered by Budget Part 28, which is managed by the minister in charge of science.

[95] This analysis does not cover the outlays spent on research development projects due to the fact that the first call for proposals for their performance was only announced at the beginning of 2006.

[96] Financing of research projects (pursuant to the Act of 8 October 2004 on the principles of financing of science before amendment of 15 June 2007) covers commissioned projects (dedicated to subjects set out in national framework programmes or in the multi-annual programme), own projects (dedicated to subjects set out by scientists submitting such projects), development projects (subjects set out by the scientists, their result should constitute the basis for practical use), as well as supervised projects and special projects (which are part of international programmes which are not co-financed from foreign funds). Pursuant to the Act of 12 January 1991 on the State Committee for Scientific Research (KBN) (Journal of Laws of 2001, No. 33, item 389 with amendments), financing of research projects mainly referred to financing on the basis of a competition of applications, submitted individually or by research teams, dedicated to subjects set out by its performers or ordered by the KBN or its Chairman. Therefore, according to the previous regulations, financing of research did not cover development and special projects.

137. Budgetary expenditure on commissioned research projects (PBZ) and research elements of multi-annual programmes in nominal values in the years 2000-2005, as well as the share of this expenditure in total spending on scientific research are presented in Figure 3.2.3.

Figure 3.2.3 Budgetary expenditure on commissioned projects and research elements of multi-annual programmes in nominal values and in total budgetary expenditure on research projects (in %)



Source: Study of the Ministry of Science and Higher Education.

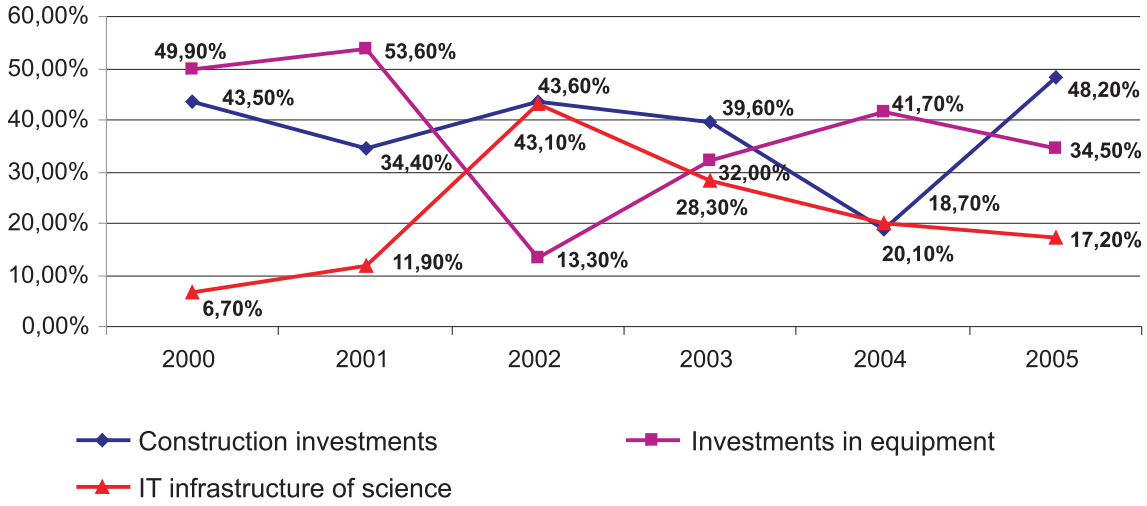
138. The data presented above shows that there was a small share of commissioned projects in the total volume of research projects over the last five years. It has to be noted that such projects are the main tools for the implementation of the state's scientific, science and technology and innovation policy managed by the minister in charge of science. They allow the minister to direct budgetary expenditure towards undertakings in the area of research and in disciplines of priority importance for the country's development and for the establishment of a knowledge-based economy.

139. Additionally, financing of international scientific cooperation from budgetary funds, which covers in particular scientific research and development works carried out within European or international programmes (co-financed with non-returnable foreign funds), is at a very low level and has been declining. As regards the structure of budgetary expenditure on international scientific cooperation in 2005, as much as 52.3% were spent on fees paid to international institutions or organisations under international agreements, whereas participation in UE programmes along with activities supporting this participation accounted for scarcely 34.68%.

140. The share of expenditure on goal-oriented projects[97] the results of which are aimed at practical application in the economy is yet lower (in the analysed period, it constituted on average 7.2% of total budgetary expenditure on R&D), and has been steadily declining; in 2005 it dropped to the level of 5.93%.

141. As the diagnosis of the Polish R&D sector shows, budgetary financing is also characterised by the low level of expenditure on investments in scientific research and development works[98]. Additionally, the system for distribution of budgetary funds designated for co-financing of R&D investments is rather dispersed. As a result, scientific entities are poorly equipped, which is accompanied by the high wear of scientific and research devices and constraints on possibilities to carry out research at the global level.

Figure 3.2.4 Structure of expenditure on investments in scientific research and development works in the years 2000-2005



Source: Study of the Ministry of Science and Higher Education.

3.3 Support from European funds

3.3.1 Support for enterprises within pre-accession programmes

142. Aid granted form pre-accession programmes such as Phare and SAPARD was an important source of financing the development projects of enterprises in the pre-accession period and at the early stage of Poland's membership in the EU. Below there was presented a detailed structure of aid granted to the enterprise sector within the framework of Phare programmes in 1999 – 2005 and within SAPARD until the end of 2005.

[97] According to the Act on the principles of science financing, a goal-oriented project is an undertaking intended for accomplishment in a specified period of time, on stipulated terms by authorised entities covering applied research, development works, industrial research and pre-competitive research.

[98] Financing of investments in scientific research or development works under the Act on the principles of science financing (before amendment of 15 June 2007 covers: construction investments, purchase of buildings, purchase or construction of scientific and research equipment classified as fixed assets, development of information technology infrastructure of science, as well as participation in investment projects on the basis of international agreements.

Table 3.3.1.1. Support for the enterprise sector within the Phare programme in the years 2000-2003 (in million EUR)

Name of Project	Allocated resources	Amounts contracted	Amounts spent
Phare 2000, Development of SME	30.1	29.9	27.1
Phare 2001, Promotion of SME Development	55.1	55.1	44.4
Phare 2002, SME and Innovativeness Sectoral Programme	11.0	10.5	6.4
Phare 2002, Entrepreneurship in Poland – Regional Programme for SME support	24.6	24.6	16.3
Phare 2003, SME and Innovativeness Sectoral Programme	11.5	8.5	0.000
Phare 2003, Regional Programme for SME Support	22.8	19.8	6.252

Source: Study of the Ministry of Regional Development, Warsaw 2006.

Table 3.3.1.2. Support for the enterprise sector within SAPARD until 31 December 2005 (in million EUR)

Measure / Scheme	Allocated resources	Amounts contracted	Amounts spent
Creation of workplaces in rural areas	361.5	343.4	212.6

Source: Study of the Agency for Restructuring and Modernisation of Agriculture (ARiMR), Warsaw 2006.

143. A complete assessment of the amount and effectiveness of support that Poland received under the Phare and SAPARD programmes cannot be made as yet. The contracting phase of the Phare programmes ended in November 2005, but the implementation of a few thousand projects financed from Phare 2002 and Phare 2003 is still in progress. However, it must be observed that Phare programmes, especially those implemented within the so-called New Orientation (starting with Phare 2000), were the first pro-development support undertakings addressed to enterprises, and SMEs in particular, implemented on a wide scale. These programmes, irrespectively of meeting their primary objectives, contributed to improvement of the ability of effective awarding (on the part of the administration) and effective use (on the part of entrepreneurs) of pro-development state aid in compliance with European standards.

3.3.2 Support for enterprises within the European Union's structural funds

144. Thanks to support from the EU structural funds and to the instruments designed to take advantage of them, the amount of resources destined for activities aimed directly and indirectly at the enterprise sector has significantly increased since 2004[99]. Within the framework of respective

[99] Because of the schedules for launching particular measures within the framework of operational programmes and accepted procedures for selection of projects, the process of support awarding (i.e. contracting) on a large scale started in 2005, takes place also in 2007, whereas disbursing of resources will end by the end of 2008, depending on the programme.

operational programmes, assistance is available for, *inter alia*, new investments, innovative activities, employment growth, counselling, training, pro-ecological and occupational health and safety investments, as well as for internationalisation of companies and marketing activities.

145. The Improvement of Competitiveness of Enterprises Sectoral Operational Programme (SOP ICE) provides the most complex system of support for entrepreneurs. It is directed to both business support institutions and to entrepreneurs, with particular regard to the SME sector. The SOP ICE aims to improve the competitive position of enterprises operating in Poland and within the framework of the Single European Market through creation of a strong institutional environment providing support for enterprises and fostering the transformation of the economy into an economy based on innovative enterprises. In order to achieve this goal, two priorities were set: entrepreneurship development and innovativeness growth by means of strengthening business support institutions and direct support for enterprises.

146. Support for the enterprise sector awarded in the framework of the SOP ICE is complemented by:

I. Integrated Regional Operational Programme (IROP) which supports the enterprise sector at the regional level, offering assistance to micro-enterprises and promoting entrepreneurship in local communities;

II. Sectoral Operational Programme Restructuring and Modernisation of the Food Sector and Rural Development (SOP Rural Development) which supports enterprises from the farm and food sector operating in the area of processing and marketing of agricultural produce subject to Annex I to the European Community Treaty, as well as activities related to tourism and leisure services;

III. Sectoral Operational Programme Human Resources Development (SOP HRD) which provides support for unemployed people wishing to start their own business, promotes entrepreneurship (especially among women, young people and people with disabilities), as well as strengthens the adaptive potential of enterprises;

IV. Sectoral Operational Programme Fisheries and Fish Processing (SOP Fisheries) which includes measures designated for sea fishery, inland fishery and fish processing sectors.

147. On the basis of experiences gathered so far from the implementation of the structural funds it may be said that the measures destined for entrepreneurs enjoy wide interest. Within the framework of the SOP ICE, the majority of applications were submitted within measure 2.3, under which SMEs may receive subsidies for new investments.

148. By the end of June 2007, the total number of applications for financing submitted within the framework of the SOP ICE which offers a direct assistance to enterprises amounted to 47,533, out of which 21,677 applications within measure 2.3. In case of investment activities the value of financing applied for in applications that were correct with regard to formal requirements surpassed the allocation many times, exceeding it by four times in measure 2.3.

149. By the end of June 2007, the total value of applications filed in by entrepreneurs amounted to over PLN 13 billion, exceeding by four times the amount of resources available. The table below illustrates the interest in the measures destined for entrepreneurs in the framework of the operational programmes concerned.

Table 3.3.2.1 Consolidated list of amounts of support for the enterprise sector allocated for the years 2004-2006 and granted in the years 2004-2005 under each operational programme co-financed from the EU structural funds (as of June 2007).

Operational Programme	Priority/ Measure number	Total value of allocation (PLN)	Total value of support applied for (PLN)	Allocation / value of applica-tions	Total value of contracts signed (PLN)	Alloca-tion /total value of contracts signed
SOP ICE	2.1	48 284 045	101 601 800,47	210,43%	47 550 287,73	98,48%
	2.2	995 066 446	7 913 695 591,81	795,29%	886 565 755,63	89,10%
	2.3	1 128 186 639	4 051 332 216,16	359,10%	1 123 817 544,42	99,61%
	2.4	559 607 159	965 250 537,01	172,49%	568 377 381,86	101,57%
IROP	3.4	213 662 797	528 719 406,15	247,46%	198 669 615,26	92,98%
SOP HRD	1.2	753 115 042	751 627 134,03	99,80%	859 963 289,00	114,19%
	1.4	288 852 001	600 300 542,78	207,82%	300 288 838,46	103,96%
	1.6	247 819 759	522 314 501,83	210,76%	257 941 356,90	104,08%
	2.3	718 508 834	3 529 402 472,46	491,21%	723 421 056,26	100,68%
SOP Agriculture	1.1	1 251 096 636	1 562 487 288,58	124,89%	1 234 343 593,08	98,66%
	1.5	1 257 445 600	1 835 176 220,41	145,94%	1 361 919 666,53	108,31%
	2.4	236 527 664	317 147 255,80	134,08%	217 567 856,93	91,98%
	2.6	124 616 401	163 077 907,41	130,86%	115 771 104,75	92,90%
SOP Fisheries	3.1	19 108 336	15 034 182,67	78,68%	5 238 687,00	27,42%
	3.2	32 927 393	39 092 516,60	118,72%	30 907 761,29	93,87%
	3.4	219 850 950	175 864 349,43	79,99%	140 175 155,43	63,76%
	3.5	483 752	336 657,35	69,59%	336 657,35	69,59%
	4.3	12 260 200	3 573 936,79	29,15%	2 905 114,23	23,70%
	4.5	22 838 757	7 286 245,88	31,90%	6 268 231,35	27,45%
Total		**8 130 258 411**	**23 083 320 763,62**	**283,92%**	**8 082 028 953,46**	**99,41%**

Source: Ministry of Regional Development, Warsaw 2007.

3.4 Aid to business support institutions

150. Development of enterprises is stimulated not only by direct assistance provided to entrepreneurs, but also by support for widely understood business support institutions. The majority of measures aimed to strengthen and develop various business support institutions (such as technology transfer centres, science and technology parks, industrial parks, technology incubators and R&D institutions, loan and guarantee funds, seed capital funds) were provided within the SOP ICE. These measures aim at stimulating entrepreneurship and innovative activities through giving access to high quality services provided by business support institutions, through improvement of accessibility of external financing, and through preparation of a modern infrastructure for business activity. Furthermore, they should foster entrepreneurship through strengthening of links between the R&D sector and enterprises, through improvement of mechanisms for implementation and commercialisation of innovations (including technology transfer) as well as through better on-line access to a variety of public services.

151. The measures aimed at business support institutions enjoy wide interest of applicants. Out of 1113 formally correct applications, 527 were approved. The value of approved projects (including projects placed on the waiting lists) is PLN 2.7 billion and surpasses by 12% the value of available resources. The table presented below shows the structure of the SOP ICE measures aimed at business support institutions along with the amounts allocated for particular category of support.

Table 3.4.1 Support for business support institutions allocated in the years 2004-2006 and granted in the years 2004-2006 within the SOP ICE presenting categories of support (in million EUR)[100]

No.	Type of support	Amount allocated for the years 2004-2006	Value of support for approved projects covered by contracts[100]
1.	Reinforcement of institutions (and their networks) supporting operations of enterprises, including those belonging to the National SME Services Network (KSU)	37,6	38,4
2.	Improvement of accessibility to external financing for investments in enterprises: providing capital for micro-loan funds, credit guarantee funds and seed capital funds	203,8	205,8
3.	Support for industrial parks, science and technology parks and technology incubators, including academic initiatives	168,1	178,8
4.	Strengthening of co-operation between the R&D sector and the economy: support for institutions and organisations from the R&D sector (including their networks and consortia) and other institutions that support entrepreneurship and innovativeness	121,8	119,9

Source: Ministry of Regional Development, Warsaw 2006. Complement to the SOP ICE and monthly information on the progress of the SOP ICE implementation as at 27 October 2006.

[100] As of 6 July 2007.

3.5 Support for the science sector within the structural funds

152. Support for the science sector is available within measure 1.4 of the SOP ICE and relates to financing of goal-oriented projects carried out by the enterprises individually or in cooperation with scientific entities, as well as by the Centres of Advanced Technologies (sub-measures 1.4.1. and 1.4.4.), investments (sub-measures 1.4.2. and 1.4.3.) and research and goal-oriented project in the area of foresight (sub-measure 1.4.5.).

153. To carry out this measure the funds from the ERDF in the value of EUR 88.85[101] million have been assigned. From the beginning of the Programme launch till 31st June 2007, 677 applications for financing within the framework of measure 1.4 have been submitted. By then 214 contracts have been signed for the total value of financing amounted to PLN 455,993,082 (about EUR 121.3 million) including the financing from the ERDF amounted to PLN 330,622,070 (about EUR 87.9 million).

154. Detailed value of contracts signed within the above sub-measures and value of financing from structural resources in the period from 1st May 2004 till the end of June 2007 were presented in the table below.

Table 3.5.1 Contracts signed within the Sub-measure 1.4 of the SOP ICE in the years 2004-2006 (PLN)

Measure	Sub-measure	Number of applications	Number of contracts signed	Value of signed contracts/ decisions issued	
				Total	ERDF
1.4	**1.4.1**	164	94	144 031 983,54	97 424 793,87
	1.4.2	250	50	85 278 485,83	63 309 569,69
	1.4.3	217	43	182 842 102,25	137 131 576,92
	1.4.4	16	9	7 023 364,59	5 142 519,84
	1.4.5	30	18	34 208 142,80	25 656 107,10
	Total	**677**	**214**	**453 384 079,01**	**328 664 567,42**

Source: Ministry of Regional Development, Warsaw, July 2007.

155. While attempting to assess the implementation process of structural funds for the science, it should be stressed that applicants have the greatest interest in investment projects, yet significantly fewer submitted applications and also signed contracts related to the implementation of R&D projects. It is a typical feature of undercapitalized structures, but changes in the infrastructure should result in an increased number of research projects, due to the modernized infrastructure. Furthermore, the reasons for such a structure of applications should be attributed to not very flexible and complicated procedures and general construction of applied instruments when scientific entities are involved. The majority of projects is implemented by scientific entities from the public sector. Projects carried out by entrepreneurs relate mainly to the sub-measure 1.4.1. Large entrepreneurs acting in the areas of "computer science and related activity" (Polish Classification of Activity 72) and "conduct of research and development works" (Polish Classification of Activity 73) are dominating beneficiaries.

[101] The value of resources after the allocation introduced by the regulation of the Minister of Regional Development of 26 April 2006 modifying the regulation on the Completion of SOP ICE, 2004-2006 (OJL no. 74, pos. 517).

4. Strategy

4.1 Main objective

156. The OP IE is an element of the system for effective use of the European Union's structural funds by Poland in the years 2007-2013. The main strategic document the assumptions of which serve as a point of reference for the OP IE is the Lisbon Strategy[102] renewed in 2000, which sets two priority objectives: economic growth and employment, in compliance with the objectives of sustainable development[103] and *Community Strategic Guidelines*. At the national level, these are: *The Country's Development Strategy* for the years 2007-2015, *National Strategic Reference Framework for the years 2007-2013 and National Reform Programme for the Implementation of the Lisbon Strategy for the years 2005-2008*[104].

157. The OP IE meets the assumptions of the Lisbon Strategy adding to the implementation of its objectives due to designation of 90% of the financial allocation for measures in the following areas: R&D, innovations, information and communication technologies.

158. These measures also contribute to the implementation, in Poland, of conclusions from the Summit of the European Council of March 2006 within the framework of increasing investments in science and innovations and they fulfil the recommendations of the European Council from the Summit of March 2007 and conclusions included in the European Commission's Report for 2006 on the implementation of the renewed Lisbon Strategy within the framework of stimulating the R&D activity and innovativeness.

159. The OP IE is complementary to Community documents developed within the 2007-2013 financial perspective: the 7th Framework Programme for Research, Technological Development and Demonstration Activities for the years 2007-2013[105] and the Competitiveness and Innovation Framework Programme for the years 2007-2013[106].

160. The basic strategic document which integrates assumptions of the renewed Lisbon Strategy and of the Cohesion Policy for the years 2007-2013 is the Community Strategic Guidelines (CSG)[107]. Within the framework of the CSG, the Commission proposed to concentrate interven-

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[102] *An agenda of economic and social renewal for Europe*, COM (2000) 7, Brussels, 28 February, 2000.

[103] The basic document which describes the assumptions of the renewed Lisbon Strategy is the Integrated Package of Guidelines for the years 2005-2008, i.e. *General Guidelines for the Economic Policy* and *Guidelines on Employment* united in one document, *Growth and Employment – Integrated Guidelines for the years 2005-2008*, COM (2000) 141, Brussels, April 2005.

[104] The document was adopted by the Council of Ministers on 27 December 2005.

[105] The document was adopted by the Decision No 1982/2006/WE of the European Parliament and of the Council dated 18 December 2006 concerning the Seventh Framework Programme of the European Community for Research, Technological Development and Demonstration Activities (2007 to 2013).

[106] *Decision No 1639/2006/EC of the European Parliament and of the Council of 24 October 2006 establishing a Competitiveness and Innovation Framework Programme (2007 to 2013), OJ L 310/15,* 9 November 2006 r.

[107] Cohesion Policy in Support of Growth and Employment: Community Strategic Guidelines 2007-2013, *COUNCIL DECISION of 6 October 2006 on Community strategic guidelines on cohesion (2006/702/EC)*.

tion measures of the Cohesion Policy on the objectives of the renewed Lisbon Strategy, namely on stimulating growth of economy competitiveness and on increasing the employment level. In the CSG, the Cohesion Policy goals, to be attained at the Community level, are defined as follows: making Europe and its regions a more attractive place to work and invest, development of knowledge and innovativeness for economic growth and creation of a substantial number of better and permanent jobs.

161. The national document to which the OP IE refers directly, is NSRF. Its objective was defined as creating conditions for increasing competitiveness of the Polish knowledge-based economy and entrepreneurship, ensuring a growth of the employment level and enhancing social, economic and territorial cohesion of Poland[108].

162. The objective formulated in this way calls for concentrated efforts aimed to increase the competitiveness of the Polish economy through improving its innovativeness[109]. It is necessary to improve the innovativeness of enterprises, particularly SMEs, in all its areas, that is with regard to products, both manufactured goods and services provided, technologies and business processes, internal and external alike, marketing strategies and methods, including business models, and organisation, including re-engineering of business processes.

163. Innovations are the key factor contributing to creation of new, better workplaces, in particular of workplaces based on knowledge, which is necessary at the moment, e.g. because of the growing number of graduates of higher schools in Poland. Innovations contribute to creation of new workplaces based on knowledge in two ways.

164. Firstly, innovations lead to improvement of productivity and effectiveness of enterprises and to a growth of satisfaction of their clients, in this way strengthening their competitive position on the market. At present, technologically advanced countries meet these objectives through, first of all, innovations consisting in unconventional information gathering and processing, as well as in use of their knowledge which directly results in creation of workplaces based on knowledge. Secondly, innovations are a source of new types of products (production and services), both in production and in widely understood consumption. New types of products open new markets and new opportunities for economic activity, which again adds to creation of new workplaces.

165. Innovations in the enterprise sector should contribute to reduction of the pressure on the natural environment, both locally – through improved effectiveness of the use of renewable and non-renewable resources, reduction of water and air pollutants and non-recyclable waste, and globally – through improvement of the effectiveness of energy use to reduce emission of "greenhouse gases". Wherever possible, it is expected that innovative changes in presently used systems and devices will lead to reduction of pressure ratios on the environment (ratios for unit of product or service), and new products or services will be implemented in such a way as to comply with the requirements in the area of environmental protection and effective use of resources, especially energy.

166. The effect of investments carried out within the OP IE on the climate change and growth of greenhouse gas emission level will be subject to the periodic observation within the monitoring and evaluation of instruments implementing within the NSRF with use of the means of technical assistance.

167. The implementation of the OP IE should add to a better use of environmental technologies, through, for example, stimulating scientific research and diffusion of environmentally-friendly

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[108] *National Strategic Reference Framework 2007-2013 supporting economic growth and employment* – document approved by the Council of Ministers on 29 November 2006.

[109] Compare footnote 3.

technologies. It is particularly important to promote environmentally-friendly products and services on the Single European Market (SEM) and to support export of such products and services.

168. Innovations, especially those related to application of new information and communication technologies in the area of organisation and management, are an indispensable element of the transformation of the Polish economy into a digital economy based on knowledge and of the transformation of the Polish society into an information society which can enjoy a better standard of living. On the basis of an analysis of the needs of the Polish economy presented in the diagnosis, as well as on the basis of an analysis of strategic objectives of the abovementioned documents, the main objective of the programme has been identified, namely:

Development of the Polish economy on the basis of innovative enterprises

169. The objective will be achieved through measures that together constitute a comprehensive process which is one of the most important elements supporting the country's socio-economic development. The components of this process include investments in human resources and investments in the R&D area which will provide better opportunities for high quality development works resulting in effects that may be used in the economy. These effects will add to establishment of new innovative enterprises, the development of which will be supported by providing capital for investments in innovations and by mutual cooperation and activities of numerous business support institutions. In addition, support will be provided for their expansion on international markets through promotion and information activities. The support of the use of the information and communication technologies in the economic activity will contribute to the increase of the competitiveness of the Polish entrepreneurs on the European market. Increase of the broadband Internet penetration will effect in the higher absorption of e-services, both public and commercial. Meeting the main objective with the use of all the said elements will be more effective thanks to implementation of information and communication tools.

170. In the context of the implementation of the renewed Lisbon Strategy, it is necessary to provide basis for a stable economic growth that will be compliant with the principles of sustainable development. In the area of the environment, emphasis will be placed on activities that are beneficial to both the economy and the environment, in this way implementing the win-win strategy.

171. In order to monitor the progress of the implementation of the measures aimed at achieving the main objective of the OP IE, the following indicators have been adopted.

172. Monitoring indicators for the main objective of the OP IE

Indicator	Indicator baseline value[110]	Assumed value of the indicator in the target year	Frequency of indicator measurement	Source of data
Share of enterprises financing innovative activities in industrial enterprises in total[111]	41,1% (2006)	50,9%	Annually	GUS „Science and Technology 2005" – table 2.5
The participation of enterprises (including SME) incurring expenses on the innovative activity in the amount of industrial enterprises in total[112]	To be established	To be established	Annually or every 2 years	GUS
Share of enterprises incurring expenditures on innovative activities in the number of enterprises in the service sector	23,2% (2006)	32,0%	Every 2 years	GUS
Share of sold production of new and modernised products in the total sold production of the industry[113]	22,7% (2006)	30,7%	Annually	GUS „ Science and Technology 2005" – table 2.13
The share of sold production of new and essentially improved products in a sold production of products in total in industry (including the data for SME)[114]	To be established	To be established	Annually or every 2 years	GUS
Share of sold production of new and modernised goods in the total sold production of goods in the service sector	7,7% (2006)	10,2%	Every 2 years	GUS,„Innovative Activities of Enterprises in Services Sector in the years 2001-2003" – table 7.1
Expenditures on innovative activities (as % of sold production value of all enterprises) (*Innovation expenditures*)	1,67% (2006)	2,12%	Annually	EIS - indicator 3.3
Investment expenditures on R&D activities within the environment protection (in PLN million)	0,3	6,1	Annually	GUS „Environment Protection"

173. The implementation of the OP IE will contribute to establishment of a knowledge-based economy, to support for enterprises at early stages of development and those introducing innovative technological and organisational solutions, to strengthening of cooperation among enterprises, business support institutions and scientific entities, also through building and development of information society.

110 Baseline values of all indication in the OP IE, if it is not indicated differently, relate to 2006
111 The data refers to economic operators employing over 49 people
112 The values of this indicator will be estimated until the end of Ist quarter of 2008 at the latest.
113 The data refers to economic operators which employ over 49 persons
114 The values of this indicator will be estimated until the end of Ist quarter of 2008 at the latest.

174. With regard to the importance of SME sector in the development of economy and existing barriers of its development, the majority of instruments designed within the OP IE are directed exclusively or in particular to the SMEs. At the same time with regard to the necessity for a priority treatment of this group of beneficiaries, the Managing Authority will assign at least 65% of resources allocated to a direct support for enterprises within the OP IE for beneficiaries of SME sector.

175. Considering the necessity of adjusting OP IE provisions to changing economic conditions, within the framework of selected priority axes it is presupposed the possibility of submitting pilot projects, aiming at testing a new kind of projects or a new way of access and identification of these which can be included in a wider scope in the Programme in following years, or which can be used in following periods of programming. Implementation effects of these projects will not be counted in monitoring quantitative indicators of Programme.

176. Pilotage is a method of work that begins from generating new ideas within the framework of innovative strategy, with involvement of all interested parties. Then, elaborated new ideas are tested in small pilot projects realized in a short period of time. Effects of projects are subsequently analyzed, and these projects which were successfully implemented, are developed and adjusted to the objectives of Programme. The projects, which succeeded, are analyzed to enable to learn and draw conclusions from made mistakes.

177. A small team among others will manage: the process of experimentation, including the development or adaptation of innovation strategy, including regional ones, in partnership with interested parties; designation of main areas of pilotage; selection of projects; monitoring; analysis and popularization of their effects. Pilotage progresses will be systematically analyzed during meetings of the Monitoring Committee and they will be described in annual reports on the OP IE implementation.

4.2 Detailed objectives

178. Accepted detailed objectives of the OP IE coming directly into objectives of the cohesion policy for the years 2007-2013 determined in the CSG, i.e. development of knowledge and innovativeness in favor of economic growth and indirectly into objectives: creation of permanent and better jobs and making Poland as a place to work and invest attractive.

179. In particular the implementation of OP IE objectives will affect the implementation of the guideline: "improvement of knowledge and innovativeness level in favor of growth" through implementing the undertakings in the scope of enhancement of investments in research and development works, facilitation of innovations and promotion of entrepreneurship, building of informative society and improvement of access to external sources of financing.

180. The OP IE is compatible with *The National Development Strategy for the years 2007-2015*[115] (NDS) that sets out priorities in the area of socio-economic development. The objectives of the OP IE refer directly to Priority 1 *Improvement of competitiveness and innovativeness of the economy* of the Strategy, primarily in the following areas: entrepreneurship development, improvement of access to external sources of financing of investments, improvement of the technological level of the economy through increased expenditures on R&D and innovations, development of information society through informatisation of the relations between business and the public administration, and development of the service sector.

[115] *The Country's Development Strategy for the years 2007-2015* was adopted by the Council of Ministers on 29 November 2006.

181. The detailed objectives of the OP IE fit in with the two priorities of *National Reform Programme for the years 2005-2008*: Entrepreneurship development and improvement of competitiveness of enterprises. The priorities and support instruments operating within the OP IE are a reply to the challenges identified in the *National Reform Programme* with regard to support for the R&D area, development of innovation market and institutional environment assisting in cooperation between the R&D area and the economy, with regard to improvement of the external financing system for innovative undertakings, support system for economic promotion of Poland and ICT development in the economy and administration. At the same time, they constitute a complement to the measures of the strategy with regard to improvement of regulations quality, simplification of administrative procedures and reduction of economic activity costs, improvement of economic judiciary and completion of the main privatisation processes.

182. At the same time, the scope of the OP IE meets the challenges identified at the European Summit in spring 2006 with regard to improvement of investments in knowledge and innovations and boosting the potential of enterprises, especially SME, through concentration of support on undertakings that support establishment, transfer and diffusion of innovative undertakings in the economy and creation of conditions that facilitate establishment and development of SME.

183. The OP IE is one of the instruments aimed at performance of the tasks set out in *Directions of Improvement of the Economy's Innovativeness for the years 2007-2013,* in particular with regard to: *Research for the Economy*, *Capital for Innovations*, *Infrastructure for Innovations*, *Intellectual Property for Innovation* and, to a smaller extent, *Staff for Modern Economy*.

184. The objectives that should be reached at the national level and simultaneously refer to the intervention of the OP IE are also set out in the following documents: *Strategy for Development of Science in Poland until 2013 and a prospective forecast covering the period up to 2020*[116], draft of *Strategy for Development of Science until 2015*[117], draft *Strategy for Development of Tourism in the years 2007-2013*[118] and *Directional Strategy for informatisation of Poland until 2013 and a prospective forecast covering the period up to 2020*[119], as well *as Strategy for information society development in Poland in the years 2007-2013*[120].

185. The diagnosis of the situation of the science and enterprise sectors and the description of the cooperation between these two summarised in the SWOT analysis, as well as the analysis of strategic documents, allowed for formulation of the following detailed objectives contributing to the development of the Polish economy based on innovative enterprises:

1. Improvement of innovativeness of enterprises
2. Improvement of competitiveness of Polish science
3. Strengthening of the role of science in economic development
4. Increasing the share of innovative products of the Polish economy in the international market
5. Creation of permanent and better workplaces
6. Growth of the use of information and communication technologies in the economy

186. The objectives of the OP IE are compatible with the components of the Convergence Objective set out in the Regulation of the European Parliament and the Council on the European Regional

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[116] The document was accepted by the Council of Ministers on 29 June 2005.

[117] The document subjected to inter-department consultations. After adoption by the Council of Miniters (by the end of the third quarter of 2007) it will replace *Strategy for Development of Science in Poland until 2013 and a prospective forecast covering the period up to 2020.*

[118] The document was adopted by the Council of Ministers on 21 June 2005.

[119] The document was adopted by the Council of Ministers on 29 June 2005.

[120] The document subjected to inter-ministersial consultations.

Development Fund[121] regarding, in particular: research and technological development, innovation and entrepreneurship, information society, tourism and support for SME promoting sustainable production models.

187. At the same time, the implementation of the objectives of the OP IE will contribute to the attainment of the horizontal detailed objective of the 2007-2013 NSRF: *Improvement of competitiveness and innovativeness of enterprises, especially in the manufacturing sector of high added value and development of the service sector*. The objective will be also implemented by intervention of Regional Operational Programmes (ROPs), the Human Capital Operational Programme, the Development of Eastern Poland Operational Programme and, to a smaller extent, the Infrastructure and Environment Operational Programme, as all they are compatible with the OP IE.

188. The implementation of this objective of the NSRF will assume concentration of the structural funds on the aims favouring an increase of the competitiveness of the Polish economy and contributing to strengthening of the OP IE "growth engines" (as innovative enterprises have been considered in the OP IE) through creation of a positive institutional environment for their development, including establishment of an information society.

189. The intervention envisaged within the OP IE will contribute to the implementation of the remaining objectives of the NSRF: "*improvement of the quality of public institutions services and extension of partnership mechanisms", "improvement of the quality of human capital and improvement of social cohesion", "development and modernisation of technical infrastructure of fundamental importance for growth of competitiveness of Poland", and "an increase of competitiveness of Polish regions and preventing their social, economic and territorial marginalisation*".

190. The architecture of operational programmes built within the framework of NSRF creates a complex system of supporting the development of Polish economy and includes instruments designed both on the national and regional level. While in this context the ROPs concentrate mainly on the development of competitive regional economies, in particular through supporting the SMEs, the OP IE as a national programme concentrates on supporting the growth of competitiveness of Polish economy through improving its innovativeness. The projects realized under OP IE are of the supra-regional significance and thus influence on the competitiveness of the polish economy as a whole. This means that the projects supported within OP IE contribute in various degrees, depending on types of projects, to the regional development, however the scale of its influence is supraregional.

191. The OP IE, being a part of comprehensive system of supporting the competitiveness of the Polish economy on the national level, envisages mainly investments and advisory assistance in favor of R&D activities, innovations and ICT, and also a direct and indirect support for enterprises, including the SMEs, in these areas in Poland. On the national level, the OP IE is complementary to the OP Human Capital (within the improvement of Polish potential of human resources necessary for innovative enterprises, R&D works and business environment institutions), OP Infrastructure and Environment (within the infrastructure of universities and environmental investments in enterprises), OP Development of Eastern Poland (for projects within the building of infrastructure of wideband access to the Internet and R&D infrastructure, implemented through the support for individual project concentrating in the region of Eastern Poland), Rural Development Plan (support for instruments in the scope of creating and developing micro-enterprises and tourist services). The OP IE instruments are not directly complementary to the Operational Programme for the Sustainable Development of Fisheries Sector and Coastal Fishing Areas, considering the

[121] Regulation (EC) No. 1080/2006 of the European Parliament and the Council of 5 July 2006 on the European Regional Development Fund Regulation and repealing Regulation (EC) No. 1783/1999, OJ L 210/1 of 31 July 2006.

fact that it relates to the other scope of support. On the regional level within the framework of 16 regional operational programmes, the intervention with public funds concentrates mainly on the support for the SMEs and the support within R&D works, ICT and innovations, in the scope necessary for the development of economy of a given region, complementary to instruments on the national level. In order to ensure the achievement of necessary cohesion and synergy of proposed instruments of support in order to maintain an economic development, strong mechanisms of coordination were provided on the NSRF level.

192. Demarcation line, elaborated jointly by all involved parties, between programmes on a national level and regional operational programmes and also operational programmes financed from other funds, which will be subsequently accepted by the NSRF Coordinating Committee, constitutes an appropriate reference to determine the issue of intervention scope proper for a given operational programme.

193. In order to ensure the observance of the elaborated demarcation between the ROP and other operational programmes at the stage of their implementation, additionally the following coordination tools will be provided:

194. **1. NSRF Coordinating Committee**: In order for an effective coordination of horizontal policies and coordination between the European Regional Development Fund, European Social Fund, Cohesion Fund, European Agricultural Fund for Rural Development and European Fisheries Fund, the Coordinating Committee has been established on the NSRF level. Among others, representatives of all institutions which manage national operational programmes and Regional Operational Programmes, representatives of the minister of regional development, other ministers, who play a role of Intermediate Institutions, National Evaluation Unit, Certificating Institutions, a representative of the minister of agriculture and rural development – responsible for the implementation of tasks of the Common Agricultural Policy within the Rural Development Plan, fisheries minister – responsible for the implementation of tasks of the Common Fisheries Policy within the Operational Programme for the Sustainable Development of Fisheries Sector and Coastal Fishing Areas, 2007-2013, will participate in the work within its framework.

