



**EXPERT EVALUATION NETWORK
DELIVERING POLICY ANALYSIS ON THE
PERFORMANCE OF COHESION POLICY 2007–2013**

TASK 1: POLICY PAPER ON INNOVATION

POLAND

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**A report to the European Commission
Directorate–General Regional Policy**

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1 EXECUTIVE SUMMARY

In Poland the regional context of innovation policy is clearly visible and manifest in the National Regional Development Strategy 2007–2013. Also, the 16 Regional Operational Programmes contain goals and objectives related to innovativeness and competitiveness. In principle, their priorities follow the main objectives of the national strategies as regards innovation and technology support. All regions have Regional Innovation Strategies, however not that vividly implemented. In addition, expenditure on innovation has been envisaged within a special development programme for the five poorest Polish regions (Operational Programme for the Development of Eastern Poland).

Since Poland's accession to the EU, practically all national development policies (innovation policy included) have been implemented as part of EU policies. Strategic planning, funds and implementation tools of innovation policy are directly related to EU funding. Both national and regional strategic documents name EU funds (mostly ERDF) and relevant EU programmes as the main source of funding for innovation policy. However, science and higher education are financed mostly from domestic sources (83% and 96%, respectively).

At the current stage of implementation of the 2007–2013 funds in Poland, no comprehensive analysis of the outputs and results of the intervention is possible, since many projects have just got underway, and several have not yet commenced at all. However, it can already be noted that one of the virtues of the Operational Programme Innovative Economy is the integration of R&D processes within several enterprises that benefit both from projects on their own research and later practical application of the results. The major deficiencies in implementation of the projects is related to often too schematic procedures and risk-avoiding attitudes (often imposed by the European Commission) which in many cases do not allow for promising, though risky innovative projects to be undertaken.

At the moment (mid-2010) the real spending of funds allocated to innovation-oriented projects is limited which is due to the early stage of programme implementation. However, many projects have already been approved, and there are even worries that all the money will be allocated even before 2012 which may leave the last years of the programming period without any funds. Investment in research establishments and enhancing research potential, concentrated in major academic centres in the largest cities, seems to be the most successful direction of intervention in this area.

Main challenges facing Cohesion Policy programmes as they aim to contribute to improve the innovative potential of Poland are:

- Enhancing selectivity of financing science and enterprises (including SMEs) focusing on truly innovative and promising products, markets and research fields.

- Improving coordination among programmes and projects, and cooperation of different agents.
- Opening up the procedures for both specifying project criteria and following project selection to truly innovative projects.
- Spreading the idea of innovativeness to the whole society and to sectors other than solely those involved in specific projects.

2 NATIONAL AND REGIONAL INNOVATION POLICY AND THE CONTRIBUTION OF THE ERDF

2.1 NATIONAL AND REGIONAL INNOVATION POLICY

When compared with Europe and the rest of the world, the level of innovation in Poland is relatively low. This is corroborated inter alia by Poland's low ranking in studies prepared for the European Commission (European Innovation Scoreboard 2009). Poland's low innovation level is the main factor underpinning and necessitating policy support. In such a situation, comprehensive measures with a long-term time horizon are needed.

Improving the level of innovation across the Polish economy is present in all the key national strategic documents. However, this is not an overriding priority but one of the goals associated with such issues as competitiveness of the economy, increase of employment, development of infrastructure and rural areas or territorial cohesion. Moreover, these are only science, economy and to some extent public administration which are influenced by innovation strategies. What the country is lacking is the overall, general strategy for entire society and all public institutions which would support innovative thinking and behaviour in all wakes of public life and create general innovation awareness among the wide social groups and the administrative, political, cultural and economic elites.

