Regional Innovation Monitor

Regional Innovation Report (Mazovia)

To the European Commission
Enterprise and Industry Directorate-General
Directorate D – Industrial Innovation and Mobility Industries

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The Regional Innovation Monitor (RIM) is an initiative of the European Commission's Directorate General for Enterprise and Industry, which has the objective to describe and analyse innovation policy trends across EU regions. RIM analysis is based on methodologies developed in the context of the INNO-Policy Trendchart, which covers innovation policies at national level as part of the PRO INNO Europe initiative.

The overarching objective of this project is to enhance the competitiveness of European regions through increasing the effectiveness of their innovation policies and strategies. The specific objective of the RIM is to enhance the scope and quality of policy assessment by providing policy-makers, other innovation stakeholders with the analytical framework and tools for evaluating the strengths and weaknesses of regional policies and regional innovation systems.

RIM covers EU-20 Member States: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden and the United Kingdom.

This means that RIM will not concentrate on Member States where the Nomenclature of territorial units for statistics NUTS 1 and 2 levels are identical with the entire country (Estonia, Latvia, and Lithuania), Malta which only has NUTS 3 regions, Slovenia which has a national innovation policy or Cyprus and Luxembourg which are countries without NUTS regions.

The main aim of 50 regional reports is to provide a description and analysis of contemporary developments of regional innovation policy, taking into account the specific context of the region as well as general trends. All regional innovation reports are produced in a standardised way using a common methodological and conceptual framework, in order to allow for horizontal analysis, with a view to preparing the Annual EU Regional Innovation Monitor reports.

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1 http://www.rim-europa.eu
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Executive Summary

1. Introduction: Main recent trends in the Regional Innovation System

The economy of Mazovia is developing rapidly, at about 7% per annum. Among the main competitive advantages of Mazovia are: strong research potential, the presence of the main financial institutions and qualified staff. As a result, it is not surprising that Mazovia is a leading Polish region in terms of inflow of foreign direct investment. During the last three years for which data are available (since 2007), annual average investments are estimated at about €4.69b. Two particular issues of concern, however, are the large number of companies that have ceased trading, and growing public debt.

The analysis of innovation performance over the last ten years shows a mix of both positive and negative trends. Mazovia has certainly improved its performance, especially in terms of R&D and innovation investment intensity. Recent developments also show that there has been a consolidation of efforts and activities undertaken by different R&D performers. On the other hand, there are still major structural barriers that have not been resolved, such as a high share of R&D activities funded by the State.

2. Major innovation challenges and policy responses

Based on the analysis of main trends in the Regional Innovation System (RIS), the following three main challenges for the regions have been identified:

Challenge 1: Strengthen the diffusion process between the metropolitan area and sub-regions.

In particular, there is a need to identify areas of shared interest between different sub-regions and the Warsaw area. It is also necessary to establish a better understanding about the drivers required for innovative start-ups to be established outside the Warsaw area. All this will be a difficult task, but the overarching objective (ideal scenario) should be to develop strong sub-regional poles mutually co-operating with the Warsaw area and with each other as much as possible.

Challenge 2: Establish greater prioritisation in the future innovation programmes.

Keeping in mind that Mazovia could lose convergence region status in the next programming period of the EU Structural Fund interventions, the challenge is not only to find new sources of funding, but also above all to establish linkages with the national funding system to maximise the added value of regional programmes during the forthcoming programming period. At present the national and regional programmes offer similar types of support.

Challenge 3: Pay greater attention to the role of foreign direct investments and growth of existing companies.

As noted earlier, Mazovia is a leading Polish region in terms of inflow of foreign direct investments. For SMEs, those investments represent an opportunity to become more actively involved in international business activities. For policy makers, the challenge is to watch closely the developments and establish an environment conducive to co-operation and innovation. It is also observed that on balance the trend in terms of creation of new companies is positive, but the numbers of companies that ceased trading is substantial. The focus should be placed on increasing the survival rate of operating companies.
3. Innovation policy governance

The overall autonomy of the regional authorities vis-à-vis the central government is important, although not as strong as in other decentralised governance systems in the EU. Launched in June 2005, the RIS-Mazovia project aimed at fostering co-operation between the scientific and research institutions, industry, and local and regional government administration. The Regional Assembly formally adopted the Strategy in April 2008. The post-RIS Mazovia activities have been continued with support provided from the ESF programme ‘Human Capital Operational Programme 2007-2013’.

While there have been some changes in the management and co-ordination of RIS (since 2005), including the establishment of the Regional Innovation Council, and the launch of new systemic projects overseen by the Marshal Office, the adoption of the National Strategy for Regional Development will have a significant impact on relations between different levels of governance in coming years. In essence, the Strategy represents a shift from a highly centralised governance model (top-down) towards strengthening multi-level governance.

With regard to availability and use of policy intelligence tools, the key emerging conclusion from the present analysis is that the dearth of evaluation and foresight studies has been rectified significantly over the recent years, which should provide the basis for the preparation of new generation of evidence-based policies.

4. Conclusions: future actions and opportunities for innovation policy

With regard to the three main challenges, the present report puts a spotlight on the need to strengthen diffusion of innovation between the Warsaw metropolitan area and other sub-regions, and the need to establish greater focus of innovation policy, especially in view of the phasing-out of Mazovia from convergence region status. In addition, adequate attention needs to be paid to the role of foreign direct investors, and to increasing the survival rate of operating companies.

Concerning governance, the key challenges and opportunities faced by regional innovation policy-makers are concentrated around: multi-level governance (included in the recent National Strategy for Regional Development), capacity, tools and partnership.

With regard to smart specialisation, there are interesting developments taking place in the areas of opto- and nano-electronics, advanced materials, energy, and aviation, etc. It should be noted that policies should not be exclusively focused on specific sectors or technology areas, but support should be provided along the value-chain. In particular, the focus of future interventions should be placed on providing support for niche areas.

Based on the existing evidence, it can be concluded that possible future orientations and opportunities for regional innovation policy in Mazovia lie particularly in:

1. Developing a strong partnership by bringing together all key stakeholders of the regional innovation system.

   Building a new momentum during the update of the Regional Development Strategy, and possibly later during the revision of RIS, offers an important opportunity for developing an environment conducive to innovation activities based on co-operation. It has to be recognised that public consultations are essential, but it is equally important to provide suitable solutions to the problems encountered by the regional innovation stakeholders. In essence, engaging different actors requires continuous efforts so that there is an ownership developed during both the design and implementation on new innovation strategies.
2. **Improving strategic intelligence and drawing lessons from the implementation of ongoing innovation programmes.**

There is a need to improve the availability and reliability of statistical data. This requires co-operation between the Marshal Office, Central Statistical Office and central administration. The ongoing systemic project of the Marshal Office is considered as a step in the right direction, but further efforts are needed to integrate the existing evidence and identify the gaps. Lessons also need to be drawn from the implementation of innovation programmes. A radical shift from grants to financial engineering schemes will not necessarily provide all the solutions. In particular, those activities that would complement the activities funded from the national programmes will have a high added value.

3. **Establishing a greater prioritisation concentrating on key areas of strategic importance for the regional development.**

In the era of budgetary constraints, it will be important to focus public support on a selective number of areas to contribute to consolidation of RTDI efforts along the value-chain, and not on a single sector or technology area. This will represent an enormous challenge in Mazovia, which is characterised by the highest concentration of RTDI activities in Poland, but also by a relatively low innovation performance in comparison with other EU regions.
1. Main Trends and Challenges in the Regional Innovation System

1.1 Recent trends in regional economic performance

Relative to the EU27 average, Mazovia scores high on GDP per capita growth. During the 2005-2008 periods, Mazovia recorded a growth of 7.44% compared to 3.73% in the EU27. Since 2000, Mazovia has improved its performance in terms of GDP per capita, almost reaching the EU27 average in 2008. It has also managed to significantly reduce the level of unemployment from almost 13% (2000-2003) to less than 6% (2007-2010). Appendix D contains more detailed statistical data.

In comparison with other Polish regions, Mazovia accounts for the highest share of total Polish GDP. This share is estimated to be 21.5% in 2008, almost identical with the share in 2000. During the 2000-2008 period, the Mazovian economy recorded growth of 83%, higher than the average national growth estimated at 70%. According to the latest available data for 2008-2009, the economy has grown at a rate of 7% per annum. Measured by GDP per capita, Mazovia is the wealthiest region in Poland. In 2008, GDP per capita was estimated at €15,164 and is almost 58% higher than the country average (Central Statistical Office, Local Data Bank).

By the end of 2010, the unemployment rate was estimated at 9.4%, which was slightly lower than the average unemployment in Poland of 10%. Within, Mazovia, however, there are high sub-regional differences. The highest levels of unemployment were recorded in the following sub-regions: szydlowiecki – 35.9%, radomski – 30.4% and przysuski – 25.7%. By contrast, the areas with the lowest levels of unemployment are: Warsaw – 3.5%, and the following sub-regions: warszawski zachodni – 6.0%, pruszkowski – 6.9% and grodziski – 7.2% (Voivodeship Labour Office, 2011).

Despite those differences, Mazovia is the leader of the Polish transformation and fastest developing metropolitan area in the country and Central Europe. The Gdańsk Institute for Market Research (2010) ranked Mazovia as the third most attractive Polish region for investors. This is reflected in available data on foreign investment. By the most recent count, it is estimated that there are some 23,500 companies with foreign capital operating in the region. Among the main features of the region determining its competitive position are its strong research potential, the high foreign investment, the presence of the main financial institutions, and qualified staff.

In terms of inflow of foreign direct investments, Mazovia is a leading Polish region. During the 2007-2010 period, the annual average level of foreign investment in Mazovia is estimated at about €4.69b, followed by Śląskie (€1.02b), and Dolnośląskie (€1b). This shows that Mazovia recorded an increase of FDI 4.5 times that of each of the other two regions (Biuro Inwestycji i Cyklii Ekonomicznych, 2011).

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2 Average of exchange rate in 2008: 1EUR=3.479858333PLN.
Of the 100 largest companies in Poland, some 43 have headquarters in Warsaw. As an example, the largest electricity company in Poland (PGE) employs almost 46,000 people, the Polish Oil and Gas Company (PGNiG), a leader in the natural gas market in Poland employs almost 33,000, Polimex-Mostostal, an engineering and construction company, employs almost 13,000, one of Central Europe’s largest refiners of crude oil (PKN Orlen) employs more than 4,500, and GK Polski Holding Farmaceutyczny employs some 3,700. There are also Special Economic zones functioning in Mazovia. Those include: Warmia-Mazury Special Economic Zone, Tarnobrzeg Special Economic Zone, the „Starachowice” Special Economic Zone, and Lodz Special Economic Zone.

The 2008 gross value added (GVA) of manufacturing industries in Mazovia was roughly 15% of total Polish GVA, compared to 33.1% in Śląskie. In recent years (since 2005), the decrease in manufacturing sector GVA (1.7 %) was higher in Mazovia than in any other Polish region (Central Statistical Office, 2010).

According to 2009 data, approximately 17% of the workforce is employed in the manufacturing sector. This represents 362,000 employees, of whom 306,000 are employed in the processing industries (Central Statistical Office, Local Data Bank). A specific feature of Mazovia is that some 16,482 are employed in the agriculture sector, which is more than 11% of the country workforce in that sector - agriculture plays an important role outside Warsaw. Mazovia has the largest area of farmland among the Polish regions and is in first place in terms of agricultural production.

Despite a general good performance and positive trend in terms of creation of new companies, the numbers of companies that ceased trading is substantial – in 2010 33,385 ceased their activities, including more than 2,600 companies from the manufacturing sector (Central Statistical Office, Local Data Bank).

An additional issue is the present situation of public finances. According to the latest available information regarding the 2011 budget, income is planned at 2.76b PLN and expenditures at 3.24b PLN. Consequently, there is a budget deficit of 486.2m, which in turn causes an increase in debt. The debt is estimated at 1.5b PLN, equivalent to €338m or 54% of the forecast income. The region is planning to repay the total debt by 2033. It is argued that a substantial reduction in taxes introduced in previous years, which, despite record economic growth, was not accompanied by an appropriate adjustment on the expenditure side, led to a significant increase in the deficit (The Regional Assembly of Mazovia, 2011).

In this context, it is important to mention a recent legislative proposal which aims at introducing reforms to the current system of transfer of financial means from regions with higher income to less favourable regions, known also as ‘Janosikowe’. It is estimated that back in 2010 Mazovia had to pay more than 60% of its taxes for this purpose, and the draft proposal foresees a reduction by 20%. On the whole, the objective is not to remove the subsidy mechanism but introduce the necessary reforms with the view of supporting also more dynamically developing regions.

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4 http://www.wmsse.com.pl
5 http://www.tsse.pl/en
6 http://www.sse.com.pl
7 http://www.sse.lodz.pl/en
10 Exchange rate: September 2011 (1 EUR is equal to 4.437700 PLN).
11 The maximum allowed debt is 60%.
1.2 Recent trends in regional innovation performance

During the 2000s, Mazovia has improved its performance, especially in terms of innovation investments. For example, gross expenditure on R&D activities in the manufacturing sector increased by 56% during the 2005-2009 period. The positive trend can be also reflected in the changes of structure of R&D expenditures – currently slightly more than two-fifths is used for experimental development compared to 35% in 2004.