195. Representatives of local government party and social and economic partners will participate in the work of the Committee as well.

196. Among the number of tasks contributed to the Committee, its main task in respect of the coordination between structural funds and agricultural funds includes monitoring the cohesion of implementing policies and particular operational programmes and also issuing opinions on conformity of activities carried out within national operational programmes to activities carried out within regional operational programmes, coordinating activities with other structural activities as well.

197. The NSRF Coordinating Committee will create a working group, consisted of representatives of all institutions managing programmes financed from the sources of ERDF, ESF, EAFFRD and EFF. The task of the above-mentioned working group will include the preparation of proposals of cross-control mechanisms for investments supported in the framework of individual programmes (e.g. appropriate questions in applications for financing, project sample controls, joint access to the data bases). The above-mentioned actions will aim at avoiding double financing of projects and guaranteeing compliance with a determined demarcation line.

198. **2. Subcommittee within NSRF Coordinating Committee**, whose task first of all will include coordinating the awarded support, watching over the observance of the determined line of demarcation and also ensuring that co-financed projects will contribute to the synergy of support both on the national and regional level. The Subcommittee will have a mandate to coordinate the support extents within particular operational programmes in the process of their implementation.

199. **3. OP IE Monitoring Committee** whose task is to watch over the effectiveness and quality of implementing the OP IE (compare: chapter 6.4.1).

200. Furthermore, ensuring the coordination between activities of areas of other operational programmes (including Rural Development Plan and Operational Programme for the Sustainable Development of Fisheries Sector and Coastal Fishing Areas, 2007-2013), and also current monitoring the cross-financing within the OP and ROP will be secured by the participation of representatives of appropriate MA's of particular programmes in the works of OP IE MC and committees monitoring other OPs and ROPs.

201. Additionally, a certain role in the process of the coordination of awarded support and avoidance of double financing will be introduced on the operational level, i.e. through obliging beneficiaries to declare, before signing a contract on financing, that eligible expenditures presented within a given project approved for implementing are not financed in an unallowable extent (double, within ineligible expenditures) from other operational programmes.

4.3 Strategy for implementation of the detailed objectives

202. Within the OP IE, support will be provided for activities in the area of product (goods and services), process and organisational innovations in the production and service sectors, which directly or indirectly contribute to creation and development of innovative enterprises. Support will be also provided for innovativeness with high potential for diffusion[122], whereas innovativeness with little potential for diffusion will be promoted and supported within ROPs and the Eastern Poland Development Operational Programme.

203. Support will be provided also for investments of enterprises in R&D infrastructure, which should positively influence the growth of outlays in this area.

204. Emphasis will be placed on financing of both development of the production sector and of market services, with the latter being a perfect opportunity for the country's development. At the moment, off-shoring services in Poland experience a boom, mainly due to the advantageous cost/quality ratio. However, Poland should not build its competitive advantages on the basis of low cost of services, but on its highly qualified human resources, high quality of its services and high quality research resources. Therefore, emphasis will be moved from development of the typical off-shoring services towards high quality R&D services based on highly qualified human resources.

205. Since it is necessary to reconcile productivity growth, restructuring processes of the economy and, at the same time, to create new workplaces, it is advisable to direct the support provided within the OP IE towards undertakings with considerably high innovative potential that create new competitive goods and services. Concentration of support on undertakings in the R&D area and innovations will accelerate the process of establishment of a knowledge-based economy in Poland.

206. Considering the high consumption of fixed assets in enterprises and insufficient level of investment expenditures, often connected with a poor financial situation, shown in the SWOT

[122] The level of diffusion describes potential range of the given innovation which, following its first introduction in one enterprise, is later absorbed in other enterprises, regions, countries and on other markets through market channels (acquisition of tangible assets (machines and equipment) and intangible assets (software, technical services, counselling and training services, etc.)) and non-market channels (imitation, adaptation, etc.). Only product innovativeness (with regard to goods and services) leads to diffusion of innovation through market channels, since only this type of innovativeness is carried out to meet direct needs of the clients of innovative enterprises. In other words, if an innovative product (a good or service) is manufactured by one company, it is later sold to other enterprises which, due to its implementation, become innovative themselves.

diagnosis and analysis (compare: chapter 1.5), at the current stage of development of Polish economy it is advisable to direct instruments of direct support nature, including subsidies for new investments, support for R&D activities and implementation of new solution, in particular technologic ones, to enterprises (in particular to the SMEs), and also to increase the investment readiness and to support the promotion of sale on the JRE and beyond it.

207. These activities will be strengthened by a direct support assigned for stimulating the innovative activity, granted within the OP IE, and undertaking cooperation between entrepreneurs and between entrepreneurs and scientific entities, and improving the service of investors and access to information on the Polish economy.

208. Additionally, instruments of financing engineering allowing the SMEs to gain resources for an innovative activity beyond a traditional banking sector will be supported.

209. The activities aimed at increasing the use of information and communication technologies in the economic activity will be conducted (building of eAdministration favouring the decrease of administration barriers in conducting economic activity, support for the use of data communication technologies by micro- small- and medium sized enterprises, stimulating the demand for e-services through wider access to the broadband Internet and information as far as the advantages of wide use of information and communication technologies in everyday life and economic activity is concerned).

210. Because of limited public resources, the OP IE will support projects with high added value[123] that may bring the most desirable economic results. Therefore, it has been assumed that within the OP IE support will be provided for undertakings that add to establishment and development of innovative companies and to introduction of new innovative solutions, both technological and organisational. Besides, support will be given to highly innovative projects and to projects of high value, including those related to creation of new and permanent workplaces. A large part of projects to be supported within the OP IE will be also co-financed from private resources which will allow for financing of a large number of projects and add to better effectiveness of the implementation of the OP IE's objectives.

211. Support envisaged within the OP IE will be awarded regardless of the sector to which it will be related to (in compliance with the restrictions arising from the scope of the intervention of the ERDF and from state aid principles) and it will be complementary to the measures of 16 ROPs, the Human Capital Operational Programme, the Infrastructure and Environment Operational Programme, the Development of Eastern Poland Operational Programme and OP Development of Rural Areas. The OP IE activities were directed to support both the innovations of radical and incremental nature. This is why, within the Programme the projects implemented by enterprises operating in traditional sectors will be also supported provided that these projects fulfil the criterion of innovativeness. In case of support granted to innovative projects of the radical character under the OP IE the support shall be granted to projects in which innovativeness level of the technological solution will be determined by the time of its application worldwide or level of its dissemination worldwide in the given trade. In case of support granted to innovations of different character (i.e. improvements) the project selection criteria shall be established on the grounds of compatibility with the aims of each measure (e.g. conducting R&D activities or introduction of new designs).

212. In case of projects including a training support (granted in accordance with cross-financing rules) it can be granted only in a close connection with an investment or advisory project and it never constitutes a separated project.

[123] Added value is understood as additional value resulting from the implementation of the project that would not be generated in the given period without state support.

213. The Managing Authority, in order to observe a rule of elastic financing, will secure the functioning of mechanisms guaranteeing that on the level of priority axis this value does not exceed 10%. Additionally on the level of projects the value of engaged sources will be investigated by determining the value of eligible costs covered by this instrument. The investigations will be executed by the institution which takes an application to assess and carries out its qualification.

214. Intervention within the OP IE is in accordance with the provisions of ERDF, pursuant to the regulation (EC) No 1080/2006 of the European Parliament and of the Council of 5 July 2006 on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999 and with the regulations concerning State Aid. The intervention is also complementary to the Operational Programme for Agricultural Areas Development, 2007-2013 and to the Operational Programme for Fishery and Riparian Areas Sustained Development, 2007-2013.

215. The implementation of the measures resulting from the detailed objectives of the OP IE will be compliant with the directions of Community policies regarding environmental protection, equal opportunities, employment, creation of information society and sustainable development, including in the environmental aspect.

216. Activities implemented in the upcoming years within the frame of OP IE will contribute to popularize the usage of environmental technologies. Innovative undertakings not included in the OP Infrastructure and Environment (I&E OP), in particular aiming at using new technologic solutions in the production, leading to the reduction of a harmful effect on the environment, including: limitation of energy, material and water absorptivity of products and services will be co-financed within the Programme. This support will be directed in particular to the SME sector, not covered by the support within the I&E OP.

4.3.1 Detailed objective 1. Improvement of innovativeness of enterprises

217. Objective 1 *Improvement of innovativeness of enterprises* will be achieved due to various tools contributing to improvement of the role of the innovative solutions in the enterprise sector (in particular SMEs) in Poland and at the same time contributing to enhancement of the role of enterprises in establishment of a knowledge-based economy.

218. The diagnosis of the Polish enterprise sector and the SWOT analysis show that the level of innovativeness of Polish enterprises (including SMEs) is rather low which is reflected in, for example, a little share of advanced technologies in the production sold, insufficient saturation of the enterprise sector with new technologies, the low level of resources for R&D coming from the enterprise sector and the low level of entrepreneurs' awareness regarding securing the industrial property rights.

219. Moreover, the SWOT analysis showed that one of the weaknesses of enterprises in Poland is their low propensity for cooperation. Whereas cooperative undertakings of enterprises, mutually interconnected by a common economic objective, together with specialised suppliers, service providers, firms running businesses in similar sectors, as well as institutions related to them (including scientific entities), are the most effective instruments for improvement of competitive position through transfer of new solutions.

220. Therefore, support instruments of the OP IE will make it easier for entrepreneurs (especially SMEs) to establish, transfer and popularise new solutions, both among entrepreneurs and business support institutions.

221. An indirect support for business environment institutions aims at providing with a high quality of services provided in favor of enterprises implementing innovative projects. Additionally, it is presupposed that activities executed within the OP IE contribute to a stronger connection of existing business environment institutions what should give a better accessibility and identification of serviced provided by them. These activities will be complementary to the HC OP instruments within the framework of which the support was assigned among other for the improvement of the quality of human resources of business environment institutions.

222. The basic indicators describing Polish enterprises show that they are much weaker in terms of technology, capital and personnel than enterprises operating in other EU Member States with which they compete on the SEM and on global markets.

223. A low innovativeness of enterprises, especially SMEs, first of all results from the lack of access to the capital. Innovative undertakings are burdened with a considerable risk of failure what reduces chances to gain a banking credit as a source of financing the investment. With regard to that within the OP IE the support of VC and the strengthening of private investor net, what will considerably contribute to unblock the investment potential of SMEs, are planned. With regard to the fact that private kerb capital market concentrates first of all on undertakings carried out by the SMEs, the intervention in this area will contribute to the realization of first objective. At the same time, as a made diagnosis of situation of enterprise sector indicates, the biggest potential in absorbing innovative solutions shows the sector of large enterprises. A transfer of up-to-date technologic solutions to the SMEs takes place by the agency of them. With regard to that within the Programme a part of instruments of support was also directed to enterprises from outside the SME sector.

224. In the light of the above it is necessary to undertake activities aiming at stimulating entrepreneurs to implement innovative undertakings. It needs to implement comprehensive support instruments appropriately fitted to the needs of large enterprises and SMEs, especially these ones, which are at early stages of growth, and to enterprises introducing up-to-date technologic solutions of high importance to the whole economy.

225. The said observations make Objective 1 dedicated to enhancement of innovativeness of enterprises due to strengthening of the role of innovations (related to products, processes and organisation) in the production and service sector, to stimulation of investment outlays, including funds spent on R&D works in enterprises, as well as enhancement of business support institutions, especially of the science sector. The implementation of Objective 1 will also entail support for creation of a complex system of external financing for innovative activity of enterprises, especially at early stages of development, which will add to development of SME potential.

226. **Monitoring indicators for Objective 1**

Indicator	Baseline value	Expected value in the target year	Frequency of measurement	Source of data
Share of innovative enterprises in the industry[124]	42,5% (2006)	52,3%	Every 2 years (since 2004)	GUS, „Science and Technology 2005" – table 2.1
Share of innovative enterprises in industry (including SMEs)[125]	To be evaluated	To be evaluated	Annually or every 2 years	GUS
Share of innovative enterprises in the service sector	24,4% (2006.)	33,6%	Every 2 years (since 2006)	GUS „Innovative activities of enterprises in service sector in 2001-2003" – table 1.1
Share of business spending on R&D/GDP (BERD/GDP)	0,20% (2006.)	0,48%	Annually	GUS „Science and Technology 2005" – Figure 1.4
Share of high-tech products in the total sold production of the industry (in %)	32,8% (2006)	40,0%	Annually	GUS „Science and Technology 2005" – table 4.1
Share of value of sales of new-to-market-products in value of sales in total	8,7% (2006)	11,0%	Annually	EIS 2006
Share of value of sales of new-to-firm products in value of sales in total	5,8% (2006)	7,4%	Annually	EIS 2006
Share of innovative SMEs cooperating with other enterprises/institutions in respect of innovations in the totality of enterprises	9,4% (2006)	11,8%	Annually	EIS – indicator 3.2
Share of SMEs innovating in-house	14,5% (2006)	17,5%	Annually	EIS - indicator 3.1
Share of SMEs that introduced organizational innovations	19,3%	32%	Annually	EIS - indicator 3.6
Early-stage venture capital (including so-called origin and initial capital) as % of GDP	0	0,0093%	Annually	EIS - indicator 3.4

[124] The data refers to economic operators employing over 49 people.
[125] The values of this indicator will be estimated until the end of Ist quarter of 2008 at the latest.

4.3.2 Detailed Objective 2. Improvement of competitiveness of Polish science

227. Implementation of Objective 2. *Improvement of competitiveness of Polish science* is to strengthen the science sector through, on the one hand, providing appropriate research base and, on the other hand, directing already available resources towards research in the disciplines of priority importance for the country's development.

228. Competitiveness of science is understood as the ability to pick up and to solve research problems at the level recognised as high by international scientific community, and also as the ability to create solutions that can be implement in socio-economic practice (in enterprises, education and public administration). In particular, it is demonstrated by the amount of international (especially European) projects in which Polish scientists are participating and by the amount of financial means obtained for implementation of these projects. Such situation can be achieved only if the high quality research staff and research base is guaranteed.

229. The SWOT analysis revealed many weaknesses of the Polish science sector. A very low level of expenditure on research and development is apparent. Noticeable is also the domination of budgetary financing, with inadequate financing of research from private resources, as well as unfavourable structure of budgetary financing, preferring basic research from market research. Another problem is limited availability of financing for the priority development directions.

230. Additionally, the analysis conducted shows that scientific equipment is frequently worn-out and obsolete because of limited investments in this area. Another feature of Polish science is unfavourable R&D staff age structure resulting, in particular, from insufficient incentives for young people to take up scientific careers and the lack of adjustment of the competence of personnel to the needs of the modern economy.

231. Implementation of this objective is to improve the competitiveness of Polish scientific research and development works thanks to concentration of financing to scientific research for priority areas, as well as improvement of standard of scientific entities, including specialist research devices and IT infrastructure. Enhancement of the potential of scientific staff by rejuvenating its structure through involvement of students and doctoral students in conducting researches also using foreign good practices and strengthening an international cooperation will be stimulated. The above activities will be complemented by initiatives consolidating entities running the R&D activity as well. The synergy of activities would be achieved through supporting the sector within the priority axis 4. "Higher education and science" of the Operational Programme Human Capital and the axis 14. of the Operational Programme Infrastructure and Environment "Infrastructure of higher education" directed to major universities in leading academic centres. This above mentioned activities will be especially conducive for the goals set out in the OP IE.

232. It should be underlined that the implementation of this objective will be complementary and would be in line with the recently introduced assumptions of the reform of Polish science system, envisaged in document, recently updated entitled "Science Development Strategy in Poland till 2015"[126] considering the National Development Strategy 2007-2015 provisions. The Science Development Strategy determines plans for reforms in the context of scientific, scientific-technical and innovation policy indicating specific proposals that include the creation of new legal framework expressed among others in acts on organization and financing of scientific researches and development works, National Centre of Research and Development, Agency of Cognitive Research an the act on Public Scientific Institutions.

233. Activities to identify research areas of a strategic importance have been undertaken and they will be presented in the form of the National Programme of Scientific Researches and Develop-

[126] The document under inter-department consultations – it will be accepted by the Council of Ministers in the 3rd quarter of 2007.

ment Works. The priorities pointed in the "Strategy…" will be verified and completed on the basis of results of implemented National Programme *Foresight* "Poland 2020".

234. According to the government decision, the undertaken system reform of public support for the R&D and innovation sector should lead to the increase of public expenditures and stimulation of extrabudgetary financing of science. A new model assuming the separation of creation of scientific policy and implementation role, which are nowadays centralized in the Ministry of Science and Higher Education envisages to create the above mentioned executive agencies what would also contribute to debureaucratization and depolitization of financial resources distribution procedures.

235. These changes will be concerned, in particular, with:

I. changes in the rules for awarding subsidies for basic statutory activity consisting in concentration of financing on the best scientific entities should result in consolidation of scientific entities and improvement of those with the largest potential. These rearrangements of financing rules should be enforced after completion of evaluation of scientific entities. From the second half of 2007, subsidies will be granted in the first place to entities from categories 1 and 2 (there are five categories altogether). Financing will be also related to implementation of tasks of key importance in the area of the state's scientific policy as well as changes introduced in the area of control system and evaluation of these tasks performance.

II. establishing on 1st July 2007 the National Research and Development Center (NRDC), that is a state public agency implementing a scientific and innovation policy through implementing programmes of scientific research and development works, specified by the Minister in charge of science and strategic in terms of the economy interests. Additionally, the Center's tasks include supporting the commercialization and other forms of scientific research and development work result transfer to the economy, supporting the development of scientific staff, in particular the participation of young scientists, implementing international programmes of mobility, implementation of other tasks commissioned by the minister of science.

III. the amendments to the Act of 8 October 2004 on *the rules for financing of science* and executive regulations related to this act coming into force on the 1st July 2007 would allow to simplify procedures of application for budgetary funds on conducting R&D works also to improve and make their expenditures more effective. The importance of funds granted in that competition procedure will also be increased considerably, plus form of granting of the subsidies will be more flexible.

IV. establishing the Agency of Cognitive Research that will be engaged in financing the basic research. Scientists themselves will be initiators of subject matter but the Agency will take opinions of scientific environment representatives into consideration in deciding about assigning funds for a particular research project.

V. pursuing a state scientific policy would be supported by the National Council of Science which will be a consultative and advisory body of the minister of science, composed of representatives of scientific environments, economy, social organizations and government and local government administration.

VI. coordinating functions in implementing scientific, scientific-technical and innovative policies will be granted to the science and innovativeness council acting within the office of the Chairman of the Council of Ministers.

236. **Monitoring indicators for Objective 2**

Indicator	Baseline value	Expected value in the target year	Frequency of measurement	Source of data
Share of total outlays on R&D in GDP (GERD/GDP)	0.57% (2005 r.)	1.50%[127]	Annually	GUS
Poland's financial share in projects financed within EU FP	1.3% (2005 r.)	2.0%	Annually	KPK (National Contact Point)
Share of Polish publications cited on the Philadelphia list in the total number of Polish publications	14.16% (2005 r.)	25%	Annually	OPI
Number of scientific entities creating a common infrastructure (consolidated research funds)	0	25	Annually	IB II
Share of persons with a doctor degree in technical and natural science disciplines in a total number of persons with a PhD degree	33 % (2005 r.)	40 %	Annually	GUS
Number of employed in the R&D activity per 1000 professionally active persons	4.4	7.3	Annually	GUS

4.3.3 Detailed Objective 3. Strengthening of the role of science in the economic development

237. Achievement of Objective 3. **Strengthening of the role of science in the economic development** will contribute to enhancing the economy's innovativeness, through increasing the number of commercialised R&D results and putting them into practice by entrepreneurs.

238. Knowledge, innovation and human capital are the driving forces of economic growth and add to the society's development. The Polish economy, in order to become a competitive knowledge based economy, must improve its knowledge potential through scientific research, education and innovations. The OP IE assumes that "the knowledge triangle" consisting of research, education and innovations will also be the basis for science development strategy so that it might become a driving force of the country's economic development. "The knowledge triangle", along with a new approach to innovation (open innovation[128]) therefore assumes wide cooperation of scientists and entrepreneurs, and, consequently, enhancement of the role of science in the economy.

239. The SWOT analysis conducted showed substantial unwillingness for cooperation between companies and scientific entities. This results, for example, from the lack of compliance of R&D activities with the needs of entrepreneurs stemming from scientists' reluctance to take up such activities. On the other hand, entrepreneurs are not aware of potential profits of innovativeness growth achieved due to implementation of new technologies which result from R&D works. Partly, another reason for such a situation is a high risk attributed to such activities, which

[127] An assumed target value is coherent with the value included in the National Strategic Reference Framework, 2007 – 2013. Additionally, considering the obligations of Poland coming out of the implementation of the Lisbon process, the index will be subjected to medium-term evaluation in 2010.

[128] This strategy consists in finding and compiling new ideas, which are complementary to already existing research and development projects, as well as in removing geographical and technological barriers that pose obstacles to development of new products and markets.

adds to entrepreneurs' reluctance to invest their limited funds in such innovative undertakings. Therefore, the technological gap between Poland and leading EU Member States has been widening.

240. The factors presented above justify directing Objective 3 towards enhancing the effects of synergy that may be achieved through cooperation of scientific entities, entrepreneurs and business support institutions.

241. Objective 3 will be implemented through co-financing of projects concerning applied research (basic and industrial), as well as development works, industrial and pre-competitive research as well as development projects. It will be also implemented through support for acquisition of industrial property rights, commercialisation of R&D results and their application in the economy. These measures will be assisted by activities aimed at development of innovative business support institutions and infrastructure for transfer of new technologies from research centres to enterprises.

242. **Monitoring indicators for Objective 3**

Indicator	Baseline value	Expected value in the target year	Frequency of measurement	Source of data
Share of business spending on R&D in total outlays on R&D	26.9% (2005)	40%	Annually	GUS
Number of people employed in R&D in enterprises in relation to total employment in R&D activity*	7.3 %	20%	Annually	GUS
Number of patents granted to the Polish residents (per 1 million of habitants) - by the Patent Office of the Republic of Poland (PO RP) - by the European Patent Office (EPO) - by the United States Patent and Trademark Office (US PTO)	27.65 0.26 (2002) 0.29 (2002)	62 4 2	Annually	GUS / Eurostat
Number of commercialized results of R&D researches executed in scientific entities	184 (2004)	450	Annually	IB II
Number of technology transfer centres	35	100	Annually	IB II

* As of 31 December.

4.3.4 Detailed objective 4. Increasing the share of innovative products of the Polish economy in the international market

243. As the SWOT analysis shows, the Polish economy is characterized by a low share of high processed products and high technology in export and a poor internationalization and insufficient promotion of "Poland" brand as well what additionally makes difficult to function on international markets for entrepreneurs. Therefore the enterprises operating in Poland do not use fully the possibilities connected with the access to the SEM and with an increased accessibility of other world markets. The export of low processed products, often realized under somebody's else brands, does not allow to build a permanent competitive advantage and the poorness of

"Poland" brand, and brands associated with it, makes the expansion on new markets considerably difficult for entrepreneurs.

244. The introduction of high processed, technologically advanced goods and services produced by enterprises operating in Poland to foreign markets requires promoting actions, contributing to the increase of acknowledgement of trade marks and brand names from Poland. The implementation of Objective 4 will include both the stimulation of undertaking such a type of activities by SMEs and their own activities of administration organs, aiming at securing the information and complete service, facilitating to locate investments in Poland for potential investors. This kind of activities will have an influence on generating a larger number and a bigger value of investments (both foreign investments and investments made by enterprises acting already in Poland). These measures will consequently contribute to the improvement of acknowledgement of "Poland" brand on world markets.

245. The development of social infrastructure, in particular – tourist infrastructure will contribute to the growth of attractiveness of Poland as a place of searching valuable trade contacts and locating investments as well. Therefore the instruments of implementation of Objective 4 included among others the strengthening and promotion of the biggest tourist attractions of Poland what will have an influence on the increase of number of foreign tourists and also indirectly on the strengthening of "Poland" brand. Due to that, products of enterprises operating in Poland will be associated with a more developed and advanced economy and the enterprises will be able easier to introduce relatively technologically advanced products to the foreign markets.

246. The implementation of Objective 4 will have an influence on the growth of share of enterprises registered in Poland in a global economic turnover and on the creation of conditions letting increase a level of investments, including foreign investments, in particular the investments connected with the newest technologic solutions and modern services, on the growth of demand for new industrial designs and on the increase of intensity of tourist traffic in Poland as well.

247. Indirectly the effect of implementation of Objective 4 will include the growth of investment expenditures in enterprises and also the increase of innovativeness level of enterprises, especially SMEs, through strengthening Poland's economic connections with the international market – among others through creating a cohesive system of economic promotion of Poland. Additionally, the inflow of investments, resulting from the implementation of Objective 4 and an intensified trade exchange will contribute to the diffusion of innovative solutions and through it – to a further economic development.

248. At the same time, the implementation of Objective 4 depends on the other objectives of the OP IE which contribute to modernisation of products and services offered by enterprises operating on the Polish market and consequently enables them to improve their competitive position on the SEM and on foreign markets.

249. **Monitoring indicators for Objective 4**

Indicator	Baseline value	Expected value in the target year	Frequency of measurement	Source of data
Share of high technology goods in total exports	3,4 % (2006)	4,5%	Annually	GUS, „Science and Technology 2005" – table 4.2
Share of goods of medium-high technology in export in total	33,4% (2006)	43,5%	Annually	Ministry of Economy on the basis of CISG
Number of tourist arrivals (in million persons)	15,2 (2005)	21,0	Annually	Institute of Tourism
Number of new community industrial designs per million population	25,0	36	Annually	EIS - indicator 5.5

4.3.5 Detailed Objective 5. Creation of permanent and better workplaces

250. Objective 5. **Creation of permanent and better workplaces** was formulated in the context of the challenges posed by the implementation of the renewed Lisbon Strategy and the cohesion policy. The implementation of this objective is fundamental to the Polish economy since the high rate of unemployment and unfavourable structure of employment (high share of agriculture and declining industries) constitute one of the key obstacles restricting socio-economic development of the country and hampering an increase of innovativeness of the Polish economy. This objective is horizontal and its accomplishment depends on progresses made in the implementation of the remaining detailed objectives of the OP IE.

251. It is assumed that comprehensive support within the OP IE for innovative undertakings, such as R&D works, investments, counselling and training necessary for realisation of investments, as these activities strengthen competitive position of enterprises on the SEM and international markets, will contribute to creation of new permanent workplaces. At the same time, the implementation of the objectives of the OP IE should contribute to generating a demand for jobs requiring specialist skills and knowledge, which may lead to changes in the employment structure (creation of jobs in modern sectors of the economy, including the service sector), and simultaneously will enhance modernisation processes in the Polish economy.

252. The OP IE aims at focusing support on creation of permanent and better workplaces, in particular in the sectors that are carriers of a knowledge-based economy, which include, for example, science, research and development activities, branches of the industry related to advanced technologies, business services related to knowledge-based economy and the information society services sector.

253. **Monitoring indicators for Objective 5**

Indicator	Baseline value	Expected value in the target year	Frequency of measurement	Source of data
Number of new workplaces created as a result of projects implemented within the OP IE (in total and broken according to sex) Total/Women/Men	0	69,625 27,850 / 41,775	Annually	IB II
Employment in high-tech services (as % of total employment in industrial processing section and service sector)	2,25% (2006)	2,58%	Annually	EIS – indicator 4.1
Employment in medium-high and high-tech manufacturing (as % of total employment in industrial processing section and service sector)	5,24% (2006)	6,01%	Annually	EIS - indicator 4.5

4.3.6 Detailed objective 6. Growth of the use of information and communication technologies in the economy

254. Development of information society as one of the most important conditions for increasing the innovativeness of European economies is the key principle under the Lisbon Strategy.

255. The information and communication technologies has profoundly altered the functioning of the economy as they changed the methods of goods production and distribution, rendering services, communication with customers and among the entrepreneurs. The development of information technologies contributed to market globalisation and streamlined its performance.

256. 'Strategy of Information Society Development in Poland for 2007-2013' is to stimulate the growth of the use of information and telecommunication technologies both on the social and economic level. It focus on three major areas:

a) improvement of conditions for the economy functioning by reducing development barriers (legal, administrative and organizational);

b) stimulating demand for digital services and other information technologies uses in the economy and social life (disseminating the broadband Internet access and promoting information technology skills as well as shaping the awareness of the social and economic benefits brought by the information technologies);

c) boosting the supply of digital services (development of digital services rendered by public entities, stimulating the application of digital technology services in the communication among entrepreneurs and between them and their customers).

257. Objective 6 will be implemented with the use of instruments that add to the growth of use of information and communication technologies by public administration, enterprises and citizens. That will positively influence the development of the Polish economy and improve the position of Poland among European Union Member States with respect to ICT use.

258. Modern, knowledge-based economy requires innovative activities. However, the existing legal, administrative and organizational barriers adversely affect their functioning. That is why the

creation of proper conditions for the development of public e-services and content is a key issue in information society development. 'National Plan for the ICT Implementation for 2007-2010'[129] defines activities in this respect and includes:

a) priorities and objectives of public administration informatization for 2007-2010,

b) list of sectoral and supra-sectoral information technology projects,

c) schedule of actions regarding development of information society,

d) list of the public services which should be performed with the use electronic means.

259. Providing easy access to the information resources of state registers within public administration is a key issue in implementing digital economy in Poland. Thanks to it, it will be possible for citizens to use electronic means of communication to contact appropriate offices, which will provide efficient services as well as reuse the digital content maintained by public administration.

260. The increased use of new technologies in public administration will improve effectiveness, quality and efficiency of its activities. Establishment of electronic administration will require complex analysis, legal amendment and reengineering of the processes it implements in the areas where the administration meets with enterprises and citizens, and between various levels of administration, in compliance with the opportunities offered by contemporary information and communication technologies[130].

261. The broadband access to the Internet, which is necessary for the efficient usage of digital services, substantially influences the functioning of digital economy in Poland. Only 22%[131] Polish households have a broadband access to the Internet, and the percentage is the lowest for the inhabitants of rural areas and among persons with the lowest income. It considerably reduces possibilities to use eServices offered by the public administration and enterprises. Such a low level of access to the Internet preserves digital exclusion of citizens. That is why the support for broadband Internet access in households, particularly in the areas of the lowest economic attractiveness and in households with low income, will contribute to the growth of potential customers of digital economy. It will also help to include in the main stream of innovative economy those for whom the traditional economic environment constitutes a substantial barrier (especially the entities from the areas facing the biggest social exclusion).

262. Apart from the economic barriers preventing access to Internet, a significant limiting factor is the technical lack of broadband access to Internet resulting from low profitability of investment in the ICT infrastructure (both the skeleton network and the so-called "last mile" connections) in rural areas. This causes the fact that the percentage of households in such areas having Internet access is almost two times lower than in big cities[132]. That is why support for ICT infrastructure investment is necessary (this mostly regards the "last mile" infrastructure which has not been included in any operational programmes realised within the framework of NSRF) in economically unprofitable areas. It will make possible to remove "white spots" on the broadband access to Internet map and, at the same time, increase competitiveness on the ICT services market.

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[129] Pursuant to the Act of the 17 February 2005. The Plan for Informatization of a Country is drawn up for a time period not longer than 5 years. Currently binding 'Plan for Informatization of Poland for 2007-2010' was accepted by the Council of Ministers on 28 March 2007. It is anticipated that the next Plan for Informatization of a Country will cover the years from 2010 to 2013.

[130] Activities in this respect will be also financially supported within Human Capital Operational Programme.

[131] 'Use of Information-Communication Technologies in Enterprises and Households', Central Statistical Office, Warsaw 2006.

[132] According to the research carried out by the Central Statistical Office "Information society: using ICT technologies in 2006." the percentage of households with persons in 16-74 age range in rural areas is 25% and in big cities this percentage equals 46%.

263. The benefits from the implementation of new technological and organizational solutions have been widely recognized by large enterprises. Support for use of new technologies will add to stimulation of innovativeness in the SME sector and in micro-enterprises and consequently, will add to their efficiency, quality and competitiveness, as well as will open international markets to them through support for implementation of eBusiness solutions in the operational and organizational area. One of the main barriers for the application of information and data communication technologies solutions is among the entrepreneurs belonging to this group – apart from the lack of relevant resources – the lack of awareness of the necessity of the changes exhorted by the global economy. The examples of newly emerging micro- and small enterprises making use of digital techniques for improving the attractiveness of their offers will help all of the entrepreneurs to understand the gain of implementing innovative technologies.

264. The implementation of ICT in enterprises and establishment of electronic services for enterprises and between enterprises (Business–to-Business - B2B) is more and more common on the European as well as on the global market. That is why their implementation among Polish enterprises is essential if they are to effectively cooperate with their European partners.

265. Activities that support establishment of enterprises providing eServices and access to digital contents will stimulate local entrepreneurship and innovativeness in the sector of electronic knowledge-based economy through opening the market of digital contents and services, and consequent creation of new workplaces with the potential for development.

266. While carrying out research for the sake of information society's development, one must take into account the necessity to protect users' privacy, ensure network safety and build users' trust and awareness.

267. After 2-3 years of the OP IE's commencement, the Objective 6 fulfilment review will be carried out taking into account effectiveness of mechanisms utilised. The review will be carried out on the basis of the analysis of data collected from Programme's beneficiaries during evaluation research including the level of beneficiaries' interest and the level of contracting.

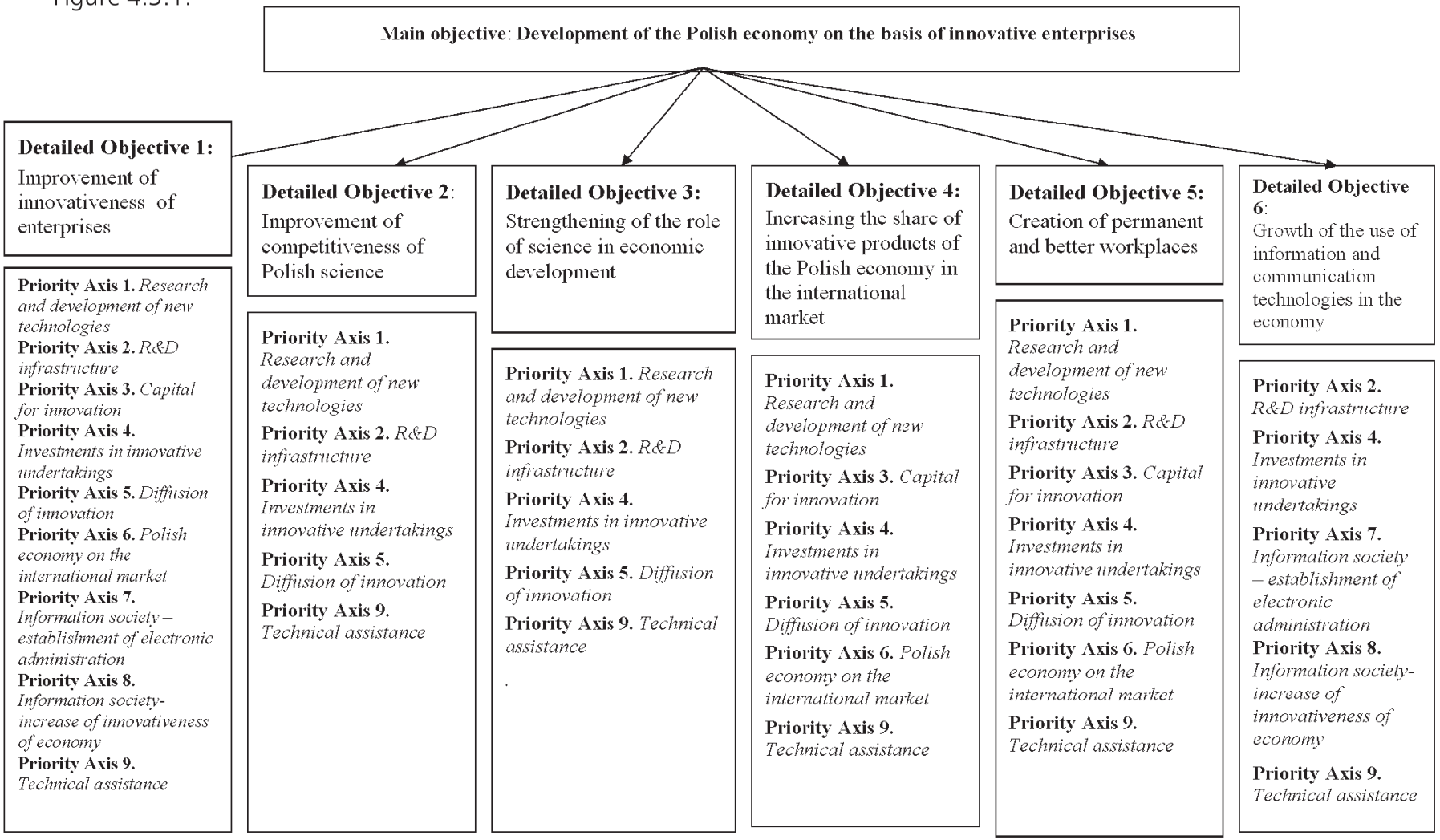
268. **Monitoring indicators for Objective 6**

Indicator	Baseline value	Expected value in the target year	Frequency of measurement	Source of data
Percentage of enterprises using Internet to interact with public administration institutions	60.9%	90%	Annually	GUS
Percentage of households with broadband access to Internet [133] including: a) households in rural areas b) household from the lowest income brackets	21.6% 9.8% 8.2%	75% 50% 40%	Annually	GUS
Ratio of the employed using computers with Internet access to the total number of the employed	27.8% (2006)	65%	Annually	GUS

269. The structure of detailed objectives and priority axes for the implementation of the OP IE has been presented in Figure 4.3.1.