Innovativeness is one of the six goals formulated in the National Development Strategy 2007–2013. In the National Strategic Reference Framework 2007–2013 innovativeness is defined in the context of competitiveness. At the level of strategic goals, innovativeness is linked with increased competitiveness of the economy, which is expected to be transposed into enhanced prosperity and higher standards of living. At the same time, the level of innovation is hoped to be improved by a number of activities which involve direct supports to enterprises (technology purchases, launching new products and processes, etc.), and broadly understood development of the potential for innovation, e.g. through the expansion of the infrastructure of academic, research and higher education institutions, financing research and implementation work or development of R&D human resources. Many initiatives are launched to enhance the transfer of knowledge and technology from the science sector to the sector of enterprises; they include for example the creation of new innovation–environment institutions and provision of support to the existing ones

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(technology transfer centres, incubators, science and technology parks), as well as encouraging cooperation and exchange of experiences between such organisations. Also importantly, the broad spectrum of activities includes the creation of, and support to financing mechanisms. Moreover, innovation policy strives to strengthen the human capital by offering training to entrepreneurs, employees and graduates, both at basic and specialised levels.

Since Poland's EU accession, practically all national development policies (innovation policy included) have been implemented as part of the EU policies. Strategic planning, funds and implementation tools of innovation policy are directly related to EU funding. Both national and regional strategic documents name EU funds and relevant EU programmes as the main source of funding for the innovation policy. However, science and higher education are financed mostly from the domestic sources (83 and 96 per cent, respectively).

In Poland, the regional dimension of innovation policy is clearly visible. One of the priorities of the National Regional Development Strategy 2007–2013 is “Improving innovative potential of regions”. Similarly, innovativeness is included in the mandatory set of strategic goals in the development strategies of all 16 Polish regions (Gorzelać et al. 2006). Furthermore, each region in Poland has a Regional Innovation Strategy (RIS); these documents are similar as far as their goals are concerned, but can significantly vary regarding the quality of the diagnosis of their innovation potential (Gorzelać et al. 2007). RIS also indicate EU funds as the main sources for the funding of activities, and this additionally highlights the primacy of the NSRF and Operational Programmes in the practices of development policy in Poland.

The national and regional levels are quite similar in the Polish innovation policy regarding the identified goals and tools proposed. As a rule, regional (voivodship) strategies restate the provisions of the central strategic documents, usually placing greater emphasis on the detailed regional context. On the one hand, this can be seen as a proof of the consistency of the planning efforts, but on the other – in view of wide disparities in the potential for innovation of individual regions (cf. e.g. Olechnicka 2007; Olechnicka, Płoszaj 2009a) – it is difficult not to see it as stereotyping and a wish to address all possible goals and initiatives regardless of the indigenous resources and possibilities concerning their use. Such a situation may lead to a low effectiveness of the intervention, particularly in those regions where the innovation potential is the lowest. This is especially true in regard of the fact that implementation of projects financed from central and regional programmes is not sufficiently co-ordinated, which may also be true for projects financed by different governmental agencies of the central level.

As of 2007, the entire area of Poland is covered by EU funding under the Convergence objective. The key operational programme with a focus on innovation is the Operational Programme Innovative Economy. The aggregate programme expenditure planned for the period 2007–2013 will total EUR 9.7 billion, of which the ERDF will contribute EUR 8.25 billion (12.3% of the total allocation within the National Strategic Reference Framework 2007–2013 for Poland), and the

national public funds will provide EUR 1.46 billion. 95% of these outlays will be spent on interventions directly related to innovation (see Annex C).

Innovativeness is present in all the 16 Regional Operational Programmes, with a total respective allocation of EUR 3.25 billion (which accounts for nearly 20% of the aggregate value). In addition to that, expenditure on innovation has been envisaged within a special development programme for the five poorest Polish regions (Operational Programme for the Development of Eastern Poland), with a planned allocation of EUR 320 million (14% of the total programme allocation) for innovation-oriented activities. Not only ERDF funding is used to finance innovation policy in Poland. European Social Fund (ESF) funds expended as part of the Operational Programme Human Capital also play an important role, particularly the Fund's allocation on "Developing human potential in the field of research and innovation", which has a total budget of EUR 600 million.

The key measures envisaged as part of Operational Programme Innovative Economy cover the following areas: support to research and development of modern technologies; development of R&D infrastructure; supporting innovative enterprises and initiatives; diffusion of innovation (including innovative business-environment institutions such as: incubators, science and technology parks, technology transfer centres); information society (including e-administration).