In contrast to those positive developments, there is a general low level of investments in R&D activities (in 2009: €803m), which however represent 38.6% of total investments in Poland. More importantly, the share of state funding in GERD has recorded an upward trend and accounts for 67.5% of total expenditures, which is the third highest among all 16 Polish regions (Central Statistical Office, 2005/2011).

Similarly, a mix of positive and negative trends emerges from a further analysis of innovation investments. During the last eight years for which data are available (since 2002), innovation investments in the manufacturing sector have increased 2.5-fold. Despite this positive development, the investments are to a large extent focused on buildings, machinery and equipment and much less on technology and R&D activities. Currently, the shares of expenditures in buildings and machinery and equipment in total innovation investments are respectively 27.6% and 56.6% (Central Statistical Office, 2011).

Besides that, the proportion of manufacturing companies investing in innovation declined to 13.7% in 2009 (Central Statistical Office, Local Data Bank). As noted in the analysis of Śląskie (Walentowski, 2011a), this trend can be explained by the fact that, following the initial investments, companies are looking currently to increase the return of their previous investments. Nevertheless, the level of innovation investments in the manufacturing sector recorded an annual growth of 1% between 2008 and 2009. The average investment in all Polish regions fell by some 8%, which reflects the changes between the programming periods in the EU Structural Fund interventions.

The service sector plays an important role in the region. The latest available data (2009) shows innovation investments in the service sector standing at about €1.3b, and representing 70% of this type of investment in Poland. The potential for developing service innovation stands as taking steps to stimulate diffusion of innovation to companies operating in the manufacturing sector (in 2009: almost 26,000 such companies) is significant, even though the sector recorded a decline of innovation investments (-3.5%) during the 2006-2009 period.

A recent noteworthy trend is a consolidation of activities undertaken by different R&D performers. This process was initiated by the Act on Research Institutions of April 2010. The establishment of the National Centre for Nuclear Research in September 2011, as a result of merging the former the Institute of Atomic Energy POLATOM, and the Andrzei Soltan Institute for Nuclear Studies, is a concrete example. The specialisation of that centre is not only nuclear power - it also produces radiopharmaceuticals and equipment for various branches of science and economy, including medicine. The activities of other institutes such as the Institute of Aviation show how some research institutes have successfully developed their strategies. The Institute has established a strategic alliance with General Electric, provides services to UTC, MTU and Airbus, and managed to secure an annual growth rate of 20% in its financial results and the number of researchers employed.

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13 http://www.ipj.gov.pl/english
14 http://ioa.edu.pl/
With regard to skills for innovation, it should be noted that the overall number of R&D personnel declined by 904 during the 2004-2009 period (Central Statistical Office, 2005/2011). While personnel with the title of Professor decreased by 5%, the staff with 'habilitation' and PhD increased by 14% and 13%, respectively. The challenge for Mazovia, in common with other Polish regions, is to take appropriate action better match the supply of skills with business sector needs.

There is another important issue to be taken into account when assessing Mazovia’s recent trends in innovation performance, namely a significant increase in public support to innovation activities. It is estimated that the available budget for innovation activities, mainly supported by the EU Structural Fund (SF), has increased significantly in the course of the last few years, reaching €764m during the 2007-2013 financial perspective. This does not take into account the national programmes, which raise the total public innovation investment in Mazovia further.

As in other Polish regions, Mazovia has witnessed the emergence of new investments and institutions. Altogether, Mazovia has 70 research institutes, 15 technology platforms, eight cluster initiatives, two science and technology parks, 15 technology transfer offices, and eight entrepreneurship incubators. So far, there is no evidence of the actual long-term outcomes or impacts of recent initiatives on innovation capacities of enterprises in Mazovia. The latest available statistics are for 2009, whereas the implementation of the 2007-2013 programming period only started in 2008/2009. The appraisal of regional innovation policies presented in Section 3.2 is subject to this caveat.

Figure 1-1 Economic and innovation performance indicators

Source: Eurostat.
1.3 Identified challenges

Challenge 1: Strengthen the diffusion process between the metropolitan area and sub-regions.

The development gaps between the capital region (Warsaw) and sub-regions, and intra-regional differences, are the greatest in Poland. To illustrate this, it is estimated that by the end of 2010 the highest levels of unemployment were recorded in the following sub-regions: szydlowiecki – 35.9%, radomski – 30.4% and przysuski - 25.7%, compared with an average of 9.4% in Mazovia as a whole and 3.5% in the Warsaw area.

In particular, there is a need to identify areas of shared interest between different sub-regions and the Warsaw area. It is also necessary to establish a better understanding about the drivers required for innovative start-ups to be established outside the Warsaw area. All this will be a difficult task, but the overarching objective (ideal scenario) should be to develop strong sub-regional poles mutually co-operating with the Warsaw area and with each other as much as possible.

Challenge 2: Establish greater prioritisation in future innovation programmes.

The region of Mazovia could lose the convergence region status in the next programming period of the EU Structural Fund interventions. Taking this into account, calls have been made recently to establish programmes funded by the State to compensate for the significant loss of funds, which will be available in the Regional Operational Programme 2014-2020. This undoubtedly represents a great challenge, but also offers an opportunity for prioritising key areas of strategic importance for regional development.

At present, the support measures implemented in the framework of the national programme ‘Innovative Economy’ 2007-2013 are reflected within the Regional Operational Programme. The challenge is not only to find new sources of funding, but above all to establish linkages with the national funding system to maximise the added value of regional programmes during the forthcoming programming period.

Challenge 3: Pay greater attention to the role of foreign direct investments and growth of existing companies.

As noted earlier, Mazovia is a leading Polish region in terms of inflow of foreign direct investments. For SMEs, those investments represent an opportunity to become more actively involved in international business activities. For policy makers, the challenge is to watch closely the developments and establish an environment conducive to co-operation and innovation.

It is also observed that on balance the trend in terms of creation of new companies is positive, but the numbers of companies that have wound up their activities is substantial. Proponents of concentrating policy support on young innovative companies argue that start-ups play a very important role in the economy. Opponents consider that the support should not be disproportionate and should primarily be focused on existing businesses. The truth of course is that the policy should not support exclusively either start-ups or existing companies, although the regional policy makers face the particular challenge of increasing the survival rate of operating companies.
2. Innovation Policy Governance

2.1 Degree of institutional autonomy

The overall degree of legal autonomy of the regional authorities vis-à-vis the central government is important, although not exceptionally strong, especially when compared with the most decentralised governance systems in the EU. The legal status of Mazovia clearly states that the region is responsible for undertaking activities of public character that do not fall under the competences of the central government.

In practice, the region undertakes activities independently and on its own responsibility, and manages the assets of the region as well as its finances on the basis of regional budget. Most importantly, however, Mazovia (as well as other Polish regions) is responsible for the design and implementation of Regional Development Strategy. During the design stage, the regional authorities cooperate with a series of actors, especially local and central administrations as well as other regions.

In relation to the budgetary autonomy in Mazovia, the two main sources of income are the Personal Income Tax and Corporate Income Tax channelled to the region. These two sources of funding represented 57% of the total budget in 2011.

In terms of importance, funding from the central government come next, i.e. roughly 17%, followed by EU funding accounting for 15%. Overall, this means that under the current system Mazovia almost entirely relies on funding channelled from the national and EU level (Board of Voivodeship of Mazovia, 2011a).

A recent development is the adoption of the 2010-2020 National Strategy for Regional Development by the central government. With regard to the degree of institutional autonomy, the Strategy is focused on increasing the role of self-government bodies and the Ministry of Regional Development as well as strengthening partnership among relevant local and regional actors. This can be seen as a move away from a top-down approach towards a multi-level governance model. More detailed information about the proposed changes are presented and discussed in Section 2.2.

Concerning the higher education institutions and public research organisations, governance is applied centrally, although it is important to remember that the regional authorities take decisions regarding various types of infrastructure projects, including park initiatives and incubators. Although the regional authorities do not have direct influence on those institutions, they certainly have a role to play in developing the regional triple helix and strong partnership between all actors of the regional innovation system.

While regions are responsible for the preparation and implementation of their regional strategies, the main issue of concern among Polish regions is the absence of regional powers to influence the design of national programmes, which represent significant funding, which flows directly to the sub-national level.
2.2 Institutional-set up, co-ordination and implementation mechanisms

Launched in June 2005, the RIS-Mazovia project aims at fostering co-operation between the scientific and research institutes, industry, and local and regional government administration, as well as developing the first regional innovation strategy. The overarching goal of the project includes creating conditions for the economic and sustainable growth of the region. In particular, the focus is placed on improving the competitiveness of SMEs by providing support for the implementation of new technologies and for the development of innovation skills. The Regional Assembly of Mazovia formally adopted the Strategy, with the time horizon of 2015, in April 2008. Hence, the 2007-2013 programming period had been prepared before the Strategy was adopted which allowed in the opinion of regional authorities to tailor the long-term planning to the available funding mechanisms. The comparison with the Regional Innovation Strategies adopted by other regions prior to the preparation of the current programming perspective does not however reveal major differences in the focus.

The RIS-Mazovia was supported by the EU Sixth Framework Programme and thereby required the participation of international partners. The Marshal Office teamed up with two organisations, namely the META Group (Umbria) and the Regional Development Agency of Brandenburg (ZAB). During the 2005-2008 period an important milestone was the creation of Regional Innovation Council as an advisory body to the Marshal Office on RTDI-related issues.

The post-RIS Mazovia activities have been continued thanks to a support provided within a sub-measure (8.2.2, Regional Innovation Strategies) of the Human Capital Operational Programme 2007-2013. This allowed commencement in September 2009 of activities within a systemic project of the Marshal office “Building monitoring system and evaluation foundations for the implementation of the RIS”. Among the main tasks of that project are: the development of a conceptual framework for a monitoring and evaluation system, the implementation of an on-line monitoring and evaluation platform, the implementation of the monitoring and evaluation system, and the realisation of info-promotion activities. The project is planned to be completed by October 2015.

Another systemic project is the Mazovian Innovation Network. It aims at developing a regional web-based platform to facilitate exchange of views, and to provide sources of interesting and useful information in the field of innovation, entrepreneurship, science and technology. The pilot phase of the project was completed in July 2011 and currently is subject to an evaluation, which will validate the effectiveness of campaigns to raise awareness. On this basis, it will be possible to select the best communication channels and tools to reach the regional innovation stakeholders. Among the planned activities are: the continuation of the Mazovian Innovator Competition, the introduction of pilot grant schemes to foster science-industry co-operation, and the preparation of development strategies of five strategic cluster initiatives. According to our source of information, the project’s activities have been recently re-launched.

With regard to horizontal co-ordination, the Regional Innovation Council plays an important role by bringing different actors of the regional innovation system of Mazovia together. The Council is composed of different stakeholders, including the Marshal - Chairman of the Council, members of the regional Board, representatives of regional institutions, scientific institutions, private sector, business intermediary institutions, central administration, and regional and local administrations.

15 http://www.msodi.mazovia.pl
In the statute of the Council it is stated that it shall meet at least twice per year, which is considered by the practitioners as insufficient. The 2010 report analysing the conditions of innovation since the adoption of the RIS Mazovia 2007-2015 recommended that the sessions of the Innovation Council take place more often than had been originally foreseen. Up to October 2011, two Council meetings had been organised.

Figure 2-1 presents the evolution of programming and implementation of RIS in Mazovia during the 2005-2011 period.

Figure 2-1 Timeline of Priority Setting of Regional Innovation Strategies

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<tr>
<th>2005 - 2008</th>
<th>2009 - 2011</th>
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<td>RIS Managing Unit</td>
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<td>Marshal Office</td>
<td>Marshal Office</td>
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<td>Innovation Council (as of October 2008)</td>
<td>Innovation Council</td>
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<td>RIS Coordination Unit</td>
<td>RIS Coordination Unit</td>
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<tr>
<td>Marshal Office</td>
<td>Marshal Office</td>
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<tr>
<td>Warsaw University of Technology (Centre for Technology Transfer and Entrepreneurship Development)</td>
<td>Department of Strategy and Regional Development (Innovation Unit)</td>
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<td>Information Processing Centre (OPi)</td>
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<td>Centre of Technology Transfer and Promotion of Innovation - IRC</td>
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<td>META Group (Umbria)</td>
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<td>Regional Development Agency of Brandenburg (ZAB)</td>
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<td>Source of financing</td>
<td>Source of financing</td>
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<tr>
<td>RIS-Silesia Project</td>
<td>8.2 Human Capital Operational Programme</td>
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<td>6 Framework Programme EU</td>
<td>Operational Programme Innovative Economy</td>
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<td>2.6 Integrated Regional Operational Programme 2004-2006</td>
<td>Regional Operational Programme</td>
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<tr>
<td>Procedures of project selection</td>
<td>Procedures of project selection</td>
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<tr>
<td>Competitive</td>
<td>Marshal Office individual projects</td>
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</table>

Source: Own assessment.