[133] Broadband access defined according to GUS methodology.

Figure 4.3.1.


Main objective: Development of the Polish economy on the basis of innovative enterprises
Detailed Objective 1: Improvement of innovativeness of enterprises
Priority Axis 1. Research and development of new technologies
Priority Axis 2. R&D infrastructure
Priority Axis 3. Capital for innovation
Priority Axis 4. Investments in innovative undertakings
Priority Axis 5. Diffusion of innovation
Priority Axis 6. Polish economy on the international market
Priority Axis 7. Information society – establishment of electronic administration
Priority Axis 8. Information society- increase of innovativeness of economy
Priority Axis 9. Technical assistance
Detailed Objective 2: Improvement of competitiveness of Polish science
Priority Axis 1. Research and development of new technologies
Priority Axis 2. R&D infrastructure
Priority Axis 4. Investments in innovative undertakings
Priority Axis 5. Diffusion of innovation
Priority Axis 9. Technical assistance
Detailed Objective 3: Strengthening of the role of science in economic development
Priority Axis 1. Research and development of new technologies
Priority Axis 2. R&D infrastructure
Priority Axis 4. Investments in innovative undertakings
Priority Axis 5. Diffusion of innovation
Priority Axis 9. Technical assistance
Detailed Objective 4: Increasing the share of innovative products of the Polish economy in the international market
Priority Axis 1. Research and development of new technologies
Priority Axis 3. Capital for innovation
Priority Axis 4. Investments in innovative undertakings
Priority Axis 5. Diffusion of innovation
Priority Axis 6. Polish economy on the international market
Priority Axis 9. Technical assistance
Detailed Objective 5: Creation of permanent and better workplaces
Priority Axis 1. Research and development of new technologies
Priority Axis 2. R&D infrastructure
Priority Axis 3. Capital for innovation
Priority Axis 4. Investments in innovative undertakings
Priority Axis 5. Diffusion of innovation
Priority Axis 6. Polish economy on the international market
Priority Axis 9. Technical assistance
Detailed Objective 6: Growth of the use of information and communication technologies in the economy
Priority Axis 2. R&D infrastructure
Priority Axis 4. Investments in innovative undertakings
Priority Axis 7. Information society – establishment of electronic administration
Priority Axis 8. Information society- increase of innovativeness of economy
Priority Axis 9. Technical assistance

5. Priority axes implemented within the programme

5.1 Priority Axis 1. Research and development of new technologies

270. **Objective of the priority axis**: The objective of the priority axis is to increase the role of the science sector in the economy through R&D activity in the directions recognised as priorities for the social and economic development of the country.

271. **Justification for the selection of the priority axis:** Implementation of the economy development strategy on the basis of innovative enterprises calls for tightened closer cooperation between the science sector and enterprises. The Polish science sector is not sufficiently developed and therefore it does not provide adequate support for entrepreneurs operating in a more and more competitive international environment. This leads to preservation of the technological gap between Poland and the most innovative economies of the world, including some European Union Member States. Therefore, it is indispensable to strengthen the R&D sector in order to create appropriate research potential adjusted to development needs of the country. Simultaneously, an intensification of cooperation between science sector and business should be pursued, also through more efficient use of existing instruments and through introduction of new effective mechanisms of public intervention. The cooperation between science sector and business will be intensified by application of instruments that, on the one hand, may encourage entrepreneurs to take up activities in favour of their development based on R&D results and, on the other hand, may encourage scientists to take up scientific research and development works compliant with the needs of entrepreneurs. The implementation of this priority axis should adjust the supply of new technological solutions to the demand for them and, consequently, it should probably increase the demand for high technologies based on R&D results in the economy.

272. It is necessary to constantly verify areas of scientific research and development work aimed at the acceleration of the sustainable economic development for the improvement of life quality of the Polish society. The selection of such priorities permits more rational use of results of the research in practice and the creation of preferences for them in the allocation of financing, which is intended to rationalise and prioritize the use of resources.

273. One of the diagnosed problems of the science sector is an unfavourable age structure of its staff. That is why it is necessary to support measures encouraging young people to take up a scientific career, which, in result, should lead to the injection of new blood into human resources of the Polish science.

274. **Description of the priority axis:** Under the priority axis the financing will be provided for the forecasting of directions of scientific research that can have the greatest influence on the pace of the social and economic development of the country. The forecast and determination of directions of the technological development and progress is a complex, long-lasting and continuous process and requires utilisation of special instruments. One of them is a foresight method, a tool that helps to indicate directions of preferred investments and undertakings in

the R&D area. Its essence is the involvement of all the interested parties (entrepreneurs, representatives of non-governmental organisations, politicians, mass media representatives and scientists) in the public debate in regard to the most important future needs of the society and the economy. *Foresight* will be conducted at national level (determining directions of research that are important for the whole country), and at the level of particular regions and branches.

275. The support is also planned for the implementation of the state scientific, scientific-technical as well as innovation policies through the financing of strategic programmes in regard to scientific research and development work that being the part of the National Programme of Scientific Research and Development Works. Additionally, within the framework of the priority axis, undertakings allowing to increase the awareness of a role of effective management of research works and their results among scientists engaged in the implementation of these projects are planned. Moreover, projects aiming at indication of relevant methods, models and means for effective management of research works and their results, allowing to enforcement of functioning of the R&D sector in Poland, will be supported.

276. The priority axis covers support for scientific research and development works that will contribute to the establishment of a knowledge-based economy, performed by scientific and industrial consortia. Support will be also provided for large multidisciplinary and transdisciplinary research projects compliant with thematic priority axes presented in paragraph 284 and project stemming from foresight.

277. The support will be provided for the injection of new blood into human resources of the scientific sector by including students, graduates[134] and doctoral students in the implementation research projects in the fields generally essential for the economic development. In particular, these will include application projects implemented by young scientists, in the best research teams in Poland, as well as projects based on subsidies of the scientific research carried out during post-graduate doctoral studies, under the international cooperation of scientific institutions.

278. The transfer of good practices to Poland, also in respect to the cooperation between science sector and economy, can be expected due to the financing of research projects carried out by top class scientists from abroad in Polish scientific institutions. These experts will be employed in scientific institutions, and, as project managers, they will establish research teams consisting of Polish and foreign scientists in order to carry out research projects.

279. Moreover, support will be provided for development projects of aimed at practical application for the needs of the sector/branch of the economy of high importance to the society. In the framework of the axis, support is designated for transfer of results of scientific research and development works through co-financing of the costs of acquisition of protection of industrial property generated in scientific entities based in Poland. Development projects enable bridging the gap between industrial research and latter implementations. The financing of such projects should enable a more efficient and faster implementation of goal-oriented projects, carried out by enterprises.

280. One of the instruments enabling entrepreneurs to enable acquire new, innovative technologies and products for the development of their activity are goal-oriented projects referred to in the previous section, which base on R&D works aimed at satisfying specific needs of a given particular entrepreneur.

281. The implementation of the priority axis will focus on support for investments of entrepreneurs in the area of R&D works through co-financing of projects covering technical, technological

[134] Final beneficiaries of the support can be graduates of university studies until 3 years after graduation, on the condition that they have a full-time job in a scientific and didactic area, in a scientific institution.

or organisational undertakings (industrial research and development works) implemented by entrepreneurs, groups of entrepreneurs[135] or other entities that are able to directly apply the results of the project in practice. Entrepreneurs who will receive support under the priority axis will be able to decide on their own about a contractor of R&D work; they can conduct it on their own, if they possess the infrastructural base and other necessary resources, or they can contract it out to a scientific institution, a scientific network or a scientific and industrial consortium. The implementation of results of R&D activity carried out by entrepreneurs under this priority axis will be possible under the Priority Axis 4. Due to the dedicated system of implementation of projects, the applicant will submit one application comprising the whole undertaking together with its implementation stage.

282. Within the priority axis, support may also be given to such undertakings, that will constitute the foundations for creation of European Institute of Technology in Wroclaw, within the EIT+ programme. This complex programme was initiated together with the municipality and aims at development of education, research and innovation centre in the region of Wroclaw as well as obtaining one of the Knowledge and Innovation Communities of the European Institute of Technology[136].

283. Additionally, in order to support commercialisation of results of R&D works, projects implemented within the priority axis may contain an element that promotes the given project[137].

284. It should be stressed that within Priority Axis 1 support will be provided for R&D projects belonging to the following thematic areas:

a) Info thematic group:

I. information and telecommunication technologies,

II. intelligent, telecommunication and data communication networks of new generation,

III. optoelectronics,

IV. computational sciences.

b) Techno thematic group:

I. new materials and technologies,

II. nanotechnologies,

III. designing specialised systems,

IV. mechatronics,

V. chemical technology and engineering.

c) Bio thematic group:

I. biotechnology and bioengineering,

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[135] Projects will be implemented by entrepreneurs on their own or in cooperation with scientific entities and scientific consortia, and by scientific entities at the request of entrepreneurs.

[136] The support for projects connected with the programme EIT+ implemented within the framework of OP IE will not be granted for the same eligible expenditures that will be financed from other proper Union sources. The Managing Authority will secure that the projects will have the guaranteed necessary national co-financing.

[137] Apart from goal-oriented projects.

II. biological progress in agriculture and environmental protection,

III. new medical products and techniques.

285. The thematic restrictions will not, however, refer to goal-oriented projects and application projects carried out by students, graduates[138] and postgraduates, as the major objective here will be the usefulness of research for the business activity. Development projects (paragraph 279), the subject of which is included in the foregoing areas, will, in turn, be preferred in the selection procedure, however, thematic projects not included in the above-mentioned areas will not be excluded from the financing. The projects implemented during doctoral studies within the international cooperation of scientific institutions will be treated in a similar way.

286. It should be stressed that there is a possibility to correct the above mentioned priorities, in particular when the results of the National Foresight Programme are taken into account.

287. **Under the priority, the following measures will be supported**:

a) Identification of scientific research and development works directions in view of enhancing sustainable economic growth for raising life quality of the Polish society and rationalising funds available for scientific research by means of co-financing of projects related to:

I. *Foresight Polska 2020* National Programme and the following foresight programmes,

II. preparation of strategies for development of specific disciplines of science and the economy,

III. preparation of strategies for technology platforms operating in Poland benefiting from the results of the foresight method;

b) support for the implementation of the state scientific, scientific-technical as well as innovation policy through the financing of strategic programmes in regard of scientific research and development work in the thematic areas specified in the OP IE.

c) implementation of undertakings, aimed at increasing the interest in taking up scientific career by young scientists, including:

I. application projects carried out by students, graduates[139] and doctoral students that can be applied to the needs of economy,

II. projects in which students, postgraduates and participants of doctoral internships would take part, focusing in the areas of priority importance and accordance with the areas specified in the OP IE, that carried out by the best research teams in Poland,

III. projects implemented during doctoral studies within the international cooperation of scientific institutions;

d) support of projects carried out by outstanding scientists from abroad, according to priorities of the OP IE, establishing research teams in Polish scientific institutions;

e) co-financing of research projects which results are aimed at direct application and responding to the needs of specific sectors of the economy or sectors of particular social importance (development projects);

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[138] See footnote 134.

[139] See footnote 134.

f) support for acquiring protection of industrial property developed in scientific entities based in Poland as a result of R&D works;

g) co-financing of projects that cover technical, technological or organisational undertakings (applied industrial research and development works) carried out by enterprises, groups of enterprises or other entities that are able to directly apply the results of projects in practice (goal-oriented projects);

h) support to EIT+ programme.

288. **Under the priority axis, non-returnable support will be granted to the following groups of beneficiaries**:

a) scientific entities,

b) scientific networks[140] and scientific and industrial consortia[141] (including Centres of Excellence (CE), Centres of Advanced Technologies (CATs) and entities involved in the EIT+ programme),

c) organisational units that deal with R&D works management and organisation,

d) Polish technology platforms,

e) entrepreneurs (in particular SME),

f) scientists (in particular young ones) and scientific teams,

g) students,

h) entities that carry out foresight projects, among others scientific entities, public administration entities,

i) entities acting for the benefit of science – entities engaged in continuous efforts related to development, promotion and practical application of science and supporting an increase of innovativeness of the economy, other than scientific research or development works (i.a. Foundation for Polish Science),

j) National Centre for Research and Development (NCBR),

k) minister in charge of science.

289. **State aid:** Under this priority axis, measure in respect to the support for the goal-oriented projects is subject to the rules of state aid.

290. **Expected results of the implementation of the priority axis:**

a) greater share of R&D works linked to the needs of entrepreneurs in R&D works conducted in scientific entities,

b) improvement of innovativeness of enterprises,

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[140] **A scientific network** is a group of scientific entities with legal personality, which, on the basis of an agreement, take up organised cooperation related to continuous joint scientific research or development works for the development of scientific areas of the network.

[141] **A scientific and industrial consortium** is a group of organisational entities, including at least one scientific entity and at least one entrepreneur, which takes up a joint undertaking, on the basis of an agreement, covering scientific research, development works or investments aimed at meeting the needs of scientific research or development works.

c) increase in the share of R&D expenditures in GDP, in particular business expenditures,

d) improvement of international competitiveness of Polish science.

291. **Monitoring indicators for the priority axis**[142]

Indicator	Baseline value	Estimated value of the indicator (in the target year)	Frequency of measurement	Entity responsible for submission of the value of the indicator
Product indicators				
Number of supported projects	0	1,500	Annually	IB II
Number of new jobs connected with R&D activity, created during the implementation of projects	0	3,000	Annually	IB II
Outcome indicators				
Share of expenditures on R&D activity in the total number of expenditures on innovative activity of industrial enterprises*	7.53%	15%	Annually	GUS
Share of expenditures on R&D activity in the total number of expenditures on innovative activity of small and medium enterprises [142]	To be evaluated	To be evaluated	Annually	GUS
Share of expenditures on R&D works connected with needs of enterprises** in GERD	26.9% (2004)	48%	Annually	IB II / GUS
Number of persons employed in R&D activity (including women)***, - as a percentage of the total number of the employed	123,431 (52,645) 0.92% (2005 r.)	150,000 (67,500) 1.08%	Annually	GUS / EUROSTAT

* The data refers to economic operators employing more than 49 people.

** The expenditures on R&D works related to the needs of enterprises are a sum of public co-financing of goal-oriented projects, expenditures on development projects, commissioned projects and expenditures of enterprises on R&D.

*** As at 31 December.

292. **Compatibility with other programmes :**

The priority axis 1 is complementary to:

a) 16 Regional Operational Programmes with regard to:

I. co-financing of R&D works implemented by entrepreneurs (goal-oriented projects) - within ROPs financing will be provided for projects at the lower value;

II. establishment and update of RISs through studies, analyses, experts' reports and support for entities responsible for the preparation and implementation of RISs as well as the establishment and development of systems;

b) Eastern Poland Development Operational Programme – under the priority axis 1 "Modern economy" within the scope of launching a close cooperation between science and business entities, strengthening institutions facilitating cooperation, as well as the transfer, absorp-

[142] The values of this indicator will be estimated until the end of Ist quarter of 2008 at the latest.

tion of innovations and the increase of their availability (in particular, the establishment of R&D infrastructure of scientific units, excellence centres, technology transfer centres and enterprises together with the employment of qualified scientific staff). Projects financed under the EPD OP will be featured in the Indicative Investment Plan (this will exclude these projects from being financed under the other operational programmes);

c) Human Capital Operational Programme especially within the scope of priority IV *Higher education and science* and priority VIII R*egional personnel of the economy* (regional component):

I. support for mobility between sectors,

II. improvement of qualifications of the staff of the R&D system in the area of research management and commercialisation of R&D works,

III. popularisation of R&D and innovative activities,

IV. creation of conditions for better cooperation between institutions of the education system and scientific units, as well as the establishment of the network of cooperation between tertiary education institutions and enterprises,

V. scholarships for participants of doctoral studies, young doctors (*postdocs*) and professors supervising research projects and visiting professors, as a complementary element of so-called comprehensive programmes of the development of tertiary education institutions,

VI. support for the higher education system that enables the improvement of qualifications of academic staff, the implementation of programmes of international cooperation, scientific studies plus experts' reports and analyses for higher education,

VII. support for the developing of the scientific research management system in respect of analyses and expertise reports, including, among other things, analyses of directions of scientific research, analyses of organisational solutions of D&R financing, evaluation of scientific policies,

VIII. development of the idea of academic entrepreneurship; training courses and consultancy for employees higher education institutions and scientific institutions, doctoral students, graduates and students who intend to start a spin-off/ spin-out firm (regional component),

IX. grants for postgraduates in the faculties resulting from the areas regarded as particularly important from the point of view of the development of the region (regional component).

d) **I&E OP**– instruments of support implemented within the framework of priority axis 1. are not directly complementary with measures of the I&E OP;

e) **RDP** – the measures financed under the OP IE are not directly complementary with the support under the RDP. However, considering accepted thematic preferences (paragraph 284), the undertakings implemented within priority axis 1. of the OP IE will be related to the support in the field of biologic sciences, in agriculture and environmental protection, and they will ensure synergy with the intervention of the EAFRD funds – axis 1. "Improving the competitiveness of the agricultural and forestry sectors" and also the axis 2. "Improving the environment and the countryside",

f) **European Fisheries Fund** – measures implemented within the framework of priority axis 1. of the OP IE are not directly connected with measures supported from sources of the EFF.

293. The support under the priority axis will have a synergic character in relation to measures in favour of the development of the knowledge based economy within Human Capital OP, Infrastructure and Environment OP, Eastern Poland Development OP and 16 regional operational programmes. Taking

into account the expected complementarity of the measures mentioned in the operational programmes, it should be assumed that the total effect of interventions in the area of science and higher education will have significant influence on the economic cohesion and improvement of the level of competitiveness of the economic sector.

294. **Cross-financing**[143]. Financing a scholarship for a student, graduate[144] young doctor, and receiving a postdoctoral internship or a foreign scientist in the scope corresponding with the implementation of research project is envisaged. Projects with a component allowing to improve employees' skills essential to achieve assumed objectives of an implemented measure will be executed as well. The level of financing within the framework of cross-financing will be limited up to 10 % of allocation for the priority axis.

295. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
1,299.27	1,104.38	194.89	13.38 %

5.2 Priority Axis 2. R&D infrastructure

296. **Objective of the priority axis:** The objective of the priority axis is to increase competitiveness of Polish science due to consolidation and modernisation of scientific research and IT infrastructure of the best scientific entities operating in Poland.

297. Justification for the selection of the priority axis: Polish scientific entities have at their disposal in the majority of cases obsolete equipment which extremely hampers advanced research. Another obstacle to high quality research work is dispersed infrastructure which leads to inefficient using of the existing research base. The dispersion of specialised equipment also causes inability to carry out large, often multidisciplinary projects, including international ones.

298. Although IT research infrastructure is relatively new and regularly extended, there are still areas characterised by a low level of development. Moreover, the level of advancement of innovative solutions and IT applications used by particular entities is unsatisfactory.

299. One of the basic features of the development of the contemporary science is undertaking the problems of significant complexity using multi-scale models and mass data resources. Research is conducted by cooperating teams that require advanced computer back office facilities for the integration of groups and organisations as well as for the creation of proper high performance applications. Thus, it is necessary to develop consequently and modernise highly specialised mainframe infrastructure following technology challenges.

143 The functioning of cross-financing, according to Article 33 paragraph 2 of the General Regulation, Information Note No. 56, cross-financing is a mechanism of the so called flexible financing that in the years 2007-2013 allows for engaging resources from the ERDF in implementation of measures the scope of which normally falls within the EFS intervention. Cross-financing is aimed at facilitating implementation of one-fund operational programmes. This mechanism consists in admitting, within the framework of a priority and in duly justified cases, limited financing for a group of projects, individual projects or parts of projects belonging to the scope of assistance of another Fund, e.g. in the case of the OP IE – from the ESF. Cross financing is limited only to such actions that are necessary for implementation of a project or a group of projects, as well as those directly linked to a project or a group of projects. Regulation of the Council No. 1083/2006 limits the engagement of cross-financing to maximum 10% of the allocation at the level of priority. Expenditures on implementation of projects that use cross-financing will be eligible under the rules set out for the given fund in accordance with the intervention scope.

144 See footnote 134.

300. The above-mentioned challenges and described weaknesses indicate that there is an urgent need for extensive investments in R&D infrastructure. Establishment of modern research centres, equipped with the most up-to-date scientific devices, capable of taking up the most ambitious tasks in the R&D area, will make it possible to conduct high quality research and will allow to train scientific and technical staff for the economy, science and education at the level compliant with international standards. Moreover, such centres will contribute to faster implementation of new technological solutions by the Polish economy and society.

301. Construction of the said research centres is also vital for assuring active and more apparent participation of scientific entities and innovative firms in research programmes and activities aimed at establishing the European Research Area. Participation in these programmes and activities is one of the main ways for improving the Polish R&D area and the economy's innovativeness, as well as for strengthening its competitiveness.

302. Moreover, thanks to concentration of expenditure on investments in the best scientific entities, the efficiency of use of public funds earmarked for R&D infrastructure, including IT infrastructure, should improve substantially.

303. **Description of the priority axis:** Within the priority axis, support will be provided for investments in centres with a high research potential concerning scientific and research equipment and necessary facilities. A substantial part of the funds from Priority Axis 2. will be spent on infrastructure investments in several large centres supervised by scientific and industrial consortia. Support will be also provided for projects in the framework of the Large Facilities of Research Infrastructure.

304. Moreover, the priority axis is envisaged to co-finance restructuring processes that consolidate scientific entities, through transfer of construction of common modern research infrastructure.

305. Another type of support offered under the priority will be co-financing of necessary investments related to maintenance and development of IT infrastructure of the science. It is also planned to develop scientific digital resources, in particular creation and maintenance of a database of research results and providing access to these resources for entrepreneurs.

306. During the merits evaluation, the priority will be given to these projects that embrace the development and extension of the infrastructure of the centres in which scientific research and development works will be carried out in the thematic areas indicated in the description of the Priority Axis 1. (paragraph 284).

307. Due to the assumed needs in regard of training courses for employees using new scientific and research equipment, the infrastructure projects are allowed to include a component enabling the achievement of relevant technical skills regarding both research processes (in respect of created laboratories) and managerial and organisational competence of the management staff. This will be of special significance for maintenaning durability of carried out investments. The complement to the above measures will also be a possibility of supporting a particular project in regard of its promotion in the scientific environment and the promotion of the results of R&D works achieved due to the supported infrastructure.

308. The implementation of the above measures will enable greater investments in the science facilities, which would result in the increase in the number of research projects carried out at the superior level, the development of specialised scientific staff and the consolidation of research teams, competitive in the international environment. This will also be possible due to the modern IT infrastructure based on complex grid solutions, together with advanced scientific software.

309. **Under the priority axis, the following measures will be supported**:

a) development of high research potential centres, including those operating as scientific and industrial consortia[145] and regional scientific and industrial consortia by means of co-financing of development of their research infrastructure (e.g. in Advanced Technology Centres and laboratories providing specialist services for entrepreneurs, as well as in within the EIT+[146] programme),

b) development of R&D infrastructure in specialist laboratories, including those operating as scientific networks[147] (e.g. Centres of Excellence),

c) support for projects implemented within the Polish Roadmap in the field of the Large Facilities of Research Infrastructure (buildings construction and purchase of equipment),

d) projects in regard of investments connected with the creation of the new, common scientific and research infrastructure as well as with the transfer of the scientific and research infrastructure aimed at the creation of a new scientific and research centre,

e) projects aimed at maintaining and developing of the modern IT infrastructure for science through financing investments in networks and equipment of supra regional importance, taking into account their crucial importance for the science,

f) providing constant access to digital resources for scientific sector,

g) projects in regard of the development of digitalised information resources for science, (creation and maintenance of databases on scientific results as well as providing access to scientific publications),

h) projects in regard of the development of advanced applications and tele-information services for the scientists.

310. **Under the priority axis, non-returnable support will be granted to the following groups of beneficiaries:**

a) scientific entities,

b) scientific networks and scientific and industrial consortia (including CE and CAT),

c) tertiary education institutions,

d) organisational entities dealing with R&D works and organisation of such works,

e) leading units of metropolitan area networks (MAN),

f) High Performance Computing Centres,

g) entities engaged in EIT+ programme.

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[145] **A scientific and industrial consortium** is a group of organisational entities, including at least one scientific entity and at least one entrepreneur, which takes up a joint undertaking, on the basis of an agreement, covering scientific research, development works or investments aimed at meeting the needs of scientific research or development works.

[146] The support for particular projects related to the EIT+ programme implemented within the framework of OP IE will not be granted for identical eligible expenditures that could be financed from any other EU resources. The Managing Authority will ensure that the projects will be given necessary national co-financing.

[147] **A Scientific network** is a group of scientific entities with legal personality, which, on the basis of an agreement, take up organised cooperation related to continuous joint scientific research or development works for the development of scientific areas of the network.

311. **State aid:** No state aid has been envisaged within the priority axis.

312. **Expected results of the implementation of the priority axis**:

a) improvement of infrastructure and laboratory equipment of national research centres of the highest research potential,

b) improvement of the level of competitiveness of Polish research centres,

c) widening and enriching the offer of research services provided by scientific entities for enterprises,

d) increasing transfer of R&D results to the economy,

e) improvement of the quality of Polish science management through creation of efficient mechanisms for access to information.

313. **Monitoring indicators for the priority axis**

Indicator	Baseline value	Estimated value of the indicator (in the target year)		Frequency of measurement	Entity responsible for submitting of the indicator's value
Product indicators					
Number of supported projects of the R&D infrastructure - including projects of the large research infrastructure	0 0	60 10		Annually	IB
Number of newly created vacancies for specialists as a result of the implementation of projects concerning functioning of the large research infrastructure	0	1,000		Annually	IB
Outcome indicators					
Degree of the wear out of scientific and research equipment*	79.5% (2004 r.)	60%		Annually	GUS
Proportion of resources (including budget and OP IE resources) intended for the purchase of scientific and research equipment of local significance** in the total amount of resources intended for the purchase of R&D equipment	13.6% (2005 r.)	30%		Annually	IB II
Number of enterprises benefiting from services of supported research and specialist laboratories (in total)	0	1,200		Annually	IB II
Number of accreditations achieved by supported research and special laboratories	0	30		Annually	IB II

*As of 31 December.

** Equipment used by more than 1 scientific entity in the framework of a formalised agreement.

314. **Compatibility with other programmes**: The priority axis 2. is complementary to:

a) 16 Regional Operational Programmes with regard to:

I. development of centres with high potential for research for investments at the value lower than in the ROP and excluding projects covered by the list of ROP indicative projects,

II. development of infrastructure in specialist laboratories for investments at the value lower than in the ROP and excluding projects covered by the list of ROP major projects,

III. regional projects in the area of maintenance and development of modern IT infrastructure of science,

IV. regional projects in the area of development of advanced data communication services and applications for science.

b) Development of Eastern Poland OP – in regard of investments in the R&D infrastructure base in scientific entities and tertiary education institutions specified in the indicative list of individual projects under the Priority Axis 1. *Modern economy*.

c) Infrastructure and Environment OP – in regard of investments under the individual projects specified in the indicative list of individual projects for the Priority Axis 14. *Infrastructure of higher education*, implemented in the leading academic centres of the country.

d) **HC OP**– instruments of support implemented within the framework of priority axis 2. are not directly complementary with measures of the I&E OP,

e) **RDP** – measures implemented within the framework of priority axis 2. of the OP IE are not directly connected with measures supported from sources of the EAFRD,

f) **European Fisheries Fund** – measures implemented within the framework of priority axis 2. of the OP IE are not directly connected with measures supported from sources of the EFF.

315. **Cross-financing:** Each of the projects implemented within the priority axis will be allowed to contain elements covering trainings for employees servicing new scientific and research equipment. The share of co-financing will amount to 10% of the value designated for the priority axis.

316. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
1,299.27	1,104.38	194.89	13.38 %

5.3 Priority Axis 3. Capital for innovation

317. **Objectives of the priority axis**:

a) to increase the number of enterprises operating on grounds of innovative solutions,

b) to improve access to external sources of financing for innovative undertakings.

318. **Justification for the selection of the priority axis.** As it was shown in the diagnosis, the Polish economy is characterised by a very low level of innovativeness and an insufficient level

of financing innovative measures by entrepreneurs, in particular by SMEs. The main reason for this situation is the lack of financial resources for this type of investments. The diagnosis of the economic situation shows a low level of entrepreneurs' willingness to invest, also in innovative undertakings characterised by a high risk and demanding relatively high expenditures in a longer period of time. It means that there is a serious market gap in financing undertakings with a high level of risk (highly innovative SMEs that are at early stages of growth), for which it is often impossible to gain capital (up to 10 million PLN).

319. Difficulties in achieving capital by SMEs from external sources are caused, among other things, by restrictive requirements of receiving a credit. SMEs, especially those that are at early stages of growth, have difficulties in submitting the whole necessary documentation, as e.g. their account history, or relevant security sources. At the same time, risk capital funds operating on the market do not invest in innovative undertakings of a relatively low value due to high fixed costs connected with the service of such undertakings, together with a high risk for projects implemented by entrepreneurs, especially entrepreneurs at the beginning stage of growth of their companies. The statistical data show that there is a systematic decrease in the number of funds (investing, first of all, in the embryonic stage) that offer capital support covering the existing market gap. This state of affairs is a barrier to the development of new enterprises, in particular those that are at early stages of growth.

320. Due to existing imperfections of the market, there is a justified necessity of public intervention, in result of which investors will be more willing to make capital investments of a relatively low value in SMEs that are at early stages of growth. In consequence, this will enable the increase of the level of investments in both technological and organisational innovative solutions made by SMEs.

321. At the same time, due to the insufficient number of newly founded innovative enterprises, it is necessary to introduce new instruments supporting the establishment of companies on the basis of innovative ideas, in regard of both specialised consultancy and financial support. Their introduction will create conditions favourable for the unblocking of the SME potential.

322. **Description of the priority axis.** Under the priority axis 3., aimed at facilitating and increasing possibilities of achieving external sources of financing for projects, the direct support is intended solely for SMEs.

323. The planned measures the implementation of which will contribute to the achievement of the objectives of priority axis 3. include, in particular, the instruments described below.

324. Due to the difficulties faced by potential and newly founded entrepreneurs while searching for the financing of innovative undertakings, the support instrument was prepared, among other, comprising the establishment of new enterprises on the basis of innovative ideas, including spin off companies, through identifying innovative solutions and verifying their market potential, providing consultancy in regard of new enterprises (so-called pre-incubation), providing the availability of the infrastructure and services necessary for newly founded enterprises and their capital reinforcement. The implementation of measures comprises the selection of institutions that will provide two-stage support for newly founded innovative enterprises, in particular in the above-mentioned scope. The refinancing of the project comprises two components, that is the subsidy for the pre-incubation and for the capital reinforcement of newly founded entrepreneurs. The capital entry occurs in the situation when, after the period of pre-incubation, considerable chances of a commercial success of a newly founded enterprise are identified.

325. The instruments of the priority axis 3 also include capital support for SMEs support at early stages of growth (i.e. seed stage, start-up and expansion) by taking up shares, interests and indebted instruments by capital funds. In order to provide financing for innovative enterprises at early stages of growth the instrument of financial engineering will be used, in a form of a fund

supporting capital funds. The fund of funds will be selected pursuant to Article 44 of Council Regulation 1083/2006 of 11 July 2006 establishing general rules in regard of the European Regional Development Fund, European Social Fund and Cohesion Fund and repelling Regulation (EC) No. 1260/1999. The indicative allocation for the foregoing instrument is 180 million EUR (including 153 million EUR from the resources of ERDF).

326. At the same time, the support will be provided for entrepreneurs in the preparation for acquiring external sources of financing through creating entrepreneurs' investment readiness (in particular, by support for projects of consultancy and training courses in regard of searching for investors, examining the condition of enterprises, market research, identifying a relevant form of financing, preparing the documentation necessary for acquiring external financing connected with shares and a relevant presentation of offers). This instrument also includes the complementary support for networks of private investors, among other things, in the scope of exchange of experiences between investors (including conferences, seminars and workshops), promotional and informational projects aimed at increasing entrepreneurs' awareness of benefits and services offered by such networks. The support will also include the creation, development and functioning of platforms associating investors and entrepreneurs who search for financing and training projects for potential investors, including business angels, within the scope of making investments in entrepreneurs' companies. The implementation of measures will influence the development of the market of private investments by increasing the awareness of both the potential parties of the transaction (entrepreneurs and investors) in regard of opportunities and benefits of external financing, in particular that connected with shares, as well as by facilitating the flow of information about entrepreneurs searching for financing and investors searching for opportunities of investing the capital.

327. The above mentioned instruments are necessary from the point of view of initiating the innovative activity of SMEs and supporting it at early stages of growth with the use of, in particular, capital funds, incubators and networks of private investors (e.g. networks of business angels). The planned instruments are addressed, in particular, to these SMEs whose undertakings are characterised by a high level of innovativeness and a relatively small value, and display a great market potential.

328. Due to the fact that VC funds operating in Poland mention environmental protection and cleaner technologies as priority support axes, the support from VC funds under OP IE will contribute to the growth in investments of SMEs in regard of environmental protection, including cleaner technologies.

329. **Under priority axis 3. the support will be provided, among other things, for the following measures:**

a) initiating the innovative activity through the identification and verification of innovative ideas of great market potential, support for the creation of enterprises from the SME sector on their basis;

b) support for these SMEs at early stages of their growth, whose undertakings are based on innovative solutions by making contribution to capital funds;

c) activation of the market of private investors through creating favourable conditions for initiating the cooperation of private investors with SME entrepreneurs searching for financial resources to implement their innovative undertakings.

330. Under the priority axis 3., it will also be possible to refinance pilot projects aimed at testing new kinds of projects or new methods of approaching and identifying those that can be successfully introduced, to a greater extent, in the following years of implementation of the OP IE or in

operational programmes in the next financial perspectives. Results of this kind of projects will not be included into the quantitative indicators of the implementation of the priority axis.

331. **Under the priority axis 3 the support will be provided to the following groups of beneficiaries:**

a) SMEs;

b) National Capital Fund and capital funds;

c) business support institutions providing the support for establishing new innovative firms, including e.g. centres of the transfer of technologies and innovations, technology accelerators, incubators, scientific and technological parks, organisations for potential investors (e.g. business angels);

d) organisations of entrepreneurs and employers.

332. **Support instruments.** The financing of a part of eligible expenditures in a form of subsidies and providing capital for venture capital funds.

333. **State aid.** The application of state aid is expected (the support provided on the basis of block exemption in regard to consulting services for SMEs, venture capital and *de minimis* support).

334. **Expected results of the implementation of the priority axis.** The implementation of measures under priority axis 3. will contribute to the creation of the system of external financing of entrepreneurs' innovative activity at early stages of their growth for those who, due to a short period of conducting business activity and a high risk of their undertakings, are not able to benefit from the offer of the bank sector.

In particular, the following results are expected:

a) growth in the number of capital investments in innovative undertakings of companies, first of all those that are at early stages of growth;

b) strengthening of the system of entities that offer external financial and consultancy support for enterprises;

c) increase in the number of newly founded firms based on highly innovative solutions;

d) increase in the number of enterprises using the latest technologies;

e) growth in the financing of investments of SMEs with private capital.