Regional Operational Programmes (there are 16 of them, one for each of the voivodships) span a similar range of goals, even though they are less focused on providing direct supports to enterprises and place more emphasis on R&D and higher education infrastructure as well as innovation-environment institutions, clusters, etc. Operational Programme for the Development of Eastern Poland mainly targets the development of higher education and information society infrastructure. Initiatives undertaken as part of the Operational Programme Human Capital, financed from the ESF, serve as significant complementary measures in the sphere of human capital development.

Main features of national innovation strategy are that improving innovativeness is present in all the key national strategic documents and is usually linked with increased competitiveness of the economy. However, this is not an overriding priority but one of the goals. In terms of measures innovation policy covers wide range of initiatives from investments to research infrastructure to direct support to enterprises.

Regional dimension of innovation policy in Poland is well developed. Each region has a Regional Innovation Strategy. Innovativeness is also present in all Regional Operational Programmes. However, the national and regional levels are quite similar regarding the identified goals and tools proposed.

2.2 ERDF CONTRIBUTION ACROSS POLICY AREAS

In the period 2007–2009, the greatest volume of ERDF expenditure was allocated for boosting applied research and product development (44% of the total budget, of which two thirds have been

earmarked as direct supports to innovative enterprises). The main measures used for boosting applied research are: direct support to enterprises (technology purchases, launching new products and processes, production lines, quality systems implementation of environmental protection requirements) and funding scientific and applied research and development projects.

The “Innovation friendly environment” category accounts for 31% of the innovation policy funds. Key measures in this area include provision of support to computerisation of enterprises and the public sphere (administration, health care, specialised support to innovative SMEs).

One fourth of the ERDF allocation for supporting innovation is earmarked for initiatives related to knowledge transfer and support to innovation poles and clusters. The priority in this regard is the development of the R&D infrastructure and the innovation environment. The main measures are: funding R&D infrastructure and scientific equipment and development of technology transfer centres, incubators, science and technology parks (etc.).

The major beneficiaries of the innovation policy include enterprises, both large ones and SMEs. Substantial funds are also allocated to support the R&D sphere (including higher education institutions) as well as to the creation and development of innovation–environment institutions (clusters, science and technology parks, technology transfer centres). Public administration is another major beneficiary, mainly with regard to development and implementation of computer technologies.

Support provided at the national and regional levels should be evaluated as formally consistent (perhaps even unduly consistent), but operationally not sufficiently integrated. This is mainly due to restating the same goals and measures at both these levels, which means however that the launched initiatives are not always properly coordinated.

As part of the innovation policy, some initiatives are undertaken to support cooperation between regions, mainly with regard to encouraging cooperation between bridging institutions, primarily in the sphere of technology transfer (Olechnicka, Płoszaj 2009b). However, the results of these efforts are rather mediocre, especially in the scope of technology transfer (PAG Uniconsult, 2008a).

3 EVIDENCE AVAILABLE ON THE PERFORMANCE OF INNOVATION MEASURES CO-FINANCED BY ERDF

3.1 INNOVATION-FRIENDLY ENVIRONMENT

The largest projects implemented in the sphere of innovation–friendly environment mostly pertain to investments in the development and use of ICT in e–administration and digitalisation of services for individuals and enterprises. This group includes inter alia: PUAP2; e-Cło (e–Customs); Electronic Platform for Compiling; Analysing and Presenting Digital Resources on Medical Events; pl.ID – Polish ID card; Infrastructure for e–Services in the Ministry of Finance; GBDOT –

Georeferential Database of Topographic Objects with a national management system; 112 emergency number national telecommunication and IT network; Consolidation and centralisation of customs and tax systems. Various initiatives associated with the development of human resources potential in the sphere of research and innovation are also financed from the ERDF (such as scholarships for PhD students). Other instruments for financing innovations e.g. venture capital funds also play an important role. Parallel to that, many foresight projects are being implemented; they focus on specific sectors (e.g. higher education), technologies (e.g. medical materials engineering) and on individual regions.

The crucial projects in this area are both long-term and large-scale ones. Many of them are in the initial implementation phase, which is confirmed by the data on the spending levels vs. the planned allocations. In the Operational Programme Innovative Economy programme, the current spending level oscillates from ca. 7% for information society measures concerning the development of e-administration, to ca. 5% concerning the development of human resources and support to business-environment institutions offering innovative services and supra-regional networks of such institutions, and to 2% in the sphere of advanced services for enterprises. The remaining categories of measures (IT infrastructure for science, services and SME applications; use of ICT in business and digital divide prevention) show very low absorption levels – less 1% (Stan wdrażania, 2010).