With regard to multi-level co-ordination mechanisms for innovation policy making, it should be pointed out that the Convent of Marshals (Heads of Voivodeships) plays an important role in ensuring co-ordination between the central government and the sub-national level. The existing challenges to co-operation are significant. To illustrate this, the Convent issued in May 2011 a position concerning the National Reform Programme (NRP) for the realisation of the Europe 2020 Strategy, in which it expressed concern about the current mode of work on the NRP and underlined that despite declarations to strengthen social participation and inclusion of regions in the process, the Programme was being carried out practically without their participation (Convent of the Marshals of Voivodeships, 2011).

The scope and extent of planned changes will put the working relations between different levels of governance to the test. Adopted by the Government in July 2010, the National Strategy for Regional Development introduces a shift from a highly centralised governance model (top-down) towards a strengthened multi-level governance system.
In a nutshell, the National Strategy for Regional Development (also known as KSRR) is considered as an attempt:

- to target selected strategic priorities based on specific development potential of the regions (place-based policy);
- to strengthen vertical and horizontal co-ordination;
- to establish new relations between the government and voivodship self-governments by means of Territorial Contracts – those contracts will serve as the basis for agreement between central and regional governments on the most important objectives and priority initiatives to be undertaken and funded by the regional development policy;
- to build an effective and efficient implementation system of development activities; and
- to build social capital through co-operation networks between different actors of the regional policy.

In particular, regions point to the urgent need of preparing a package of institutional and legal changes to enable the KSRR to effectively achieve its objectives, including the division of powers between central and local administration. Secondly, it is unclear what in practice effective “territorial” sectoral policies, an important supplement to the Strategy, will involve. Besides that, the regions underline that the effectiveness of Territorial Contracts will to a large extent depend on factors such as a correct identification of contractual parties, clarity regarding the sources of funding, and an appropriate legal framework.

In May 2011, the Ministry of Regional Development issued guidelines of updating the Regional Development Strategies. The process of updating those strategies is an obligation specified by the Act on Local Self-Government. It has also to be remembered that strategies are developed at different governance levels, notably by the EU and at the national level. Consequently, adjustments to strategic regional documents are necessary. The preparation of new Regional Development Strategies also has a practical dimension, as it will be the basis for setting out priorities of the Regional Operational Programmes 2014-2020.

In October 2011, the document setting out the principles for the new Mazovian Regional Development Strategy was published. An important element of the initial work on the document will be consultations on those principles with institutions involved in regional development and the inhabitants of the region. In the next phase, the preparation of the actual Strategy will be launched, following the process of consultation. The end result of all the work will be the adoption by the Regional Assembly of an updated Regional Development Strategy for Mazovia.

Figure 2-2 shows the management and implementation structure of the RIS-Mazovia.

The Board of Mazovia Voivodeship is the body responsible for the implementation of the RIS. Among the main tasks of the Regional Innovation Council are: issuing responses to programming and strategic documents concerning the development of innovation in Mazovia, assessing the implementation of RIS and formulating changes to be introduced into the Strategy, responding to and initiating pro-innovation projects, and making proposals for in-depth studies and analysis with the view of determining future areas of strategic importance for the region. The Council takes decisions in an open vote by simple majority with a quorum of one third of Council Members.

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Figure 2-2 Management and implementation structure of the Regional Innovation Strategy

Source: Own assessment.

The **Unit of Innovation** of the Department of Strategy and Regional Development of the Marshal Office acts as the secretariat to the Council. Apart from the tasks related to the development and implementation of the RIS, the Unit is responsible for undertaking activities within the e-Regional Development Strategy, the development of clusters, the development of the economy, entrepreneurship and innovativeness, and co-ordination with the Programming Unit on matters relating to the Regional Operational Programme. A part of the 12-person team is dealing with the above-mentioned tasks and others are responsible for the management of ongoing projects.

The **Mazovian Unit of EU Programmes Implementation** carries out the tasks arising from the Regional Operational Programme and the regional component of Mazovian Human Capital Operational Programme 2007-2013.

Established in 2003, the **Mazovian Credit Guarantee Fund** is as a joint initiative of regional governments and government institutions to support the growth of micro, small and medium enterprises. The Fund is a local government entity and the largest nonprofit regional credit guarantee facility, servicing Mazovian enterprises.

The **Mazovian Regional Loan Fund** was created in 2004 by the Marshal of Mazovia to develop the SME sector by providing preferential loans and carry out tasks consistent with the Regional Development Strategy.

The **Mazovian Development Agency** created in 2005 is tasked among other things with the promotion of regional economic and investment potential, providing an investor service, initiating projects between public and private entities, research centres, etc. The Company’s founder is the territorial self-government unit of Mazovia Voivodeship.
2.3 Availability and use of policy intelligence tools

With regard to policy intelligence tools, evidence-based methods have been increasingly used in regional policy making. Recently, we have identified the following evaluations of measures in support of innovation funded within the Regional Operational Programme:

- Optimising the system of indicators and criteria for project selection in the context of the objectives of the ROP Mazowiecki 2007-2013\(^\text{17}\);
- Identification of barriers in the implementation of projects under measures 1.6, 1.8, 4.2 of the Regional Operational Programme 2007-2013 Mazovia\(^\text{18}\); and
- Analysis of the applications submitted under the two competitions for Measure 1.5 "Development of Entrepreneurship, Regional Operational Programme of Mazovia from 2007 to 2013"\(^\text{19}\).

The duration of evaluations tends to be relatively short. For example, the evaluation of Optimising the system of indicators and criteria for project selection was carried out during the period July – November 2010. The budgets of those evaluations range from: above 75,000 PLN or €16,900\(^\text{20}\) (first evaluation), between 30,000 and 75,000 PLN or between €6,760 and €16,900 (second evaluation), and up to 30,000 PLN or €6,760 (third evaluation). The assessment of the impacts of activities within the ROP on achieving the main objective and specific objectives of the Programme is subject of an ongoing 8-month evaluation (€56,000), which should be available shortly.

More detailed results and findings of those evaluations are presented in Section 3.2.

The ongoing systemic project of the Marshall Office “Building monitoring system and evaluation foundations for the implementation of the RIS”, mentioned above, is a response to the absence of an analytical and practical framework for monitoring and evaluation of regional programmes in support of innovation activities. In this respect, the immediate challenge will be to improve the availability and reliability of data to inform future evaluations. It is also important to remember that the logical framework provides the baseline of any evaluation. Most importantly, it is also a very useful management tool in the design and monitoring of programmes, which can be used in discussions regarding challenges and any required corrective measures.

Launched in 2006, the Mazovia foresight project sought to identify the primary technologies of great importance for the strategy of the Mazovia region, and their development within the next 20 years. The interdisciplinary analysis carried out within the project and the technological forecast for sustainable development resulting from it, are focused on the following areas: Living standards of the society, Energy, Ecology, Technologies for environmental protection, Natural resources and new materials, Economical growth, and Infrastructure.

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\(^\text{20}\) Exchange rate: September 2011 (1 EUR is equal to 4,437700 PLN).
So far there have been three foresight projects in Mazovia funded within the Operational Programme Innovative Economy, namely:

- **Economic use of waste from the mining industries**\(^21\), led by the Institute of Mechanised Construction and Rock Mining. This aims to identify investment priorities in research and technological development, to change the orientation of science and innovation system, and to strengthen the potential of the Polish R&D sector and public sector enterprises.

- **Advanced technologies for industrial and ecological sustainable development**\(^22\), led by Institute for Sustainable Technologies - National Research Institute. This aims to develop a map of directions of research and development in the country on issues of production technology, operation of machinery and equipment, environmental protection and education of staff on the needs of advanced industrial technologies, taking into account the needs of industry and potential of research entities to develop an implementation plan and vision for the development of these technologies in the area of sustainable development over the horizon for 2020.

- **Academic Mazovia 2030**, led by the Warsaw University of Technology\(^23\). This aims to develop a strategy for the most promising fields of education, research and regional policy, consistent with the projected development of the region by 2030.

According to the practitioners, results of foresight could be useful for different stakeholders. With regard to the last example, the findings can be used by universities in developing their own development strategies. Local authorities may also find them useful for helping to update strategic documents, while representatives of government authorities will be able to use the results to establish a list of preferred areas of education, creation of conditions conducive to the development of higher education, etc.

In conclusion, the lack of evaluation and foresight studies has been overcome to a significant extent, which should provide the basis for the preparation of new generation of evidence-based policies.

### 2.4 Key challenges and opportunities

The key challenges and opportunities faced by regional innovation policy-makers with respect to governance aspects are concentrated around the four main issues of multi-level governance, capacity, systematic solutions to monitoring/evaluation and partnership.

With regard to **governance**, it has been recognised that there is a general lack of strategic planning in Poland, which is a result of a sectoral approach to planning and implementation of support programmes. In particular, there is a lack of co-operation between different levels of governance. In response to those weaknesses, the National Territorial Forum was inaugurated in July 2011 and similar foray are also planned at the regional level. The established of such platforms can be considered as a first permanent initiative for strategic debate on the issues of wider management of the development of the country. This should allow the exchange of experience and good practices among the main actors involved in the development policy at both the national and sub-national levels.

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\(^{21}\) [http://www.foresight-ogwk.pl](http://www.foresight-ogwk.pl)

\(^{22}\) [http://www.portaltechnologii.pl](http://www.portaltechnologii.pl)

\(^{23}\) [http://akademickiemazowsze2030.pl](http://akademickiemazowsze2030.pl)
One of the most important modifications brought by the National Strategy for Regional Development is the introduction of the proposed territorial contract. This is primarily an agreement on the main aspects such as development goals, ways of achieving them, and sources of funding. In this respect, the challenge will be the implementation of new forms of co-operation that will shape relations between state and region in the years to come.

With regard to **capacity**, there is a need to further develop competences and experience at all stages of support programmes, including programming, design, implementation, monitoring, and evaluation. This does not necessarily need to be a long-term process and different options should be studied on how to strengthen the existing structure.

In the absence of **systemic solutions to monitoring and evaluation**, the ongoing systemic project managed by the Marshal Office will provide the basis for a new system of monitoring and evaluation of regional innovation policies. The challenge will be to develop a regional observatory and draw on the experience from developing such initiatives in other regions. It was confirmed during the interviews that there is a general lack of systematic analysis of available evaluation studies and foresight projects, whereas activities are undertaken if the need arises. It is also worth to underline that the regions are increasingly becoming interested in developing evidence-based policy in addition to the responsibilities related to the implementation of different support measures.

With regard to **partnership**, the biggest challenge is to engage actors and create an environment conducive to innovation. Finding concrete and practical solutions faced by different actors of the regional innovation system will be crucial for developing genuine triple helix co-operation at the regional level. The challenge the regional authorities face is a general lack of co-operation, access to the national programmes, and a large number of R&D performers and innovative companies concentrated in the region.
3. Innovation Policy Instruments and Orientations

3.1 The regional innovation policy mix

The region of Mazovia provides support to research, technological development and innovation (RTDI) through a system based on six support measures, all of which are co-financed by the EU Structural Fund. The total annual budget during a seven-year programming period of those measures is €112.6m, which represents only 14% of the 2009 gross expenditures on R&D (GERD) or roughly one-tenth of innovation investment in the manufacturing sector.

The existing portfolio of regional policy measures in support of innovation activities consists of the following instruments:

- Measure 1.1 Strengthening of research and development sector (Regional Operational Programme, 2007-2013)\textsuperscript{24};
- Measure 1.2 Building science-industry co-operation networks (Regional Operational Programme, 2007-2013)\textsuperscript{25};
- Measure 1.4 Strengthening business intermediary organisations (Regional Operational Programme, 2007-2013)\textsuperscript{26};
- Measure 1.5 Development of entrepreneurship (Regional Operational Programme, 2007-2013)\textsuperscript{27};
- Measure 1.6 Support to co-operation linkages at regional level (Regional Operational Programme, 2007-2013)\textsuperscript{28}; and
- Measure 8.2.2 Regional innovation strategies (Human Capital Operational Programme, 2007-2013)\textsuperscript{29}.

As shown in Table 3-1, the focus of ongoing innovation policies in Mazovia comprises two categories of support measures, namely Research and Technologies and Creation and Growth of Innovative Enterprises. The regional innovation policy mix omits support measures in the category of markets and innovation culture which includes measures like innovation prizes, awareness campaigns, innovative public procurement, and IT rights protection, and there is also limited support for human resources. The only existing initiative in support of these types of activities is the annual competition organised by the Marshal Office of Mazovia (also known as the Mazovia Innovator)\textsuperscript{30}.