335. **Monitoring indicators for the priority axis**

Indicator	Baseline value	Estimated value of the indicator (in the target year)[148]	Frequency of measurement	Source of data
Product indicators				
Number of supported projects	0	To be evaluated	Annually	IB II
Outcome indicators				
Number of new jobs created in supported enterprises (total/women/men)	0	4,500/ 1,800/2,700	Annually	IB II
Number of enterprises using venture capital and capital provided by private investors (seed, start-up and expansion stages in total) under the provided support	0	309	Annually	IB II
Number of supported newly founded enterprises (up to 2 years since their establishment)	0	To be evaluated	Annually	IB II
Percentage of new SMEs supported under priority axis, existing 18 months after receiving the support	0	To be evaluated	Annually	IB II
Number of investments in seed enterprises	3	To be established	Annually	EVCA
Number of investments in start-up enterprises	9	To be established	Annually	EVCA
Amount of private funds involved in financing innovative undertakings	0	216 mln EUR	Annually	IB II

336. **Complementarity with other programmes.** Due to the specificity of the planned intervention, the implementation of the priority axis 3. is expected at central level. The priority axis is complementary with:

a) **16 Regional Operational Programmes** within the scope of :

I. development of economic and investment activity financing instruments, loan funds and credit guarantees – within the framework of ROPs the support is granted to projects aiming at capitalised guarantee and loan funds acting on the local and regional market,

b) **HC OP**:

I. within the framework of priority axis 8. *Personnel for regional economy* within the scope of promoting the establishment of start-up type partnerships and granting the training

148 The target values of the indicators will be evaluated until the end of Ist quarter of 2008 at the latest.

and advisory support for persons intending to start their own economic activity of this type what constitutes the completion of activity supporting the initiative of innovative activity designed within the framework of priority axis 3,

II. within the framework of priority axis 2. *Development of human resources and the adaptive potential of enterprises and improvement of health condition of working population* within the scope of networking the existing guarantee and loan funds what enables to develop the existing networks.

c) **I&E OP, DEP OP**– instruments of support implemented within the framework of those operational programmes are not directly complementary with measures of the OP IE,

d) **RDP** – measures implemented within the framework of priority axis 3. are complementary in relation to measures supported from sources of the EAFRD within the framework of the Rural Development Programme within the scope of:

I. axis 3. within the framework of the measure *Differentiation towards non-agricultural activity* within the scope of undertaking or developing a non-agricultural activity or an activity connected with the agriculture by agriculturists (a beneficiary is a private person insured in the Agricultural Social Insurance Fund (KRUS) on the basis of law regulations on social insurance of agriculturists while in the OP IE the beneficiaries are enterprises, i.e. private persons or legal entities running an economic activity subjected to the insurance on the basis of law regulations on social insurance system),

II. axis 3. within the framework of the measure *Creation and development of micro-enterprises* within the scope of investments connected with the creation or development of micro-enterprises, especially acting within the scope of services for farms or forestry, municipal services providing for people, transport or construction services, processing industry of agricultural products or edible forest products.

e) **European Fisheries Fund** – measures implemented within the framework of priority axis 3. of the OP IE are not directly connected with measures supported from sources of the EFF.

337. **Cross-financing.** The implementation of the cross-financing instrument is envisaged within the scope necessary to achieve the objectives set. The share of co-financing may not exceed 10% of the value designated for the priority axis.

338. **The budget of the third priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
340.00	289.00	51.00	3.50%

5.4 Priority Axis 4. Investments in innovative undertakings

339. **Objective of the priority axis:** to increase the level of competitiveness of enterprises through application of new solutions.

340. **Justification for the selection of the priority axis.** Currently, the main sources of competitive advantage of enterprises operating in Poland are low labour costs and the large domestic market. However, in terms of development trends and advanced globalisation, sustainable growth can be guaranteed only by enhancing competitive advantage by enterprises based on innovative solutions.

It means that enterprises that wish to face international competition should invest in the latest solutions enabling them to strengthen their competitive position on the market, including, in particular, the involvement of entrepreneurs in conducting R&D activity, which is also advised.

341. As it was shown in the SWOT analysis, Polish economy is characterised by a very low level of investment expenditures. In addition, in result of a high level of using fixed assets in enterprises, they (especially SMEs), first of all, make investments of imitating type. The SWOT analysis also displays a low level of willingness of enterprises to introduce innovations. Lack of sufficient own resources and difficulties in possessing finance for new investments[149], in particular by SME, make only a small percentage of Polish enterprises count as innovative enterprises.

342. Poor financial situation of Polish enterprises is reflected in limited involvement of enterprises, especially SME, in R&D activity, and consequent development and implementation of new solutions that would improve the competitive position of enterprises. Lack of instruments for support for R&D works in enterprises negatively affects the innovativeness level of entrepreneurs operating in Poland.

343. In the long-term perspective, this situation means the loss of capabilities to compete for enterprises operating in Poland and on SEM, which is also connected with a decline in the competitiveness of the whole EU economy. Consequently, public intervention within priority axis 4. will focus on support for undertakings related to development, implementation and transfer of innovative solutions, both technological and organisational, with high added value for the economy and providing substantial numbers of new workplaces. Due to low expenditures of the private sector on R&D, it is also planned to support new investments and consultancy that facilitates the performance of R&D activity.

344. The implementation of measures within the frameworks of priority axis 4. will enable to change the trend from investments of reconstruction character into highly innovative investments, both the investments of breakthrough character measured by the period of usage in the world or by the degree of dissemination of a given solution in a given branch in the world and the investments of other character, e.g. improvements whose usage will facilitate for example to run R&D activity in enterprises or to introduce new designing products. Such an approach will allow to strength the competitive position of these enterprises, thus strengthening their competitive position and consequently their financial position. This will provide a possibility for a wider group of enterprises to involve in R&D activity. The concentration of resources on the direct support for enterprises will allow the growth of expenditures on R&D activity through reinvesting profits achieved from the supported investments in the further development of enterprises.

345. Due to the inclusion of the support for entrepreneurs, especially SMEs, under ROPs, the programmed instruments of support for companies will refer to big investments, connected with the use of modern solutions of a relatively big value and undertakings necessary to conduct R&D activity in the companies.

346. **Description of the priority axis.** The scope of support under the Priority Axis 4 refers to entrepreneurs who introduce innovations (in particular, technological and organisational ones) and start or develop R&D activity. The scope of the support comprises both the implementation of results of R&D work, the implementation of new investments, especially those connected with using of the latest solutions on a world scale and creating new jobs, as well as the measures supporting R&D activity in enterprises. The implementation of projects in the areas of interventions selected in this way will contribute to the achievement of the objective of the priority axis

[149] A new investment is an investment in tangible and intangible assets related to: establishment of a new production site, extension of present production sites, diversification of production through introduction of new products, or substantial changes in the production process.

4., i.e. to improve the level of innovativeness of enterprises by stimulating the use of modern solutions.

347. Support instruments for innovative undertakings of entrepreneurs designed within priority axis 4. are complementary to the instruments set out in priority axis 3., which aim at support for the benefit of enterprises at early stages of development.

348. The support under the priority axis 4. is directed to enterprises, and, due to preferential criteria, in particular to SMEs that make investments in innovative solutions, first of all, in regard of products and technologies, both in traditional and modern sectors.

349. The planned measures, the implementation of which will contribute to the achievement of the objective of the priority axis 4., include, in particular, the instruments specified below.

350. The support is planned for the implementation of results of R&D works accomplished under priority axis 1. by enterprises. Entrepreneurs, independently or in cooperation with scientific institutions, will receive support, in particular, for the accomplishment of research and development work in regard to technical, technological and organisational undertakings (applied research and development work) under the priority axis 1. and their implementation under the priority axis 4. within one, comprehensive project that includes the accomplishment of R&D works and implementation of their results, provided that they meet the economic reasonability criterion for the implementation of the achieved results.

351. In addition, it is planned to provide an instrument aimed at enterprises interested in the development of their conducted R&D activity. The support is intended for investments and consultancy in regard of R&D activity, in particular, in respect of the preparation of a strategy for transforming enterprises into research and development centres[150]. The intervention in this area is one of the elements of influencing the growth of enterprises' expenditures on R&D.

352. At the same time, the support will be provided for consultancy and training courses in regard of elaborating industrial and functional designs and investments connected with the purchase of fixed assets enabling the implementation of new product designs. At present, enterprises, in particular SMEs, are not using opportunities created by industrial design. That is why the support in the above-mentioned area will contribute to the promotion of industrial design as one of the sources of competitive prevalence and, at the same time, to the growing interest of SMEs in conducting R&D activity in this respect.

353. Under the priority axis 4., it is also planned to provide an instrument for SMEs that wish to implement purchased or their own results of R&D work. By intending the technological credit for a new investment regarding the implementation of a new technology, as well as for the start of production of new goods, the modernisation of produced goods or the provision of new services on the basis of this technology, after the completion of the project and the start of production or the provision of services, the entrepreneurs will be allowed to have a part of the technological credit dismissed.

354. Co-financing will be also provided for projects of entrepreneurs from both the production and the service sector, related to implementation of new investments, covering acquisition of innovative organisational or technological solutions (including those leading to reduction of adverse influence on the environment, e.g. reduction of energy, material and water consumption of products and services).

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[150] Pursuant to the provisions of the Act of 29 July 2005 *on some forms of support for innovative activity* (*Journal of Laws* No. 179, item 1484), with further changes.

355. Because of complementary support within the ROP, the measures included in the OP IE must be characterised by a high level of innovativeness of the solutions applied and relatively high value of the project. First of all, the support will be provided for projects connected with the use of innovative technologies on a world scale. Apart from criteria regarding the level of innovativeness of implemented undertakings, the size of the enterprise is also taken into account, whereas those from the SME sector will be preferred.

356. Due to low expenditures of entrepreneurs on R&D, under the priority axis 4., the support will also be provided for new investments connected with the start of conducting R&D activity by entrepreneurs. This instrument is supposed to encourage entrepreneurs to conduct R&D activity which is one of the sources of innovations. Moreover, together with introducing other the OP IE instruments, the conditions will be created to increase the demand of enterprises for highly qualified R&D staff. This will also contribute to the enhancement of the quality level of services provided by entities operating in the nearest environment of enterprises conducting R&D activity, including, first of all, cooperative enterprises and scientific institutions. The intervention in this respect will strengthen the innovative potential of the Polish economy.

357. Moreover, due to a small participation of the service sector in creating GDP (which was proved in the SWOT analysis), the financing will be provided for new investments implemented by centres of services that create a considerable number of jobs addressed to highly qualified workers (e.g. IT centres dealing with the development of software, designing and network management).

358. Furthermore, due to a small participation of high and medium technology products in export, a support instrument was planned for big innovative projects implemented in the production sector, under which the latest worldwide solutions or those of the highest potential of diffusion will be preferred. The support under this instrument will include the financing of new investments (i.e. in particular, the purchase of fixed assets as well as intangible and legal assets). Under this instrument, the preferences will be given to projects that possess a R&D component. Depending on the character of a project, the impact of project on the level of regional development, i.e. in case of project generating directly or indirectly a large number of workplaces will be considered.

359. In order to meet greater requirements of SMEs in comparison to large enterprises, investment projects implemented by SMEs in chosen measures are allowed to contain elements of consulting services and special training necessary from the point of view of implementation of investments.

360. The support is also planned for the measures aimed at introducing innovative management techniques, including Life Cycle Assessment (LCA) in regard to all potential results of the effect of the product or its designing on environment, beginning from the research, through its production, use and processing and ending with its storage.

361. Furthermore, the proposed evaluation system for the projects co-financed under OP IE gives an opportunity of awarding bonuses for the enterprises, which implemented the Environment Management System (EMS) that significantly contributes to creating ecological awareness and joint responsibility for the condition of environment at all levels of the organisational structure. Through granting points for implementing EMS certified in regard of its conformity with requirements of Standard ISO 14001 or registered in the EMAS system, the bonus is awarded to proved efforts taken by applicants in favour of environmental protection. At the same time, SMEs will receive additional points also if they participate in informal programmes, e.g. Cleaner Production certificates.

362. In the case of assistance granted from the Structural Funds to a large enterprise, the Managing Authority undertakes to request an assurance from the enterprise concerned that the assistance will

concern new investments and will not be used for support of investments that concern the relocation of its production or service facilities from another Member State of the European Union.

363. **Within the priority axis, the following measures will be supported**:

a) support for implementation of R&D results achieved thanks to the implementation of R&D works co-financed within Priority Axis 1 (within one complex project covering R&D works and implementation of their results, on condition that the criterion of economic justification has been met),

b) implementation of results of R&D works resulting from the Technological Initiative programme,

c) implementation by SMEs of own or acquired new technologies and production of new goods or improvement of old goods on the basis of such technologies through co-financing from the Technological Credit Fund,

d) counselling and investments necessary for entrepreneurs to conduct R&D works, including those directed towards obtaining the status of a research and development centre,

e) training courses, consultancy and investments of enterprises necessary to prepare and implement industrial and functional designs,

f) new investments covering application of new highly innovative organisational and technological solutions in production and services, including those leading to reduction of an adverse impact on the environment,

g) new investments of enterprises from the production sector, comprising the use of innovative solutions of great significance for economy due to the size of investments and number of new jobs connected with these investments; innovative solutions on a world scale and those including a R&D component will be preferred,

h) establishment of a large number of workplaces in enterprises from the sector of modern services,

i) new investments connected with the start of R&D activity by entrepreneurs.

364. Under the 4. priority axis it will also be possible to refinance pilot projects aimed at testing new kinds of projects or new methods of approaching and identifying those that can be successfully introduced, to a greater extent, in the following years of implementation of OP IE or in operational programmes in the next financial perspectives. Results of this kind of projects will not be included into the quantitative indicators of the implementation of the priority axis.

365. **Under the 4. priority axis, non-returnable support will be granted to the following groups of beneficiaries: entrepreneurs and BGK (Bank Gospodarstwa Krajowego).**

366. **Support instruments.** Co-financing of a part of eligible expenditures in the form of a grant and co-financing of the Technology Credit Fund.

367. **State aid.** State aid is envisaged (regional state aid, the support provided on the basis of block exemptions in regard to consulting services for SMEs, and for training courses).

368. **Expected results of the implementation of the priority axis.** The implementation of priority axis 4. will contribute to intensification of application of new and modern solutions in the area of products (goods and services), processes (also technological processes), marketing and

organisation (logistical and IT in the area of management and distribution). In the first place, the following results are expected:

a) growth in the level of new investments in enterprises,

b) growth in the number of innovative enterprises,

c) growth in expenditure on R&D in enterprises,

d) growth in the number of enterprises that use environmental technologies or received the support for development of eco-products,

e) growth in the number of newly created permanent workplaces.

369. **Monitoring indicators for the priority axis**[151]

Indicator	Baseline value	Estimated value of the indicator (in the target year)[151]	Frequency of measurement	Source of data
Product indicators				
Number of supported projects	0	To be established	Annually	IB II
Number of supported enterprises (including SMEs), that introduced innovations on their own	0/0	1,200/ To be established	Annually	IB II
Outcome indicators				
Number of jobs created in supported enterprises (total/women/men) including in SMEs	0	42,500 17,000/25,500 (SME data to be evaluated)	Annually	IB II
Number of enterprises (including SMEs) that started R&D activity in result of the support	0	To be established	Annually	IB II
Number of new R&D jobs in the sector of enterprises (including SMEs) established in result of the support	0	To be established	Annually	IB II
Number of projects carried out in cooperation of scientific and research institutions and enterprises	0	To be established	Annually	IB II
Number of patents granted to enterprises (including SMEs) under implemented projects	0	To be established	Annually	IB II
Number of SMEs that introduced organisational innovations under the provided support	0	To be established	Annually	IB II
Number of enterprises (including SMEs) that received support for introducing environment technologies or developing eco-products	0	To be established	Annually	IB II

[151] The target values of the indicators will be evaluated until the end of Ist quarter of 2008 at the latest.

370. Complementarity with other programmes. Limited financing sources assigned for the priority axis 4. forced to limit to grant the support for the investments of highly innovative character and investments connected with R&D activity. In the framework of the OP IE, the investment projects of entrepreneurs connected with introducing the innovations and the projects delivering significant economic effects in the scale of the entire country, contributing to the creation of new workplaces, are supported. Considering the above facts, the priority axis is complementary with:

a) **16 Regional Operational Programmes** within the scope of :

I. supporting projects, including projects of a high level of innovativeness, however, project of lower value than value of projects implemented within the framework of the OP IE, within the scope of research and development activity aiming at the technological and organisational development of enterprises,

b) **I&E OP** within the frameworks of priority axis 4. *Initiatives aimed at adjusting enterprises to the requirements of environmental protection* within the scope of investment measures aiming at limiting a negative impact of existing industrial activity on the environment through adjusting big enterprises to the requirements of community law in the field of environmental protection,

c) **HC OP** within the framework of trainings, but financing in the HC OP is destined to trainings of general character, however, in the OP IE there were planned supplementary specialist trainings, connected directly with investments or consultancy realised by entrepreneurs. The measures of HC OP are complementary with the OP IE especially within framework of priority axis 2. *Development of human resources and the adaptive potential of enterprises and improvement of health condition of working population* and the priority axis 4. *Higher education*,

d) **DEP OP** – instruments of support implemented within the framework of the DEP OP are not directly complementary with measures of the OP IE,

e) **European Fisheries Fund** – in case of instruments included into the public support directed to entrepreneurs the intervention in the fishery sector is excluded from the support in the OP IE. The priority axis 4. is complementary with the European Fisheries Fund within the framework of priority axis 2. *Aquaculture, inland fishing, processing and marketing of fishery and aquaculture products* and the priority axis 3. *Measures of common interest*,

f) **RDP** – measures implemented within the framework of priority axis 4. of the OP IE are not directly connected with measures supported from sources of the EAFRD.

371. **Cross-financing.** Cross-financing may be provided in the area of trainings necessary to obtain the objectives of the measures implemented. The share of co-financing will amount to 10% of the value designated for the priority axis.

372. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
3,429.71	2,915.25	514.46	35.31 %

5.5 Priority Axis 5. Diffusion of innovation

373. **Objectives of the priority axis**:

a) to provide entrepreneurs with high quality services and infrastructure aimed at strengthening and use of their innovative potential,

b) to strengthen the competitive position of enterprises through development of cooperative relations.

374. **Justification for the selection of the priority axis.** In order to increase innovativeness of the economy, it is necessary to popularise and provide access to solutions created and applied by economic operators, scientific entities and business support institutions. Thanks to access to innovations, it is possible to create new solutions, develop new applications and derive profits by authors of innovations.

375. Diffusion of innovation in the economy is possible due to intense and constant cooperation between authors and beneficiaries of innovative solutions. On the basis of developed countries, it may be stated that cooperation often facilitates achievement of results that would be inaccessible for entities acting on their own.

376. Cooperation between entrepreneurs (also at the start-up stage), as well as between entrepreneurs and business support institutions, mainly scientific entities, creates conditions that facilitate development and diffusion of new solutions (technological, product and organisational), know-how exchange as well as better utilisation of their resources.

377. However, entities currently acting on the Polish market, in particular entrepreneurs, rarely undertake this kind of cooperation, mostly due to the lack of awareness of its advantages and lack of trust in potential partners, resulting from the fear of loosing their competitive advantage and disclosing too much information concerning their strategy and resources.

378. Similarly, business support institutions do not employ all potential possibilities for cooperation for diffusion of innovation and services that may enhance innovation in the economy. These services are provided in Poland by dispersed institutions and their level and range varies significantly. This situation seems not to have a positive influence on the promotion of innovative activity among the entrepreneurs and hampers effective transfer of innovations.

379. Development of the innovation market requires execution of its legal protection. Polish and international laws provide for this kind of protection, however, as it has been stressed in the diagnosis, it is very rarely used by entities operating in Poland. Awareness of possibilities and benefits resulting from legal protection of developed solutions is very low. Relatively high costs of the procedure for obtaining industrial property rights protection constitute a serious obstacle. Taking advantage of opportunities that stem from legal protection will make investments in R&D activity more profitable, and new solutions will be accessible providing benefits to their authors.

380. **Description of the priority axis.** By creating complex tools for entrepreneurs within OP IE, especially SMEs, apart from the grants dedicated to direct projects as well as creating the friendly environment for acquiring financial resources on the capital market, there has also been planned assistance for business support institutions, which provide services especially for SMEs regarding support for their innovative activities.

381. The planned measures, the implementation of which will contribute to the achievement of objective 5 of the priority axis, include, in particular, the instruments specified below.

382. Support provided within the priority axis aims at the creation and development of supra-regional cooperative relations between entrepreneurs, especially in the area of counselling and investment which add to transfer and diffusion of knowledge and innovations among cooperating entities. The main recipients of the provided support, which contribute to the growth in cooperation between entrepreneurs and between entrepreneurs and scientific institutions and research centres, are SMEs. In Poland, clusters (including innovative clusters) are created mostly by SMEs. However, due to the role in the transfer of innovative solutions in the economy, the participation of large enterprises is also possible.

383. The cooperative associations of enterprises will receive financing, in particular for the purchase of fixed assets as well as intangible and legal assets connected with new investments, consultancy in regard of elaborating plans of the development and expansion of the association as well as the management of a cooperative association.

384. Due to the complementarity of measures in this area under the ROPs, the scope of intervention of OP IE will allow the support for these initiatives of the cooperation between entrepreneurs and between entrepreneurs and business support institutions, in particular scientific institutions, which will be characterised by supra-regional economic effect. The supra-regional character of cooperation links will be measured with the share of the links in the market.

385. At the same time, within cooperation links the support will be provided to initiatives in which entrepreneurs, in particular SMEs, constitute not less than a half of participants.

386. Another instrument will be aimed at the assistance, in particular, for business support institutions of national importance to support innovative activity of enterprises and networks of business support institutions of supraregional significance that provide comprehensive services of pro-innovative character (including, among other things, technology transfer, utilising industrial property rights, undertaking cooperative activity and promotion and utilising industrial and consumer design). In addition, the support will be provided for the functioning of the units that perform a role of the secretariat of the network, including the development of systems of information exchange between institutions gathered in the network.

387. It is important that the offer of business support institutions is comprehensive and well visible and accessible for entrepreneurs. The strengthening of the network of business support institutions will allow the improvement of the quality of the offer directed to entrepreneurs. Thus, it will contribute to providing services of adequately high level, available within the whole country.

388. Within the framework of creation of favourable conditions for innovative economic activity of companies, support will be provided for comprehensive undertakings of specialised innovation centres, especially technology parks located in the areas with the highest development potential for the whole economy. These initiatives will receive the support for consultancy in regard of the preparation of an institution development strategy that will take into account entrepreneurs' needs; that is consultancy resulting from the implemented development strategy of the institution, investments resulting from the implemented development strategy of the institution in regard of the extension or modernisation of its existing technical infrastructure, as well as promotional actions resulting from the implemented development strategy of the institution in regard to the promotion of services of pro-innovative business support institutions in the local, regional and international environment.

389. Strengthening of business support institutions that provide pro-innovative services is advised also due to the fact that they add to strengthening of relations between entrepreneurs and between entrepreneurs and scientific entities through providing access to suitable infrastructure, services and knowledge necessary to conduct economic activities related to new solutions.

390. At the same time, due to a significant role of intangible assets (so-called *intangibles*) in stimulating technological changes and the development of innovativeness of enterprises, the financing will be provided for information projects run by institutions from the business environment (in particular those that increase entrepreneurs' awareness in regard of methods and possibilities of intellectual property protection, benefits resulting from the legal protection of solutions and methods and possibilities of industrial property protection).

391. Additionally, due to the significant added value and relatively big costs, the support will be provided for SMEs that make efforts to achieve legal protection in regard of industrial property abroad as well as the support in respect of exercising their rights.

392. **Within the priority axis 5., the following measures will be supported:**

a) investments and counselling services and training related to development of cooperative relations on a supra-regional scale, including clusters,

b) comprehensive support for innovation centres (e.g. science and technology parks, technology incubators, technology transfer centres) located in the areas with top development potential,

c) support for establishment and development of business support networks on a supra-regional scale rendering services related to innovative activities of entrepreneurs,

d) support for use of intellectual and industrial property rights by entrepreneurs,

e) information and promotion regarding industrial property protection rights and industrial design.

393. Under the priority axis 5. it will also be possible to refinance pilot projects aimed at testing new kinds of projects or methods of approach and identification of those that can be successfully introduced to a greater extent in the following years of the implementation of the OP IE or in operational programmes in the next financial perspectives. Effects of this kind of projects will not be included into the quantitative indicators of the implementation of the priority axis.

394. **Under the priority axis 5., non-returnable support will be granted to the following groups of beneficiaries:**

a) groups of entrepreneurs, including: clusters, SME and large enterprises production chains, technological networks (SME and scientific entities) represented by entities holding a legal title to act on their behalf; technology platforms,

b) networks of business support institutions of a nationwide range, supra-regional networks of business support institutions,

c) specialised innovation centres (entities managing science and technology parks, technology incubators, advanced technology centres, productivity centres, centres of specialised services for entrepreneurs),

d) entrepreneurs.

395. **Support instruments.** Co-financing of a part of eligible expenditures in the form of grants.

396. **State aid.** State aid is envisaged (horizontal aid for research, development and innovative activity, regional state aid, *de minimis* aid, aid on the basis of block exemption in regard to consulting services and protection of industrial property rights for SMEs.

397. **Expected results of the implementation of the priority axis.** The implementation of priority axis 5. should contribute to increasing the percentage of innovative enterprises by rising the number of cooperative relations and enhancing services rendered to such entrepreneurs, through:

a) increasing the number of entities engaged in cooperative relations (especially including SMEs and scientific institutions);

b) improvement of quality and accessibility of services provided by business support institutions for innovative entrepreneurs;

c) increasing the role of business support institutions in the process of the innovative solutions transfer to enterprises;

d) increasing the awareness of entrepreneurs of benefits stemming from cooperation;

e) increasing the awareness of entrepreneurs of benefits stemming from the use of industrial and customer design as the source of their competitive advantage;

f) increasing the number of patent applications and other applications for industrial property rights protection.

398. **Monitoring indicators for the priority axis**

Indicator	Baseline value	Estimated value of the indicator (in the target year)[152]	Frequency of measurement	Source of data
Product indicators				
Number of projects supported	0	To be established	Annually	IB II
Number of entities engaged in cooperative measures supported (divided into entrepreneurs including SMEs and business support institutions)	0	600/to be evaluated	Annually	IB II
Outcome indicators				
Number of enterprises (including SMEs) which implemented innovative measures with the support of business support institutions	0	600	Annually	IB II
Number of jobs created in supported enterprises (T/W/M)	0	1,125/ 450/675	Annually	IB II
Number of projects implemented in cooperation with scientific entities and enterprises	0	To be established	Annually	IB II
Number of submitted patent applications to EPO and USPTO resulting from the support obtained	0	To be established	Annually	IB II

399. **Complementarity with other programmes.** The support within the framework of the priority axis 5. was directed to professional institutions of business environment being of trans-regional importance offering services directed to the needs of innovative enterprises. The priority axis is complementary with:

a) **16 Regional Operational Programmes** within the scope of:

I. supporting cooperative connections located in the area of 1 voivodship,

II. supporting for the network of business environment institutions of local and regional range according to the needs resulting from regional strategies,

III. supporting technology parks both new ones and already existing ones keeping a quota criterion – financing will be granted to projects whose value is lower than that one assumed in the OP IE. The projects whose value is over the value determined by the demarcation line will be able to achieve the financing only in case when they are placed on the list of key projects. The support of industrial parks is foreseen in the ROPs,

[152] The target values of the indicators will be evaluated until the end of Ist quarter of 2008 at the latest.

IV. protecting intellectual property – within the framework of individual ROPs there is the possibility of qualifying expenditures in the field of intellectual property protection but exclusively as an element of a complex project supported within the framework of the ROPs.

b) **HC OP** - within the framework of priority axis 2. *Development of human resources and the adaptive potential of enterprises and improvement of health condition of working population* within the scope of:

I. improving the quality of personnel of training institutions and institutions of support of entrepreneurship and innovativeness of enterprises providing services for the enterprises,

II. supporting a system of complex information services provided by institutions for entrepreneurs and persons intending to start an economic activity.

c) **DEP OP** within the framework of priority axis 1. *Modern economy* within the scope of infrastructure projects from the field of construction and enlargement of industrial parks, technology parks, incubators, mainly technology ones, centres of excellence, centres of technology transfer, centres of innovations, etc. located in the areas covered by the DEP OP, The projects supported in the DEP OP will be placed in the Indicative Investment Plan (IIP) of the Programme (registration in the IIP DEP OP will be equivalent to the exclusion of a given project from the possibility of applying for the support within the framework of other operational programmes);

d) **I&E OP** – instruments of support implemented within the framework of the I&E OP are not directly complementary with measures of the OP IE,

e) **European Fisheries Fund** – measures implemented within the framework of priority axis 5. of the OP IE are not directly connected with measures supported from sources of the EFF,

f) **RDP** – measures implemented within the framework of priority axis 5. of the OP IE are not directly connected with measures supported from sources of the EAFRD.

400. **Cross-financing.** Cross-financing may be provided in the area of trainings necessary to obtain the objectives of the measures implemented. The share of co-financing shall amount to 10% of the value designated for the priority axis.

401. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
398.99	339.15	59.85	4.11 %

5.6 Priority Axis 6. Polish economy on the international market

402. **Objective of the priority axis:** Improvement of the image of Poland as an attractive economic partner, as a place where good trade contacts may be made, and as a place good for investments, economic activity and development of tourist services.

403. **Justification for the selection of the priority axis.** Poland's accession to the Single European Market (SEM), has been beneficial for intensification of international relations of entrepreneurs and requires constant improvement of economic activity standards. In order to improve the

competitive position of the Polish economy, it is necessary to improve economic ties through increased trade (especially by SMEs), increased movement of tourists and creation of conditions allowing for improvement of investments, including foreign investments.

404. As it has been shown in the diagnosis and in the SWOT analysis, the image of Poland on the international market is unsatisfactory, which means that public intervention is necessary. It will cause the synergy effect within the framework of interacting areas, i.e.: export promotion, sales promotion on the Single European Market, investment localisation (including foreign investment) and economic and tourist promotion of Poland. The system of investment and trade exchange service and support, particularly its part regarding proper information flow in the economy, must still be strengthened. In order to encourage active international relations development, searching for cooperating parties or new outlets, it is necessary to define standards and procedures and improve access to information.

405. Support of investment and promotion within the scope of supraregional tourist products, especially the ones connected with organisation of EURO 2012 in Poland, will contribute to the increase in Poland's economic attractiveness. This way of regarding the development of the tourist infrastructure forces a holistic approach to creating tourist products over administrative boundaries developing, at the same time, a business and social environment friendly for entrepreneurs. It also contributes to the sustainable tourism growth understood as the socio-economic development of regions involved while maintaining absorbability of tourist regions and their tourist capacity.

406. The objective of priority axis 6. is complementary to the other axes implemented within the OP IE for which direct and indirect support has been provided for establishment and development of innovative products and services. The implementation of measures aimed at export promotion and at promotion of sales on the SEM, of innovative products and services, as well as innovative investments, allows for comprehensive implementation of the main objective of the OP IE.

407. Achieving the aim of the priority axis 6., especially as regards the increase in the level of Poland's investment attractiveness, depends on various significant changes (also changes outside OP IE's scope of intervention, i.e. road infrastructure development, proper preparation of land for investment and ensuring stability of the Polish legal system). As regards activities connected with increasing Poland's share in the international market, it is also important to improve offers of enterprises operating in Poland.

408. **Description of the priority axis.** Within priority axis 6., support will be provided for measures consisting in making a closer link between the Polish economy and the international economy, due to presenting Poland as an attractive partner on international market, as well as attractive location for investments. Within the framework of planned activities whose undertaking will contribute to achieving the goal of the priority axis 6., there are, in particular, several instruments described below.

409. One of the activities within this scope is support for SMEs regarding sales in the Single European Market and promotion of export[153] within the framework of the "Passport to export" programme. This programme will enable entrepreneurs from the SME sector, who so far have not undertaken any export activities or sold their products in the Single European Market or who have undertaken such activities on a small scale, to use a package of instruments including, in particular, consultancy, financing costs of participation in economic fairs and missions and gaining documents necessary to launch their products or services on a selected foreign market. Thanks to these instruments, an entrepreneur will gain all information necessary to develop export or sales activities on the Single European Market and will be able to establish vital

[153] According to the rules for granting the state aid, support will not be granted for projects regarding export to third countries and EU Member States.

contacts on a given market. This activity complements other OP IE's priority axes as it facilitates launching innovative products from the Polish economy on the international market including those products which will be created thanks to support gained within the framework of other activities included in the Programme.

410. In addition, the axis 6. includes an instrument regarding construction and development of a computer system of entrepreneur support providing access to information regarding enterprises, products, chances for cooperation, investment conditions, etc. A platform for contacts, meetings, sessions, and an Internet consulting point for entrepreneurs interested in establishing new contacts and gaining economic information will also constitute a part of this system.

411. Within the framework of the priority axis 6., there has also been planned support for the investor support centres network. The investor support centres network, whose origin is constituted by already existing investor support centres, cooperating with the agency supporting investment on the national level will serve as a source of information about possible investment localisation as an institution acting as a go-between in establishing contacts with local and central administration and also during possible negotiations regarding making investments.

412. As a supplement for the above instrument, there has been planned an activity connected with increasing the investment attractiveness of a localisation by means of financing the preliminary preparation of big plots of land destined mainly for investments realised "from the basis" including support for research, analyses, conceptual works and consultancy-promotional activities (in particular development of land development concepts, territorial development and macrolevelling analysis, geotechnical tests, feasibility study, formal and legal analyses, environmental impact analysis and information about created investment area). Refinancing will regard all *greenfield*, *greyfield* and *brownfield* areas.

413. Another instrument provided in the priority axis 6. is support for development of tourism which contributes to uniform socio-economic development of a country. Refinancing will be mostly provided for investments connected with European Football Championships EURO 2012 which will be organised in Poland and Ukraine; this is also possible to grant support to tourist projects of line character. Within the framework of support granted in the OP IE the projects consisting in the construction of stadiums and sports infrastructure will not be financed.

414. Thanks to support obtained from public means, further development and product maintenance will be able to be financed from revenues from tourist traffic. Additionally, activities promoting the most important Poland's tourist attractions will be supported (including preparation and running promotional campaigns in Poland and abroad and creation of visual identification systems and activities aimed at improving the system of tourism management in Poland (tourist traffic analysis, marketing research regarding tourist products, Polish national system of tourist information and booking accommodation).

415. The instrument integrating other priority axis 6. measures is support for Poland's economic promotion realised by means of refinancing research regarding Poland's image on international markets and running informational and promotional campaigns about Polish economy. Refinancing will also be provided for Poland's participation in and organisation of the most important events of international character, e.g. investment fairs and missions, international exhibitions.

416. **Within priority axis 6., the following measures will be supported:**

a) comprehensive support for SME entrepreneurs interested in trade contacts with foreign partners, covering in particular: counselling and trainings in sales promotion of SEM, export promotion, foreign market studies, participation in exhibitions and fairs (this type of support does not cover state aid for activities connected with product export),

b) development of business assistance centres' network,

c) development of large investment areas, especially related to conceptual works allowing for implementation of *brownfield, greyfield* and *greenfield* investments,

d) undertakings necessary for promotion of Poland's tourist assets, including creation of new innovative types of products and tourist services, establishment of tourist information system,

e) investments in the area of tourist products of supra-regional importance, including those contributing to improvement of the quality of tourist services,

f) establishment and development of an Internet system for servicing entrepreneurs seeking trade partners and potential investments in Poland.

417. **Under the priority axis 6., non-returnable support will be granted to the following groups of beneficiaries**:

a) business support institutions of supra-regional and international importance dealing with economic and tourist promotion of Poland,

b) business support institutions from the tourist sector,

c) public institutions, including state legal persons,

d) local government entities,

e) entrepreneurs.

418. **Support instruments.** Co-financing of a part of eligible expenditures in the form of a non-returnable grant.

419. **State aid.** In the majority of projects implemented within priority axis 6., state aid is not applicable. Direct support for entrepreneurs allows for application of the rules related to *de minimis* aid.

420. **Expected results of the implementation of the priority axis**. The following results should be obtained within priority axis 6.:

a) increase of number of SMEs exporting and selling on the Single European Market,

b) development of the network of investor service centres and investment zones,

c) increase of the access to information systems supporting the promotion of sale on the Single European Market and the export and gaining the investments and their service,

d) increase of knowledge concerning the potential and possibilities of Polish economy,

e) increase of tourist traffic in Poland,

f) increase of recognisability of "Poland" brand,

g) increase of export value.

421. **Monitoring indicators for the priority axis**[154]

Indicator	Baseline value	Estimated value of the indicator (in the target year)	Frequency of measurement	Source of data
Product indicators				
Number of tourism projects supported (including in tourism)	0	To be established[154]	Annually	IB II
Number of newly established and supported of investor service centres	0	16	Annually	IB II
Outcome indicators				
Number of entries to databases created or improved under Axis 6	0	40,000	Annually	IB II
Number of supported SMEs gaining first orders from outside of Poland within 2 years since the moment the support has been achieved	0	885	Annually	IB II
Number of supported SMEs which increased the export or sale on the Single European Market as a result of support	0	2 000	Annually	IB II
Number of investment projects serviced by supported investor service centres	0	600	Annually	IB II
Number of investment areas prepared with the support of the OP IE	0	140	Annually	IB II
Number of tourists (in millions)	15.2 (2005 r.)	21.0	Annually	Institute of Tourism

422. **Compatibility with other programmes.** Priority axis 6. is complementary with:

a) **16 Regional Operational Programmes** within the scope of promoting a regional and local economy in the country and abroad through financing the projects in the field of:

[154] The target value of the indicator will be evaluated until the end of Ist quarter of 2008 at the latest.