3.2 KNOWLEDGE TRANSFER AND SUPPORT TO INNOVATION POLES AND CLUSTERS

The key projects related to knowledge transfer and support to innovation poles and clusters focus on the development of research infrastructure and technology transfer institutions, and include: The Wrocław Research Centre EIT+; CePT – Centre for Preclinical Research and Technologies; Centre for Advanced Materials and Technologies; CENT III – University of Warsaw Centre of Biological and Chemical Sciences Ochota Campus; construction and provision of equipment for the Advanced Technologies Centre in Poznań; CCTW – Clean Coal Technology Centre; National Centre for Hadron Radiotherapy Phase I: Cyclotron Centre Bronowice (Szczegółowy opis 2009). Similarly to the priority discussed above, the level of spending has been low, but the level of allocation high.

3.3 BOOSTING APPLIED RESEARCH AND PRODUCT DEVELOPMENT

This area of intervention covers important projects intended to support investments with major significance for the economy. These include for example: construction of a production line for an innovative small petrol engine (PLN 1.1 billion, including 8% from the ERDF); creation of new jobs in the IBM shared services centre in Wrocław (PLN 606 million, 12% from the ERDF); ATM Innovation Centre (PLN 392 million, 16% from the ERDF); European shared services centre – intelligent logistic systems (PLN 384 million, 21% from the ERDF). Their specific feature is their important role for the economy and a relatively small share of ERDF funding. It is very likely that

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the funds made available from the ERDF have significantly stimulated innovation-related investments in the Polish economy, whereas EU co-financing has served as a vital factor which has “driven” the securing of the necessary indigenous own financing (taking into account high level of national, mostly private, co-financing in this area).

As part of Operational Programme Innovative Economy, the highest share of ERDF expenditure can be observed in projects related to support of scientific research for the development of knowledge-based economy (with spending for the beneficiaries at a level of ca. 6% of the total allocation). Projects related to initiating innovative activities are characterised by a lower level of EU funds spending (ca. 1.5% of the ERDF allocation). However, in terms of the value of the signed contracts, it should be emphasised that the funds which were expended at the fastest rate were those intended as direct supports to the innovativeness of enterprises (purchase of new production lines, new equipment, software, etc.), but the level of spending remains low (with majority of the projects still in the implementation phase). However, the number of applications is large, and at the moment some 12 000 beneficiaries have had their project approved only by the PAED alone. It is being envisaged that within the field of enterprise support the funds will be soon almost entirely allocated and that at the final years of the programming period there will be no sufficient resources left.

Any reliable assessment of the size of spending from the ERDF allocated funds in the period in question is extremely difficult owing to considerable dispersion of information and lack of comparable data.

3.4 OUTCOMES AND RESULTS

In the period 2004–2006, innovativeness was supported mainly by the Sectoral Operational Programme Improvement of the Competitiveness of Enterprises¹. The allocated funds amounted to over PLN 6.5 billion, out of which 4.5 billion from the ERDF. The spending under this programme was made to over 15 thousand beneficiaries. The main results of the Programme were the following: 134 research and specialist laboratories received funding; 398 new technologies were implemented; 1 363 commercial contracts with foreign partners were signed; 53 micro-loan funds and 39 loan guarantee funds received additional capital; 27 industrial parks, 17 science and technology parks and 19 technology incubators received support; 80 special-purpose projects were implemented (involving research with practical applications in the economy). Though the programme has been implemented successfully, it cannot be said that it has led to a profound general improvement of innovativeness and technological advancement the Polish economy and has increased its competitive advantage (this is corroborated by the constant low position in

¹ Some important initiatives have been financed also by Integrated Regional Operational Programme.

European Innovation Scoreboard). This is due to Poland's low innovation level and relatively small scale of innovation related interventions.