\textsuperscript{24} http://www.rim-europa.eu/index.cfm?q=p.support\&n=15046\&r=PL12
\textsuperscript{25} http://www.rim-europa.eu/index.cfm?q=p.support\&n=15047\&r=PL12
\textsuperscript{26} http://www.rim-europa.eu/index.cfm?q=p.support\&n=15048\&r=PL12
\textsuperscript{27} http://www.rim-europa.eu/index.cfm?q=p.support\&n=15049\&r=PL12
\textsuperscript{28} http://mazovia.eu/en/
\textsuperscript{29} http://pokl.mazowia.eu/wybierz-priorytet-i-dzialanie/37.html
\textsuperscript{30} http://www.innowacyjni.mazovia.pl/projekty/konkurs-innowator-mazowsza---iii-edycja/
Table 3-1 Overview of the regional innovation policy mix

<table>
<thead>
<tr>
<th>Governance &amp; horizontal research and innovation policies</th>
<th>Research and Technologies</th>
<th>Human Resources</th>
<th>Creation and growth of innovative enterprises</th>
<th>Markets and innovation culture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Strengthening of research and development sector</strong></td>
<td>-</td>
<td>2.1.1. Universities</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1.2. Public Research Organisations</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1.4. Research Infrastructures</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>1.2 Building science-industry cooperation networks</strong></td>
<td>-</td>
<td>2.3. R&amp;D cooperation</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2.2. Knowledge Transfer</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>1.4 Strengthening business intermediary organisations</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.2.1. Support to innovation management and advisory services</td>
</tr>
<tr>
<td><strong>1.5 Development of entrepreneurship</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.3.1. Support to innovative start ups incl Gazelles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.1.1. Support to sectoral innovation in manufacturing</td>
</tr>
<tr>
<td><strong>1.6 Support to cooperation linkages at regional level</strong></td>
<td>1.3.1 Cluster framework policies</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>8.2.2. Regional innovation strategies</strong></td>
<td>1.2.2. Innovation strategies</td>
<td>-</td>
<td>3.1.3. Stimulation of PhDs</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Own assessment.

**Measure 1.1.** Mazovia provides financial support for **R&D infrastructure projects at scientific research establishments and higher education institutions.** During the seven-year programming period 2007-2013, the financial support for these areas is estimated at about €70.8m. By the end of 2013, it is expected that there will be 320 R&D projects undertaken as a result of this investment. Examples of flagship initiatives implemented in the framework of this support measure are: Support to the R&D capacity of the Technical University of Radom (cf. left image below) by constructing and equipping 7 specialised laboratories, and Establishment of new research centre of the Polish Academy of Science (cf. right image below) which is expected to play an important role in obtaining new sources of energy and preparing methods for rational utilisation of energy.
Figure 3-1 Flagship projects realised in the framework of Measure 1.1 Strengthening of research and development sector.

Source: University of Technology of Radom and Mazovian Unit of EU Programmes Implementation.

The value of those two projects is respectively 14m PLN (€3.4m) and 95m PLN (€22.8m), totalling 109m PLN (€26m), 31.

**Measure 1.2.** Mazovia also provides financial support to *foster science-industry co-operation*. A company can receive support to undertake R&D activities, and also for the post-R&D phase. The company can undertake R&D activities alone provided it has necessary infrastructure or can sub-contract the work to a scientific research institution. The proposal is submitted for both phases; however, during implementation, the beneficiary can decide under certain conditions to stop the project – for example, if the R&D results show that a continuation of the project would not lead to the intended outcomes, or if the R&D results show that the post-R&D phase could not be undertaken, or if changes in market conditions make the implementation of R&D results economically non-viable. It is worth noting that a similar instrument is implemented in the framework of the national Operational Programme ‘Innovative Economy’ 2007-2013.

The total financial allocation for this instrument during a seven-year programming period is estimated at €22.5m. By the end of 2013, it is anticipated that 200 projects of co-operation between the science and business sector will be undertaken.

**Measure 1.4.** A part of the support is targeted at *business intermediary organisations, industrial, science-technology parks, loans and guarantee funds*. The total financial allocation during a seven-year programming period is estimated at €69.3m. The two flagship projects, which are currently being undertaken, are the Establishment of a Science-Technology Park and modernisation of infrastructure in Świerk (left image below), and the Płock Industrial and Technological Park (right image below).

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31 Exchange rate: September 2011 (1 EUR is equal to 4.437700 PLN).
Figure 3-2 Flagship projects realised in the framework of Measure 1.4 Strengthening business intermediary organisations.

Source: The National Centre of Nuclear Research and Plock Industrial and Technological Park.

The value of those projects is estimated at 90m PLN or €21.6m and 195m PLN or €46.9m, respectively.\(^32\) In addition, two loan funds for SMEs have been supported and the total value of those projects is estimated at some 40m PLN or €9.6m. The Mazovian Regional Credit Guarantee Fund is another concrete example of a currently implemented project, the total value of which is estimated at almost €70m PLN or €16.8m.

Measure 1.5. Mazovia actively promotes the development of entrepreneurship with the view of increasing the competitiveness of micro- and SMEs. This is a direct policy response to a shortage of own funding for investment projects, which is identified as one of the key barriers to company development. The existing support measure is targeted both at newly created and existing companies, and at traditional and innovative branches of industry. To realise this objective, some €474m has been earmarked until 2013. By that date, it is expected that 200 companies will have received support for innovation activities, and 1,200 will have obtained direct investment grants.

Figure 3-3 Examples of projects realised in the framework of Measure 1.5 Development of entrepreneurship.

Source: Plast Service Pack and Stalmech.

\(^{32}\) Exchange rate: September 2011 (1 EUR is equal to 4,437700 PLN).
Measure 1.6. Last but not least, Mazovia provides support for cluster initiatives. To this end, the funding earmarked during the 2007-2013 programming period is estimated at €16.6m. The main expected outcome of this instrument is the implementation of 100 innovative products/services by the end of 2013. Examples of projects that are currently implemented are the creation of a cluster led by Mossakowski Medical Research Centre Polish Academy of Sciences33 and the development of an energy cluster also known as the Mazovian Energy Partnership.34

Overall, €496m or slightly more than three-fifths of the total regional budget in support of innovation activities is channelled directly to companies, and the remaining €292m (roughly about 37%) goes to other stakeholders of the regional innovation system, notably scientific research institutions, science and technology parks, loans and guarantee funds, and other business intermediary organisations. The results of this assessment are almost identical to those of other Polish regions, for example Silesia (Walandowski, 2011a). Mazovia also implements several projects in the framework of the regional component of the national programme ‘Human Capital’ 2007-2013. One of the key ongoing strategic projects already mentioned is the development of a monitoring and evaluation system of the Regional Innovation Strategy (RIS).

There have been no major shifts in the overall direction of policy in recent years. In comparison to the 2004-2006 programming period, ongoing regional innovation policy instruments have been to a large extent modelled on the previously implemented national programmes. The region provides support for developing R&D infrastructure, fostering science-industry co-operation through goal-oriented research projects, strengthening different business intermediary organisations including science-technology parks, loan-guarantee funds, and cluster initiatives. As in other Polish regions, funding for innovation activities has increased considerably, from about €12.2m per annum35 during 2004-2006 to approximately €112m per annum.

33 http://www.cmdik.pan.pl/index_eng.html
34 http://www.mse.mazowsze.pl/en/
35 Measure 2.5 Promotion of entrepreneurship and 2.6 Regional innovation strategies and knowledge transfer of the Integrated regional operational programme (2004-2006).
### Table 3-2 Existing regional innovation support measures

<table>
<thead>
<tr>
<th>Title</th>
<th>Duration</th>
<th>Policy priorities</th>
<th>Budget</th>
<th>Organisation responsible</th>
<th>More information</th>
</tr>
</thead>
</table>
| Strengthening of research and development sector                       | 2007-2013   | • 2.1.1. Universities  
• 2.1.2. Public Research Organisations  
| Building science-industry co-operation networks                        | 2007-2013   | • 2.2.3. R&D cooperation  
• 2.2.2. Knowledge Transfer                                              | €22 500 000| Mazovian Unit of EU Programmes Implementation | [http://www.rim-europa.eu/index.cfm?q=p.support&n=15047&r=PL12](http://www.rim-europa.eu/index.cfm?q=p.support&n=15047&r=PL12) |
| Development of entrepreneurship                                         | 2007-2013   | • 4.3.1. Support to innovative start ups incl Gazelles  
| Regional innovation strategies                                          | 2007-2013   | • 1.2.2. Innovation strategies  

Source: Own assessment.
In summary, the three most important regional innovation policy measures are the following:

- **Measure 1.2 Building science-industry co-operation networks** (despite a relatively low level of funding, the importance of this measure is considerable since it provides funding for R&D- and post R&D phases).

- **Measure 1.4 Strengthening business intermediary organisations** (in particular, support to Loans and Guarantee Funds can be considered as an important shift in regional innovation policies from direct business subsidies towards financial engineering schemes).

- **Measure 8.2 Regional innovation strategies** (the only measure in support of human resources and development of innovation skills).

### 3.2 Appraisal of regional innovation policies

According to the 2010 Implementation Report of the Regional Operational Programme, the lack of Ministerial decree concerning infrastructure investments and support for R&D projects has led to significant delays in launching Measure 1.1 ‘Strengthening of research and development sector’ and Measure 1.2 ‘Building science-industry co-operation networks’ (Marshal Office of Mazovia Voivodeship, 2011a). An another problem during the implementation stage of the Regional Operational Programme concerned Measure 1.6, ‘Support to co-operation linkages at regional level’. Out of 26 submitted applications, two project proposals were positively assessed during the selection stage and only one project was accepted for funding. Low interest in clusters can be explained by a general lack of awareness about the importance of such initiatives. In addition, 87% of submitted proposals did not pass the formal selection phase. This threatens the achievement of initially planned targets, which are considered to be too ambitious (Loc. cit).

The interviews carried out in the framework of this assignment confirmed that the main problems were encountered during the implementation of Measure 1.2 and Measure 1.6. In the future programming period, it is planned to introduce additional incentives to raise the interest in and uptake of a measure in support of co-operation linkages rather than completely abandoning this form of support.

Measure 1.5, ‘Development of entrepreneurship’ has attracted a lot of attention and interest amongst entrepreneurs. It is estimated that in response to two calls for proposals, 1,722 applications have been submitted, of which 405 projects have been selected for funding. Despite this impressive figure, it should be noted that the impact of this support measure on SMEs capacities to innovate would be limited because only a small proportion of projects involve innovation activities. In the majority of cases, support is provided for the purchase of machinery/equipment and physical investments in order to improve the company’s competitive position. Based on the available results, the main barriers faced by SMEs are the level of complexity of project application, followed by frequent changes to the competition requirements, as well as unclear selection criteria.

With regard to design, it is important to note that support measures implemented in the framework of national programme 'Innovative Economy' 2007-2013 are mirrored by what is implemented within the Regional Operational Programme. For example, Measure 1.2 ‘Building science-industry co-operation networks’ is almost identical to Measure 1.4 ‘Support to goal-oriented projects’ and 4.1 ‘Support to the implementation of R&D results of the Operational Programme 'Innovative Economy’’. One of the key differences is of course the level of funding available. For regional measures the planned value per project is approximately €112,500, compared with €630,000 for national programmes.

Table 3-2 presents key innovation performance indicators, which are then briefly discussed to assess the general impact of sub- (national) innovation policies.
Table 3-3 Key regional innovation indicators

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross expenditures on R&amp;D in thousands PLN</strong></td>
<td>2261690,1</td>
<td>3322052,0</td>
<td>3498087,9</td>
</tr>
<tr>
<td><strong>Expenditures on innovation activity in industrial enterprises in million PLN</strong></td>
<td>3533,8 (*)</td>
<td>5100,8</td>
<td>5151,7</td>
</tr>
<tr>
<td><strong>Means for automating production processes (automatic &amp; computer controlled)</strong></td>
<td>1567/1446 (*)</td>
<td>2350/2183</td>
<td>2272/2052</td>
</tr>
<tr>
<td><strong>Share of state funding in gross domestic expenditures on R&amp;D in %</strong></td>
<td>62.2</td>
<td>55.9</td>
<td>67.5</td>
</tr>
<tr>
<td><strong>Share of R&amp;D investments in the total expenditures in the manufacturing sector</strong></td>
<td>8.1 (*)</td>
<td>6.9</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>Share of expenditures on innovation activity in industrial enterprises with &gt; 249 persons</strong></td>
<td>84,8 (*)</td>
<td>n.a.</td>
<td>81,7</td>
</tr>
<tr>
<td><strong>R&amp;D personnel by level of education (PhD)</strong></td>
<td>8781</td>
<td>9912</td>
<td>9893</td>
</tr>
<tr>
<td><strong>R&amp;D personnel</strong></td>
<td>34702</td>
<td>33416</td>
<td>33798</td>
</tr>
</tbody>
</table>


The main indicators of the effects of innovation policies are R&D and innovation investments. Since 2004, gross expenditure on R&D (GERD) and innovation investments in the manufacturing sector have increased by more than half and by 46%, respectively. In addition, Mazovia has managed to secure a position as the main investor in R&D and innovation activities among Polish regions over this period. The fact that there has been no downward trend in innovation investments during the 2008-2009 period suggests that the manufacturing sector continues to view such investments as necessary for future growth. By contrast, innovation investments in the manufacturing sector in Poland as a whole have declined by some 8% over the same period.