I. strengthening entrepreneurs running an export activity and sale on the Single European Market, acting on the local and regional market through financing projects of entrepreneurs within the scope of the participation in fairs, exhibitions, economic missions,

II. creating and developing a coherent system of promoting the voivodship enhancing the attractiveness of region as a place of investments,

III. supporting investments in point tourist products, and also promoting tourist products of regional and local importance,

IV. preparing studio and conception works for investment terrains of the area not smaller than included in the OP IE, and also financing the territorial development, levelling works, integration of grounds and other works necessary to prepare grounds for the investment regardless of area which they take.

b) **DEP OP:**

I. within the framework of priority axis 1. *Modern economy* within the scope of preparing the terrains for the investment activity connected with technology and industry parks and incubators as well as complex preparing the terrain for investments in the regions included in this Programme. For projects such as a territorial development, the support within the framework of the DEP OP will include exclusively projects whose total value amounts to minimum 1 million EURO. The projects supported in the DEP OP will be placed in the Indicative Investment Plan (IIP) of the Programme (registration in the IIP DEP OP will be equivalent to the exclusion of a given project from the possibility of applying for the support within the framework of other operational programmes),

II. within the framework of priority axis 1. *Modern economy* a complex promoting project of Eastern Poland will achieve a support,

III. within the framework of priority axis 1. *Modern economy* within the scope of creating trans-regional investor and entrepreneur service centres located in the areas included in the DEP OP.

c) **RDP** within the framework of priority axis 3., the measure *Renovation and development of villages* within the scope of constructing, reconstructing, renovating or equipping objects fulfilling public, social and cultural, recreation and sports functions or serving the promotion of rural areas, forming the area of public space, renovating or reconstructing the infrastructure connected with the development of tourist, sports, social and cultural functions; renovating, exposing or restoring local monuments of history, buildings being historic buildings or commemorative places,

d) **I&E OP** within the framework of priority axis 12. *Culture and cultural heritage* within the scope of supporting the projects from the field of protecting and preserving historic buildings of trans-regional importance, including the historic buildings included in the UNESCO World Cultural and Natural Heritage or regarded by the President of Poland as Monuments of History,

e) **HC OP**– instruments of support implemented within the framework of HC OP are not directly complementary with measures of the OP IE,

f) **European Fisheries Fund** within the framework of priority axis 3. *Measures of common interest* within the scope of developing new markets and promotion campaigns

for supporting the undertakings serving the implementation of policy of enhancing the quality and importance of fishery sector products, developing new markets of fishery and aquaculture products and promotion campaigns of these products, including the organisation and participation in fairs, exhibitions and other promotion events.

423. **Cross-financing.** The implementation of the cross-financing instrument is envisaged within the scope of trainings necessary to achieve the objectives set. The share of co-financing will amount to 10% of the value designated for the priority axis.

424. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
410.63	349.04	61.59	4.23 %

5.7 Priority Axis 7. Information Society – establishment of electronic administration

425. **Objective of the priority axis:** The priority axis aims at improving the conditions of undertaking economic activity through the increase in accessibility of public administration information resources and public services in the digital form for citizens and enterprises.

426. **Justification for the selection of the priority axis:** The position of the Polish economy on the international market, especially in the European Union, will be soon more and more dependent on access to information, including public information and wide access to electronic services - provided by public administration for citizens and entrepreneurs as well as for entrepreneurs to one another and citizens. In order to implement these measures, it is necessary to provide citizens with broadband Internet[155] access.

427. Increase in use of information and communication technologies within public administration will make it possible to increases effectiveness of its activities, its capability of forecasting and planning as well as decrease the costs of performing its tasks. It will have a positive influence on administration budget rationalisation.

428. Solutions introduced in the priority axis 7. will contribute to facilitating economic activity undertaking, i.e. through removing barriers between business and administration areas as well as through improving the possibility of re-using public information resources by entrepreneurs. They should substantially contribute to the development of innovative entrepreneurship also in areas located outside economic centres.

429. As results from the observations included in the diagnosis section, the level of application of ICT in Polish enterprises, institutions and state administration offices is much lower than the average level in the European Union. The experiences of EU Member States show that restructuring changes in internal processes for management in the public administration are a prerequisite for efficient fully transactional electronic services of the public administration. Therefore, it is necessary to:

a) improve the scope and integration of eServices of the administration for citizens and entrepreneurs and their full transactionality,

[155] Such measures will be undertaken in parallel within the framework of the priority axis 7. „Building electronic administration" and the priority axis 8. „Information society – increasing economy innovativeness".

b) redesigning, standardization and integration of processes inside the administration. Reorganization of the public administration must be related to documentation circulation management and access to electronic state registers.

430. It is important to ensure that both processes are introduced synergically. The development of the systems of eAdministration must reconcile development of integrated electronic services and digital content and implementation of support systems and process restructuring within the administration.

431. **Description of the priority axis.** Implementation of public e-services for citizens and entrepreneurs will be possible thanks to restructuring of the public administration and establishment, under the priority axis 7., integrated platforms that will provide public services in electronic form in the areas vital for economic activity, e.g. tax settlements, duties, administrative charges, etc. It is assumed that the integrated IT system of electronic services will be based on innovative IT technologies.

432. Integration of public registers assumes further extension and integration of nationwide teleinformation infrastructure which is the basis for coherent rendering of electronic services. It will make data transferring between platforms, electronic registers and offices possible, integrate public administration entities, and will also provide a set of necessary horizontal services supporting electronic public services, thanks to, i.a. the system of electronic personal identification (eID).

433. Further stimulation of establishment and development of Polish digital content in the Internet, especially that of high importance to competitiveness of the Polish economy in the EU, as well as to the development of entrepreneurship (especially access to state registers, for example in area of territorial information, court registers, new mortgage books). The basic task in this respect is restructuring and integration of state registers, so that to provide safe and effective access to the data they contain and development of systems for giving access to public information.

434. The objectives will be gained through IT projects conducted by particular public institutions, maintaining the trust rule, respect of privacy of the user, as well as of security of data and the net. These projects will be utilized to fulfill the priorities included in the 'National Plan of ICT Implementation for 2007-2010'. Horizontal projects (being implemented in favour for the administration as a whole), having particular impact on the possibilities of making the administration services available will play special part.

435. The Managing Authority is aware of importance of informatisation of processes within the scope of public orders. Within the framework of the intervention of the OP IE within the framework of measures directed to the construction of electronic administration, the pressure will be put on disseminating the idea of public e-orders and supporting submitted projects connected with the implementation of this idea into practice. Especially in the stage of assessing projects within the framework of this priority axis, the solutions foreseeing this form of public order realisation will be promoted.

436. The Managing Authority will aim at keeping the rules of competitiveness on the telecommunication market and within this scope it will cooperate with appropriate institutions, especially with the Office of Electronic Communication.

437. Within the framework of the priority axis a system-project will be carried out as well. It's aim is to support for measures related to coordination of works carried out within the confines of each project within priority axis 7., as well as within ROPs. It shall ensure, where necessary, the interoperationability created systems and on ensuring their compatibility with measures taken on the regional level. The Project will also ensure access to full database on the implementation of Priority axis. Furthermore, promotional and information activities will be carried out. The

exchange of good practices, both in the regional, national and also union level to gain new skills and knowledge will be one of project components.

438. **Within the priority axis, the following measures will be supported:**

a) establishing of compatible electronic platforms providing public eServices for citizens and enterprises, e.g. in area of social security, taxes, public procurement, business activity registers, court registers, health protection, environmental protection,

b) restructuring, adjustment and implementation of state registers, content and IT systems of the public administration as to ensure their cooperation in order to make them more efficient, integrated and able to provide services in electronic form, as well as providing integrated teleinformation infrastructure of the public administration at national and local levels,

c) development of public information systems (including legal information),

d) system-project aiming at ensuring synergy of measures regarding eAdministration on the central and regional level.

439. **Under the priority axis, non-returnable support will be granted to the following groups of beneficiaries:**

a) government administration entities and entities responsible to them,

b) institutions maintaining state records and registers (on the basis of legal acts),

c) consortiums of public administration units with other institutions, among others scientific entities, enterprises, associations, organs of professional autonomies, entities of non-governmental organizations.

440. **State aid:** State aid is not applicable under this priority axis.

441. **Expected results of the implementation of the priority axis:**

a) Establishing of new digital services for enterprises and citizens provided by the public administration or modernization or extension of those already existing, as well as increasing the level of access to these services,

b) enabling of electronic circulation of matters and documents in the public administration - with the use of electronic signature and electronic identity (eID),

c) increasing the range of using the existing state registers, information resources and systems of public administration (including legal information),

d) implementation of electronic administration solutions (eGovernment) through creation of an integrated central electronic platform that will allow for providing public services in electronic form with regard to services for entrepreneurs and citizens,

e) increasing accessibility of public information.

442. **Monitoring indicators for the priority axis**

Indicators	Baseline value	Estimated value of the indicators (in the target year)	Frequency of measurement	Authority responsible for the delivery of the indicator value
Product indicators				
Number of projects regarding development of information society supported	0	38	Annually	IB
Outcome indicators				
Number of public services specified within UE classification available via the electronic platforms of public administration;	0	24	Annually	IB II
Percentage of public registers[156] accessible online for commercial services and services managed by other public entities	0	60%	Annually	IB II
(e-government availability of basic public services)	20% (2006)	60%	Annually	EUROSTAT

443. **Compatibility with other programmes:** The priority axis 7. is complementary to:

a) 16 Regional Operational Programmes in fields of projects within the scope of e-services:

I. integrated system of supporting the management in the public administration on a regional level,

II. public e-services of regional and local dimension (including: e-health-projects with the scope of telemedicine; e-work; e-education),

III. e-services in the public administration – electronic circulation of documents, e-services provided for entrepreneurs,

IV. constructing and modernising integrated and/or thematic information systems of local and trans-local impact by using the instruments of ICT, including constructing and developing dedicated thematic portals and platforms of e-services, e.g. from the scope of science, health, tourism, safety of citizens, environment protection, culture, administration, economy.

b) DEP OP within the priority axis 1. "Modern economy", operation 1.2 "Information society infrastructure" through improving the quality of public institution functioning and enhancing the mechanisms of partnership, and developing the service sector, as well as – constructing and modernising technical and social infrastructure being of a basic importance for the competitiveness of Poland, improving the quality of human capital and increasing the social cohesion, as well as compensating developing chances and supporting structural changes in the rural areas.The demarcation line is the type of beneficiaries, which are in 7th priority axe institution of public administration, placed on indicative list of major projects.

c) HC OP within the framework of Priority 1 of the HC OP *Employment and social integration* and the Priority 5. of the HC OP *Good governing* within the framework of which the tasks

[156] Registers are compiled by public entities in accordance with applicable acts. Among others, their goal is to make its contents available online.

enhancing the standards of services providing by a public sector for entrepreneurs thanks to the usage of modern communication and information technologies will be realized:

I. preparation, implementation and development of organisational and system solutions enhancing the efficiency of activity and quality of services providing by work market institutions, including among others the development of information instruments and systems for work market institutions; improvement and enhancement of cooperation, information and good practice exchange systems between various entities providing services within the scope of social activisation and integration; increase of accessibility of work market serviced, among others through developing the network of institutions, introducing new methods and instruments of vocational activisation, as well as through using modern communication technologies,

II. enhancement of public administration potential in the field of making law and strengthening the ability of public administration and administration of justice to provide high quality services; and support of cooperation of public administration and non-governmental sector within the scope of implementing public tasks through supporting governmental administration potential within the scope of using the ICT in the governmental and self-governmental administration (preparation of system guidelines);

d) **I&E OP** - measures implemented within the framework of priority axis 7. of the OP IE are not directly complementary with measures within the framework of the I&E OP;

e) **European Fisheries Fund** - measures implemented within the framework of priority axis 7. of the OP IE are not directly connected with measures supported from sources of the EFF;

f) **RDP** – measures implemented within the framework of priority axis 7. of the OP IE are not directly connected with measures supported from sources of the EAFRD.

444. **The financing flexibility instrument (*cross-financing*).** It is foreseen to use an instrument of *cross-financing* within the scope of training necessary to achieve assumed objectives of implemented tasks. The share of financing within the framework of *cross-financing* will amount up to 10% of the sum destined to the priority axis.

445. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of priority axis in total OP IE allocation
788.24	670.00	118.23	8.12 %

5.8 Priority Axis 8. Information society – increase of innovativeness of economy

446. **Objective of the priority axis:** to stimulate the development of digital economy through supporting the creation of new, innovative eServices, innovative electronic solutions for business and the reduction of technologic, economic and mental barriers for using the services in the society.

447. **Justification for the selection of the priority axis:** In the area of globalization, the competitiveness of economic activity depends on a skilful use of ICT in a larger and larger degree. Services in a digital form, which a customer may use in any place and time, start to force out services provided in a traditional form. The electronic communication between a customer

and a service giver becomes a standard. The use of ICT for the communication between entrepreneurs considerably improves effectiveness of their business activity, reduces its costs and allows even small entities to expand their group of receivers in an extent unimaginable in a traditional economy. A proper response of Polish economy to these phenomena constitutes a huge chance. Its underestimation may cause retardations difficult to catch up on.

448. The SWOT analysis indicates that strong sides of Polish economy are an increasing readiness of entrepreneurs for using ICT in their activities and a high knowledge of informative technologies among young people. The priority axis 8. is to enable to use this potential.

449. The implementation of modern information and communication technologies (ICT) creates the possibility for optimizing the functioning of enterprises and affects directly the growth of innovativeness and competitiveness of economy. The information and communication technologies stimulate the changes in an organization and business models in enterprises and additional investments in the human capital. The increase of the ICT use in enterprises and organizational changes associated with it exert an essential influence on the growth of GDP. Additionally the ICT sector is characterized by the highest degree of globalization and it s a good example how the rationalization of production contributes to the increase of specialization and the growth of turnovers within the enterprises.

450. Expanding the group of entities running their own businesses is an important issue for the economic development of Poland. Undertaking to run businesses by young entrepreneurs, in particular by university graduates – whose knowledge of innovative solutions is the best and who use them the most willingly is especially valuable for the development of innovative economy. A planned support allows the entrepreneurs beginning their activities to get resources for their first and significant project enabling them to develop a business on an open global market of digital services.

451. Financing the creation and implementation of eServices will effect in the increase of innovativeness in enterprises, in particular in small and medium enterprises and micro-enterprises, allowing them – due to the use of electronic way – to function on a nationwide market and in a perspective – also on the common European market.

452. The support in favor of establishing a business will affect the integration of society having common areas of interests (shared hobbies, problems, e.g. health or social problems) and the improvement of life quality due to the accessibility of digital services, adjusted to their needs. It will also cause that these societies open to Europe and the whole world contributing to a better understanding of occurring processes and taking an active part in them using an electronic communication.

453. The support of the ICT implementation in enterprises and the creation of electronic services for entrepreneurs and between enterprises (so-called Business-to-Business - B2B) reaches out the needs and expectations of entrepreneurs. The eServices[157] for enterprises will contribute to a more efficient functioning of companies. In a changing economy the electronic communication becomes in a larger and larger degree a necessary condition of carrying out an effective cooperation with partners on the whole world. It will constitute a stimulus to the optimization of processes in Polish enterprises and to their adjustment of them to standards used in a knowledge-based economy.

454. Securing the access to a broadband Internet for citizens, thanks to which they will be able to use electronic services provided by both a public administration and enterprises, and to play an active role in an information society, will be a necessary completion of above activities. It will

[157] eServices – electronic services.

increase the readiness of citizens from groups which are today threatened by a social exclusion caused in particular by a digital exclusion, to undertake a business.

455. The support for the enterprises of SME sector, aiming at providing with a service of ensuring a broadband access to the Internet, so-called a last mile (providing a user with the Internet directly), that will be conducted on areas which are not economically profitable, on one hand will allow to eliminate existing now "white spots" of access to the broadband Internet (appearing in areas which are not economically profitable) and on the other hand – will positively affect the increase of competitiveness on a Polish telecommunication market.

456. **Description of the priority axis.** The support of creating and providing the citizens and enterprises with the eServices within the priority axis 8. will consist in granting a subsidy for executing a project in the scope of creating and making accessible the services in a digital form. The subsidy is foreseen for micro and small enterprises running businesses not longer than 1 year. These services may be related to any sphere of life e.g. tourism, culture, health, education, business and administration operations etc. The instrument envisages the possibility of the entrepreneur's purchase of services of advisory and informative companies, so the entrepreneurs of various specialities will be able to start operating on the market of electronic services.

457. The creation of electronic services provided between enterprises (B2B) and also the usage of modern technologies in the enterprises will be supported. The instrument envisages to finance the implementation of B2B communication system in a micro, small or medium enterprise, declaring the conduction of a permanent economic cooperation with at least two other entrepreneurs. Support for individual entrepreneurs should positively affect the openness of accepted solutions in order that the cooperation in the digital form may include the cooperation with partners on the European and global market as well.

458. Securing the access to a broadband Internet for citizens will be a necessary element of the above activities. The support – executed with the participation of local self-governments – will consist in a partial or complete cost coverage of the access to the Internet incurred by households threatened by a digital exclusion for economic reasons. A subsidy covers a partial or complete payments for a certain period of time for the access to the Internet, provision of necessary computer equipment and obtaining a technical help with installing the equipment at home. Entities of local self-governments with an eventual support of non-governmental organizations will be a direct beneficiary of project. Their task will include the identification of target group of users and coordination of project. The support will include among others the coverage of costs of running coordination activities by local self-government entities and local self-government organizations.

459. Activities which consist in promoting this activity and informing potential beneficiaries of the possibility of obtaining the support (organizing information campaigns, promotion in electronic and traditional media, organizing of workshops and conferences, running consultative centres in regions), trainings for beneficiaries, support for beneficiaries in preparing documentations indispensable for implementing a project, preparing expert's opinions connected with the implementation of projects will be run within a system project. The project will also include an advisory support and coordination for regional programmes. A wide range of training activity aiming at increasing informative skills of a target group of users and their consciousness of benefits resulting from using teleinformative technologies both in an every day life and in business operations will also be run. The coordination of above-mentioned aspects will concern the measures implemented within the framework of ROP, DEP OP and OP IE and its objective will include among others to secure the synergy of intervention and separation of financing.

460. The support for micro, small and medium entrepreneurs aiming at providing a service of securing a broadband access to the Internet, so-called a last mile (providing the Internet directly

for a user) will be run as a necessary element of activity as well. The instrument envisages the support of projects consisting in the construction of a dedicated teleinformation infrastructure between the nearest or most effective point of Internet distribution and a final beneficiary and provision of a broadband access to the Internet for final users. This support will be granted exclusively on economically unprofitable areas.

461. **Within the priority axis among others the following measures will be supported:**

a) support for newly created micro, small and medium-sized enterprises providing eServices,

b) supporting eServices between enterprises (B2B),

c) supporting activities covering the e-Integration through supporting the access of citizens to the broadband Internet,

d) support of providing the access to the broadband Internet at a stage of so-called "last mile" by the SMEs.

462. **Under the priority axis non-returnable support will be granted to the following groups of beneficiaries:**

a) micro, small and medium-sized entrepreneurs, including micro and small entrepreneurs running business operations not longer than 1 year;

b) entities of local self-governments, consortia of entities of local self-governments, consortia of entities of local self-governments with non-governmental organizations – for conducting projects aiming at providing the access to the broadband Internet for citizens who are particularly threatened by a digital exclusion.

463. **State aid:** Within a priority axis state aid is applicable.

464. **Expected results of the implementation of the priority axis:**

a) stimulating entrepreneurship and innovativeness of entrepreneurs through supporting their business operations in the scope of creating digital services,

b) dissemination and promotion of modern information and communication technologies across Poland also beyond academic centres,

c) increasing the effectiveness and reducing costs of the management of enterprises, introducing modern organizational solutions based on the ICT to enterprises, opening new electronic channels of distribution, enabling to provide remote services by enterprises through electronic ways, increasing a cooperation degree between enterprises,

d) widening international markets for products and services of Polish enterprises due to the ICT,

e) increasing the range of electronic integration through increasing the access of citizens to the broadband Internet and improving the conditions of citizen informative skills,

f) generating a demand for products and digital services among citizens, enterprises and public institutions as an important element of creating a digital economy based on knowledge and transformation into a information society,

g) increasing the competitiveness on a Polish telecommunication market.

465. **Monitoring indicators for the priority axis**

Indicator	Baseline value of the indicator	Estimated value of the indicator (in the target year)	Frequency of measurement of the indicator	Entity responsible for submitting the indicator value
Product indicators				
Number of supported projects related to the informative social development	0	13,000	Annually	IB
Number of supported enterprises (dividing into micro, small and medium enterprises)	0	11,400	Annually	IB II
Number of households of target group which obtained a broadband access to the Internet	0	100,000	Annually	IB II
Number of supported projects within the Submeasure 8.3.2	0	11,520	Annually	IB II
Outcome indicators				
Percentage of enterprises running sales for enterprises (B2B) through specialized Internet markets	0.4%	12%	Annually	Central Statistical Office (GUS)
Declared use of Internet on rural areas in the period of last 12 months	31.6%	80%	Annually	Central Statistical Office (GUS)
Percentage of enterprises that have informative systems integrated with other enterprises (external integration of business processes)	4.7% (2006)	17%	Annually	EUROSTAT/ DG INFSO
Number of new workplaces created due to the implementation of projects	0	17,500	Annually	IB II
Number of electronic services prepared to be provided due to the implementation of Priority Axis 8	0	11,000	Annually	IB
Penetration of line with a broadband access to the Internet (144 kbit/s)	3.9% (2006)	14.9	Annually	Office of Electronic Communication (UKE)
Percentage of enterprises receiving orders through the Internet or other webs	10.2 % (2006)	50 %	Annually	Central Statistical Office (GUS)

466. **Complementarity with other programmes.** The priority axis 8. is complementary to:

a) 16 Regional Operational Programmes in the fields of projects from the scope of infrastructure of information society, including:

I. constructing, developing regional and local safe and broadband networks, cooperating with framework regional/national networks, in particular outside of urban areas,

II. constructing and implementing electronic platforms for the integrated system of supporting the management on the regional and local level,

III. constructing and equipping local/regional centres of network management,

IV. purchasing computer hardware and software enabling to run an economic activity with the help of broadband network,

projects of e-services, including:

I. supporting the implementation of the ICT in enterprises and securing a wide access and using the ICT technologies for the SMEs. The demarcation line is the type of beneficiary, which in OP IE are micro-, small and medium sized enterprises, as well as minimal amount of support granted,

II. constructing and modernising integrated and/or thematic information systems of local and trans-local effects by using the instruments of ICT, including constructing and developing dedicated thematic portals and platforms of e-services, e.g. from the scope of science, health, tourism, safety of citizens, environment protection, culture, administration, economy. The demarcation line is the type of beneficiary, especially by excluding innovative clusters, granting single enterprises, instead of their consortium, as well as minimal amount of support granted,

III. local and sub-regional initiatives for limiting the digital exclusion and eIntegration of rural societies. The demarcation line is the type of projects: within DEP OP the intervention focuses on providing the Internet to every municipality ("middle mile connection") and constructing backbone network whilst the OP IE focuses on "last mile connection", which means supply of Internet directly to the user,

IV. trainings from the scope of using the instrument of ICT.

b) DEP OP within the framework of 1. priority axe *Modern economy* measure 1.2 *Information society infrastructure* through improving supply of Internet to enterprises and inhabitants of peripheral areas, endangered of digital divide as well as enhancing the competitiveness of enterprises, including especially a production sector of high added value and developing a service sector, as well as – constructing and modernising technical and social infrastructure being of a basic importance for the competitiveness of Poland, improving the quality of human capital and increasing the social cohesion, as well as compensating developing chances and supporting structural changes in the rural areas. The demarcation line is the type of projects: within DEP OP the intervention focuses on providing the Internet to every municipality ("middle mile connection") whilst the OP IE concentrates on "last mile connection", which means supply of Internet directly to the user.

c) HC OP within the framework of the Priority 1. of the HC OP "Employment and social integration", Priority 2. *Development of human resources and the adaptive potential of enterprises and improvement of health condition of working population*, and the Priority 7. of the HC OP *Promotion of social integration* through:

I. developing a national system of thematic and specialist trainings,

II. preparing, implementing and promoting nationwide and trans-regional actions for vocational activisation and social integration, realised by specialist institutions of nationwide range, including among others the actions for vocational activisation and social integration of the youth endangered by the social exclusion,

III. developing employment forms, vocational activisation and workplaces for persons with dysfunctions making the integration difficult (including alternative forms of employment), supporting innovative actions focused on searching for new forms and methods preventing the social exclusion,

IV. developing and increasing the accessibility of high quality social services enabling to increase chances on the work market (especially for the disabled persons);

d) **I&E OP** - measures implemented within the framework of priority axis 8. of the OP IE are not directly complementary with measures within the framework of the I&E OP;

e) **European Fisheries Fund** - measures implemented within the framework of priority axis 8. of the OP IE are not directly connected with measures supported from sources of the EFF,

f) **RDP** – measures implemented within the framework of priority axis 8. of the OP IE are not directly connected with measures supported from sources of the EAFRD.

467. **Cross-financing.** It is foreseen to use an instrument of *cross-financing* within the scope of training necessary to achieve assumed objectives of implemented tasks. The share of financing within the framework of *cross-financing* will amount up to 10% of the sum destined to the priority axis.

468. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of Priority Axis in total OP IE allocation
1,415.86	1,203.49	212.38	14.58 %

5.9 Priority axis 9. Technical assistance

469. **Objective of the priority axis:** To ensure support for the OP IE management, implementation and monitoring processes and to ensure that Community funds and national resources are used effectively and in compliance with the law.

470. **Justification for the selection of the priority axis:** One of the conditions for participation in the management of the structural funds is to provide administrative potential necessary to meet this purpose. It will require substantial financial outlays for providing an efficient management, implementation, information, monitoring and evaluation system for structural aid within the OP IE, since the authorities involved in these measures must have necessary potential and skills. At the same time, taking into account the OP IE allocation (bigger in comparison with the SOP ICE) and the bigger number of various support instruments, the OP IE support together with the system for its implementation will require involvement of further human resources and also their quality of work improvement, which requires proper preparation and involvement of much bigger resources and means for this goal. Providing proper administrative capability will be realised according to the Plan of activities for increasing administrative potential of entities involved in realisation of Operational Programmes in Poland in 2007-2013 approved by the Council of Ministers as of 17 April 2007. The priority axis 9. Technical Assistance provides means and instruments to facilitate the OP IE realisation which include strengthening of administrative capabilities regarding the OP IE implementation.

471. **Description of the priority axis:** Support for effective OP IE management and implementation process will be rendered through:

a) providing compliance with Community laws and policies,

b) ensuring high quality and cohesion of measures used for the OP IE implementation,

c) organisation of a coherent system for information and promotion of the OP IE measures, compliant with the information policy of the NSRF,

d) support for institutions involved in the OP IE management and implementation.

472. **Under the priority axis, non-returnable support will be granted to the following groups of beneficiaries:** Institutions directly involved in the OP IE management and implementation.

473. **Within the priority axis, the following measures will be supported:**

a) support for employment in authorities responsible for management, implementation, monitoring, evaluation, audit and control. Financing of employment costs in the authorities responsible for the implementation of the OP IE measures will be granted within the technical assistance component, while financing of employment costs in Managing Authorities and in Intermediate Bodies which are simultaneously government administration bodies, will be provided within the Technical Assistance Operational Programme, 2007-2013,

b) improvement of qualifications of employees responsible for management, implementation, monitoring, evaluation, audit and control, as well as promotion,

c) costs of the OP IE management and implementation, in particular:

I. costs of selection of projects,

II. control,

III. evaluation,

IV. organisation of meetings, committees, groups of teams,

V. development of analyses, studies, evaluations, reports,

VI. financing of assistance provided by external experts,

VII. collection, processing and analysing of data,

VIII. preparation of documentation for key and extensive projects, so-called *project pipeline*.

d) financing of costs of the OP IE evaluation,

e) financing of operating and administrative costs related to the implementation of the objectives of the OP IE,

f) acquisition of equipment and software necessary for the implementation of the objectives of the OP IE,

g) financing of programming costs and future structural interventions,

h) financing of activities related to communication, promotion and training activities supporting the OP IE implementation and management system,

i) financing of activities aimed at the completion of the SOP ICE, 2004-2006 implementation,

j) financing of costs of documents archiving,

k) financing of costs of rent, development, modernisation and adaptation of rooms for the needs of the OP IE management and implementation.

474. **Expected results of the implementation of the priority axis**:

a) efficient OP IE management, implementation, monitoring, evaluation and control process,

b) improvement of social awareness and knowledge on support available within the OP IE,

c) in relation to transfer of useful information to beneficiaries and potential beneficiaries connected with the structural funds, it is expected that efficient and effective application of funds within the OP IE will improve, which will add to their better absorption.

475. **Monitoring indicators for priority axis**

Indicator	Baseline value	Estimated value of the indicator (in the target year)	Frequency of measurement	Entity responsible for submitting of the indicator value
Product indicators				
Number of jobs created and financed by the programme	0	40,000	Every 6 months	MA
Number of computer units purchased (laptops, servers, computers)[158]	0	2,000	Every 6 months	MA
Number of instructions, training sessions, workshops, studio visits organised	0	1,000	Every 6 months	MA
Number of expert opinions, analyses, researches, studies, evaluations, elaborations and concepts provided by external evaluators	0	100	Every 6 months	MA
Number of conferences, meetings, seminars organised	0	1,000	Every 6 months	MA
Outcome indicators				
Number of trained persons	0	3,000	Annually	MA
Average time of means payment on the basis of the application for payment	400[159]	30	Annually	MA

[158] Excluding printers and fax machines which belong to the office equipment category

[159] Data on NSRF level

476. **The budget of the priority axis (EUR million)**

Total public contribution	ERDF	National public funds	Share of the priority axis in total OP IE allocation
329.65	280.20	49.45	3.39 %

6. System for the Implementation of the Innovative Economy Operational Programme

6.1 Management and implementation

6.1.1 General remarks

477. The system for the management and implementation of the OP IE is compliant with Council Regulation (EC) No. 1083/2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999 and Commission Regulation No 1828/2006 Of 8 December 2006 laying down the general principles for the implementation of the Council Regulation (EC) No. 1083/2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund, as well as with Regulation (EC) No. 1080/2006 by the European Council and Parliament of 5 July 2006 on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999.

478. This chapter contains the description of the system for the OP IE management and control, in accordance with the requirements set out in Article 58 of the Council Regulation (EC) No. 1083/2006. General information regarding the functions of the Managing Authority for the NSRF, the Managing Authority for the OP IE, Certifying Authorities, Intermediate Bodies, Audit Institution and the relations between them are set out in the NSRF.

6.1.2 Managing Authority

479. The function of the Managing Authority (MA) pursuant to the Act on the rules of pursuing development policy is performed by the minister in charge of regional development issues. Pursuant to the internal regulations prepared by the minister in charge of regional development issues, the MA duty is performed by an organizational unit within the Ministry of Regional Development. At present the function is performed by the Managing Department for the Competitiveness and Innovativeness Programmes.

480. The OP IE institutional scheme and the scheme indicating the location of MA, CA, AI and the institution responsible for receiving payments from the EC are included in the annex No. 9.6.1 and 9.6.2 to the OP IE.

481. Pursuant to Article 60 of the Council Regulation (EC) No. 1083/2006, the Managing Authority is responsible for the management and implementation of the OP IE in compliance with the principles of sound financial management. The Managing Authority shall be responsible in particular for:

a) ensuring that the measures to be financed are compliant with the criteria applied to the operational programme and compliant with Community and national rules throughout the implementation period,

b) verification whether co-financed goods and services are supplied and declared expenditures for operations have been really incurred and whether they are compliant with Community and national rules,

c) ensuring that there is a system for computer registration and storage of accounting data for each measure within the operational programme and that data regarding the implementation is collected, necessary for financial management, monitoring, control and evaluation,

d) ensuring that beneficiaries and institutions involved in the implementation of the measures have either a separate accounting system or an appropriate accounting code for all transactions related to the given measure,

e) ensuring that evaluation of operational programmes referred to in Article 47 of Council Regulation (EC) 1083/2006 is compliant with the provisions of the said regulation,

f) ensuring the compliance with requirements related to information and promotion set out in Article 69 of Council Regulation (EC) 1083/2006,

g) providing the EC with information necessary for evaluation of major projects,

h) setting procedures for ensuring that all documents related to expenditure and audit, necessary for providing appropriate audit route, are stored in compliance with Article 90 of Council Regulation (EC) 1083/2006,

i) ensuring that the Certifying Authority obtains all necessary information related to the procedures and verifications related to expenditure, necessary for certification,

j) managing the works of the Monitoring Committee of the OP IE (MC) and providing it with necessary documents allowing for the OP IE monitoring and implementation,

k) development of annual and final reports on the progress of the OP IE implementation approved by the Monitoring Committee and transmission of these reports to the EC,

l) developing a description of the management and control system setting the organisation and procedures of the MA, IB, Certifying Authority, Audit Institution and other institutions responsible for audits (pursuant to Article 71, paragraph 1 of Council Regulation (EC) 1083/2006),

m) sending annual OP IE expenditure forecast for the present and following year to the EC, pursuant to Article 76, paragraph 3 of Council Regulation (EC) 1083/2006.

482. Furthermore, the MA is obliged to:

a) develop guidelines for the IB for development of detailed manuals and procedures and give opinion on these documents,

b) develop sample reports for the IB and guidelines related to sample application forms, contracts and other documents for beneficiaries, as well as verify and approve samples developed by the IB,

c) prepare guidelines concerning eligibility of expenditure within the OP IE with the participation of the IB,

d) developing proposals for criteria for selection of operations and submitting them to the Monitoring Committee,

e) setting out eligibility criteria for costs covered by co-financing within the operations,

f) setting out the level of co-financing for the operations as the percentage of eligible costs (the level may vary depending on the type of operation or the competence of the beneficiary, or stand at up to 100% of the operation value),

g) setting out the types of projects the selection of which requires opinions by experts,

h) develop general criteria for project selection for the OP IE and submit them to the MC for approval,

i) verify applications related to major projects sent by the IB with regard to compliance with the requirements of the OP IE,

j) provide audits of the OP IE, including development of a system audit plan and cooperate with the IB on development of an audit plan for priority axes,

k) perform system audits of the OP IE,

l) evaluate the progress of the implementation of the OP IE on the basis of the annual report,

m) provide the MC with information on comments voiced by the EC on the basis of the annual report and inform the EC about actions taken in reaction to these comments,

n) develop reports on irregularities in cooperation with the IB and send them to authorised institutions, in accordance with the NSRF implementation system,

o) ensure evaluation of the OP IE in compliance with the EU requirements, especially development of an evaluation plan for the OP IE and cooperation with the IB on development of evaluation plans of individual priority axes, and to supervise the implementation of this plan,

p) depending on the option selected in respect to the electronic monitoring system –participate in implementation and operation of the central system and supervise the performance of these tasks by the IB or identify, in cooperation with the IB, the needs for systems within the OP IE and supervise their establishment and functioning, and supervise the efficiency of cooperation with the central system, in order to provide suitable flow of data to the central system,

q) develop, in cooperation with the IB, annual expenditure forecasts for the present and following year and submit them to the EC,

r) develop, in cooperation with the IB, a detailed communication plan for the OP IE and supervise communication activities of the IB.

483. The MA, at the request of the MC, on its own initiative or on the motion of the IB, introduces changes in the OP IE and in the criteria for project selection, including those related to the share of funds. Changes may be introduced as a result of socio-economic changes or in order to consider the Community priorities in another way, or because of difficulties in the implementation and allocation of reserves. The MC gives opinions on the said changes but the final decision is taken by the MA. The EC must be notified of such a decision within a month. The Commission takes a decision on the motion to amend the OP IE in the shortest period of time possible from the date of official submission of the motion by the MA. With respect to the area referred to in Article 65 a) and g) of Regulation No. 1083/2006, changes must be approved by the MC.

6.1.3 Intermediate Bodies

484. Pursuant to Article 59 of Council Regulation (EC) No. 1083/2006, the OP IE shall delegate the management of individual priority axes to Intermediate Bodies (IB) which are directly responsible to the OP IE Managing Authority for performance of these tasks.