In the period 2004–2006, innovativeness was supported mainly by the Sectoral Operational Programme Improvement of the Competitiveness of Enterprises². The allocated funds amounted to over PLN 6.5 billion, out of which 4.5 billion from the ERDF. The spending under this programme was made to over 15 thousand beneficiaries. The main results of the Programme were the following: 134 research and specialist laboratories received funding; 398 new technologies were implemented; 1 363 commercial contracts with foreign partners were signed; 53 micro-loan funds and 39 loan guarantee funds received additional capital; 27 industrial parks, 17 science and technology parks and 19 technology incubators received support; 80 special-purpose projects were implemented (involving research with practical applications in the economy). Though the programme has been implemented successfully, it cannot be said that it has led to a profound general improvement of innovativeness and technological advancement the Polish economy and has increased its competitive advantage (this is corroborated by the constant low position in European Innovation Scoreboard). This is due to Poland's low innovation level and relatively small scale of innovation related interventions.

At the current stage of the implementation of the 2007–2013 funds in Poland, no thorough analysis of the outputs and results of the intervention is possible. This is because, firstly, the number of already completed projects is very small. Secondly, and most importantly, projects of crucial importance take many years to complete, and their large part is still in the early implementation stage. The existing evaluation analyses³ do not allow offering any comprehensive picture of the output and results indicators. In this regard, ex-ante analyses prevail, particularly fragmentary analyses focusing on individual innovation policy measures. Such evaluations are topically limited – and cover individual groups of beneficiaries, e.g. relating to the plans and needs of entrepreneurs, and/or are limited in terms of their subject – as they target specific initiatives (e.g. science and technology parks, advanced technology clusters, cooperation networks, industrial property protection, development of exports and linkages with foreign markets and trade partners, support to private investors or assistance in developing cooperation ties). Some of them are also spatially limited, e.g. an evaluation of the preparedness of higher education institutions in Pomerania to absorb funds as part of the ROP⁴. An additional factor which makes the evaluation of

² Some important initiatives have been financed also by Integrated Regional Operational Programme.

³ In the field of innovation 39 evaluations (and scientific analysis with elements of evaluation) were conducted in the period 2002–2010 (as of May 2010). Only some of them concern 2007–2013 period. Those concerning 2004–2006 period are mostly ex-ante and on-going studies focusing on formal and procedural aspects of policy implementation (as well as e.g. absorption capacity, diffusion of information on programmes etc.) and not on outcomes and results. Currently several ex-post evaluations are carried on (final report should be available in late autumn). All of mentioned 39 studies are available on-line: <http://www.ewaluacja.gov.pl/Wyniki/Strony/Innowacje.aspx>

⁴ <http://www.parp.gov.pl/index/index/1463>;

innovation policy in Poland even more difficult, including the outcomes of ERDF funding, is that such outcomes exist concurrently with the outcomes of other supports, mostly those from the ESF, the evaluations of which are not conducted together with evaluations of parallel programmes.

Relevant evaluation studies demonstrate inter alia that the technological parks created with the involvement of ERDF tend to concentrate – in general – firms already more open to cooperation with R&D establishments, firms using more public funds than other firms, and firms with a wider range of operations. Nonetheless, the overall impact of these parks has still been rather limited (IBS, 2008). Better results have been observed in evaluation of projects strengthening co-operation between R&D sphere and the economy implemented in the 2004–2006 period. Main effect is that most of scientific entities and enterprises which have benefited from the support within this measure (measure 1.4 of Sectoral Operational Programme Improvement of the Competitiveness of Enterprises) strengthened its cooperation (MRR, 2009). In period 2004–2006 direct support to enterprises is assessed of great importance for those entities. However, it has mediocre influence on the innovativeness of the whole economy (PAG Uniconsult, 2008b).

It has been indicated by the key actors responsible for managing the programmes related to innovation and supported by the ERDF that the selectivity of the scientific projects being financed is too low. Instead of concentrating on the directions indicated by foresight studies, too many fields are being supported which may lead to a lower increase of the scientific potential of Polish science had the selectivity been stronger.