Apart from a rise in RTDI investment intensity, an upward trend is noticeable in investment in the automation of production processes, although the most recent data suggests that there has been a declining trend which might reflect the transition between the two most recent programming periods.

Despite these positive outcomes, the existing evidence shows that the impact of public innovation policies has actually had little impact on long-term structural indicators. In particular, while the share of state funding in GERD has reached 67.5%, most innovation investment is undertaken by large companies employing more than 249 persons, and R&D expenditures represent a small proportion in the total innovation investments.

With regard to human resources, a mixed picture has emerged. While the number of PhD graduates in R&D personnel has increased over the last six years for which data is available, there has been a general downward trend in the total number of R&D personnel.
The emerging conclusions from the most recently completed evaluations can be summarised as follows:

• The evaluation of Measure 1.5 ‘Development of entrepreneurship of the Regional Operational Programme’ confirmed a high level of interest among entrepreneurs, especially in micro- and small enterprises. The study also found that a preference given to enterprises for undertaking projects in areas characterised by high levels of unemployment started to show effects and led to greater numbers of proposals in those areas, even though companies located in the Warsaw area account for the highest share of projects. For that reason, it is very important to ensure that projects undertaken in the Warsaw area have a high impact on other parts of region.

With regards to outcomes, it is noted that the declaration made by the companies about the expected growth of employment should be subject to continuous monitoring. Based on the analysis of two published calls for tenders, the study estimated that the declarations made by companies concerning the level of newly created workplaces (7,286) are much higher than the initial target (1,000).

In relation to innovation aspects, the evaluation noted that while in principle all project proposals had an element of innovativeness, the impacts could be discerned mainly at sub-regional level. In the immediate future, it is recognised that support should be granted to regional and national innovating companies, preferably in the form of financial engineering schemes. Currently, it is acknowledged that such companies are more interested in the Operational Programme ‘Innovative Economy’ which is financially more attractive (BDKM Grupa Doradcza, 2010).

• The evaluation looking at the implementation of Measure 1.6 ‘Support to co-operation linkages at regional level’ showed that potential beneficiaries are insufficiently aware of state aid rules with regard to cluster initiatives. To this end, strengthening information activities and publicising case studies based on concrete examples is recommended. Problems have been also encountered in calculating personnel costs. The beneficiaries also point to a lack of precision in the definition of a target group, especially potential beneficiaries of this specific intervention, and the level of complexity involved in the preparation of proposals, while the selection criteria are viewed by the beneficiaries as overly demanding (PAG Uniconsult, 2011).

• Another evaluation shed additional light on how to optimise the monitoring system. With regard to the usefulness of indicators for decision-making processes, the evaluation concluded that the available information is incomplete and fragmented. This is mainly due to difficulties encountered in measuring and reporting values of those indicators considered to be most relevant. Inadequacies in IT systems necessitated the manual monitoring of indicators.

The ongoing external evaluation, which is expected to be completed shortly, aims to assess the extent to which undertaken projects have contributed to achieving the main goal and specific objectives of the Regional Operational Programme (Marshal Office of Mazovia Voivodeship, 2011b). As background information, initial goals have been defined as the improvement of regional competitiveness, and increasing social, economic and territorial cohesion. The specific objective, relevant to innovation related aspects, is identified as the development of the regional economy, including the knowledge-based economy. This is an eight-month evaluation study, the budget of which is estimated at 250,000 PLN or roughly about €60,000. The results of this mid-term evaluation are expected to feed into the process of preparing the next programming period (post-2013), so from a strategic perspective it is certainly an important input for the design of new and more effective forms of support to stimulate innovation activities in Mazovia.
3.3 Good practice case

In the landscape of the regional innovation policy mix, Measure 1.4 ‘Strengthening business intermediary organisations of the Regional Operational Programme’ can be considered as containing elements of good practice. The target group of this support measure are different business intermediary organisations, among others industrial, technological parks. Our interest in this specific instrument is primarily due to the fact that it provides financial support to the Regional Loan and Credit Guarantee Funds, which play an important role in the development of the SME sector and entrepreneurship in the region.

The Mazovian Credit Guarantee Fund\(^36\) was established back in 2003 as a result of an initiative of the Marshal Office. The mission of the Fund is to help Polish SMEs to improve access to external sources of financing through granting guarantees that secure credit and bank loans repayment. The main stakeholders include the Marshal Office and Warsaw City Council, National Bank of Economy, and several districts, cities, and business associations. It is considered that the ownership structure of the Fund increases the credibility in the financial market, which is reflected in cooperation with the major banks operating in Poland.

The Fund offers credits and bank loan guarantees up to 70% of the value of loans, with a maximum guarantee of 1 mln PLN or €240,000 for a revolving loan, and 2 mln PLN or €480,000 for an investment credit. Until the end of 2010, the Fund granted 2,632 guarantees for almost 483m PLN, which leveraged credits provided by financial institutions of 900m PLN (Mazovian Credit Guarantee Fund, 2011). Further recapitalisation of the Fund (€70m PLN or €16.8m) will allow the introduction of new guarantee products. One of those is the Guarantee for innovative projects, known also as “Innovation 2010”. Primarily, this instrument is targeted at enterprises undertaking projects co-financed through the EU SF. The existing evidence shows that the majority of enterprises obtain their own input in the projects realised in the framework of Measure 1.5 of the Regional Operational Programme from external sources of funding, i.e. loans from commercial credits. Hence, the instrument of guarantees facilitates access to finance and allows the realisation of projects co-financed by the EU SF interventions (BDKM Grupa Doradeza, 2010).

The Mazovian Regional Loan Fund\(^37\) was established in November 2004 in order to support entrepreneurship and contribute to the creation of new work places. The mission of the fund is, among other things, to support micro-, small-, and medium size enterprises registered or undertaking business activities in Mazovia, by facilitating access to external sources of financing. The Fund has recently received financial support of 20m PLN or €4.8m from the Regional Operational Programme. The recapitalisation of the Fund has allowed two new products to be launched. The first is the loan to the newly created enterprises (<12 months) between 20,000-120,000 PLN or €4,800 and €28,800 for the period of 60 months. The second is the loan for existing enterprises (>12 months) between 120,000-500,000 PLN or €28,800 and €120,000 for the period of 60 months. The preferential interest rate is between 6.76% and 8.76%; the main advantages for entrepreneurs are that there is no requirement for a prior loan history and there are no bureaucratic procedures.

\(^36\) http://www.mfpk.com.pl
\(^37\) http://www.korzystnepozyczki.pl/
In June 2011, both funds signed a co-operation agreement allowing enterprises taking loans from the Regional Loan Fund to receive bank loan guarantees up to 70% of commitments from the Regional Credit Guarantee Fund. In the context of designing new effective support for the SME sector during the next programming period 2014-2020, there is growing interest in shifting support from grants towards repayable financial instruments. Experience in the design and implementation of both Regional Funds is valuable and contains elements of good practice.

3.4 Portfolio of innovation support measures

During the seven-year programming period of the EU SF interventions, the total financial allocation of regional measures in support of RTDI activities is estimated at about €764m. The budget for regional innovation programmes in Mazovia is higher than in other Polish regions. For instance, in Śląskie the financial allocation in support of RTDI activities was approximately €517m during the same period. In addition to the Regional Operational Programme, some €7b is channelled through the Operational Programme ‘Innovative Economy’ and Operational Programme ‘Human Capital’ in support of innovation activities (Walendowski, 2011b)38.

According to the latest available information, 17.4% of all contracts in the framework of the Operational Programme 'Innovative Economy' are signed with companies from Mazovia. Provided that there are no changes, the total financial investment in support of innovation activities will reach some €1.2b. Two other regions accounting for the highest shares of signed contracts in the scope of this national programme are Małopolskie and Dolnośląskie, with respectively 8.8% and 7.6% (Ministry of Regional Development, 2011). Additionally, some €40.5m is channelled through the national programme known as the ‘Human Capital’ Operational Programme (Measure 8.2 'Transfer of knowledge').

Contrary to the situation in Śląskie, the national programmes at present are financially more important than support provided through the Regional Operational Programme. Clearly, the situation could be subject to change, although one can expect that Mazovia will emerge as the region where most investments in support of RTDI activities will be concentrated.

In the framework of the Operational Programme ‘Innovative Economy’, several key strategic RTDI projects have been undertaken in Mazovia. Examples of such projects are presented below:

- The Institute of Biotechnology and Antibiotics, in association with the Institute of Biochemistry and Biophysics of the Polish Academy of Sciences and the University of Gdańsk, implements a project known as ‘Centre of Medicinal Product Biotechnology’. In summary, the main objectives of this project are two-fold. The first is the development of innovative insulin analogues with a modified action to improve human health protection. It is expected that the entire health care sector will benefit from savings as a result of the introduction of a new and significantly cheaper medication. The second is the development of an effective avian influenza vaccine, which might be used in industrial poultry production39. The total funding of the project (2007-2012) is estimated at approximately 102m PLN or €24.5m.

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• New metal materials with nano-structure for the application in modern industrial branches (known also as NANOMET) is a project led by Warsaw University of Technology in co-operation with the Institute of High Pressure Physics of the Polish Academy of Sciences, Rzeszow University of Technology and the Metal Forming Institute. The main objectives of this project include the preparation, development and presentation for commercialisation of new nano-materials. The project will contribute to a significant improvement in the characteristics of existing materials (such as their electrical resistance) and the development of new products characterised by better functionality characteristics. It is foreseen that the newly developed materials will be used in modern industrial branches, such as the aviation, automotive, energy and biomedical sectors. The total funding of the project (2008-2018) is estimated at approximately 38m PLN or €9m.

• The project ONCO-3CLA aims to develop and implement anti-carcinogenic molecules, which are developed from the application of latest biology, biotechnology, chemistry and bioengineering techniques. Innovation in this project consists in creating a brand new particle that has not yet been tested in a cell or human system. The project is led by a pharmaceutical company established in 1986, known as Adamed, and Jagiellonian University, Warsaw University, Technical, Gdańsk Technical University, Gdańsk Medical University and the National Cancer Institute in the United States. The total funding of the project (2008-2015) is estimated at approximately 88m PLN or €21m.

• The Centre of Advanced Materials and Technology, known also as CEZAMAT is a project led by Warsaw University of Technology in association with Institute of Physical Chemistry, Institute of Physics, Institute of Fundamental Technological Research, Institute of Electronic Materials Technology, and Institute of High Pressure Physics. The main objective of this project is the development of a platform integrating the science sector through interdisciplinary research activities on future materials and technologies. The research will be focused on micro-, opto-, nano-, and bio-electronics, and engineering of multifunctional micro- and nano-materials. In the framework of this project five specialised laboratories will be created. The total funding of the project (2008-2013) is estimated at approximately 385m PLN or €92.5m.

• The Centre for Preclinical Research and Technology (known also as CePT) is the biggest biomedical and biotechnological undertaking in Central and Eastern Europe. The aim of this project is to create a dynamic scientific centre in Warsaw consisting of closely cooperating environmental research centres, conducting research on the most common diseases of civilisation, especially neoplastic, neurological and vascular, as well as ageing and age–related diseases. The CePT consortium was established by the Warsaw Medical University (the leader), the University of Warsaw, the Warsaw University of Technology and seven institutes of the Polish Academy of Sciences, namely Nencki Institute of Experimental Biology, Institute of Biochemistry and Biophysics, Miroslaw Mossakowski Medical Research Centre, International Institute of Molecular and Cell Biology, Institute of Fundamental Technological Research, Institute of High Pressure Physics, and the Nałęcz Institute of Biocybernetics and Biomedical Engineering. The total funding of the project (2008-2013) is estimated at approximately 388m PLN or €93m.

41 http://www.cezamat.eu/
42 http://cept.wum.edu.pl/en/node/91
Despite significant financial allocations, it has to be remembered that public interventions (SF interventions) are lower than the private investments. The annual budget in support of innovation, including both regional and national programmes supported by the EU SF (the main instruments in support of RTDI activities) is roughly €286m per annum, which over seven years totals more than €2b. Based on the most recent data, the annual average foreign direct investment in Mazovia over 2007-2010 is estimated at €5b (Biuro Inwestycji i Cykli Ekonomicznych, 2011).

It is useful to compare the number of companies (beneficiaries) of programmes and the total number of existing companies. According to the Regional Operational Programme, it is estimated that some 3,700 companies will receive direct and indirect support, and in addition some 11,000 companies will benefit from the Operational Programme ‘Innovative Economy’, giving a total of about 14,700 supported companies, which represent 5% of total active enterprises in Mazovia.43

3.5 Towards smart specialisation policies

The discussions on smart specialisation have been triggered partly by the ongoing project ‘Building a system of monitoring and evaluation of Mazovian Regional Innovation Strategy’ (2009-2015)44, which is considered as a good introduction to the preparation of a new generation of policies with a 2020 horizon. Among other things, an analysis of Mazovia innovativeness and an international benchmarking study are planned to be carried out by the end of 2011. Also, the preparation and development of a new Regional Innovation Strategy is planned.