485. Delegation of authority shall refer to tasks related to individual priority axes (or a few priority axes) covering interventions that belong to the competence of the given ministry. While delegating authority, the MA shall remain fully responsible for the complete implementation of the OP IE.

486. Delegation of authority shall take place on the basis of an appropriate agreement that should set out:

a) tasks and scope of responsibility of the IB,

b) way for monitoring and controlling of the IBs' performance of tasks by the MA.

487. The following institutions act as IB for the OP IE:

a) minister in charge of science (for priority axis 1. and 2.), at present the function is performed by the Department of European Funds in the Ministry of Science and Higher Education,

b) minister in charge of economy (for priority axis 3., 4., 5. and 6.), at present the function is performed by the Department of European Funds in the Ministry of Economy,

c) minister in charge of informatisation (for priority axis 7. and 8.) at present the function is performed by the Department of Information Technology Development in the Ministry of Interior and Administration.

488. The mains tasks of the IB within the OP IE include in particular:

a) with regard to programming:

I. developing proposals for detailed description of the priority axis and measures within the OP IE on the basis of the guidelines set out by the minister in charge of regional development and submitting them to the MA,

II. management of individual priority axes implemented within the OP IE (the IB may establish Second level Intermediate Bodies for particular measures and delegate there some duties; at the same time, the IB has the sole responsibility of the complete implementation of the priority axis within the OP IE),

III. developing a proposal strategy for the implementation of the priority axis,

IV. developing, if such a need arises, proposals for amendments in the OP IE, in particular in the area of the implementation of the given operations,

b) with regard to implementation and selection of projects:

I. evaluation and selection of operations to be implemented and co-financed within the OP IE on the basis of the criteria approved by the Monitoring Committee,

II. ensuring that the operations selected are compliant with appropriate Community and national rules throughout their implementation,

III. concluding contracts on co-financing with beneficiaries,

c) with regard to financial management:

I. settling contracts with beneficiaries in compliance with the adopted procedures and making payments from the OP IE resources to beneficiaries, including development of applications for refunds and sending them to the Managing Authority; monitoring the progress of contract implementation,

II. managing financial resources designated for implementation of the priority axis programme coming from the European Union's budget, from the state budget and from other sources at the level of priority axes/operations (measures),

III. developing annual and multi-annual prognosis for expenditure within the priority axis/operation (measures) for the present year and for the following year and transmitting it to the MA of the OP IE.

d) with regard to monitoring and evaluation:

I. monitoring the progress of the implementation of priority axes/operations, including the degree to which the objectives set have been achieved, as well as making evaluations of priority axes/operations in compliance with the procedures set out by the MA,

II. developing periodic, annual and final reports on the implementation of operations and sending them to the MA of the OP IE, the reports are later sent to the Monitoring Committee for approval and then to the European Commission,

III. participation in the implementation and use of the electronic monitoring system and maintenance of the electronic monitoring system for the priority axis within the OP IE.

e) with regard to control:

I. control of the implementation of the priority axis/operation, including controls of the implementation of individual projects (in particular aimed to verify whether the co-financed products and services have been supplied and whether the expenditures declared by beneficiaries have been actually incurred, and whether they are compliant with appropriate Community and national rules); sending the results of such controls to the MA of the OP IE,

II. developing an annual control plan with regard to the priority axes,

III. recovering amounts wrongly paid to beneficiaries within the priority axis,

IV. developing periodic reports on irregularities and sending them to the MA of the OP IE,

V. transmitting all necessary information on procedures and verifications made in relation to expenditures to the Certifying Authority for the needs of certification,

VI. systemic controls in the authorities that implement individual operations in order to assure the regularity of the system maintenance and sending the results of these controls to the MA of the OP IE.

f) with regard to communication and promotion:

I. ensuring appropriate information and promotion in the area of the priority axis and informative, promotion and communication activities at the level of operations,

II. ensuring compliance of the implementation of the priority axis with the requirements related to information and promotion within the OP IE,

III. developing a detailed communication plan for the priority axes, taking into account informative and training activities in the first place,

g) with regard to ensuring accounting standards:

I. ensuring application of separate accounting systems or appropriate accounting codes for all financial operations related to the project by beneficiaries and all institutions involved in the priority implementation,

II. ensuring an IT system for registering and storing accounting records for each operation within the Programme and ensuring that the data on the implementation necessary for financial management, monitoring, verification, audit and evaluation is collected,

III. storing all documentation related to the implementation of the operation for 3 years since the date of the project completion.

489. Upon the MA consent, the IB may vest the implementation of some of its tasks in the Second level Intermediate Bodies (IB II), another institution having suitable competence, cadre resources and experience, in particular with regard to the implementation of undertakings corresponding with tasks vested in it within the OP IE. Entrusting the objectives is pursuant to regulations on public procurement.

490. This function may be performed by institutions belonging to the public finance sector or which are in charge of the performance of such a function, the competences of which stem from appropriate legal regulations or statutes. These may be public entities, including state of private legal persons, responsible for the implementation of measures within individual priority axes. In case of the institution from outside a public finance sector, the function of IB II will be performed by an entity selected, pursuant to regulations of the Act on the rules of pursuing development policy.

491. At present the function of IB II for measures (group of operations) is performed by:

a) within the priority axis 1. – Polish Agency for Enterprise Development, Information Processing Centre, Ministry of Science and Higher Education,

b) within the priority axis 2. – Ministry of Science and Higher Education,

c) within the priority axis 3. – Polish Agency for Enterprise Development,

d) within the priority axis 4. – Polish Agency for Enterprise Development, Polish Information and Foreign Investment Agency,

e) within the priority axis 5. – Polish Agency for Enterprise Development, Polish Information and Foreign Investment Agency,

f) within the priority axis 6. – Polish Agency for Enterprise Development, Polish Information and Foreign Investment Agency,

g) within the priority axis 7. – Implementing Authority for European Programmes,

h) within the priority axis 8. – Implementing Authority for European Programmes, Polish Agency for Enterprise Development.

492. Such delegation of authorities by the IB does not exempt it from absolute responsibility for the implementation of the priority axis within the OP IE.

493. The IB must not delegate tasks related to:

a) development of applications for refund and transmitting them to the Certifying Authority,

b) transmitting to the Certifying Authority all necessary information on procedures and verifications related to expenditures,

c) developing annual and multi-annual prognoses of expenditures within the priority axis and transmitting them to the MA.

6.1.4. Certifying Authority

494. Certification of payments to the EC shall be made by certifying authorities (CA) for central programmes financed from the ERDF and the Cohesion Fund that operate within the Ministry of Regional Development, functionally independent of the MA. The tasks of the CA cover mainly the tasks set out in Article 61 of the Council Regulation No. 1083/2006.

495. The CA shall be responsible for certification of expenditures incurred within the OP IE. The main tasks of the CA cover certification of expenditures incurred by beneficiaries and certification of payment applications sent by the IB.

496. Pursuant to Article 35, section 2, point of 6 December 2006 on the principles of carrying out the development policy, the minister in charge of regional development certifies to the EC the correctness of the expenditures incurred within the operational programmes. Certifying Authority is an organisational unit established in compliance with the regulation of the minister in charge of regional development with regard to the organisational rules to be set out within the Ministry of Regional Development, and is responsible for certification of expenditures incurred within ERDF/ESF/Cohesion Fund. As regards the tasks undertaken, CA is independent from the units functioning as managing authorities for particular operational programmes, within separate departments subordinate to other Members of the Ministry Management. The Member of the Ministry of Regional Development Management responsible for CA supervision directly reports to the Minister of Regional Development and takes independent decisions as regards certification of expenditure declarations and payment applications to the EC. Currently the Department of Certifying Institution performs the function of Certifying Authority.

497. Certifying Authority for the OP is responsible in particular for:

a) development of certified declarations of expenditures and payment applications and submitting them to the EC,

b) certification of the regularity of expenditure declaration and its compliance with reliable accounting systems and verifiable supplementary documentation,

c) certification of the compliance of expenditures declared with appropriate Community and national rules, and that they were incurred with regard to selected operation for financing in line with programme applicable criteria and Community and national rules,

d) ensuring, for certification purposes, that managing authority provided it with appropriate information on procedures and verification carried out in relation to the expenditures included in the expenditure declarations,

e) taking into account, for certification purposes, the results of all the audits of carried out by the Audit Institution or commissioned by it,

f) maintenance of accounting documentation related to expenditures declared to the EC in an electronic form,

g) registering amounts to be recovered and amounts withdrawn as a result of cancellation of the whole or part of financial contribution to the operation. The recovered amounts are returned to the European Union budget before the completion of the operational programme or by deducting them from the following expenditure declaration,

h) taking into account, for certification purposes, information on the irregularities found in the operational programme,

i) taking into account, for certification purposes, results of system inspections and expenditure inspection carried out by managing authorities,

j) approving or disapproving, for certification purposes, executory instructions expenditures of managing authorities for operational programmes,

k) carrying out system inspection visit in managing authority and in institutions subordinate to managing authority or in beneficiaries with regard to programme implementation and inspection visits to control expenditures on the basis of refund applications submitted by managing authorities,

l) carrying out inspection visits in Intermediate Body in Certification as regards compliance with ROP certification system.

6.1.5 Audit Institution

498. The Audit Institution (AI) tasks set out in the Council Regulation (EC) No. 1083/2006 shall be carried by General Inspector for Fiscal Control, whose function is performed by secretary or undersecretary in the Ministry of Finance pursuant to the Act of 28 September 1991 on fiscal control. AI is independent of MA, IB, IB II and CA.

499. The AI tasks are carried out via fiscal control organisational units subordinate to General Inspector for Fiscal Control, which a separate unit within Ministry of Finance (currently Department for Certifying and Issuing Declarations on Winding-up of EU Assistance). Separate organisational units responsible for inspection of EU funds were established within each tax office.

500. The AI is responsible for the whole of the works connected with the issue of assurance that the OP IE management and control system fulfils requirements of regulations of the Council (EC) No. 1083/2006 and for the preparation, before the submission of first application for a periodic payment, or not later than within 12 months following the OP IE adoption, of report including evaluation results of the establishment of systems and opinions on the compliance of OP IE management and control system with the articles 58-62 of the regulation. The works within the compliance audit are run by the Department for Certifying and Issuing Declarations on Winding-up of European Union Assistance, the opinion is signed by the General Inspector of Fiscal Control.

501. AI shall ensure that the audit activities are compliant with internationally recognized auditing standards. The main tasks of AI cover:

a) ensuring performance of audits in order to verify the efficient functioning of the OP IE management and control system,

b) ensuring performance of operation audits on the basis of an appropriate sample in order to verify the declared expenditures,

c) submitting to the EC, within 9 months following the OP IE adoption, an audit strategy identifying the entities which shall be responsible for audit performance mentioned in point 1. and 2., methodology which shall be applied, sampling methods for the purpose of operation audits and an indicative audit planning in order to ensure the audit performance of main entities and even distribution of audits in throughout the program period,

d) up to 31 December of each year in the years 2008 – 2015:

I. submitting to the EC annual audit report presenting the results of audits carried out in the previous 12 months, completed on the day of 30 June of the given in compliance with the OP IE audit strategy and informing about all the irregularities in the OP IE management and control systems. The first report, which shall be submitted up to 31 December 2008, shall cover the period from 1 January 2001 to 30 June 2008. The information on audits performed after the day of 1 July 2015 shall be included in the final audit report constituting supplement to declaration on closure mentioned in point 5,

II. stating an opinion, on the basis of the inspections and audits performed on its commission, whether the management and control system functions effectively as to guarantee that the declarations of expenditures submitted to the EC are correct and to ensure that the transactions they are based on are correct and compliant with the law,

III. submitting declaration of partial closure of the OP IE,

IV. submitting to the EC, not later than on the day of 31 March 2017, a declaration on closure, including the assessment of the validity of the application for final payment and compliance with the law and regularity of transactions being the basis of the expenditures included in the final declaration of expenditures, which shall be supplemented with final audit report.

502. Within the framework of the works described above Department for Certifying and Issuing Declarations on Winding-up of EU Assistance shall supervise, coordinate and ensure the appropriate quality of works carried out by tax inspection authority.

503. To ensure the quality of works carried out by tax inspection authorities the Department shall ensure appropriate control mechanisms, which shall involve, in particular:

a) implementing a documentation management system (defining criteria for preparation, verification and acceptance of documentation, as well as its standardization and informatization),

b) supervising the process of carrying out the works (assigning employees the responsibility for task performance and verification of its completion),

c) performing annual inspections to control the quality of the works completed (within re-performance audits and audits performed to verify the correctness of methodology adopted by tax inspections authorities).

504. The General Inspector for Fiscal Control shall act as the Audit Institution (AI) for the OP IE. Tasks related to this area shall be performed by a separate organisational unit within the Ministry of Finance and tax inspection authorities. The AI is independent of the MA and IB for the OP IE.

505. The AI shall perform the tasks set out in Article 62 and Article 71 of the Council Regulation (EC) No. 1083/2006.

506. The AI is responsible, in the first place, for ensuring that audits of the OP IE management and control system as well as controls of projects carried out on the basis of an appropriate sample are compliant with internationally recognised auditing standards.

6.2 Audit and control procedures

6.2.1 Audits of management and control systems

507. The MA is an entity responsible for preparing and submitting the description of management and control system to the EC.

508. Examination proceedings within audits of management and control systems referred to in Article 62, paragraph, 1 letter a of the Council Regulation (EC) No. 1083/2006 are performed at the following stages:

a) Introductory review – collecting and analysing information on the audited activity,

The results of an introductory review are the basis for introductory assessment of the audit environment and for identification, on the basis of risk analysis, of audit areas subject to examination procedures at the following stages.

b) Test of control mechanisms – verification whether the risks identified during the introductory review are accompanied by control mechanisms so that to limit or eliminate these risks, and whether these mechanisms were implemented by the audited entity in the areas subject to examination.

Analyses made during the introductory review and control tests are the basis for assessment of the internal control environment.

c) Development of an audit programme – identification of areas to be examined during reliability tests together with a detailed schedule.

d) Reliability tests – examination of the effectiveness of introduced control mechanisms on the basis of the examined document sample.

509. Expenditures examined during reliability tests will be included in the group of eligible expenditures subject to examination within project controls (Article 62, paragraph 1, letter b of Council Regulation (EC) No. 1083/2006).

6.2.2 Controls of projects

510. Controls of projects referred to in Article 62, paragraph 1, letter b of Council Regulation (EC) No. 1083/2006 are performed on spot, on the basis of documentation maintained by the beneficiary. The aim of controls is to ensure that:

a) the project was selected in compliance with the selection criteria established within the OP IE and that it was implemented in accordance with the decision on awarding assistance, that it fulfils appropriate requirements related to its functionality and usefulness or meets the objectives set,

b) declared expenditures are reflected in accounting records and other documents on accounting value (so called supporting documents) maintained by the beneficiary,

c) expenditures declared by the beneficiary are complaint with Community and national rules,

d) public contribution was paid to the beneficiary without unnecessary deductions or unjustified delays.

511. If the problems detected seem systematic and may therefore bring about risks threatening other projects implemented within the OP IE, further examinations shall be made, so that to identify the scale of these problems.

512. The Audit Institution shall develop an audit strategy which identifies entities responsible for performance of audits, defines a methodology to be followed, sampling methods and an indicative audit plan. The audit strategy shall be submitted to the EC for approval.

513. On the basis of audits of the management and control systems and controls of projects, the Audit Institution shall develop:

a) an annual report on control containing results of audits carried out in the given year, compliant with the audit strategy and presenting potential irregularities in the OP IE management and control system,

b) an annual opinion establishing whether the management and control system guarantees that the declarations of expenditures submitted to the EC are correct and whether the transactions they refer to are compliant with the law,

c) a declaration on partial closure of aid referring to projects completed in the given year,

d) a declaration on closure of aid that assesses the validity of the application for final payment and compliance with the law and regularity of transactions related to this application included in the final declaration of expenditures.

514. The Audit Institution shall also be responsible for assessment of compliance of management and control systems in the entities that participate in the management and implementation of the OP IE, pursuant to Articles 58 – 62 of the Council Regulation (EC) No. 1083/2006. A report on the assessment and an opinion is submitted to the EC together with the description of the management and control systems prior to transmission of the first payment application or within 12 months from the day of the adoption of the OP IE. The first payment under audit of indirect compliance depends on the approval for the report by the EC.

6.3 Financial flows

515. The European Commission transfers the resources of the European Regional Development Fund for financing the OP IE as advance payments, interim payments and final payments. The resources transferred for financing the OP IE by the European Commission in the aforementioned form shall come into the separate EUR bank account governed by the Minister of Finance. From this account, after currency translation into PLN, the resources shall be transferred to the central state budgetary account at the Minister of Finance's disposal and constitute budgetary revenue. Subsequently, the resources for financing projects shall be transferred from the state budget.

516. The expenditures for the implementation of the OP IE are planned within the budgetary part of the administrator in charge. In compliance with the rules for state budget implementation within annual limits set out in the Budget Act. These limits shall be established in agreement

with the minister in charge of regional development in the course of works on the Budget Act on the basis of the OP IE payment tables and multiannual limits for liabilities and expenditures set out in the OP IE so that to provide for efficient and timely implementation of the OP IE. The resources for financing projects shall be made available and transferred by the minister in charge of public finance, in line with the rules for usage of budgetary funds and on the basis of the demand and schedule submitted by the given budgetary funds administrator. The expenditures for the implementation of the OP IE planned within the budgetary parts of particular administrators, that is, competent ministers are transferred to the beneficiaries in the form of advance payments or refunds. The resources of the ERDF planned within the allocation of the OP IE, can be used on development subsidies transferred to the entities in the public finance sector and to other entities being beneficiaries of the ERDF, and on expenditures of state budgetary entities involved in the implementation of the OP IE.

517. Payments to beneficiaries shall be made on the basis of the subsidy agreement and beneficiary's payment application with consideration of previous payments. Whereas the beneficiary, as specified in the subsidy agreement, shall, in specified periods, transmit the required documents for certification of expenditures incurred for implementation of projects. In the case of advance payments, subsequent payments shall depend on settlements of previous payments.

518. Second level Intermediate Body, Intermediate Body, as well as the Managing Authority certify the amount of qualified expenditures. The certified amount of qualified expenditures shall be reduced by the income indicated by the beneficiary, in line with the Article 55 section 2 and 3 of Council Regulation (EC) No 1083/2006. In addition, it shall be reduced by the amount of expenditures which were incorrectly accepted as qualified within previously submitted applications, amounts improperly used and paid to the beneficiary on the basis of previous applications as well as by the amount of penal interest, paid by the beneficiaries as a result of delay in payments of the amount due. Subsequent payments to the beneficiary shall be also reduced by the amount of accrued interest from the advance payments made to the beneficiary for the implementation of projects or as refunds of expenditures incurred.

519. For the purpose of ERDF resources settlement the Managing Authority draws up a refund application for all the expenditures incurred within particular priority axes/measures and on the basis of financial installation prepares calculation of the value of the community funds that should be refunded by the European Commission. The prepared document is submitted to the Certifying Authority in order to certify the expenditures to the European Commission.

520. Within the financial flow monitoring system Managing Authority shall monitor the amount of qualified expenditures including the expenditures constituting state co-financing. The Managing Authority shall make calculation of the level of subsidies from EU funds at the level of priority axis so that the input of EU funds will not exceed the level adopted for a given priority axis in the OP IE.

521. Diagram presenting financial flows is included in Annex 9.6.3 to the OP IE.

6.3.1 Institution responsible for receiving of payments

522. The Ministry of Finance is an institution responsible for receiving of payments made by the EC. Pursuant to the work regulations of the Ministry of Finance, at present the Paying Authority Department provides services of banking accounts into which payments from community funds will be paid.

523. Funds transmitted by the European Commission as advance and periodic payments and a final payment will be included in a state budget as its revenues.

6.3.2 Procedures concerning received interests

524. Within the OP IE the interest accrued from the resources received by specific bodies involved in financing of the OP IE shall be spent on the implementation of the specific priority axis/measures Programme and shall be indicated in the report on the implementation of the priority axis/measures.

525. For the handling of funds received from the EU within the financial perspective 2007-2013, similar system of bank accounts as for the 2004-2006 perspective shall be maintained, that is I level- funds accounts and II level- programme accounts.

526. Interest earned on the funds and programme accounts shall be added to the accounts balance. Immediately after the calculation of interest, the Institution receiving funds from EC shall transfer relevant amounts to the State Budget revenue account and they shall be used on state co-financing.

527. In the case when the beneficiary receives the resources for the project implementation as an advance payment, the information about the interest accrued from these resources shall be submitted to the implementing body. The resources transferred to beneficiaries within subsequent instalments shall be reduced by the amount of interest accrued from the resources transferred as an advance payment to the beneficiaries' accounts.

6.4 Monitoring

528. The OP IE monitoring is aimed to assure appropriate quality of the OP IE implementation. Monitoring is done by the MA, the MC and the IB, as well as by monitoring sub-committees for priority axes if any such sub-committees have been established.

6.4.1. Monitoring Committee

529. The MC shall be appointed in compliance with the regulation introduced by the competent minister acting as the Managing Authority within three months following the date of the submission to Poland of the decision accepting the OP IE by the EC. Works of the MC are presided over by a competent minister acting as the Managing Authority or his representative. The MC shall be appointed in line with the procedures stipulated in guidelines No. 3 by the Minister of Regional Development of 23 March 2007 on monitoring committees (MRR/H/3(1)03/2007) and with the provisions included in the Principles of Monitoring Committee appointment within Innovative Economy Operational Programme defined by the Managing Authority.

530. Prior to the EC decision regarding the acceptance of the OP IE, it is planned to appoint the OP IE Monitoring Pre-committee in order to approve or disapprove project selection criteria within the OP IE, detailed description of priority axes and MC Working Rules. Pre-committee shall perform its tasks up to the date of the OP IE Monitoring Committee appointment. The institutional composition of the Monitoring Pre-committee and the OP IE Monitoring Committee shall remain identical.

531. The MC shall be composed of representatives of the government, local government as well as social and economic partners. The MC composition shall strive towards balance among the representatives and adhere to the principle of partnership. The social and economic partners shall represent organisation representative at the country level. What is more, the MC composition shall include a non-governmental organisation representative, selected in the course of open candidate recruitment.

532. The EC representative, in an advisory capacity, may participate in the works of MC on his own initiative or on the Chairman's invitation.

533. The MC shall be appointed by the minister in charge of regional development within three months since the date of the transmission to Poland of the decision on the adoption of the OP IE by the EC. Works of the MC are presided over by a representative of the minister in charge of regional development. The MC shall assembly when such a need arises at least every six months.

534. The MC shall be composed of representatives of the minister in charge of regional development as the coordinator of the NSRF, the minister in charge of public finance, the MA, the IB, other ministers competent with regard to the scope of the OP IE, local governments, social and economic partners and representatives of the EC in an advisory capacity.

535. The MC may take a decision on establishing a monitoring sub-committee for particular support areas to which some of its tasks shall be delegated related to monitoring with regard to the given support area.

536. The MC shall take care of the effectiveness and quality of the OP IE implementation. Its tasks include, in particular:

a) considering and approving the criteria for selection of projects within the OP IE and approving potential changes in these criteria,

b) periodic examination of progress in the area of fulfilment of detailed objectives set out in the OP IE on the basis of the documents submitted by the MA,

c) analysing the results of the OP IE implementation, in particular the achievement of the objectives set out for each priority axis and the results of evaluations related to monitoring of the OP IE implementation, in particular when monitoring reveals substantial departures from the objectives or when proposals for changes in the OP IE have been put forward,

d) analysing and adopting annual and final reports on the OP IE implementation,

e) knowledge of annual reports (or their part) on OP IE controls and the EC's comments on these reports, as well as informing the EC on actions taken in reply to its comments,

f) submitting proposals for changes in the OP IE to the MA; such changes should be aimed at facilitating the implementation of the ERDF objectives set out in Regulation No. 1083/2006 or at improving the OP IE management, including financial management,

g) analysing and approving all proposals for changes in the EC decision on the ERDF contribution.

537. Monitoring is done on the basis of financial indicators set out in the OP IE as well as of output and outcome indicators quantifying the objectives of individual priority axes. Wherever possible, appropriate statistical data shall be broken down by sex and size of the projects implemented by beneficiaries. The data for monitoring purposes shall be submitted to the EC electronically, in accordance with the requirements.

6.5 Evaluation

538. Evaluation shall aim at improving the quality, effectiveness and cohesion of the assistance within the Cohesion Policy and the OP IE strategy and implementation with respect to specific structural problems at the national and regional levels, while taking account of the principle of

sustainable development and relevant Community legislation concerning environmental effects and strategic environmental assessments.

539. Evaluation of the OP IE shall be vested with the MA. Its main tasks cover primarily:

a) developing an evaluation plan covering various implementation stages of OP IE,

b) ensuring that ex-ante evaluation is made before the OP IE implementation begins,

c) ensuring strategic evaluations which purpose shall be the evaluation and analysis of the OP IE evolution with respect to the relevant objectives of the Programme as well as national and community policies,

d) ensuring that evaluations related to monitoring of the OP IE implementation are made, in particular where monitoring reveals significant departures from objectives or where proposals for changes in the OP IE are put forward,

e) ensuring that till 30 June 2011 the evaluation of the degree of the OP IE implementation shell be made with respect to selected priority axis, its results shall be used as the basis for the allocation of state performance reserve,

f) cooperation with the State Evaluation Unit and the EC during evaluations related to monitoring of the OP IE implementation done by the EC or on the EC's initiative,

g) cooperation with the EC during ex-post evaluation, upon finalisation of OP IE implementation,

h) providing financial resources within the technical support component of the OP IE, for the evaluations and data gathering from the monitoring system,

i) submitting the results of evaluations related to the monitoring of the implementation of the OP IE to the MC, EC and State Evaluation Unit ,

j) publishing of the evaluations results.

540. Furthermore, competent ministers that act as IB shall be responsible for evaluation of priority axes they are responsible for.

541. The priority subject fields, which shall be selected for evaluation, shall be in compliance with the scope of intervention of OP IE and shall concern the influence of the Programme on innovation of the economy, the development of information society and increasing the role of science in the economic development. Additionally, the influence of the Programme on the employment and the degree of achievement of the Lisbon Strategy goals shall be presented.

542. The evaluation research shall be carried out by independent external entities and the outcomes of the evaluation shall be made available to public opinion (reports from the evaluation shall be publishes on the OP IE website).

543. The outcomes shall be also presented at the conferences and meetings organized by State Evaluation Unit and at the meetings of OP IE Monitoring Committee. Experts evaluating the quality of the research being conducted and management of the units responsible for the implementation of the recommendations included in the outcomes of evaluation researches shall participate in the meetings. Such system shall guarantee high quality of the carried out evaluations as well as an effective implementation of recommendations included in final reports.

544. The evaluation unit established within the MA OP IE structure is responsible for cooperation with the State Evaluation Unit as regards drawing up evaluation plans and taking into consideration methodological guidelines of State Evaluation Unit.

545. The MA for OP IE, within a period of time no longer than 1 month following the acceptance of OP by the EC, shall prepare evaluation Plan for the years 2007 – 2013. The Plan shall define a detailed scope of evaluations carried out and OP IE evaluation system as well as an introductory list of evaluation research. In addition, periodic evaluation plans shall be prepared annually containing a list of detailed undertakings, implementation times and planned budgets for particular tasks, which shall be complete in the given year.

546. The monitoring system shall constitute support for the evaluation system. Its primary components are product and outcome indicators defined in two catalogues: basic for particular priority axes and advanced for monitoring particular measures. The indicators describing the stage of the implementation of particular projects shall be added to the electronic database in which they shall be aggregated for a higher level.

547. 3 million EUR shall be allocated for the implementation of the tasks related to the OP IE evaluation process. The volume of the financial resources allotted to the evaluation shall allow for effective and efficient implementation of all the tasks in this respect.

6.6 Procedure of projects' selection

548. The selection of project will be depended on fulfilling the criteria approved by the Monitoring Committee (pursuant to the article 65 letter b of regulations 1083/2006), and on approving a project for financing by the MA or IB. These strategic, formal and content-related criteria (including the preparation of appropriate documentation and implementation readiness) will be equal for all potential beneficiaries of all projects which relate to a given category of OP IE operation.

549. Within the programme the following selection modes of projects will be used: individual, competitive, systemic, technical aid. An appropriate balance between different selection mode of projects will be provided depending on the character of a given priority axis. The usage of a given selection mode of projects should serve to improve the achievement of strategic objectives of individual priority axes of OP IE. Details related to the usage scope of a given mode in a given priority axis and institutions participating in the selection procedure will be determined in "The detailed description of priority axes of the Innovative Economy Operational Programme". The selection mode of projects will be compliant with appropriate directives of the Ministry of Regional Development in a given scope.

6.7 Exchange of electronic data aimed at meeting the requirements related to payments, monitoring and evaluation

6.7.1 National IT System for the years 2007-2013 (SIMIK 07-13)

550. The minister in charge of regional development (currently the Ministry of Regional Development, Department for Coordination and Management of the Community Support Basis) supervises the works on the new IT system and sets out the standards as regards data collection on the part of all participants in the NSRF implementation system. The minister in charge of public finance (currently the Minister of Finance, the Department of IT Systems Development) shoulders responsibility for the creation and development of an IT system on the basis of standards with regard to data collection set out by the minister in charge of regional development.

551. Particular modules of the National IT System shall be ready for usage in July of 2007. The full operational capacity with regard to all components the system shall reach by the end of 2007.

552. Pursuant to Article 58 d) and Article 60 c) of the Council Regulation No. 1083/2006 the management and control system shall have reliable and computerized systems for bookkeeping and accounting, monitoring and financial reporting aimed at ensuring registration and storage of accounting entry for each operation within operational programmes and ensuring collection of data about each operation being carried out essential for the purposes of financial management, monitoring, verification, audit and evaluation.

553. For the purposes of management and reporting in the Managing Authority, Intermediate Bodies, Second level Intermediate Bodies and Certifying Authority the following two basic IT systems shall be used:

    a) financial and accounting system meeting the requirements of the act on bookkeeping

    b) National IT System for monitoring and reporting and an optional local system for monitoring and reporting at the level of institution responsible for implementation of operational programme.

554. National IT System shall be compliant and compatible with the reporting and monitoring system applied for the operational programme.

555. All the entities involved in the process of implementation, namely, Managing Authority, Intermediate Bodies, Second level Intermediate Bodies, Certifying Authority and Audit Institution shall have access to data being collected in the National IT System with regard to proper performance of the tasks.

6.7.2 National and local systems for monitoring and reporting

556. National IT System (centralized system) available for monitoring and reporting purposes shall collect data at a country level and essential for the management and control system adopted for operational programme.

6.7.3 Characteristics of the National IT System

557. In accordance with the principles adopted the National IT System shall primarily function as a registration system i.e. it shall collect data introduced into the central database after the occurrence of an event. In particular, the system shall enable the collection of information within the following scope:

    a) registering data related to operational programmes,

    b) supporting project lifecycle, including:

        I. registering the application forms compliant with formal requirements,

        II. registering major projects within the scope stipulated in the Regulation (EC) No. 1828/2006,

        III. registering co-financing agreements,

        IV. registering payment applications,

        V. registering data related to inspection of particular projects,

VI. registering indicators of the significant progress, including keeping a unified dictionary of indicators.

c) registering data related to irregularities,

d) keeping a register of the amounts recovered (including keeping a register of debtors).

558. Furthermore, the National IT System shall make it possible to produce particular reports:

a) statements of expenditures at the level of Intermediate Bodies and statements of expenditures and payment applications prepared on higher levels,

b) forecasts of expenditures.

559. The System shall cover and provide data defined in Annex III to the Implementing Regulation No. 1828/2006.

The Structure of National IT System

560. National IT System is build on the basis of a web-based technology; the access to the data collected in the central database is possible through an Internet browser installed on a computer with Internet access.

561. A national IT system supporting the implementation of NSRF and financed from the priority axis 2 funds, IT support for NSRF implementation within TA OP, 2007-2013, will be implemented.

562. At the same time, the possibility of constructing a separate IT system for the purposes of management and implementation of OP IE is allowed for. The System will be fully compatible with the national IT system, and the scope of the data collected and processed will be compliant with the scope of data stipulated in Annex III to the Commission Regulation (EC) No. 1828/2006 of 8 December 2006.

563. The diagram presenting the structure of the National IT System is located in annex 9.6.4.

6.7.4 Description of the procedures envisaged in order to ensure the reliability of computer systems for accounting reporting and financial monitoring

564. The security policy of National IT System is implemented on many planes.

565. The utilisation of secure protocol https with an appropriate structure of networking access devices in the headquarters of system operator (Ministry of Finance) reduces the risk of hacking, access, and consequent on this, modification of the data in the system by unauthorized individuals. In addition, it makes it impossible to change date in the course of data transfer to server.

566. The extensive functionality of granting rights to users (three-dimensional model of rights: the system function, the implementation level, region) gives them access only to the date necessary for the performance of tasks.

567. The policy of making backup copies guarantees that, in case of serious breakdown of the system which entails destruction of the database, it will be possible to recover the date gathered up to one day prior the occurrence of the breakdown.

6.7.5 Information related to internal circulation of data between 'central entity (MS Liaison)' and the entities applying for an access/modification of access right to SFC2007

568. Electronic exchange of data with the European Commission pursuant to Article 39 of Commission Regulation (EC) No. 1828/2006 of 8 December 2006.

569. The access rules to the system of electronic exchange of data with the European Commission (SFC2007) were regulated by a Procedure of granting users access to the system of electronic exchange of data with the European Commission established by the Ministry of Regional Development.

570. Pursuant to the procedure MS Liaison function for the European Social Fund, European Regional Development Fund, Cohesion Fund, resulting from the regulations laid down by Article 41 of Commission Regulation (EC) No. 1828/2006, according to which Member States shall send request for access right to SFC2007 in a centralized way, was assigned to an organisational unit within the Ministry of Regional Development. In compliance with rules formulated by the EC, the MS Liaison function and MS Liaison Deputy function are performed by two employees of the aforementioned organisational unit, who are appointed and accepted by the EC.

571. To secure the access to SFC2997 the abovementioned procedure defines the rules of applying for the access right on the part of the users. In accordance with the provision adopted at a country level and Node Hierarchy structure the access right is granted to the employees of the following institutions (the so-called Key Users):

    a) Coordination body at a country level (Member State Authority status)

    b) Programme Managing Authority (Member State Managing Authority status),

    c) Certifying Authority (Certifying Authority status),

    d) Audit Institution (Audit Institution status).

572. The Procedure defines also verification rules for candidates for users as proposed by MS Liaison and for adequacy of the requested scope of rights. (Permissions, Role) as well as the rules of informing about all kinds of changes related to Key Users.

573. The register of Key Users, that is, persons granted access to SFC2007, is maintained by the organisational unit within the Ministry of Regional Development performing the function of MS Liaison in compliance with the legal acts regarding personal data protection.

574. The minister in charge of regional development shall be responsible for ensuring appropriate functioning of a safe system for electronic exchange of information with the EC and for granting accreditation to access to the system to the institutions involved in the implementation of operational programmes. Input of data to the IT system and introduction of a local system shall lie with the MA that shall cooperate with the NSRF coordinator. The minister in charge of regional development shall supervise the IT system and set out the standards related to data collection on the part of all participants in the NSRF implementation system.

575. The minister in charge of public finance shall be responsible for creating and developing an IT system on the basis of standards with regard to data collection set out by the minister in charge of regional development.

6.8 Information and promotion

576. In accordance with the provisions of Article 2 of the Commission Regulation (EC) No 1828/2006 setting out rules for the implementation of Council Regulation (EC) No. 1083/2006 laying down general provisions of the European Development Plan, the European Social Fund and the Cohesion Fund and Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund, Poland prepares the European Funds Communication Strategy for years 2007-2013, covering all funds and programmes in Poland. The purpose of the Joint Strategy is to ensure effective co-ordination of the activities of individual institutions which will improve the effectiveness of information and promotional activities.

577. The Communication Strategy shall be developed by the Coordinating Authority NSRF (within the structure of the ministry in charge for regional development) in cooperation with the Managing Authorities. The Strategy is in line with the rules specified in the Guidelines of the Minster of Regional Development for information and promotion.

578. The Communication Strategy sets out general rules for information and promotional activities for all of operational programmes and National Strategic Reference Framework but in particular, it defines the objectives and the central idea, the target groups and indicates the institutions involved in information and promotional activities, it also defines the required minimum of the actions taken.

579. The Managing Authority shall draw up a communication Plan for the operational programme, it shall include objectives, description of the target groups, description of the planned information, promotional and training activities, division of tasks and the degree of responsibility for the information, promotional and training activities, between the Managing Authority and individual IBs and Implementing Institutions (IB II), description of MA, IB, II/IB II information, promotional activities as well as the activities of other partners involved in the process of information and promotion within the OP, including entities mentioned in paragraph 5, section 3 of the executive directive, framework schedule, indicative budget and the system of evaluation and reporting from the realization of the information, promotional and training tasks. Communication Plan for the operational programme shall be consulted with the Coordinating Authority NSRF in the scope of its compliance with the Communication Strategy and acceptance of the Monitoring Committee for the given programme.