Based on interviews it has been indicated that the procedures of both specifying the project criteria and following project selection are too cautious and too schematic. In many cases truly innovative projects may be not forwarded at all, or may be disapproved due to the risks involved in the final success. Often it is the quality of the application, and not the quality of the project itself which is the real justification for the project approval. Also, the enterprises seem to apply for support not to carry out breakthrough innovation, but rather for improvement of their “traditional” lines of activity. Thus, the overall competitiveness of the Polish economy in the “creative” sector has not been increased, though the efficiency and quality of production or service may be improved.

4 CONCLUSION: MAIN CHALLENGES FACED BY COHESION POLICY PROGRAMMES

In spite of all efforts mentioned above and unquestionable successes of several activities, it has to be admitted that Poland has not yet begun to implement a serious innovation policy. Overall R&D financing is poor (less than 0.6 per cent of the GDP), and the profile of a low-cost economy specialised in manufacturing commodities developed elsewhere and sold on external markets has not yet been changed. The overall competitiveness of the Polish economy in the “creative” sector

has not been increased, though the efficiency and quality of production or service has been improved.

The reasons for this are manifold. One of them is a **too weak selectivity of financing science**, due to the conservative attitudes of the scientific community which is mostly interested in maintaining the status quo, and too small decisive power of the state administration which restrains from indicating few most important disciplines and research directions that would be considered as the most important and worth major financial support.). Similarly, **the support for enterprises (in particular SMSs) is too often being directed to improvement of the already existing products and services, and too rarely for supporting truly innovative**, though sometimes risky, undertakings. This is the result of both the attitudes of the enterprises themselves, and of a too cautious and schematic procedures of the implementing administration.

However, both national and regional strategy documents are full of references to competitiveness and innovativeness. In all of them Cohesion policy is considered as a main source of policy guidelines, and even more important as a funding source. Promoting innovativeness is one of the priorities, however it is “dissolved” in many strategic objectives and operational programmes. ERDF is the main, but not the only source of financing these objectives, since the ESF is being responsible for the “soft” measures, and the Cohesion Fund for major infrastructural projects, in which modernisation and technological advancement are one of the main targets. Moreover, these targets are also met in the policies addressed to rural areas and less developed regions.

This “proliferation” of Lisbon–driven targets has not allowed for proper co–ordination among particular programmes and projects, and has not led to sufficient “tailoring” of activities in relation to regional/local real conditions. Most of the Regional Innovation Strategies follow similar patterns (though some of them indicate as “innovative” traditional industries that dominate in their particular regions) and suggest implementing similar instruments (technology parks, innovation centres, relay centres etc.). **The readiness for co–operation of different agents (ministries and regional authorities) is still too low, which decreases the level of co–ordination and integration.**

There is a need to open the procedures of both specifying the project criteria and following project selection for truly innovative – though sometimes risky projects, and to make the quality of the project and not of the application the decisive criterion for project selection.

It is too early to provide comprehensive evaluation of projects and actions undertaken.

Fragmentary evidence suggests that the absorption of the funds allocated for innovation–oriented projects is low. Investments in research establishments and enhancing research potential, concentrated in major academic centres in the largest cities, seems to be the most successful direction of intervention. Also, technological support to innovative firms (including SME’s) has demonstrated some positive results. Several activities follow “fashionable” goals, like cluster creation and support, often being artificial and not sufficiently rooted in real conditions and related to real needs.

Attempts to make innovation and research-oriented projects one of the leading dimensions in development of the less-developed regions has not, as yet, proved to be successful. The

Operational Programme Development of Eastern Poland has resulted in fragmentation of projects and interventions, and support for R&D and academic entities too often has led to improvement of hard infrastructure, and not necessarily to an increase of the scientific and research potential.

This leads to a conclusion that the innovation policy is being followed more “virtually” than in reality, and that the importance attached to an increase of the competitive advantage of the Polish economy through stronger research potential and better links between science and economy, is not, as yet, great enough (considerable funds devoted to Research, Technology Development and Innovation are insufficient and dispersed comparing to needs and Poland's backwardness in these respects). Also, the innovation policy has been limited to some sectors only, and need to increase the overall innovativeness – understood more as a social than technological phenomenon – of the entire society and its institutions has not been recognised as yet. Successful implementation of innovation strategies will be made possible only when a general culture of innovativeness – as opposed to risk-avoiding and conservatism – becomes the general attitude of wide strata of the society and a driving force of functioning of institutions and organisations.