Other recent and important developments taking place in Mazovia relate to implementation of the 2020 Regional Development Strategy, which was adopted by the Regional Parliament in 2006. The 2011 Monitoring Report of that Strategy confirmed that Metropolitan Warsaw was consolidating its position as the leading economic centre in Poland. Increasing investment and strengthening and deepening of the diffusion of regional development initiatives from the metropolitan area represents a significant challenge (Strzelecki, 2011). The report is regarded as a starting point for the implementation of the Regional Development Strategy, which stems from the recently introduced changes to the national and EU strategic documents, namely the National Strategy of Regional Development (2010-2020) and the Europe 2020 Strategy. Following a debate, the Regional Assembly gave its assent in June 2011 to begin the process of updating the Regional Development Strategy, and it is expected that the draft Strategy will be ready by mid-2012.

Established in 1999, the Mazovian Office of Regional Planning (known also as MBPR45) is overseeing the implementation of the initiative known as ‘Development trends of Mazovia’. The ongoing research activities are concentrated around six main objectives: the reduction of regional disparities in terms of competitiveness; the increase in the level of human capital and labour productivity; the development of clusters and investments in sectors with a high degree of technological advancement; the pressure on government cooperation with business; the mobilisation of business intermediary organisations; and the support to local governments in creating and preparing investment areas in the municipalities.

43 By the most recent count it is estimated that by the end of 2009 there was about 277,593 active enterprises in the region, according to the Local Data Bank of the Central Statistical Office.
44 The value of developing this strategic intelligence tool is estimated at some €3.2m.
45 http://www.mbpr.pl and http://www.trendyrozwojowemazowsza.pl
With regard to content, the goal of the RIS is defined as increasing the innovation capacities of Mazovian enterprises, which would positively contribute to faster growth and greater competitiveness at the EU level. The document itself is structured around three main objectives, namely increasing the co-operation in the development process of innovation and innovativeness, growth of internationalisation of enterprises, and growth of means and effectiveness of funding supporting pro-innovation activities in the region. The horizontal objective is defined as shaping and promoting pro-innovative and entrepreneurial attitudes (Marshal Office of Mazovia Voivodeship, 2008).

More specific goals are defined within these strategic objectives. As an example, the main goals within the first strategic objective (i.e. Increasing the co-operation in the development process of innovation and innovativeness) are: the development of forms of business-science-ecosystem co-operation, which guarantee positive effects for the private sector, the growth of activity of SMEs in co-operation networks with the most innovative local and foreign enterprises, and raising awareness about the creation and development of cluster and other network initiatives. Importantly, the Strategy clearly acknowledges that it should not specify particular institutions, enterprises or other entities, but rather activities and relationships, which should be taking place in the region. However, without specific proposals there is a risk of supporting all-inclusive policies, despite the fact that the Strategy mentioned a co-operation based on experience and trust.

So far, prioritisation takes place during the assessment of submitted proposals. The selection criteria of projects financed in the framework of the Regional Operational Programme, which is the main instrument to support innovation activities in Mazovia, are divided into the following categories: strategic criteria, e.g. complementarities with the Regional development strategy (35 points - 5 additional points can be granted to meet the needs of concrete priorities), horizontal criteria (10 points), and merit-based criteria (50 points). It should be noted, however, that the Regional Development Strategy (Voivodeship, 2006) is rather broadly defined, and more precisely that one of the specific objectives is to increase the innovativeness and competitiveness of the regional economy. There is also a lack of reference in the selection criteria within the Regional Operational Programme to the 2015 Regional Innovation Strategy.

Based on existing evidence, the following part of this section aims to chart the current potential in the region. The existing clusters in the region are: Mazovian ICT cluster46, Mazovian Printing and Advertisement Cluster “Colourful Valley”47, Mazovian Aviation Cluster, Mazovian Photonic Technology Cluster “Optoklaster”, Mazovian Space Technologies Cluster48, and Alternative Information Cluster49. The most recently created entities also include the Innovation Agrofood cluster led by the Warsaw University of Life Sciences, and the ICT, Medical and Energy Clusters (See Section 3.1, cf. information about Measure 1.6). The establishment of cluster initiatives in Mazovia is viewed as a positive development, but clearly is at the early stage. Recent research found that the main barriers faced by clusters include a low level of trust between members of the cluster, shortage of funding for joint projects, weak policy support, and poorly developed relationships with the R&D sector (Matusiak, et al., 2010).

46 http://www.klasterict.pl
47 http://kolorowakotlina.pl
48 foreign R&D Centres operating in Poland have been identified, employing about 10,000 persons, mostly in the ICT sector (19). In Warsaw, the following centres are being established: 3M, Cederroth, GE Engineering Design Centre, General Electric Aircraft Engines, Humax, Samsung Electronics, SAS Institute, TopGan, Faurecia. In addition, it is estimated that out of 29 technological platforms, 15 are operating in Warsaw. As in the case of clusters, technology platforms, as well as regional innovation strategies, are at an early stage of development. As noted, the first agreements launching the platforms were signed in 2005, and new ones were signed in 2006 and 2007. According to Matusiak et al. (2010), the platforms have not yet been adequately utilised as an instrument of regional innovation policy in Mazovia. In the view of interviewees, among the most active platforms are: the Opto and Nano-Electronics Platform, the Advanced Materials Platform, the Platform for Homeland Security, the Construction Technology Platform. Although the Platforms are national initiatives an important number of institutions from Mazovia has been actively participating. For example, founded in October 2008 Mazovian Photonic Technology Cluster, known also as Optoklaster brings together manufacturing companies and research institutes specialised in the field of photonic technologies. In concrete terms, companies belonging to the cluster are innovation leaders. Among them are for instance Vigo Systems specialised in the production of high performance detectors for a wide range of applications including industrial, scientific, medical and military purposes, and Solaris Laser a world-leading manufacturer of industrial Fiber and CO2 laser coding, marking and engraving systems. Looking at bottom-up initiatives, activities undertaken by companies like Optel are worth mentioning. Established in 1989, Optel is a leading innovative company specialised in ultrasonic technologies. It has on its account a number of interesting projects, which have resulted in the development of innovative products.

It is also estimated that there are some 121 research institutes in Poland employing some 28,000 persons. Altogether 70 such institutes are located in Mazovia and the level of employment is roughly 16000. The Industrial Research Institute for Automation and Measurements, the Institute of Aviation, and the Institute of Electronic Materials Technology are leading Mazovia research institutions. The latter has been recently known for making a considerable contribution to research on graphene. Other important R&D regional performers are: the Warsaw University of Technology (particularly strong position of Faculty of Production Engineering) and outside Warsaw the Institute for Sustainable Technologies.

51 http://www.optoklaster.pl
52 http://www.vigo.com.pl
53 www.solarislaser.com.pl
54 http://www.optel.pl
The results of interviews confirm the absence of analysis of the Mazovian potential in the light of smart specialisation strategy. In the meantime, the sectoral studies at the national level are being prepared independently. The recent report on Innovativeness of the Aviation sector in Poland in 2010 puts a spotlight on the innovation dynamics of the aviation sector, benchmarks the position of the aviation industry and presents micro analyses shedding light on the sources of increased innovativeness and prospects for the development of the aviation sector in Poland (Baczko, 2011). The Institute of Aviation is a leading research centre specialising in light aviation and space research, R&D services for jet aircraft engines and related areas, materials and structure research. The Institute has established a strategic alliance with General Electric and provides services to UTC, MTU and Airbus. Another example of initiative in this sector is the establishment of Aerodynamics Lab in the town Zielonka belonging to the Warsaw agglomeration. The project is led by Avio55 in association with the Military Aviation Company (WZL), the Warsaw University of Technology, and the Warsaw Academy of Technology. The rationale of this project which is co-funded in the framework of the Operational Programme 'Innovative Economy' is to tackle the barrier of increasingly difficult access to the labs for testing prototypes of aviation turbines. It is planned that the lab will be fully operational in 2013.

Another emerging area with the potential is biotechnology, according to one the interviewees. As an example, the institute of Biochemistry and Biophysics56 is a leading institution in molecular biology with a special attention to microbial and yeast molecular genetics, mutagenesis and DNA repair, plant molecular biology, structural biology and bioinformatics.

In addition, there are two technology park initiatives. The profile of the Plock Industrial and Technology Park is defined by the activities of one of Central Europe’s largest refiners of crude oil (Pkn Orlen), the only Polish producer of polyolefins (Basell Orlen Polyoolefins), one of the leading chemical companies in Poland (PCC Rokita), and existing local potential in chemical-related sectors. Another initiative in preparation is the Science and Technology Park in Swierk (cf. Section 3.1).

According to the 2006 report summing up the results of research and analysis of the RIS Mazovia, the paper and printing industry, pharmaceuticals, cosmetics, precision engineering, ICT and food industries could be considered as the main growth sectors in Mazovia, recording during the 2000-2005 period higher gains in employment than the country average (Marshal Office of Mazovia Voivodeship, 2006).

The most recent available indicators show that during the period 2005-2010 employment growth was fastest in the manufacture of basic metals (+40%), electrical equipment (+33%), metal products (+21%), pharmaceutical products (+17%), other non-metallic mineral products (+16%), and paper and paper products (+11%). The four branches with the highest shares of employment accounting for some 49% of total employment in the manufacturing sector, experienced gains and losses in employment. Manufacture of chemicals and chemical products, and manufacture of machinery and equipment recorded declines of 4% and 1%, respectively, whereas employment in the rubber and plastic products and food products industries grew respectively by 2% and 6% (Central Statistical Office, 2011).

55 http://www.aviopolska.pl
56 http://www.ibb.waw.pl
57 Account only for 1% of total employment in the manufacture sector. The other branches of industry account for some 26% of total employment.
It is also noteworthy that Mazovia is actively seeking to further develop cooperation with other metropolitan areas. In June 2011, the Marshal Office organised a conference dedicated to the Warsaw metropolitan area with the participation of representatives of Paris, Hamburg, Amsterdam, London, etc. This should be seen in the light of intensified interest and a planned shift to strengthening and using the territorial potential as foreseen in a draft of the National Strategy of Regional Development for years 2010-2030. The recent fact finding mission to Sachsen-Anhalt is another concrete example.

In terms of co-ordination, the Innovation Unit, Department of Strategy and Regional Development of the Marshal office is tasked with overseeing the development and implementation of the RIS 2007-2015 and Regional e-Strategy, the regional cluster policy, the support to promotion of business activities, entrepreneurship and regional innovation capacities. It also co-operates with the Department of Programming Regional Development concerning the preparation of strategic documents, such as the Regional Development Programme and the Regional Operational Programmes. The Mazovian Innovation Council is an advisory body of the Executive Board of Voivodeship on matters relating to the RIS 2007-2015.

The challenges for developing Mazovia’s smart specialisation strategy are significant. Firstly, it will be important to establish better prioritisation of future funding. The policy of picking winners should be avoided. Instead, it will be necessary to focus the support on value chains rather than on a single NACE sector or technology area. The past experience of co-operation between Ciech, a company specialised in the production of chemicals and the brewery industry shows that a fruitful co-operation between different sectors is possible and should be supported. It would be also highly desirable to focus the support on niche areas with the highest potential. Secondly, new policy responses will need to be designed in such a way as to establish synergies with funding available from the national programmes, and also to develop diffusion mechanisms allowing sub-regional areas such as ciechanowsko-plocki, ostrolecko-siedlecki, and radomski to reap the benefits of existing innovation potential in Warsaw.

In the meantime, Mazovia is preparing its new Regional Development Strategy and will shortly have to review its Regional Innovation Strategy based on the results of the ongoing systemic project ‘Building a System of Monitoring and Evaluation of Mazovian Regional Innovation Strategy’ (2009-2015). All this is necessary to set out clear directions and orientations for the next generation of policies up to 2020.

3.6 Possible future orientations and opportunities

Among the main challenges and opportunities identified are: strengthening the diffusion process between the metropolitan area and sub-regions; establishing greater prioritisation in future innovation programmes; and paying greater attention to the role of foreign direct investments and growth of existing companies.

With regard to governance, the key challenges and opportunities are concentrated on the four main issues of multi-level governance, capacity, tools, and partnership. There have been a number important modifications included in the National Strategy for Regional Development and the process of implementing them will test co-operation between different levels of governance.

The effects of regional innovation policies are mainly seen in R&D and innovation investments. Apart from a rise in investment intensity, there is also an upward trend in the automation of production processes. Despite those positive developments, there have been no significant changes in long-term structural indicators.

Required mechanisms for the development of a smart specialisation strategy are all in place. The policy of picking winners should be avoided. In particular, it will be necessary to focus on value chains rather than on a single sector or technology area. Recently, interesting developments are taking place in the areas of opto- and nano-electronics, advanced materials, energy, and aviation.
Based on the existing evidence, it can be concluded that possible future orientations and opportunities for regional innovation policy in Mazovia lie particularly in:

1. **Developing a strong partnership by bringing together all key stakeholders of the regional innovation system.**

   Building a new momentum during the update of the Regional Development Strategy and possibly later during the revision of RIS offers an important opportunity for developing an environment conducive to innovation activities based on co-operation. It has to be recognised that public consultations are essential, but it is equally important to provide the regional innovation stakeholders with suitable solutions to the barriers they encounter. In essence, engaging different actors requires continuous efforts so that there is an ownership developed during both the design and implementation of new innovation strategies.