580. The Managing Authority shall also prepare the annual action plan of executive character.

6.8.1 Objectives of the Communication Plan

581. The principal objective of the OP IE Communication Plan, 2007-2013 is providing general information and promoting the Programme among society, as well as providing professional help and reliable information about the measures that will be implemented within the OP IE to the potential and actual recipients, so that to improve the effectiveness of utilization of funds available within the OP IE.

582. The realization of the general objective will be ensured by the realization of detailed objectives, such as:

a) broadening the society's knowledge about the Programme through communication tools, which enable informing wider circle of recipients in Poland, as well as profiled group of potential and actual beneficiaries,

b) cooperation with socio-economic partners in realization of the information and promotional projects,

c) supporting beneficiaries in gaining EU funds through professional information and motivation,

d) ensuring the transparency of the procedures of the implementation of funds through relevant information,

e) presentation of the successful project realizations within the Programme through popularization of good practice,

f) constant improvement of knowledge and qualifications of the persons involved in the management, implementation and information processes of the OP IE.

583. Target groups of information, promotional and training activities within OP IE:

a) public opinion – society in general,

b) potential and actual beneficiaries of the OP IE that is entrepreneurs, scientific and research entities and business infrastructure institutions,

c) social and economic partners,

d) employees of the institutions involved in the Programme implementation,

e) employees of help desks.

6.8.2 The annual action plan

584. The information, promotional and training activities for a given calendar year is specified in the annual action plan of executive character, drawn up on the basis of the OP IE Communication Plan, 2007-2013 by the MA.

585. The following types of information and promotional activities will be realized within the OP IE action plans:

a) maintaining the OP IE website,

b) campaigns in the media: Internet, press, radio,

c) conferences,

d) information meetings,

e) preparing, printing and publishing of information materials,

f) purchase and distribution of promotional materials,

g) trainings for the staff managing and implementing the OP IE,

h) trainings for the OP IE beneficiaries.

6.8.3 Methods of assessment of the information and promotional activities

586. The Managing Authority analyzes the information and promotional activities on the basis of the reports of IB and IB II, and prepares information within the periodic, annual and final Programme reports, in compliance with the Guidelines of the Minister of Regional Development, in the scope of reporting for 2007-2013.

587. Furthermore, in order to asses the efficiency of the information, promotional and training activities and the accuracy of the chosen communication tools, at least once a year, MA shall conduct an opinion poll within relevant sample groups composed of the representatives of the target groups. On the basis of the results of the opinion polls and the analysis performed on the basis of periodic and annual reports, the Managing Authority evaluates *the OP IE Communication Plan, 2007-2013.*

588. The MA cooperates with the CO NSRF in monitoring how well is the public opinion informed about the possibilities of utilization of EU funds and the effects of their implementation.

589. The MA shall provide commensurate financial resources for the information, promotional and training activities.

6.9 Compliance with Community Policies

590. The government of Poland, represented by the Council of Ministers, bears a general responsibility for the implementation of objectives determined in the NSRF, including the OP IE, with the help of instruments of their implementations resulting from EU regulations, with the European Commission.

591. In accordance with the provisions stipulated in the Treaty of Amsterdam and Council Regulation 1083/2006/EC, member states shall respect the horizontal policies of EU, especially the implementation of the OP IE shall contribute to supporting of the horizontal issues such as equal opportunities, non-discrimination and sustainable development.

592. Community horizontal principles of equal opportunities, non-discrimination and sustainable development shall be realized through the selection of relevant Programme entry criteria. Within all the OP IE measures, the compliance with the horizontal principles (so called 'entry criterion') was accepted as *sine qua non* condition- additional points shall be awarded for the positive influence on the realization of the horizontal principles. At the level of measures implementation, the realization of the horizontal principles shall be ensured by the monitoring and control system.

593. At all stages of implementation, realization of the OP IE shall be in line with the principle of partnership in the understanding of the Community law and national laws. In accordance with Article 11 of Council Regulation No. 1083/2006, the social partners are: local governments, socio-economic partners (the trade unions and the employers) and the entities representing civil society (NGOs).

594. The participation of social partners was taken into consideration at all stages of the OP IE implementation.

595. At the programming stage, the role of the partners in the fulfilment of the Programme principles was taken into consideration. Hence, the participation of the socio-economic partners, local governments and NGOs in the consultations on the provisions of the OP IE and in discussions on the shape of the Programme areas of support.

596. At the implementation stage, the partners shall play a vital role in the Monitoring Committee of the OP IE. In line with the principle of partnership, the Monitoring Committee shall be composed of the government representatives, local governments representatives, social and economic partners and NGOs, in particular partners from the environmental sector (public administration officials and representatives of NGOs). While appointing the Committee special emphasis shall be put on the equal participation of the government representatives, local governments' representatives, social and economic partners, as well as on their work efficiency.

597. At the stage of monitoring and evaluation the principle of partnership shall be realized through the participation of partners in the reporting system, in passing information on the progress of the OP IE and in discussions on the results of Programme evaluation.

598. Projects co-financed by the operational programme will fully respect the provisions of the Environmental Impact Assessment Directive, Habitats and Birds Directives. Appropriate screening criteria will be applied at the projects selection stage to ensure that the projects are compliant with the above mentioned Directives. Co-financing of projects having a negative impact on potential Nature 2000 sites (i.e. sites, that in the Commission's view needed to be designated in 1/5/2004, but were not designated by Poland), will not be permitted.

599. Furthermore, the Managing Authority ensures that the public aid granted in the OP IE is compliant with law regulations in terms of public aid being in force at the moment of granting it.

600. The Managing Authority assures that public contracts, including granted licences concerning the projects co-financed from structural funds are consistent with the provisions of directives 2004/17/EC, 2004/18/EC, Regulation (EC) No 1564/2005 or rules of the Treaty if it concerns.

601. In order to secure an effective coordination of monitoring the environmental effect being the results of projects implemented in the OP IE, the Managing Authority will establish, within its structure, a post for monitoring the progress of the OP IE within the scope of environmental conditionings and monitoring the environmental dimension on the level of projects to whom a role of supervising the implementation among others the rules of sustainable development and environmental aspects in the OP IE will be entrusted.

602. In particular the tasks of this post will consist in:

a) consulting all selection criteria of projects before approving them by the Monitoring Committee,

b) consulting, from the point of environmental view, projects of great importance for the economy and projects from indicative lists, including large ones.

7. Draft financial plan

603. Total amount of public finance involved in the implementation of the OP IE in the years 2007-2013 will reach about EUR 9,711.6 million[160].

604. This sum includes public resources from the ERDF amounting to EUR 8,254.9 million and national resources the involvement of which has been forecast at the level of EUR 1,456.7 million. The allocation from the European Regional Development Fund for the OP IE accounts for 12.3% of the total Community financial appropriation envisaged for the NSRF implementation.

605. The level of national public co-financing accounts for 15% of the total public financial allocation, and the support from the European Regional Development Fund amounts to 85% of the total public financial allocation.

606. The majority of interventions taken up within the OP IE will constitute state aid in accordance with the definition of the ECT. Therefore, apart from public funds, the implementation of the OP IE will also involve private funds at the level compliant with the Community rules on state aid granting.

607. Since it is impossible to precisely determine the amount of private funds that will be involved within the OP IE, they have not been included in the financial table which constitutes an annex to the OP IE.

608. Pursuant to the provisions of Council Regulation (EC) No. 1083/2006 of 11 July 2006 *laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No. 1260/1999*, whenever state aid is provided, the share of structural resources is counted in relation to public resources, thus it is not necessary to list private funds in the financial table.

Presentation of financial obligations for the Innovative Economy Operational Programme, 2007-2013 broken into years (current prices in Euro)

	European Regional Development Fund	Cohesion Fund	Total
	1	2	3 = 1+2
2007	1 157 226 001	0	1 157 226 001
2008	1 184 324 642	0	1 184 324 642
2009	1 211 244 851	0	1 211 244 851
2010	1 195 443 813	0	1 195 443 813
2011	1 173 121 175	0	1 173 121 175
2012	1 151 510 530	0	1 151 510 530
2013	1 182 014 268	0	1 182 014 268
2007-2013	**8 254 885 280**	**0**	**8 254 885 280**

[160] Presented sums of ERDF funds and of national public funds, are due sums, and as such are not presented in current prices.

Presentation of financial obligations for the Innovative Economy Operational Programme, 2007-2013 broken into priorities and sources of financing (current prices in Euro)

Priority axis	Community contribution	National contri-bution	Indicative division of national contribution		Financing in total	Level of co-financing	For information purposes:	
			National public funds	National private funds*			Contribution of the EIB	Other sources of financing
	1	2=3+4	3	4	5=1+2	6=1/5	7	8
1.	1 104 380 000	194 890 589	194 890 589	0	1 299 270 589	0,85		167 293 790
2.	1 104 380 000	194 890 589	194 890 589	0	1 299 270 589	0,85		45 658 132
3.	289 000 000	51 000 000	51 000 000	0	340 000 000	0,85		16 666 667
4.	2 915 254 000	514 456 588	514 456 588	0	3 429 710 588	0,85		1 704 076 303
5.	339 148 000	59 849 647	59 849 647	0	398 997 647	0,85		33 528 997
6.	349 038 080	61 594 955	61 594 955	0	410 633 035	0,85		46 588 927
\7.	670 000 000	118 235 294	118 235 294	0	788 235 294	0,85		139 100 346
8.	1 203 485 200	212 379 741	212 379 741	0	1 415 864 941	0,85		266 429 018
9.	280 200 000	49 447 059	49 447 059	0	329 647 059	0,85		0
Total	**8 254 885 280**	**1 456 744 462**	**1 456 744 462**	**0**	**9 711 629 742**	**0,85**		**2 419 342 180**

* Amount of private funds involved has not been presented since, in accordance with the provisions of the Council Regulation (EC) No. 1083/2006 of 11 July 2006, whenever state aid is provided, the share of structural funds is counted in relation to public funds.

** The data presented in this column are estimated data and their value can be changed during the implementation of the Programme. They do not constitute the commitment of Polish party to achieve them and they are not considered during the calculation of the public aid ceiling.

8. Categories of structural funds intervention in the years 2007-2013

Indicative division of the programmed use of the funds' contribution according to categories (in Euro)

Priority questions	
Code	**Amount**
01	773,170,000
02	1,016,412,000
03	250,153,000
04	331,210,000
05	411,349,910
07	2,962,004,000
08	30,919,000
09	33,150,000
11	344,784,000
12	33,500,000
13	604,976,000
14	681,293,210
15	358,962,080
57	14202,080
85	246,576,000
86	33,624,000
Total	8,254,885,280

Forms of financing	
Code	**Amount**
01	8,101,885,280
03	153,000,000
Total	8,254,885,280

Area	
Code	Amount
PL	8,254,885,280
Total	8,254,885,280

Implementation of the Lisbon Strategy within priority axes

609. In the table, the categories of structural funds intervention in the years 2007-2013 have been assigned to individual priority axes of the OP IE.

Intervention category number	Priorities Intervention categories	"Lisbon" category (Y/N)	Estimated division between categories	Community contribution of the ERDF	"Lisbon" expenditure
P 1.	**Research and development of new technologies**				
01	Measures in the area of research and technological development in research centres	Y	70%	**1,104.38**	**1,104.38**
04	Support for research and technological development especially for SME (including access to services related to research and technological development in research centres)	Y	30%		
P 2.	**R&D infrastructure**				
02	Infrastructure related to research and technological development (including systems, instrumentation and fast computer lines connecting research centres) and competence centres related to concrete technologies	Y	92%	**1,104.38**	**1,104.38**
11	Information and communication technologies (access, safety, interoperation, risk prevention, research, innovations)	Y	8%		
P 3.	**Capital for innovation**				
05	Advanced counselling for enterprises and for groups of enterprises	Y	83,8 %	**289**	**289**
07	Investments in enterprises directly involved in research and innovations (innovative technologies, establishment of new enterprises by universities, R&D centres or already existing enterprises)	Y	16,2 %		
P 4.	**Investments in innovative undertakings**				
07	Investments in enterprises directly involved in research and innovations (innovative technologies, establishment of new enterprises by universities, R&D centres or already existing enterprises)	Y	100%	**2,915.25**	**2,915.25**
P 5.	**Diffusion of innovation**				
03	Transfer of technologies and improvement of networks of cooperation between SME and between SME and research centres, universities and regional authorities	Y	73.8%	**339.15**	**339.15**
05	Advanced counselling for enterprises and for groups of enterprises	Y	16.4%		
09	Other measures for stimulation of research, innovations and entrepreneurship in SME	Y	9.8%		
P 6.	**Polish economy on the international market**				
05	Advanced counselling for enterprises and for groups of enterprises	Y	32.4 %	**349.04**	**206.24**
08	Other investments in enterprises	N	8.9 %		
14	SME services and applications (eCommerce, education / trainings, network creation)	Y	17.8 %		
57	Assistance in improvement of tourist services	N	40.9 %		

Intervention category number	Priorities Intervention categories	"Lisbon" category (Y/N)	Estimated division between categories	Community contribution of the ERDF	"Lisbon" expenditure
P 7.	**Information society - establishment of electronic administration**				
11	Information and communication technologies (access, safety, interoperation, risk prevention, research, innovations)	Y	20%	**670**	**670**
12	Information and communication technologies (TEN-ICT)	Y	5 %		
13	Services and applications for citizens (eHealth, eAdministration, eLearning, eIntegration, etc.)	Y	30 %		
14	SME services and applications (eCommerce, education / trainings, network creation)	Y	40 %		
15	Other measures aimed at improving access to and effectiveness of using information and communication technologies by small and medium-sized enterprises	Y	5 %		
P 8.	**Information society – increase of innovativeness of economy**				
11	Information and communication technologies (access, safety, interoperation, risk prevention, research, innovations)	Y	10.2%	**1,203.49**	**1,203.49**
13	Services and applications for citizens (eHealth, eAdministration, eLearning, eIntegration, etc.)	Y	33.6 %		
14	SME services and applications (eCommerce, education / trainings, network creation)	Y	29.2 %		
15	Other measures aimed at improving access to and effectiveness of using information and communication technologies by small and medium-sized enterprises	Y	27 %		
P 9.	Technical assistance			**280.2**	
85	Development, implementation, monitoring and control	N	88 %		
86	Information and communication studies and assessment	N	12 %		
Allocation for 2007-2013 in total[161]				**8,254.89**	**7,831.89**
Out of which: expenditure for the implementation of the Lisbon Strategy		**94.88 %**			

610. As has been shown in the table above, about 94.88 % of the total funds under the OP IE will be earmarked for the categories of intervention subject to the "earmarking" principle. This means that they will be designated for achieving the objectives of the Lisbon Strategy that have been set out in annex IV to Council Regulation No. 1083/2006[162].

[161] The difference between the amounts presented in the line and the sum of amounts for individual priorities comes from roundings.

[162] According to the provisions of Council Regulation (WE) of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No. 1260/1999.

9. Annexes

9.1. Indicative financial table of liabilities for the Programme according to priority axes and years (in EUR[163])

Years	Total	Public funds (EU + national)	European Union				National public contribution				Private	Intervention category code
			NSRF in total	Out of which			Total	State budget	Budget of local government entities	Other		
				ERDF	ESF	CF						
	1=2+11	2=3+7	3=4+5+6	4	5	6	7=8+9+10	8	9	10	11	12
Priority axis 1.												**01,04**
2007	182 140 593	182 140 593	154 819 504	154 819 504	0	0	27 321 089	27 321 089	0	0	0	
2008	186 405 760	186 405 760	158 444 897	158 444 897	0	0	27 960 863	27 960 863	0	0	0	
2009	190 642 847	190 642 847	162 046 418	162 046 418	0	0	28 596 429	28 596 429	0	0	0	
2010	188 155 854	188 155 854	159 932 476	159 932 476	0	0	28 223 378	28 223 378	0	0	0	
2011	184 642 401	184 642 401	156 946 041	156 946 041	0	0	27 696 360	27 696 360	0	0	0	
2012	181 241 012	181 241 012	154 054 860	154 054 860	0	0	27 186 152	27 186 152	0	0	0	
2013	186 042 122	186 042 122	158 135 804	158 135 804	0	0	27 906 318	27 906 318	0	0	0	
2007-2013	1 299 270 589	1 299 270 589	1 104 380 000	1 104 380 000	0	0	194 890 589	194 890 589				
Priority axis 2.												**02,11**
2007	182 140 594	182 140 594	154 819 504	154 819 504	0	0	27 321 090	27 321 090	0	0	0	
2008	186 405 761	186 405 761	158 444 897	158 444 897	0	0	27 960 864	27 960 864	0	0	0	
2009	190 642 845	190 642 845	162 046 418	162 046 418	0	0	28 596 427	28 596 427	0	0	0	
2010	188 155 854	188 155 854	159 932 476	159 932 476	0	0	28 223 378	28 223 378	0	0	0	
2011	184 642 401	184 642 401	156 946 041	156 946 041	0	0	27 696 360	27 696 360	0	0	0	
2012	181 241 012	181 241 012	154 054 860	154 054 860	0	0	27 186 152	27 186 152	0	0	0	
2013	186 042 122	186 042 122	158 135 804	158 135 804	0	0	27 906 318	27 906 318	0	0	0	
2007-2013	1 299 270 589	1 299 270 589	1 104 380 000	1 104 380 000	0	0	194 890 589	194 890 589				
Priority axis 3.												**05, 07**
2007	47 663 514	47 663 514	40 513 987	40 513 987	0	0	7 149 527	7 149 527	0	0	0	

[163] The amounts presented in the table refer to current prices.

2008	48 779 645	48 779 645	41 462 698	41 462 698	0	0	7 316 947	7 316 947	0	0	0	
2009	49 888 428	49 888 428	42 405 164	42 405 164	0	0	7 483 264	7 483 264	0	0	0	
2010	49 237 619	49 237 619	41 851 976	41 851 976	0	0	7 385 643	7 385 643	0	0	0	
2011	48 318 200	48 318 200	41 070 470	41 070 470	0	0	7 247 730	7 247 730	0	0	0	
2012	47 428 107	47 428 107	40 313 891	40 313 891	0	0	7 114 216	7 114 216	0	0	0	
2013	48 684 487	48 684 487	41 381 814	41 381 814	0	0	7 302 673	7 302 673	0	0	0	
2007-2013	340 000 000	340 000 000	289 000 000	289 000 000	0	0	51 000 000	51 000 000				
Priority axis 4.												**0**
2007	480 800 173	480 800 173	408 680 147	408 680 147	0	0	72 120 026	69 666 757	0	2 453 269	0	
2008	492 059 020	492 059 020	418 250 167	418 250 167	0	0	73 808 853	71 298 136	0	2 510 717	0	
2009	503 243 734	503 243 734	427 757 174	427 757 174	0	0	75 486 560	72 918 773	0	2 567 787	0	
2010	496 678 774	496 678 774	422 176 958	422 176 958	0	0	74 501 816	71 967 527	0	2 534 289	0	
2011	487 404 243	487 404 243	414 293 607	414 293 607	0	0	73 110 636	70 623 670	0	2 486 966	0	
2012	478 425 530	478 425 530	406 661 700	406 661 700	0	0	71 763 830	69 322 677	0	2 441 153	0	
2013	491 099 114	491 099 114	417 434 247	417 434 247	0	0	73 664 867	71 159 048	0	2 505 819	0	
2007-2013	3 429 710 588	3 429 710 588	2 915 254 000	2 915 254 000	0	0	514 456 588	496 956 588	0	17 500 000		
Priority axis 5.												**03,05,09**
2007	55 934 206	55 934 206	47 544 075	47 544 075	0	0	8 390 131	8 390 131	0	0	0	
2008	57 244 012	57 244 012	48 657 410	48 657 410	0	0	8 586 602	8 586 602	0	0	0	
2009	58 545 192	58 545 192	49 763 413	49 763 413	0	0	8 781 779	8 781 779	0	0	0	
2010	57 781 453	57 781 453	49 114 235	49 114 235	0	0	8 667 218	8 667 218	0	0	0	
2011	56 702 495	56 702 495	48 197 121	48 197 121	0	0	8 505 374	8 505 374	0	0	0	
2012	55 657 949	55 657 949	47 309 257	47 309 257	0	0	8 348 692	8 348 692	0	0	0	
2013	57 132 340	57 132 340	48 562 489	48 562 489	0	0	8 569 851	8 569 851	0	0	0	
2007-2013	398 997 647	398 997 647	339 148 000	339 148 000	0	0	59 849 647	59 849 647	0	0	0	

Priority axis 6.												**05,08,14,57**
2007	57 565 333	57 565 333	48 930 534	48 930 534	0	0	8 634 799	8 067 980	566 819	0	0	
2008	58 913 336	58 913 336	50 076 335	50 076 335	0	0	8 837 001	8 256 909	580 092	0	0	
2009	60 252 460	60 252 460	51 214 591	51 214 591	0	0	9 037 869	8 444 592	593 277	0	0	
2010	59 466 449	59 466 449	50 546 482	50 546 482	0	0	8 919 967	8 334 429	585 538	0	0	
2011	58 356 027	58 356 027	49 602 623	49 602 623	0	0	8 753 404	8 178 800	574 604	0	0	
2012	57 281 023	57 281 023	48 688 869	48 688 869	0	0	8 592 154	8 028 135	564 019	0	0	
2013	58 798 407	58 798 407	49 978 646	49 978 646	0	0	8 819 761	8 240 801	578 960	0	0	
2007-2013	410 633 035	410 633 035	349 038 080	349 038 080	0	0	61 594 955	57 551 646	4 043 309	0	0	
Priority axis 7.												**11,12,13,14,15**
2007	110 500 188	110 500 188	93 925 160	93 925 160	0	0	16 575 028	16 575 028	0	0	0	
2008	113 087 760	113 087 760	96 124 596	96 124 596	0	0	16 963 164	16 963 164	0	0	0	
2009	115 658 293	115 658 293	98 309 549	98 309 549	0	0	17 348 744	17 348 744	0	0	0	
2010	114 149 499	114 149 499	97 027 074	97 027 074	0	0	17 122 425	17 122 425	0	0	0	
2011	112 017 973	112 017 973	95 215 277	95 215 277	0	0	16 802 696	16 802 696	0	0	0	
2012	109 954 433	109 954 433	93 461 268	93 461 268	0	0	16 493 165	16 493 165	0	0	0	
2013	112 867 148	112 867 148	95 937 076	95 937 076	0	0	16 930 072	16 930 072	0	0	0	
2007-2013	788 235 294	788 235 294	670 000 000	670 000 000	0	0	118 235 294	118 235 294	0	0	0	
Priority axis 8.												**11, 13, 14, 15**
2007	198 485 585	198 485 585	168 712 747	168 712 747	0	0	29 772 838	29 772 838	0	0	0	
2008	203 133 499	203 133 499	172 663 475	172 663 475	0	0	30 470 024	30 470 024	0	0	0	
2009	207 750 812	207 750 812	176 588 190	176 588 190	0	0	31 162 622	31 162 622	0	0	0	
2010	205 040 642	205 040 642	174 284 546	174 284 546	0	0	30 756 096	30 756 096	0	0	0	
2011	201 211 899	201 211 899	171 030 114	171 030 114	0	0	30 181 785	30 181 785	0	0	0	
2012	197 505 276	197 505 276	167 879 484	167 879 484	0	0	29 625 792	29 625 792	0	0	0	
2013	202 737 228	202 737 228	172 326 644	172 326 644	0	0	30 410 584	30 410 584	0	0	0	
2007-2013	1 415 864 941	1 415 864 941	1 203 485 200	1 203 485 200	0	0	212 379 741	212 379 741	0	0	0	

Priority axis 9.												**85,86**
2007	46 212 168	46 212 168	39 280 343	39 280 343	0	0	6 931 825	6 931 825	0	0	0	
2008	47 294 315	47 294 315	40 200 167	40 200 167	0	0	7 094 148	7 094 148	0	0	0	
2009	48 369 334	48 369 334	41 113 934	41 113 934	0	0	7 255 400	7 255 400	0	0	0	
2010	47 738 341	47 738 341	40 577 590	40 577 590	0	0	7 160 751	7 160 751	0	0	0	
2011	46 846 919	46 846 919	39 819 881	39 819 881	0	0	7 027 038	7 027 038	0	0	0	
2012	45 983 930	45 983 930	39 086 341	39 086 341	0	0	6 897 589	6 897 589	0	0	0	
2013	47 202 052	47 202 052	40 121 744	40 121 744	0	0	7 080 308	7 080 308	0	0	0	
2007-2013	329 647 059	329 647 059	280 200 000	280 200 000	0	0	49 447 059	49 447 059	0	0	0	
Costs in total												
2007	1 361 442 354	1 361 442 354	1 157 226 001	1 157 226 001	0	0	204 216 353	201 196 265	566 819	2 453 269	0	
2008	1 393 323 108	1 393 323 108	1 184 324 642	1 184 324 642	0	0	208 998 466	205 907 657	580 092	2 510 717	0	
2009	1 424 993 945	1 424 993 945	1 211 244 851	1 211 244 851	0	0	213 749 094	210 588 030	593 277	2 567 787	0	
2010	1 406 404 485	1 406 404 485	1 195 443 813	1 195 443 813	0	0	210 960 672	207 840 845	585 538	2 534 289	0	
2011	1 380 142 558	1 380 142 558	1 173 121 175	1 173 121 175	0	0	207 021 383	203 959 813	574 604	2 486 966	0	
2012	1 354 718 272	1 354 718 272	1 151 510 530	1 151 510 530	0	0	203 207 742	200 202 570	564 019	2 441 153	0	
2013	1 390 605 020	1 390 605 020	1 182 014 268	1 182 014 268	0	0	208 590 752	205 505 973	578 960	2 505 819	0	
2007-2013	9 711 629 742	9 711 629 742	8 254 885 280	8 254 885 280	0	0	1 456 744 462	1 435 201 153	4 043 309	17 500 000	0	

* The volume of private funds involved has not been presented since, pursuant to the provisions of Council Regulation (EC) No. 1083/2006 of 11 July 2006, whenever state aid is involved, the share of structural funds is calculated in relation to public funds.

9.2. Ex-ante evaluation and assessment of the expected macroeconomic effect

1. Objective and legal basis

611. Pursuant to Article 48 of Council Regulation (EC) No. 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No. 1260/1999, Member States are obliged to make an ex-ante evaluation of each operational programme.

612. Ex-ante evaluation is aimed at optimising the allocation of budgetary resources within the given operational programme and at improving the programming quality. It is also aimed at identification and assessment of disproportions, gaps and development potential, objectives set, expected results, quantitative target values, if necessary: the cohesion of the strategy offered for the region, community added value, the extent to which the Community's priorities have been taken into account, conclusions on the previous programming period and quality of implementation procedures, financial management and assessment.

613. The task to make an ex-ante evaluation was commissioned to independent experts selected through open tender. The study was developed by CASE-Doradcy in the period between 11 September and 30 November 2006. The whole report is available at the seat of the OP IE Managing Authority.

2. Scope of the evaluation

2.1. Social and economic analysis and accuracy of the strategy offered against the identified needs.

614. According to the evaluators, the diagnosis of the socio-economic situation presented in the OP IE is accurate and comprehensive. As a result of the study, however, some problems have been identified that call for verification, extension or changes.

615. Some comments made by the experts have been taken into account, and the provisions of the Programme have been corrected. As a result of the evaluators' recommendation, the data included in the diagnosis has been updated. Besides, clearer conclusions from the quantitative data presented have been added to the diagnosis. As a result of the evaluation, the SWOT analysis has been also modified and extended – the experts suggested that a few new elements should be added with regard to both strengths and weaknesses of the examined areas, especially with regard to information society. Moreover, they suggested that it was possible to change some provisions so that they better reflect the conclusions from the socio-economic analysis presented.

2.2. Assessment of the rationality of the Programme strategy and its internal cohesion

616. Despite the recommendations related to extension or changes in some provisions in the diagnostic part that were suggested by the experts, the accuracy and cohesion of the OP IE strategy was generally assessed positively. The report has stressed, in particular, numerous links between detailed objectives and the main objective of the Programme.

617. The evaluators also proposed to consider a reformulation of the structure of the diagnostic part through a more complex view on the analysed areas, as this would better reflect the main idea of the OP IE.

618. In accordance with the recommendations, the structure of the diagnostic part has been modified so that to better reflect the correlations between the analysed areas: entrepreneurship, science, information society and cooperation of scientific entities with the economy sector, and a new title for the diagnostic part has been introduced, namely "Diagnosis of selected areas aimed at establishing and developing a knowledge-based economy" which reflects the complex attitude to the examined areas of innovative economy.

619. The experts suggested that, for better cohesion of the detailed objectives, the description of priority axis 5. should precisely state that creation of permanent and better workplaces refers to the sectors which are the vehicles of a knowledge-based economy, and, for better clarity of the document, the objective of priority axis 6. should be reformulated. These recommendations have been taken into account.

620. The experts also pointed out that it was necessary to specify the part dedicated to programming in the field of information society. It was suggested that a new detailed objective should be added related to establishment of an information society that would take eGovernment into account.

621. According to the recommendation, the OP IE has been extended by a new detailed objective related to the growth of the use of new information and communication technologies in the economy, coherent with the main objective of the OP IE and with the objectives set for priority axis 7. Therefore, the diagnosis in the area of information society and the description of priority axis 7. have been modified and extended.

2.3. Assessment of the cohesion of the Programme with Community, national and regional strategic documents and policies

622. The cohesion of the Programme with Community, national and regional strategic documents and horizontal policies has been confirmed.

623. The evaluators recommended to verify and extend the provisions related to eGovernment and information society as a whole in the context of strategic documents in the area of the state's informatisation policy and information society establishment. It was also suggested that the Programme should include a broader description of the concept of a national innovation system. The majority of the comments in this area have been taken into account.

2.4. Assessment of the expected results and impact, and the assessment of the system of indicators

624. The assessment of the expected results and impact of the Programme was based on the results of the analysis of the HERMIN macroeconomic effect and expert analysis. This area was also verified on the basis of the control list of the European Commission for establishment of a system of indicators.

625. The system of OP IE indicators was positively assessed with regard to the accuracy of their selection and methodological accuracy. The experts confirmed the positive effect of the OP

IE on the achievement of the objectives of the EU's socio-economic cohesion and the Lisbon objectives.

626. The experts pointed out to some areas that required further specification and the majority of their recommendations have been included in the Programme. The evaluators paid attention to the question of definitions of the indicators and recommended to specify and verify them with regard to cohesion with the presented objectives of the OP IE. It was also suggested that the number of indicators should be reduced in the area of measures related to information society, and that the indicator of the main objective related to the share of employed in the economy sectors should be changed.

2.5. Assessment of the proposed solutions for the Programme implementation system

627. In the opinion of the evaluators, the structure of the OP IE implementation system is clear and it should provide for appropriate implementation of the instruments planned within the Programme.

628. The experts positively assessed both the management and monitoring system and the division of competence between the institutions responsible for the implementation of the OP IE. The evaluators also pointed out that the majority of recommendations from the evaluations made in the 2004-2006 programming period had been taken into account.

629. At the same time, potential barriers that may negatively affect the implementation of the OP IE were identified, such as, e.g. the lack of all necessary legal solutions for the years 2007-2013, insufficient human resources and the necessity to notify support programmes with regard to measures containing state aid.

9.3. Assessment of the expected impact on the environment, including large projects

1. Objective and legal basis

630. The legal basis for development of the prognosis of the environmental impact are set out in Directive 2001/42/EC of the European Parliament and of the Council on Assessment of the Effects of Certain Plans and Programmes on the Environment (so called SEA Directive – Strategic Environmental Assessment), as well as the Act of 27 April 2001 – Environmental Protection Law 194, Article 40 which imposes an obligation to take actions related to assessment of the effects of plans and programmes on the environment.

631. Pursuant to Article 4 of the preamble to Directive 2001/42/EC of the European Parliament and of the Council on Assessment of the Effects of Certain Plans and Programmes on the Environment, assessment of effects on the environment is an important tool for including environmental aspects in the process of development and adoption of programmes that may potentially have significant effects on the environment in Member States, as it ensures that such effects of plans and programmes are considered while these documents are developed and prior to their adoption.

632. The forecast objective included the investigation and assessment of degree and way of considering environmental aspects in the particular parts of the operational programme project, including big projects[164] *accepted by the Council of Ministers on 16 January 2007, planned to be implemented within its framework, and constituting an integral part of the OP IE. A strategic assessment of the OP IE impact on the environment and the list of big projects aimed at identifying potential and real changes which can appear in the environment in connection with the implementation of measures and projects foreseen in the OP IE, and with a later usage of constructed objects and infrastructure as well.*

2. Consultation process

633. The prognosis of the effects of the OP IE on the environment as well as the indicative list of large projects was developed by the PROEKO Sp. z o.o. company, selected through tender.

634. Both prognoses were developed in accordance with the requirements of the Act of 27 April 2001 – Environmental Protection Law which provides for assessment of the effects of policies, strategies, plans or programmes on the environment developed, according to legal acts, by central or regional public administration bodies.

635. Pursuant to the provisions of Article 43, paragraph 2 of the Act – Environmental Protection Law, and compliant with the provisions of Article 6 of the Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 *on the assessment of the effects of certain plans and programmes on the environment,* on November 8th 2006 the report on the prognosis of the OP IE, and on June 19th 2007 the report on the prognosis of the large projects were brought up for social consultations, by publishing.

636. The draft of the preliminary prognosis report on the effects on the environment, OP IE together with the draft OP IE and the list of large projects, were placed on the website of the Ministry of Regional Development (MRD) at http://www.mrr.gov.pl/Aktualnosci/konsultacje_prognozy_oddzialywania_srodowisko_poig.htm. It was also available at the reception in the building of the MRD (Wspólna street no 2/4, Warsaw). The information on the commencement of the consultations for the OP IE Prognosis was also published in "Gazeta Wyborcza", a national daily, on 15 November 2006.

637. The preliminary version of the prognosis report on the effects of the draft OP IE on the environment was presented at the press conference dedicated to environmental effects of the OP IE that was held on 21 November 2006 in Warsaw, in which representatives of non-governmental organisations, scientific institutions and socio-economic partners took part. During the meeting, the draft OP IE was presented and the implementing body of the programme presented the conclusions from the evaluation and recommendations for the OP IE.

638. Pursuant to the provisions of Article 43, paragraph 1 of the Act – Environmental Protection Law, the preliminary prognosis reports on the effects of the draft OP IE and the list of large projects on the environment were submitted for approval to the Minister of Environment and to the Chief Sanitary Inspector.

639. The process of social consultations on the preliminary report on the assessment of the effects on the environment lasted 21 days and was completed on 29 November 2006. Social consulta-

[164] The big projects of OP IE (item 9.5 OP IE), according to the provisions of the paragraph 39 of the Regulation of the Council No. 1083/2006, include the investments whose total cost exceeds 50 million Euro.

tions of the preliminary report on the prognosis of the strategic impact of large projects of OP IE on the environment lasted until 9th July 2007.

640. Pursuant to the provisions of Article 44, paragraph 1 of the Act – Environmental Protection Law, the findings included in the prognosis of the effects on the environment, the opinion of the Minister of Environment and of the Chief Sanitary Inspector, as well as comments and remarks voiced by the society, have been taken into account during the development of the final version of the OP IE, including the list of large projects. None of the subjects has forwarded comments to the prognoses.

3. Findings included in the assessment of the effects of the OP IE on the environment

641. The prognosis of the effects of the draft OP IE on the environment contain, in particular:

a) analysis and assessment of the compliance of the provisions and proposals of the OP IE with the requirements, provisions and objectives of other strategic documents related to environmental protection, including international conventions and treaties binding for Poland,

b) description of environmental effects of the OP IE implementation that may be identified, in particular the measures that may potentially be a source of irreparable damage to the environment,

c) recommendations related to the ways for reducing negative effects.

642. The prognosis of the environmental impact of the large Project of the OP IE covers in particular:

a) the assessment methodology of Project listed as large projects,

b) synthesis of OP IE objectives and their environmental effects,

c) analysis and evaluation of environmental impact of the OP IE large projects' implementation.

3.1. Conclusions

643. As to the OP IE prognosis, the report stated that the problems of environmental protection had been presented in the OP IE in a rather general manner. The necessity to take account of the requirements of environmental protection refers to all projects, even those considered most innovative, directed towards economic development through a growth of production and services.

644. The analysis made by the independent experts shows that the OP IE should include environmental requirements of the development of an innovative economy in Poland, especially identify pro-environmental expectations that may and should be formulated with regard to innovative projects that apply for support from public resources.

645. The diagnosis and SWOT analysis do not sufficiently cover the context of sustainable development principles. The strategic European documents referred to in the OP IE, namely the Lisbon Strategy and the Goeteborg Strategy, show that the ambitious objective to make the European economy the most competitive knowledge-based economy in the world in the forthcoming decade must not be achieved without taking account of environmental protection requirements which must be treated as an integral element of the development process.