According to the standpoint of respective governmental agencies – to a large extent indicated by the authors of the report – the ERDF support in the different regions should focus more on relating activities to the regional features. In the strongest scientific and academic centres, supporting the linkages between R&D and the business sector should become the priority, while in the less developed regions, enhancing the R&D potential and linking the scientific establishments with the stronger ones should be the priority. In all regions, information support to business on available research, technologies, innovations, patents should become one of priorities.

It seems that integration of particular activities undertaken within different programmes and funding sources should become one of the main tracks of reforming the EU interventions. In particular, **the ERDF and ESF financed projects should be better coordinated on national and regional levels.** This would need an integration of evaluation activities first, since integration of policies should be preceded by integration of evaluations of their achievements (new programs should build on recommendations of previous evaluation studies).

Also, spreading the idea of innovativeness to the whole society and to other sectors than just those embraced by specific projects, should be regarded as a main task for future policies of the state and the support of the European Union.

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LIST OF INTERVIEWEES

Krzysztof Gulda, Director, Department for Strategy and Development of Science, Minister of Science and Higher Education.

Aneta Wilmańska, Deputy to Chief Executive Officer of the Polish Agency for Enterprise Development

ANNEX A – BACKGROUND DATA ON EU COHESION POLICY SUPPORT TO INNOVATION

The data on the ERDF resources allocated cover the FOI codes defined as being relevant for support of RTDI, or, more precisely, those that cover the bulk of resources devoted to innovation (see annex B for the list of codes). Experts should assess the appropriateness of this common definition and, if necessary, adjust the coverage to the national case in consultation with the core team. Note: experts should complete the final column only in respect of the National and Regional programmes totals and not for each regional programme.

Table 1 – Total ERDF resources allocated per programme (2007–2013)

Programmes	Total ERDF resources for innovation	Innovation support as % of total ERDF	Main initiatives implemented
Innovative Economy OP	7 800 964 200	94,5%	Support for innovative enterprises as well as their own research. Training and retraining Research infrastructure, development of research and academic centres with high potential. Support for concrete research project with high probability for practical implementation. Development of information society, support for implementing computer techniques in public administration. Development of ICT.
Infrastructure and Environment OP	225 000 000	0,8%	Infrastructure in leading academic centres training in modern technologies
Development of Eastern Poland OP	319 958 158	14,1%	Infrastructure for higher education. Infrastructure for R&D (creation and equipment for research establishments, development of R&D infrastructure in enterprises). Business and technological parks, cluster management
16 Regional Programmes	3 249 963 773	19,6%	Support for innovative enterprises (introduction of new and improved products and services, acquiring new technologies, support for R&D, financial instruments, training and consultancy). Information society (infrastructure and soft measures). Support for innovation-promoting institutions. Infrastructure for R&D and for higher education.
<i>Total Convergence Obj.</i>	11 595 886 131	20,9%	N/A
<i>Total Competitiveness Obj.</i>	N/A	N/A	N/A
<i>Total country</i>	11 595 886 131	20,9%	N/A

Source: core team on EC data.

Table 2 – ERDF contribution to innovation by policy area (2007–2013)***Convergence Objective***

Policy area	Categorisation of expenditure (corresponding FOI codes)	Total ERFD
Innovation friendly environment	05	893 923 489
	11	0
	12	522 582 972
	13	33 500 000
	14	421 740 350
	15	958 857 239
	74	793 505 339
Knowledge transfer and support to innovation poles and clusters	02	534 929 979
	03	1 774 513 076
	04	531 983 672
Boosting applied research and product development	01	182 663 850
	06	3 458 550 181
	07	647 551 162
	09	841 584 822

Source: core team on EC data.