2. **Improving strategic intelligence and drawing lessons from the implementation of ongoing innovation programmes.**

   There is a need to improve the availability and reliability of statistical data. This requires co-operation between the Marshal Office, Central Statistical Office and central administration. The ongoing systemic project of the Marshal Office is considered as a step in the right direction, but further efforts are needed to integrate the existing evidence and identify the gaps. It is also necessary to draw lessons from the implementation of innovation programmes. A radical shift from grants to financial engineering schemes will not necessarily provide all the solutions. In particular, those activities that complement the activities funded from the national programmes will have a high added value.

3. **Establishing a greater prioritisation concentrating on key areas of strategic importance for regional development.**

   In the era of budgetary constraints, it will be important to focus public support on a selective number of areas to contribute to consolidation of RTDI efforts along the value-chain and not on a single sector or technology area. This will represent an enormous challenge in Mazovia, which is characterised by the highest concentration of RTDI activities in Poland, but which also has a relatively poor innovation performance in comparison with other EU regions.
Appendix A Bibliography


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PAG Uniconsult (2011) Identification of barriers in the implementation of projects under measures 1.6, 1.8, 4.2 of the Regional Operational Programme 2007-2013 Mazovia.


Appendix B Stakeholders consulted

Małgorzata Rudnicka, Head of Innovation Unit, Marshal Office of Mazovia Voivodeship (14 November 2011).
Piotr Świerczynski, Technology Platforms, National Contact Point for Research Programme of the European Union (16 November 2011).
Appendix C RIM Repository information
Baseline regional profile

- POLSKA
- CENTRALNY
- Region Masovian Voivodship
- NUTS Code PL12

Regional Profile

Introduction

Mazowieckie (Masovian Voivodship), including the Polish capital Warsaw, is the largest Polish region, in terms of area and population. It has the highest GDP per capita and accounts for almost 22% of Polish GDP. Further, it has the largest concentration of business activities and R&D organisations.

Repository

Support measures

- Promotion of entrepreneurship
- Strengthening of the business supporting institutions
- Creation of cooperation networks science-industry
- Strengthening of the R&D sector
- Innovator of Mazowieckie

Policy documents

- Regional Operational Programme of Mazowieckie region 2007-2013
- Development Strategy for the Mazowieckie Voivodship until 2020
- Regional Innovation Strategy for Mazowieckie 2007-2015

Organisations

- Center for Technology Transfer and Entrepreneurship Development
- Mazovia Development Agency Plc
- Marshal Office of Mazowieckie

Economy

Mazowieckie, with 5.2m inhabitants is the largest region that represents 13.4% of the country's population. It is also the economically strongest Polish region accounting for 21.7% of the country's GDP. It has also the highest GDP per capita, which represented 160.1% of the country’s average in 2008. Around 30% of all foreign direct investments are allocated in the region. Thus, in terms of absorptive capacity, potential and infrastructure, the region remains the country's most attractive region for foreign investors. The economy has been mostly privatised with the private sector producing over 75 per cent of GDP.

Although Mazowieckie is the fastest growing Polish region and a seat of most international
companies in Poland, it is characterised by enormous intraregional disparities and unbalanced economic development. While the capital city Warsaw has a GDP per capita of 305.1% of the Polish average, the value for the areas around the cities of Radom, Ostroleka and Siedlce amounts to less than 80% (Central Statistical Office (2010) Statistical yearbook of the regions).

To the strengths of the region belong the location in trans-European transport corridors, well developed railway network and largest airport in the country ensuring connections with the biggest cities in the country and in Europe, the highest dynamics of economic changes in the country, large pool of qualified labour and the largest number of students, the highest R&D expenditures and concentration of innovative companies, the largest number of tertiary education institutions in Poland as well as presences of the most headquarters of financial institutions and other central public and private organisations, e.g. Warsaw Stock Exchange, which is the largest one in the Central Eastern Europe.

According to the Polish Information and Foreign Investment Agency, the sectors with huge potential in the region are food industry with favourable natural and environmental conditions, large absorptive capacity of the market, leadership in agriculture production; and construction sector with presence of mineral deposits and raw materials and favourable natural conditions.

Research, Development & Innovation

Mazowieckie, similarly to its economic position, is also the strongest Polish regions regarding the innovation and R&D activity. The Mazowieckie's R&D leadership is remarkable as the region accounts for 43.1% of Polish GERD with almost €1b and 1.07% of the regional GDP spent on R&D, as compared with Polish average of 0.57% in 2007 (Central Statistical Office (2010) Statistical yearbook of the regions). Moreover, Mazowieckie is a leading region in terms of expenditures on innovation activity for product and process innovations by industrial enterprises: In 2008, it spent €1,46b, which accounts for 21% of all Polish innovation expenditures.

Out of 1,157 R&D units in Poland (university units and private R&D centres), 335 are located in Mazowieckie, with considerable majority of them in Warsaw. In addition, the region has the highest number of employees in the R&D sector: 26% of country's researchers, i.e. 25,489 out of 97,474 (including technicians and supporting staff) or employed in Mazowieckie. The high research and innovation performance is also reinforced by the fact that more than 20% of all patent applications, and around 26% patents granted in Poland are from Mazowieckie. (Central Statistical Office (2010) Science and technology in 2008).

Warsaw, the capital of Mazowieckie, is also the seat of the Polish best academic organisations: together with the Jagiellonian University in Krakow, the University of Warsaw are the only two academic institutions from Poland ranked in the Academic Ranking of World Universities. Other strong research organisations are most notably Warsaw University of Technology, Warsaw School of Economics and Warsaw Agricultural University.

Governance

The R&D and innovation policy is centralised in Poland, so that the regional authorities, although gained significant prerogatives and financial means due to the ERDF regional operational programmes, are not the strongest players in R&D and innovation policy.

The main regional institutions are the regional parliament (Sejmik), the Board of region and the Marshal's Office. The Sejmik is the decision-making and inspection body of the region. It consists of 51 members who are chosen in direct elections. Among its main competences is the adoption of local legislative acts, regional development strategy and regional programmes, election and dismissal of members of the board as well as adoption of the regional budget. The Board is the
executive body of the region. In particular, its main tasks include the preparation of regional budget projects, draft regional development strategies and the regional programmes, etc. which are performed with the assistance of the Marshal's Office.

Within the Marshal Office, the relevant units responsible for innovation policy are the Department of Strategy and Regional Development, which is responsible for the strategic planning and coordination and implementation of programmes co-funded by EU structural funds. In the innovation policy process, the crucial role is played by the Innovation Policy Unit, which is specifically responsible for the development of the regional innovation strategy and other promotional, information and training activities related to innovation policy in the region. Regarding the promotion of economic development, innovation and entrepreneurship, at the operational level a crucial role is played by the Mazovia Development Agency.

Policy

Mazowieckie is the most developed and wealthy region in Poland in absolute and relative terms. Due to the fact that most of the region's economic and innovation activity is concentrated in Warsaw, it causes enormous socio-economic disparities in the region. Most of the areas outside the capital city experience significant structural problems with high unemployment rates and income well below the country's average. However, given the overall high income, there is a risk that those remote areas may be excluded from highly important EU structural interventions in the next period. For that reason, from time to time there are discussions in some mass media to create two separate regions, as it is in case of Prague of Budapest, so that the lower income and more difficult economic situation in the areas outside Warsaw are not levelled by the unproportionally high income in the capital city. This project, however, is not discussed in the mainstream political debates, and thus is not likely to be implemented soon.

In October 2010, the Mazovia Council of Innovation chaired by the Marshall commenced its works. The main task of the council is to elaborate the monitoring and evaluation system for the regional innovation strategy. The council will be also responsible for further development of innovation policy in the region.

Support measure

- POLSKA
- CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

Support Measure

Title of measure
Promotion of entrepreneurship

Full title
Rozwój przedsibiorczoci
Duration
From: 2007
To: 2013

Policy objectives

- 4.3.1. Support to innovative start ups incl Gazelles
- 4.1.1. Support to sectoral innovation in manufacturing

Presentation of the measure

The measure aims at promoting entrepreneurship and strengthening competitiveness of micro, small and medium enterprises in Mazowieckie through facilitating the access to the new technologies, as well as certification and quality systems.

This measure is based on the motivation that the SMEs are a driving force of entrepreneurship and innovation, and that they contribute to the improvement of economic and social cohesion at the regional and local level. They are the main employers in the region and shape significantly its development; further they play a key role in increasing the regional competitiveness.

The most important development factor are private investments. However, according to the investigation of regional authorities the main obstacle to SMEs is a lack of sufficient financial means to invest. Therefore, the measure aims at closing that gap and offer some additional funding for innovative investment that should improve the competitiveness of regional SMEs. This measure is expected to play a particularly relevant role in remote areas, outside the capital city of Warsaw.

The measure targets both the existing SMEs as well as start-ups from any industrial sector. The funding can be spent on innovative undertakings that bring an added value to the company: expansion, diversification of production, introduction of a new production system, introduction of a new product or service, introduction of a new management system or organisational concepts, etc. The total allocation amounts to €473.8m

Keywords

- Small and medium-sized enterprises
- Entrepreneurship

Budget, source and type of funding

Currency: EUR

<table>
<thead>
<tr>
<th>Source of funding</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<td></td>
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</tbody>
</table>
Form of funding provided
- Grants

Policy learning

**Extent to which the measure can be considered as a success and worthy of policy learning**

It is too early to judge the success of the measure (e.g., results of first call for proposals still not known).

**Evidence of outcomes based on evaluation and other evidence**

It is too early to judge the success of the measure. However, the fact that the measure closed in July 2010 due to the high demand indicates a very strong popularity. In 2010, the call for proposals resulted in submission of 689 applications with the total value of co-financing amounting to more than €150m.

**Do's and Don'ts**

It is too early to judge the success of the measure; the measure has not been evaluated yet.

**This measure is recommended as an example of regional good practice to policy-makers from other regions:**

No

Organisation(s) responsible
- Marshal Office of Mazowieckie

**Support measure**

- POLSKA
  - CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

**Support Measure**

Title of measure

Strengthening of the business supporting institutions

Full title

Wzmocnienie instytucji otoczenia biznesu

Duration
From: 2007  
To: 2013  

Policy objectives  

- 4.2.1. Support to innovation management and advisory services  

Presentation of the measure  

The objective of the measure is to provide financial support to the business support institutions, i.e. organisations that facilitate business activity, knowledge transfer and provide business loans and seed and venture capital.  

The Mazowieckie business support institutions are mainly based in Warsaw, and the quality and scope of their activities is very different. Moreover, the centres are not well endowed in terms of technical and human resources. Their offer is often not in line with the actual needs of innovative enterprises and the support of innovation transfer. The local and regional venture capital funds need capitalisation. According to the regional authorities, the entire system of business environment supporting institutions needs reinforcement of institutional and service potential by strengthening existing or creating new business support institutions. Further, there is need for special consulting and advisory services for SMEs, most notably in the field of innovation and environment related business projects. There is also need to strengthen business support institutions that promote innovation directly through development of industrial, science and technology parks as well as entrepreneurship incubators.  

The measure is targeted at various organisations that support business development, innovation and entrepreneurship, including loan and guarantee funds. The total budget of the measure is almost €170m.  

Keywords  

- Small and medium-sized enterprises  
- Innovation support services  

Budget, source and type of funding  

Currency: EUR  

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<tr>
<th>Source of funding</th>
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</table>

Form of funding provided  

- Grants  
- Venture capital (including subordinated loans)  
- Guarantees  

Policy learning
Extent to which the measure can be considered as a success and worthy of policy learning

It is too early to judge the success of the measure (e.g. results of first call for proposals still not known).

Evidence of outcomes based on evaluation and other evidence

It is too early to judge the success of the measure. There is not evaluation of the measure.

Do's and Don'ts

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

- Marshal Office of Mazowieckie

Support measure

- POLSKA
- CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

Support Measure

Title of measure

Creation of cooperation networks sciency-industry

Full title

Budowa sieci współpracy nauka-gospodarka

Duration

From: 2007
To: 2013

Policy objectives

- 2.2.3. R&D cooperation
- 2.2.2. Knowledge Transfer
Presentation of the measure

The objective of the measure is to increase the knowledge transfer from science to industry by supporting R&D investments. The motivation for the measure is driven by the fact that in Mazowieckie there is a lack of collaboration between scientific organisations and enterprises. Therefore, the measure aims at increasing the innovativeness of the region's enterprises by using the results of R&D activities by the private sector.

The measure supports two sorts of projects. On the one hand, it promotes industry driven R&D activity that can be applied directly by enterprises, e.g. a development of a new applicable technology, technical or other organisational solution. On the other hand, the measure supports the implementation and introduction of the R&D results, which often is more cost effective than the R&D activity itself. Total allocated budget for the measure amounts to €22.5m.