646. The analysis made by the implementing body showed that the implementation of the OP IE may have a defined effect on the environment: direct, related to the implementation of some investment or modernisation projects, or indirect, related to the economic environment. The implementation of the OP IE may be also related to certain environmental effects, both immediate and long-term, that may appear after completion of the 2007-2013 programming period.

647. The analysis of the detailed objectives shows that basically there are potential favourable effects of the implementation of individual objectives of the OP IE. Potential negative indirect effects on the environment may take place in relation to the implementation of priority axis 3. *Capital for innovation* through increasing new innovative enterprises and priority axis 6. *Polish economy on the international market* through promotion of Poland as a country attractive to investors and tourists and a place where good economic relationships may be developed.

648. The results of internal cohesion at the level of the Programme's detailed objectives showed that the possibility of potentially positive effects was 54%, of potentially negative effects 14% and of neutral effects 25%.

649. Environmental effects of the activities undertaken will closely depend on the absorption of the environment in the area where the given undertaking will be implemented or on existence of the so called sensitive areas. Once identified, adverse effects may be in most cases eliminated or limited on condition that soothing measures or recommendations presented in the prognosis are applied.

650. The analysis shows that projects in the area of tourism may be accompanied by a risk of environmental conflicts if the projects are directed towards modern "tourist products" (e.g. tourist thematic cycles). For this group, potential fields of risk and typical compensation measures have been indicated, however tourist facilities must not be situated in the areas of Nature 2000 or in their vicinity. The analysis also assessed the impact of the implementation of selected OP IE measures, especially greenfield investments on maintenance/improvement/deterioration of the spatial structure on the national scale. Special emphasis was placed on indirect effects of spatial fragmentation in the ecological and cultural aspect.

651. It must be stressed that the changes proposed by the implementing body do not influence the structure of the priorities and objectives set out in the OP IE, it was, however, stated that complete implementation of the OP IE objectives would start a process of dynamic changes in the Polish economy, environmental effects of which, thanks to reduction of energy consumption, material consumption and emission to the environment would be in most cases positive.

652. Regarding the forecast of big projects; it was stated in the report that the implementation of the big projects within the framework of OP IE will not cause a negative impact on the environment, and it indirectly and potentially can affect the development of environmentally friendly technologies and materials.

3.2. Recommendations included

653. In relation to the OP IE, the following recommendations presented by the implementing body after the assessment of the effects of the OP IE on the environment have been included:

a) the diagnostic part was extended with regard to identification of the needs and desired directions of changes in the effects of the industrial and service sector on the environment in order to fulfil the requirement to integrate the horizontal objectives of environmental protection into sectoral policies and strategies,

b) recommendations related to giving priority to investments realised from scratch not only in the *greenfield* areas, but also in the *brownfield* or *greyfield* areas, and to directing investments to industrial or deserted post-industrial areas, or to areas agriculturally degraded. Besides, the OP IE does not define how the notions of *greenfield investments* and *greenfield areas* should be understood,

c) it must be specified which locations of projects would be preferred in the context of the Concept for Spatial Development of the Country. The OP IE should be used in order to achieve the indirect effect, namely spatial directing of the economy development while there are no clear references to these questions,

d) references to the energy effectiveness factor in innovative process have been included,

e) at the stage of works on the criteria for evaluation of projects, the Managing Authority of the OP IE will offer to include, as a post-environmental criterion of evaluation of projects, the need for the implementation of the *decoupling* principle, i.e. limiting the growth pace, and preferably reducing the need for energy and natural resources and, at the same time, increasing the pace of socio-economic development,

f) the OP IE has been extended by provisions related to effective use of natural resources, including non-renewable resources.

654. Regarding the big projects; considering the fact that the executed forecast of the impact on the environment did not show negative consequences of the implementation of these projects, the changes in the list of the big projects of OP IE, included in the item 9.5, were not introduced.

4. Strategic assessment of the effects of large projects on the environment

655. The prognosis of strategic effects of large projects of OP IE, approved by the Council of Ministers on 16th January 2007 and constituting an integral part of OP IE, on the environment, was developed by PROEKO Sp. z o.o. The large projects for the OP IE, pursuant to the provisions of Article 39 of the Regulations of the Council No. 1083/2006, are the investments whose a total cost exceeds EUR 50 million.

656. The social consultations of the preliminary prognosis report on the strategic effects of large projects of OP IE on the environment spanned from 19 June 2007 to 9 July 2007. The report was placed on the website of the Ministry of Regional Development and it was available at the reception in the building of the MRD (Wspólna Street no 2/4, Warsaw).

657. The prognosis developed by PROEKO Sp. z o.o. shows that the implementation of large projects within the OP IE will not cause negative effects on the environment, and indirectly it may potentially affect the development of technologies and materials friendly to the environment.

5. Monitoring system of the effects of the OP IE in the environmental area

658. Considering the fact that pursuant to the carried-out assessment, the projects implemented within the OP IE will not have essential effects on the environment, a separated monitoring system of the OP IE effects in the subjected area is not foreseen. However, taking into account that among new investments financed within the OP IE, there will be also innovative technologic solutions leading to the reduction of harmful effects on the environment, in particular leading to the reduction of energetic, material and water absorptivity of products and services and leading to usage of the assessment of life cycle at all stages of designing technologic or

organizational processes and the R&D works will be carried out among others in the scope of environment protection, the indicators monitoring the implementation of the operation in the subjected scope have been foreseen.

6. Opinion of the Minister of Environment and the Chief Sanitary Inspector

659. The entities set out in legal acts to which received the preliminary reports on the assessment of the effects of the OP IE and large projects on the environment with a request for an opinion did not make any comments.

9.4. Report on social consultations

1. Objective and legal basis

660. In the 2007-2013 financial perspective, the European Union stressed the role of social, economic and self-governmental partners in the process of development of programming documents.

661. Pursuant to the provisions of Article 11 of Regulation No. 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No. 1260/1999, Member States, while developing documents for programming support with the European Union structural funds, are obliged to closely cooperate with socio-economic partners.

662. With regard to the use of the EU structural funds, in accordance with the said provisions, the draft OP IE adopted by the Council of Ministers on 1 August 2006 was subject to social consultations. Those consultations aimed at stirring a debate on the directions of support from European Union's resources in the area of entrepreneurship, science and information society.

663. Works on the OP IE were a continuation of strategic works started in 2005 aimed at developing documents that would set out the intervention with the use of public funds in the area of entrepreneurship, science and information society, namely the following Operational Programmes: Innovations – Investments – Open Economy and Science – New Technologies – Information Society. The OP IE social consultations referred to social consultations related to the said programmes and the comments that were made during these consultations were an important source of knowledge and experiences used in the works on the final version of the OP IE.

2. Course

664. The OP IE consultation process lasted from May to mid-October 2006. The consultations were mainly held at press conferences, both general and thematic, at sessions of the Working Group on the OP IE and at meetings, seminars and interviews addressed to representatives of socio-economic partners, self-governmental and governmental partners and potential beneficiaries of the Programme.

665. The official opening of the consultations took place at the inauguration conference organised by the Ministry of Regional Development in Warsaw on 3 July 2006. There was also a series of

thematic conferences organised in cooperation with Marshal's Offices and economic partners, e.g. the Polish Agency for Enterprise Development (PARP). The OP IE was presented during numerous conferences and cross-sectional meetings, co-organised by socio-economic partners interested in the document for the reasons of the scope of their activity (e.g. Polish Chamber of Commerce (KIG), Lewiatan Polish Confederation of Private Employers (PKPP Lewiatan), Confederation of Polish Employers (KPP)) and regional partners.

666. Driven by the principle of partnership, in May 2006 the Managing Authority appointed the Working Group on the OP IE composed of representatives of socio-economic partners and representatives of self-governments and the government. Additionally, competent Intermediate Bodies appointed working groups in order to consult on the instruments they were in charge of. The meetings of the Working Group and working sub-groups organised by the MA and IB aimed at presenting further drafts of the OP IE and at collecting remarks and opinions of its participants with regard to the document.

667. The OP IE was also referred to in the correspondence coming to the Ministry of Regional Development. Motions, proposals, recommendations and questions were sent by both natural persons and various institutions and organisations. Besides, MPs and senators asked many questions and developed statements with regard to the provisions of the OP IE.

668. The draft OP IE was placed on the website of the Ministry of Regional Development (www.mrr.gov.pl and www.konkurencyjnosc.gov.pl) and on the official websites of the ministries that were appointed Intermediate Bodies for the OP IE: the Ministry of Economy (www.mg.gov.pl), the Ministry of Science and Higher Education (www.mnisw.gov.pl) and the Ministry of Internal and Administration (www.mswia.gov.pl).

669. A special electronic address (po-ig@mrr.gov.pl) was launched where opinions or questions related to the document could be sent via e-mail. The information on the address was placed on the websites and presented at meetings and conferences in which representatives of the MA and IB participated.

670. Consultation meetings were often held in presence of the media (the press and TV), while the information on the OP IE was made available to the public through interviews, articles and press advertisements.

3. Participants in consultations

671. The form of consultations that had been adopted was very well received by socio-economic partners, and the attendance showed that there was vast interest in the document.

672. The main participants in the meetings were entrepreneurs and representatives of business support institutions. The meetings were based on the principle of disclosure, which was reflected in an easy access to the documents in question, as well as on the principle of equality and openness, which allowed all interested parties to participate in those meetings.

673. Among the participants in the consultations, there were representatives of the following groups:

a) enterprise sector,

b) business support institutions:

I. regional and local development agencies,

II. chambers of commerce and industry and chambers of tourism,

III. trade and service associations, associations of employers, associations supporting entrepreneurship, craft associations, etc.,

c) non-governmental organisations (economic, entrepreneurship, development),

d) special economic zones, innovation centres, technology transfer centres, industrial and technology parks, clusters and innovators,

e) scientific circles, higher schools, educational centres, research and development centres, scientific and research entities,

f) banks,

g) central administration and regional offices,

h) local administration (municipal and marshals' offices),

i) media.

4. Most frequent discussion topics and comments

674. The process of OP IE social consultations resulted in numerous comments and recommendations, both general and detailed, which proves broad interest of socio-economic partners in the works on agreeing on the draft OP IE. Opinions voiced by representatives of various circles allowed for verification of the assumptions adopted in the OP IE and for setting an appropriate direction for changes in the Programme's provisions.

675. Remarks related to the OP IE focus, in the first place, on the strategic part of the document and on the way of selection of support instruments and division of financial resources in individual areas of the OP IE with regard to:

a) establishment of a concrete, precise and not very complex definition of innovativeness, softening the criterion of innovativeness that was adopted and allowing innovative projects on a regional scale to participate in the OP IE, as well as guaranteeing objective assessment of the level of innovativeness of projects,

b) readiness of Poland for implementation of the objectives of the Lisbon Strategy and for analysing whether the OP IE should focus on support for research and innovations or rather on basic or modernisation investments,

c) cooperation of the scientific sector with the economy, i.e. designating financial means for scientific research directly for entrepreneurs,

d) focusing on support for small and medium-sized enterprises and providing possibilities to finance basic investments at the national level, including modernising investments,

e) designating a large amount of finance for direct support for entrepreneurs,

f) extension of the groups of beneficiaries in some priorities and considering various organisational forms of beneficiaries. There was also a proposal submitted to adopt the principle of an open list of entities that can apply for co-financing,

g) scope of intervention set out in individual priorities,

h) informatisation – whether within the OP IE funds should be spent only on establishment of eAdministration for enterprises or on comprehensive support for instruments related to eEconomy, eScience and eAdministration,

i) financial allocations for individual priorities within the OP IE,

j) establishing a demarcation line between the OP IE and Regional Operational Programmes. The most frequently discussed question related to demarcation was the lower limit of investment projects at the level of EUR 2 million,

k) support for entrepreneurs in applying for EU funds, e.g. with regard to development of applications for co-financing,

l) proposal to develop a glossary that would explain the notions and abbreviations used in the OP IE,

m) proposal to precisely define beneficiaries in the OP IE priorities and to identify their organisational and legal forms. It was also suggested that the definitions of individual beneficiaries should be unified, as well as the names and notions in all operational programmes,

n) limited clarity of the OP IE. It was suggested that it should be divided, as the SOP ICE, into a part for entrepreneurs, a part for business support institutions (BSI) and technical assistance,

o) include commercial banks in the system for absorption of the structural funds in the years 2007-2013.

5. Conclusions

676. The draft OP IE that was consulted on was well received, and the participants in the consultations often expressed the opinion that the instruments offered by the OP IE are coherent and adjusted to the needs of the Polish economy and science, and at the same time take into account mid- and long-term objectives set out in these areas in strategic national and Community documents.

677. As a result of consultations, the draft OP IE was amended on the basis of some of the comments and proposals that had been presented. The changes introduced into the OP IE refer to its all parts:

a) its name, which originally was Competitive Economy and has been changed to Innovative Economy[165],

b) the introduction, where the notion of innovativeness has been explained and the specificity of innovative projects implemented within the OP IE has been pointed out,

[165] The name of the Programme within the National Strategic Reference Framework 2007-2013 was changed, on the basis of the decision of the Council of Ministers of 5 May 2006, from the Competitive Economy Operational Programme 2007-2013 to the Innovative Economy Operational Programme 2007-2013. The name *Innovative Economy* better reflects the plans Poland intends to implement with the use of the EU structural funds. Simultaneously, it reflects the objectives of the renewed Lisbon Strategy. The name *Competitive Economy* does not meet the objectives of the Programme and it could be misleading to potential beneficiaries.

c) the diagnosis, which has been verified so that to include present statistical data and the area of services and innovative society, as well as the effects of the use of pre-accession/ structural funds on individual economy sectors, which presents a clear picture of the situation before the implementation of the OP IE,

d) the SWOT analysis, to which the elements of information society have been added,

e) the strategy, which has been extended by the explanation of the importance of innovativeness and due to increased allocation for the area of information society, the main objective has been changed and one more detailed objective of the OP IE has been added,

f) the priority axes and some of their instruments, which have been facilitated as a result of beneficiaries' proposals, in particular:

   I. a coherent instrument for entrepreneurs has been established that allows for obtaining support for research and development works and implementation of their results within one project,

   II. the scope of priority axis 7. has been extended by instruments for entrepreneurs and broad eServices,

   III. the idea of financing of research implemented within international cooperation has been abandoned,

g) the OP IE monitoring indicators – the indicators have been specified within the OP IE objectives and priority axes,

h) financial allocations – as a result of consultation a decision has been taken to designate a bigger amount of resources for support for investments and for more comprehensive support for information society establishment in Poland,

i) the glossary explaining some notions and abbreviations used in the OP IE.

9.5 Indicative list of major projects[166]

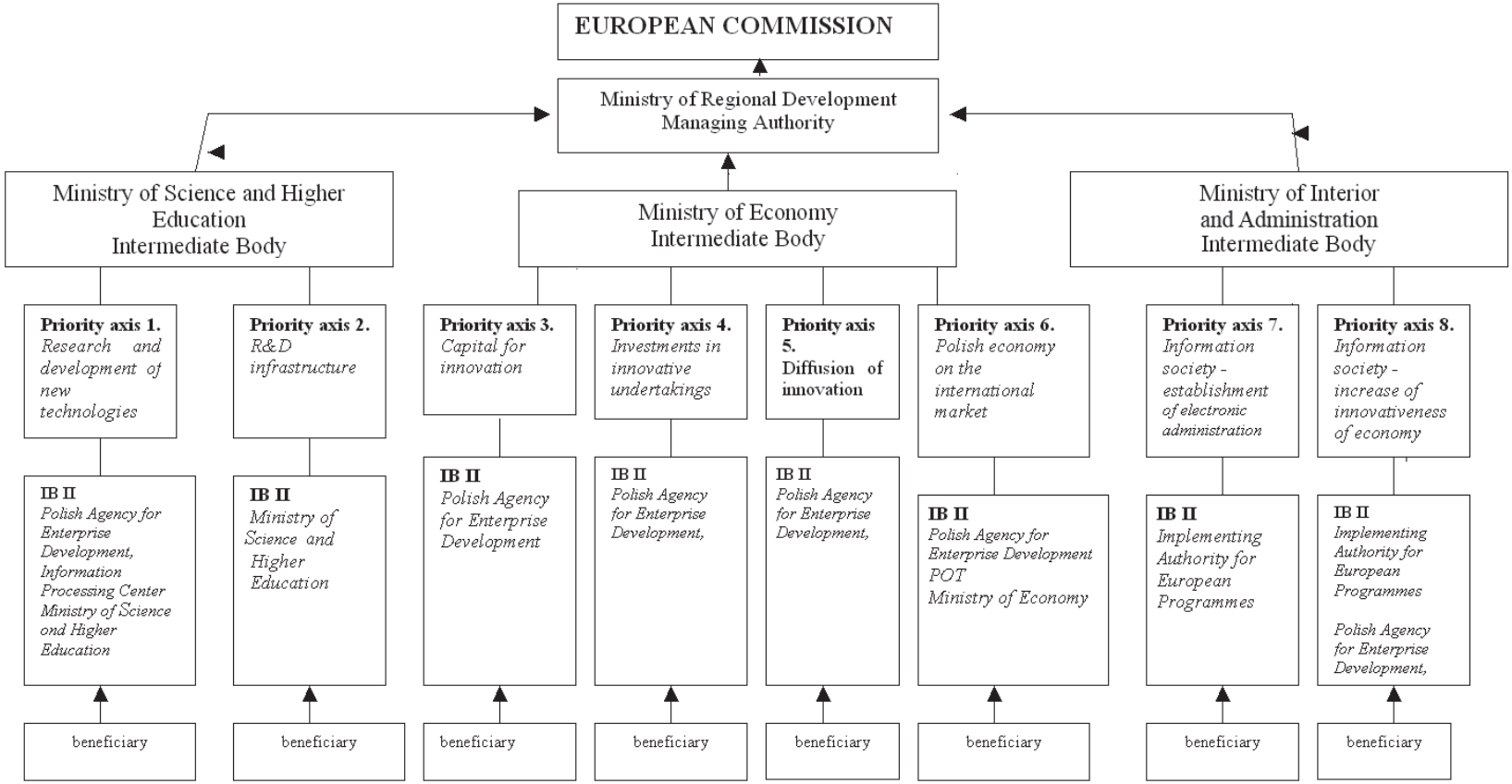
No.	Name of project / Range of investment	Approximate total cost of project (million Euro)	Planned implementation period	Place of project implementation	Institution responsible for the implementation of project	Description of project
1	2	3	4	5	6	7
Priority axis 2. R&D Infrastructure Intermediate Body – Ministry of Science and Higher Education						
1	Centre of Advanced Materials and Technology	100	2007-2013	Mazowieckie	Warsaw University of Technology	The objective of the project includes the construction of a new Centre consisting in over 40 environmental Laboratories (so called Core facilities) established by the Consortium of institutions creating the Centre; and their provision of the technology and research infrastructure. Provided infrastructure will enable to realise a joint research strategy of the Centre, but it also will create an environment favouring the formation of large, interdisciplinary research teams and the establishment of spin-off type firms, engaged in the production of new materials and appliances.
2	Centre of Preclinical Investigations and Technology	100	2007-2013	Mazowieckie	Medical University of Warsaw	The project consists in establishing a centre of biomedical investigations in the area of Ochota Campus in Warsaw. The CePT will carry out basic and preclinical investigations in the fields of structural and functional analysis of protein, physicochemistry and nanotechnology of biomaterials, molecular biotechnology, pathophysiology and physiology, oncology, genomics, neurobiology and diseases connected with processes of ageing. 10 environmental laboratories of core facilities, connected with each other, integrating the research and implementation activity of CePT will be established in the structure of CePT.
3	Lower- Silesian Centre of Materials and Biomaterials Wrocław Centre of Investigations (EIT+)	140	2007-2013	Lower Silesia	Wrocław Centre of Investigations (EIT+)	The objective of the investment is to construct the Lower- Silesian Centre of Materials and Biomaterials. The Centre will contribute to the development of basic investigation within the scope of advanced materials, modern branches of biotechnology and advanced medical technologies and it will constitute the basis for the Centre of Advanced Technology within the scope of creating substantial principles for running the used and technology investigations. The tasks to realise within the framework of the project include the preparation of detailed conception functioning of the centre, the design of appropriate building, Centre's provision with equipment.

[166] Within the framework of OP IE, the support for big investment projects implemented by a private sector is foreseen as well, however, their amount and range are not know at the moment because of the fact that these projects will be selected by open competition. The amount of supported projects will be definitely depended on the selection criteria of projects accepted by the MC and the level of public intervention.

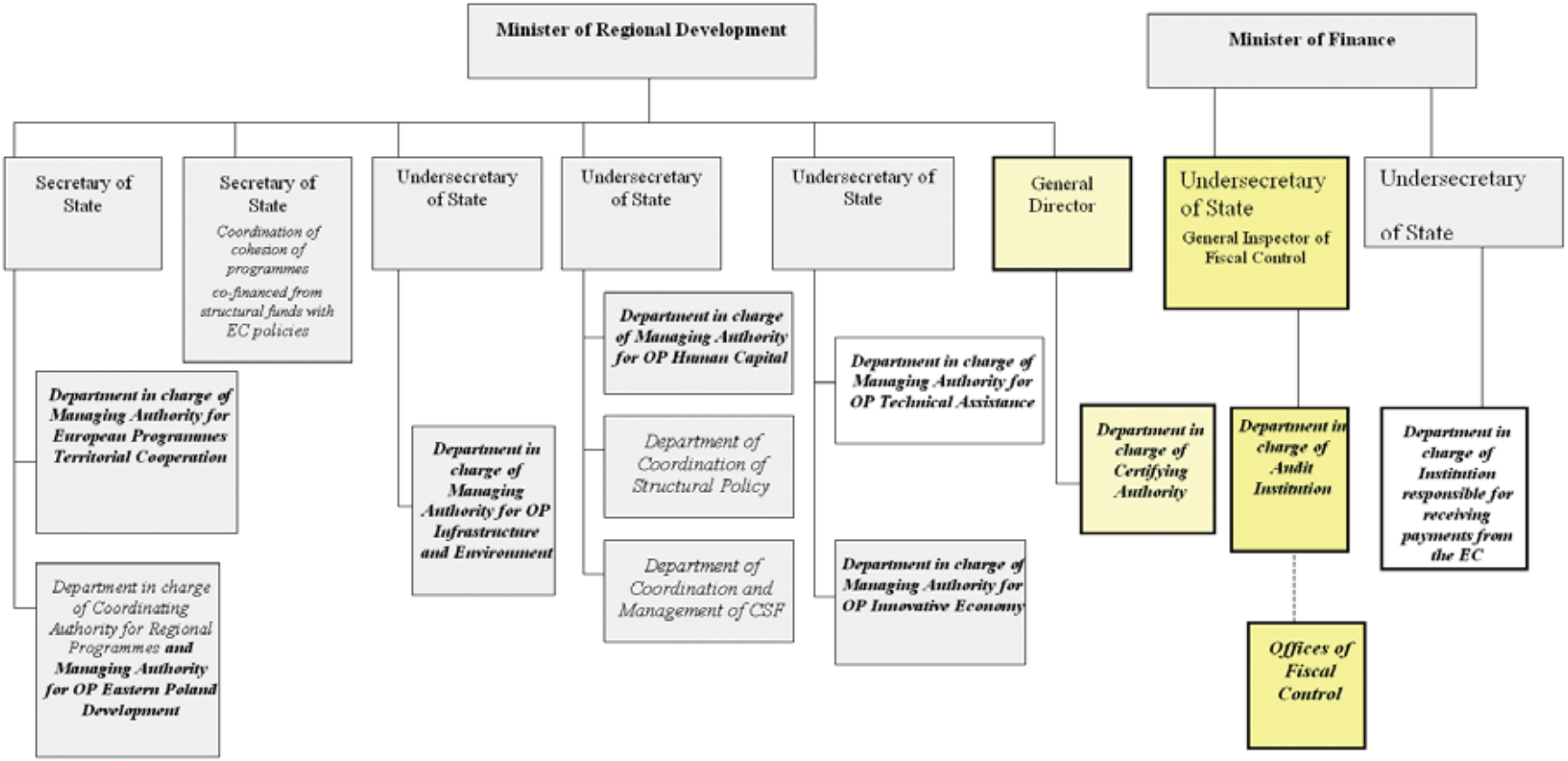
4	Wielkopolska Region Centre of Advanced Technology in Poznań	70	2007-2013	Wielkopolska Region	Adam Mickiewicz University	The project consists in construction and provision of the Wielkopolska Region Centre of Advanced Technology in Poznań (WCZT-P), within the framework of which the group of laboratories–buildings, comprising the Centres of Advanced Chemical Technologies, Industrial Biotechnology with Greenhouse, Investigations of Materials together with a regional apparatus laboratory, Biomedical Technologies with Animal House and a technical infrastructure will be established. The Wielkopolska Region Centre of Advanced Technology (WCZT-P) will be a centre of high research potential.
Priority axis 7. Information society – Building electronic administration Intermediate Body – Ministry of Interior and Administration						
5	Electronic Platform of Collection, Analysis and Disclosure of digital resources concerning Medical Events	200	2007 - 2010	The entire country	Ministry of Health/ Centre of Information Systems of Health Protection	The project concerns the creation of nationwide information system enabling the public organs, including state and self-government administration, entrepreneurs (among others the health care institutions, chemist's shops, medical practices etc.) and citizens: • To collect data concerning medical events. The source of data will include among others entrepreneurs running the health care institutions and chemist's shops, and the receivers will include public organs, including the state administration responsible for monitoring, regulating or financing the market of health protection, • To analyse the collected data concerning medical events, • The electronic access to the collected data concerning medical events. Additionally, the system will enable to make selected on-line services within the scope of health protection accessible to entrepreneurs and citizens.
6	pl.ID – Polish ID card	110	2008-2013	The entire country	Ministry of Interior and Administration	The project is the continuation of the PESEL2 project implemented within the framework of SOP IEC. The PESEL 2 project aimed at the introduction of new technical, legal and organisational solutions, which in an essential way will reduce a direct and personal participation of citizen and/or entrepreneur in the process of undertaking necessary administrative activities to a minimum. A main field of pl.ID will include the construction of electronic system approving the identity of private persons on the basis of biometric document and electronic sign.

9.6 List of organizational schemes

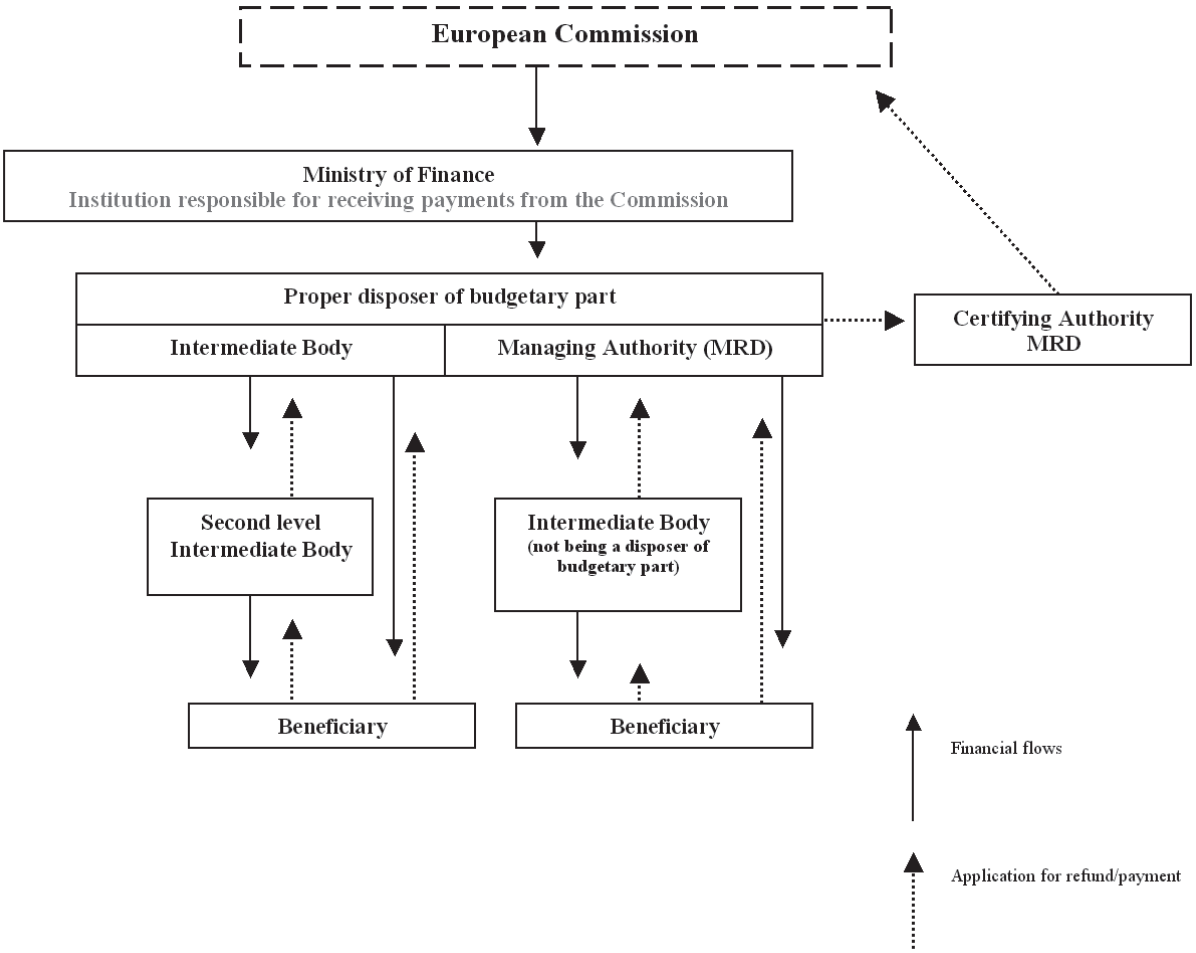
9.6.1 The OP IE institutional scheme



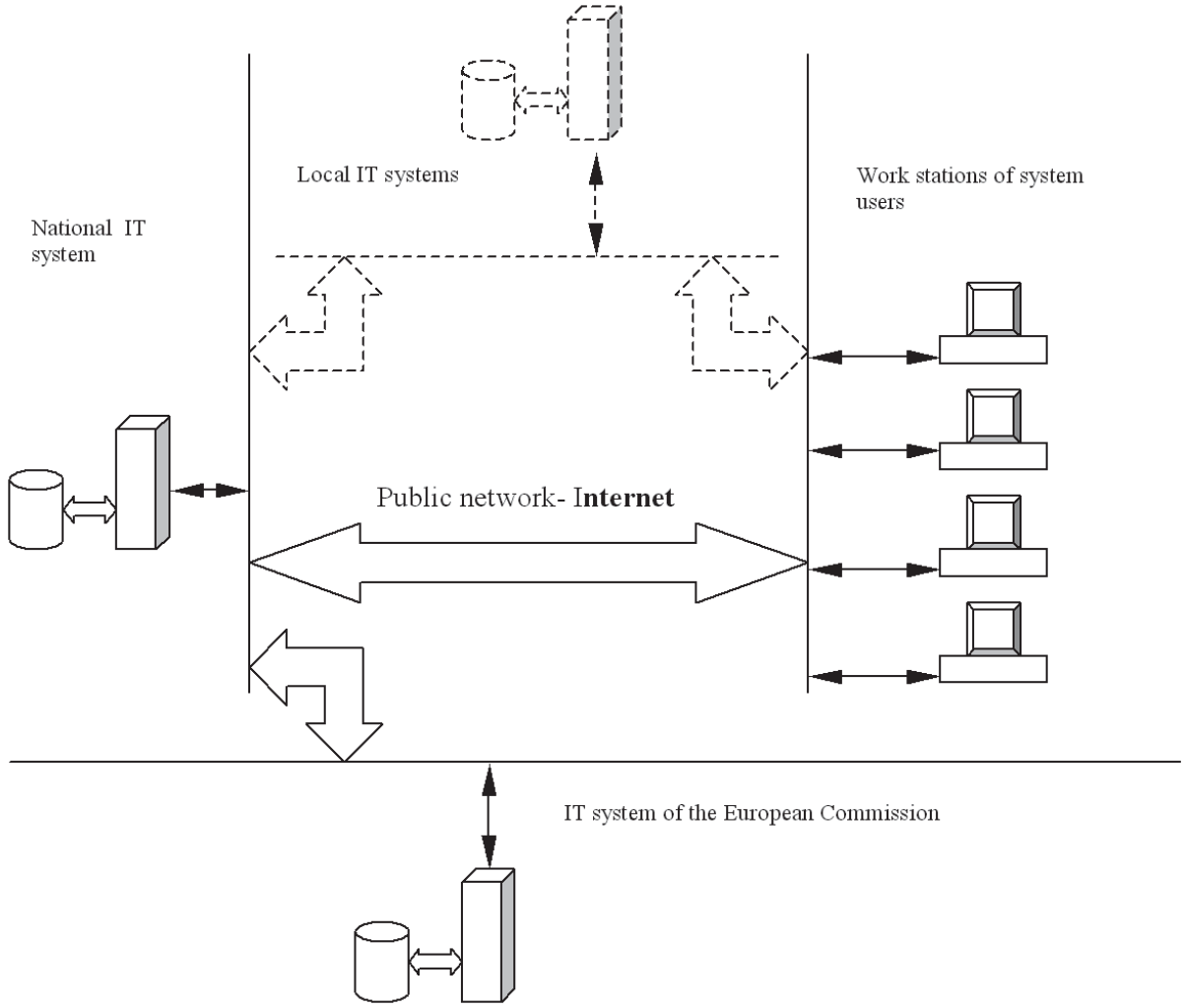
9.6.2 Organizational scheme indicating the location of OP Managing Authority, OP Certifying Authority, Audit Institution and Institution responsible for receiving payments from the EC



9.6.3 Financial flows and certification in national operational programmes



9.6.4 The diagram presenting the structure of the National IT System.



10. List of abbreviations used in the Programme

AI – Audit Institution

BEI - business environment institutions

BERD – business expenditure on research and development

CA – Certifying Authority

CAT – Centre of Advanced Technologies

CE – Centre of Excellence

EC – European Commission

EIC – European Info Centre

EIT+ – European Institute of Technology+

EPD OP – Operational Programme Development of Eastern Poland, 2007-2013

EPO – European Patent Office

EU – European Union

FDI – foreign direct investments

GDP – gross domestic product

GERD – gross expenditure on research and development

GOW – knowledge based economy

GUS – Central Statistical Office

HC OP - Human Capital Operational Programme, 2007-2013

IBnGR – Gdansk Institute for Market Economics

IB – Intermediate Body

ICT – information and communication technologies

IB II – Implementing Institution

IROP – Integrated Regional Operational Programme, 2004-2006

I&E OP - Operational Programme Infrastructure and Environment, 2007-2013

JBR – research and development entities

KIG – Polish Chamber of Commerce

KSU – National SME Services Network

LS – Lisbon Strategy

MA – Managing Authority

MG – Ministry of Economy

MGiP – Ministry of Economy and Labour

MNiSW – Ministry of Science and Higher Education

MRD – Ministry of Regional Development

NBP – National Bank of Poland

NDS – The National Development Strategy, 2007-2015

NOT – Polish Federation of Engineering Associations

NSRF – National Strategic Reference Framework 2007-2013

OECD – Organisation for Economic Cooperation and Development

OP IE– Innovative Economy Operational Programme, 2007-2013

PAIiIZ – Polish Information and Foreign Investment Agency

PAN – Polish Academy of Sciences

PARP – Polish Agency for Enterprise Development

PHARE – Poland and Hungary Assistance for Reconstructing of their Economies

POT – Polish Tourism Organisation

R&D – Research and Development

R&TD – Research and Technological Development

RIA – regulation impact assessment

RDP – Rural Development Programme, 2007-2013

RFI – Regional Financing Institution

ROP – Regional Operational Programme

RIS – Regional Innovation Strategies

SAPARD – Special Accession Programme for Agriculture and Rural Development

SEM – Single European Market

SITC – Standard International Trade Classification

SME – small and medium-sized enterprises

SOP Agriculture - Sectoral Operational Programme Restructuring and Modernisation of the Food Sector and Rural Development, 2004-2006

SOP ICE – Sectoral Operational Programme Improvement of the Competitiveness of Enterprises, 2004-2006

SOP Fisheries - Sectoral Operational Programme The Fisheries and Fish Processing, 2004-2006

SOP HRD - Sectoral Operational Programme Human Resources Development, 2004-2006

Sp. z o.o. – limited liability company

TTC – Technology Transfer Centre

UNESCO – United Nations Educational Scientific and Cultural Organisation

UOKiK – Office of Competition and Consumer Protection

UP RP – Patent Office of the Republic of Poland

US PTO – United States Patent and Trademark Office