ANNEX B – CLASSIFICATION OF INNOVATION POLICY AREAS, INSTRUMENTS AND BENEFICIARIES

Policy area	Short description
Innovation friendly environment	<p>This category covers a range of actions which seek to improve the overall environment in which enterprises innovate, and notably three sub groups:</p> <ul style="list-style-type: none"> • innovation financing (in terms of establishing financial engineering schemes, etc.); • regulatory improvements and innovative approaches to public services and procurement (this category could notably capture certain e-government investments related to provision of services to enterprises); • Developing human capital for the knowledge economy. This category will be limited to projects in higher education aimed at developing industry orientated courses and post-graduate courses; training of researchers in enterprises or research centres. <p>The category also covers initiatives geared towards improving governance capacities for innovation and knowledge policies (e.g. specific technical assistance funding, support for regional foresight)</p>

<p>Knowledge transfer and support to innovation poles and clusters</p>	<p>Direct or indirect support for knowledge and technology transfer:</p> <ul style="list-style-type: none"> • direct support: aid scheme for utilising technology-related services or for implementing technology transfer projects, notably environmentally friendly technologies and ITC; • indirect support: delivered through funding of infrastructure and services of technology parks, innovation centres, university liaison and transfer offices, etc. <p>Direct or indirect support for creation of poles (involving public and non-profit organisations as well as enterprises) and clusters of companies</p> <ul style="list-style-type: none"> • direct support: funding for enterprise level cluster activities, etc. • indirect support through funding for regrouping R&D infrastructure in poles, infrastructure for clusters, etc.
<p>Boosting applied research and product development</p>	<p>Funding of “Pre-competitive development” and “Industrial research” projects and related infrastructure. Policy instruments include:</p> <ul style="list-style-type: none"> • aid schemes for single beneficiary or groups of beneficiaries (including IPR protection and exploitation); • research infrastructures for non-profit/public organisations and higher education sector directly related to universities. <p>Any direct or indirect support for the creation of innovative enterprises (spin-offs and start-ups)</p>

Instruments	Short description
<p>Infrastructures and facilities</p>	<p>Building and equipment for laboratories or facilities for university or research centres, Telecommunication infrastructures, Building and equipment for incubators and parks for innovative enterprises</p>
<p>Aid schemes</p>	<p>Grants and loans for RTDI projects Innovative finance (venture capital, equity finance, special bonds, etc.) for innovative enterprises</p>
<p>Education and training</p>	<p>Graduate and post-graduate University courses Training of researchers</p>

Beneficiaries	Short description
<p>Public sectors</p>	<p>Universities National research institutions and other national and local public bodies (innovation agencies, BIC, Chambers of Commerce, etc..) Public companies</p>

Private sectors	Enterprises Private research centres
Others	NGOs
Networks	cooperation between research, universities and businesses cooperation between businesses (clusters of SMEs) other forms of cooperation among different actors

ANNEX C – CATEGORISATION OF EXPENDITURE TO BE USED FOR CALCULATING EU COHESION POLICY RESOURCES DEVOTED TO INNOVATION

FOI Code	Priority Theme
	Research and technological development (RTD), innovation and entrepreneurship
01	R&TD activities in research centres
02	R&TD infrastructure (including physical plant, instrumentation and high-speed computer networks linking research centres) and centres of competence in a specific technology
03	Technology transfer and improvement of cooperation networks between small businesses (SMEs), between these and other businesses and universities, postsecondary education establishments of all kinds, regional authorities, research centres and scientific and technological poles (scientific and technological parks, technopoles, etc.)
04	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)
05	Advanced support services for firms and groups of firms
06	Assistance to SMEs for the promotion of environmentally-friendly products and production processes (introduction of effective environment managing system, adoption and use of pollution prevention technologies, integration of clean technologies into firm production)
07	Investment in firms directly linked to research and innovation (innovative technologies, establishment of new firms by universities, existing R&TD centres and firms, etc.)
09	Other measures to stimulate research and innovation and entrepreneurship in SMEs
	Information society
11	Information and communication technologies (access, security, interoperability, risk-prevention, research, innovation, e-content, etc.)
12	Information and communication technologies (TEN-ICT)
13	Services and applications for the citizen (e-health, e-government, e-learning, e-inclusion, etc.)
14	Services and applications for SMEs (e-commerce, education and training, networking, etc.)
15	Other measures for improving access to and efficient use of ICT by SMEs
	Human capital

74	Developing human potential in the field of research and innovation, in particular through post-graduate studies and training of researchers, and networking activities between universities, research centres and businesses
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