Keywords

- Science-industry cooperation
- Knowledge transfer

Budget, source and type of funding

Currency: EUR

<table>
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<tr>
<th>Source of funding</th>
<th>2007</th>
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<th>2009</th>
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Form of funding provided

- Grants

Policy learning

Extent to which the measure can be considered as a success and worthy of policy learning

It is too early to judge the success of the measure (e.g. results of first call for proposals still not known).

Evaluation report links

- Information about the measure

Evidence of outcomes based on evaluation and other evidence

It is too early to judge the success of the measure. There is no data available on the implementation progress of the measure.

Do's and Don'ts
It is too early to judge the success of the measure. There is no data available on the implementation progress of the measure.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Yes

Organisation(s) responsible

- Marshal Office of Mazowieckie

Support measure

- POLSKA
- CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

Support Measure

Title of measure
Strengthening of the R&D sector

Full title
Wzmocnienie sektora badawczo-rozwojowego

Duration
From: 2007
To: 2013

Policy objectives

- 2.1.1. Universities
- 2.1.2. Public Research Organisations
- 2.1.4. Research Infrastructures

Presentation of the measure

The objective of the measure is to strengthen the research infrastructure (e.g. laboratories, R&D devices, etc.) of the Mazowian R&D intensive universities and R&D centres. Although most of the research institutions in the region have the highest research quality in the country, their position at the European and global stage is still very week.

The support is offered to R&D organisations with the highest potential, and an individual project can be supported with up to €1m. It is expected that upgraded R&D infrastructure will contribute to better R&D performance and will also foster the knowledge transfer from academia to private sector by offering highly innovative technological solutions.
So far, the measure has been supporting only one project implemented by the Technical University of Radom.

**Keywords**

- Research infrastructure
- Universities

**Budget, source and type of funding**

**Currency**: EUR

<table>
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**Form of funding provided**

- Grants

**Policy learning**

**Extent to which the measure can be considered as a success and worthy of policy learning**

It is too early to judge the success of the measure (e.g. results of first call for proposals still not known).

**Evaluation report links**

- [About the implementation of the measure](#)

**Evidence of outcomes based on evaluation and other evidence**

It is too early to judge the success of the measure. So far, only one project has been implemented and is not closed yet. There is no information available on the progress of the implementation of the measure.

**Do's and Don'ts**

It is too early to judge the success of the measure

**This measure is recommended as an example of regional good practice to policy-makers from other regions:**

No

**Organisation(s) responsible**
Support Measure

Title of measure
Innovator of Mazowieckie

Full title
Innowator Mazowsza

Duration
From: 2008
To: 2011

Policy objectives
5.1.2. Innovation prizes incl. design prizes

Presentation of the measure

Innovator of Mazowieckie is a competition that has been organising since 2008 by the Marshal of the region. It is a part of the implementation of the Regional Innovation Strategy 2007-2015. The main objective of the competition if to promote pro-innovative attitudes among young researchers on the one hand, and SMEs on the other hand.

The prize is awarded in two categories:

1. Young innovative SME, for SMEs not older than seven years and which developed in the last three years an innovation technology, an innovative product or developed any other innovative business solution;
2. Innovative young researcher, for young researchers with PhD title, who are not older than 35 years old and whose PhD thesis developed a new technology or other innovative solutions that can be applied in practice.

The main prize in the first category is around €6,500, and in the second category €2,500. there are also prize for the second and third position. However, it should be noted that the competition is one of the most prestigious awards for business and young researchers in the region and offers additional promotion of the laureates.

Keywords

Innovation culture
Small and medium-sized enterprises
Budget, source and type of funding
Form of funding provided
- Grants

Policy learning

**Extent to which the measure can be considered as a success and worthy of policy learning**

The measure has achieved its intended targets in terms of results (e.g. number of enterprises investing in innovative projects, people trained)

**Evidence of outcomes based on evaluation and other evidence**

The measure has not been evaluated. In December 2010 started the third edition, which indicates a high popularity of the competition. Moreover, the competition is also advertise on the website of the national [Ministry of Science and Higher Education](https://www.ms.waw.pl) as one of the most regional prestigious prizes for innovative solutions.

**Do's and Don'ts**

The measure has not been evaluated.

**This measure is recommended as an example of regional good practice to policy-makers from other regions:**

Yes

Organisation(s) responsible
- [Marshal Office of Mazowieckie](https:// marshaloffice.mazowieckie.pl)

**Policy document**

- POLSKA
- CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

**Policy Document**

Regional Operational Programme of Mazowieckie region 2007-2013

Regionalny Program Operacyjny Województwa Mazowieckiego 2007-2013
The Regional Operational Programme for Mazowieckie 2007-2013 is the main document defining the allocation of ERDF interventions in Mazowieckie. First published in 2007, is now regularly updated. The document defines eight priority intervention areas:

1. Creating conditions for development of innovation potential and entrepreneurship in Mazowieckie;
2. Accelerating the e-development of Mazowieckie;
3. Regional transport system;
4. Environment, prevention of threats, and energy;
5. Strengthening the role of cities in the development of the region;
6. Making use of nature and culture values for development of tourism and recreation;
7. Creating and improving conditions for human capital development;
8. Technical assistance.

The Strategic Goal of the Programme is the improvement of the region's competitiveness and improvement of the social, economic, and territorial cohesion of the region, which seems one of the key challenges in face of large socioeconomic disparities and unequal regional development. The total ERDF budget allocated by the programme amounts to €1.83b, of which around one quarter is dedicated to direct innovation support.

**Year of publication**

2007

**Link to website**


**Policy document**

- POLSKA
- CENTRALNY
- Region Mazowieckie
- NUTS Code PL12
Development Strategy for the Mazowieckie Voivodship until 2020 is an updated version of the development strategy previously published in 2001. The new version takes into account the Polish accession to the EU and contribution of the EU Structural Funds. It is a primary strategic document of the region.

The document provides a socioeconomic analysis of the region, and elaborates five strategic areas, on which the policy emphasis should be placed. Innovation and competitiveness of the regional economy are defined as one of the strategic priorities in the next years.

More precisely, the document points out the need for stronger development and competitiveness of SME's sector through more innovation, the crucial role played by the business support institutions, the need for development of modern technologies by using regional R&D potential and development of regional cooperation and knowledge transfer networks as well as the importance of strengthening the entire regional innovation system through more effective cooperation between regional R&D organisations, industry and public administration.

Year of publication
2006

Link to website
Link: http://www.mazovia.pl/wojewodztwo/strategia-rozwoju/art,6,stud...

Policy document

- POLSKA
- CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

Policy Document

Regional Innovation Strategy for Mazowieckie 2007-2015
Regionalna Strategia Innowacji dla Mazowsza 2007-2015

Organisation responsible

Marshal Office of Mazowieckie

Other organisation(s) involved
Center for Technology Transfer and Entrepreneurship Development

Content

The Regional Innovation Strategy for Mazowieckie 2007-2015 was developed within a project RIS Masovia, which was a project of the FP6, implemented in 2005-2008.

The main objective of the Strategy is to create strong relations between the R&D organisations, enterprises and public administration in the region with the aim to increase economic growth through more innovation and stronger competitiveness of SMEs.

The four specific objectives are:

1. Increase collaboration in the processes of innovation and innovation development;
2. Increase of internationalisation of Mazowieckie enterprises;
3. Increase of financial means and their effectiveness dedicated to innovation activities in the region;
4. Development and promotion of pro-innovative and entrepreneurial attitudes in the region.

The implementation of the Strategy started with the organisation of a competition Innovator of Mazowieckie in 2008. The next planned steps are the development of a system for monitoring and evaluation of the Strategy, creation of a regional network of innovation advisory centres, and training of public authorities to improve their competencies in dealing with innovation.

Year of publication

2008

Link to website


Organisation

- POLSKA CENTRALNY
- Region Mazowieckie
- NUTS Code PL12

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Organisation

Center for Technology Transfer and Entrepreneurship Development

Centrum Transferu Technologii i Rozwoju Przedsibiorczoci


Koszykowa 80
Warszawa,
02-008

Mission

The mission of the Center is development of an active system fostering commercialisation of
knowledge and research of the Warsaw University of Technology

Activities

The Center for Technology Transfer and Entrepreneurship Development aims at fostering commercialisation research results from the Warsaw University of Technology and intensify the cooperation of researchers with other research organisations and companies. The current activities comprise for example implementation of the following projects:

- **Warsaw Technology Incubator**, with the objective to stimulate practical innovation and assistance to innovators of Warsaw University of Technology as well as other academic and research institutions on their path from a simple idea to a genuine commercial success. The creation of solid fundamentals of a system that catalyzes and supports academic entrepreneurship with the focus on technology, allowing the selection and further fostering of innovative designs that have economic potential;
- **Development of technology transfer methods in environment protection in the Mazovia region**, with the objective to analyse the current status and identification of needs in the area of development, adaptation, modernization and implementation of research results as well as determining their potential of implementation in the economy. Determination of expectations of scientists and industry representatives in the category of technology transfer in environmental protection and engineering in the Mazovia Region;
- **Model Technology Transfer Center** with the objective to increase the level of knowledge of professionals working in the field of R&D in the category of innovation support, technology transfer models in Poland and the world, technology management and management of innovative projects.

Organisation

- **POLSKA CENTRALNY Region Mazowieckie**
- NUTS Code PL12

Mazovia Development Agency Plc

Agencja Rozwoju Mazowsza S.A.

Link: [http://www.armsa.eu/](http://www.armsa.eu/)

Smolna 12
Warszawa,
00-375

Mission

The Agency's mission is creating and supporting socio-economic development of Mazovia.

Activities

The priority area for the Agency is serving investors and assisting Mazowieckie companies and the Agency's tasks are:

1. promotion of regional economic and investment potential;
2. investor service;
3. promotion of local and regional brands and products;
4. supporting innovative projects, especially in the field of innovation and new technologies transfer from science to business practice;
5. initiating projects between public and private entities as well as research centres;
6. organising trainings and workshops for representatives of local authorities;
7. promotion of public-private partnership.

Mazovia Development Agency Plc realises many initiatives and projects oriented towards the growth of entrepreneurship in Mazowieckie. In this way it supports the development of small and medium companies through: education and training, administrative help, the organisation of platforms for information and experience exchange as well as making databases used in running a business available. The Agency offers the creation of integrated projects run by experienced professionals.

Organisation

- **POLSKA CENTRALNY**
- Region Mazowieckie
- NUTS Code PL12

Organisation

Marshal Office of Mazowieckie

Urzd Marszakowski Województwa Mazowieckiego


Jagielloska 26
Warszawa, 03-719

Mission

The Marshal Office of the Mazowieckie region is supporting the strategic and operational activities of the Marshall and the regional board, the executive body of the region. Its works is executed by 15 departments and offices.

Activities

The main responsibility of the Mazowieckie Marshal Office is the preparation of regional development strategy, and development and implementation of regional policy measures. In general, as in all Polish regions, the major tasks of regional self-authority are: economic development, education, culture, international cooperation, regional roads and transport management, water management and water transportation, spatial development, preservation of environment, and management of European funds.

Regarding innovation policy, the main role is played by the [Department of Strategy and Regional Development](http://www.mazovia.pl/urzad/informacje-ogolne/), which consists of several units responsible for preparation of regional development strategy, implementation of regional operational programmes, internal units, as well as a specific innovation unit. The innovation unit maintains its own website and deals primarily with the elaboration of the regional innovation strategy and creation of a system for monitoring and evaluation the strategy, networking all relevant regional actors and provision of training in innovation management for staff of regional public authorities, creating a network of centres which will provide consultancy on innovation activities, etc.
Appendix D Statistical data

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Mazowieckie (PL12)</th>
<th>Mazowieckie (PL12)</th>
<th>Mazowieckie (PL12)</th>
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<td>2000 or around</td>
<td>Previous year</td>
<td>Most recent</td>
<td>Most recent</td>
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<tr>
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<td>Change in GDP per capita</td>
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<td>2000-03</td>
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<td>0,30</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>2009</td>
<td>2010</td>
<td>2010</td>
</tr>
<tr>
<td>Government R&amp;D expenditure</td>
<td>0,69</td>
<td>0,56</td>
<td>0,60</td>
<td>0,24</td>
</tr>
<tr>
<td>Non-R&amp;D innovation exp.</td>
<td>0,53</td>
<td>0,53</td>
<td>0,41</td>
<td>0,41</td>
</tr>
<tr>
<td>Patents per mln population</td>
<td>1,8</td>
<td>5,2</td>
<td>5,4</td>
<td>115,1</td>
</tr>
<tr>
<td>Business R&amp;D expenditure</td>
<td>0,51</td>
<td>0,31</td>
<td>0,31</td>
<td>1,21</td>
</tr>
<tr>
<td>Higher education R&amp;D expenditure</td>
<td>0,24</td>
<td>0,20</td>
<td>0,21</td>
<td>0,44</td>
</tr>
</tbody>
</table>

Source: Eurostat and Community Innovation Survey.