

# CLUSTER POLICY REPORT

## V4 CLUSTER POLICIES AND THEIR INFLUENCE ON THE VIABILITY OF CLUSTER ORGANISATIONS

### CLUSTER POLICY IN POLAND

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## I. INTRODUCTION

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As cluster policy has been recognised one of the basis for building the competitiveness of Europe through excellence and innovation, it counts among the strategic priorities of the European Commission. The European Union's desire to make Europe the most competitive and dynamically developing area has resulted in stimulation of innovations and mobilization for cluster concept development. Therefore, numerous initiatives have been launched in this direction. The EU has based its cluster policy on activities focused on the creation of an environment favourable for cluster development, i.e. ensuring appropriate financial instruments and improvement of coordination channels, supporting science-education-industry cooperation. The levels of intensity of the undertaken activities and models of implemented cluster policy in the member countries, however, vary significantly.

It is no matter of doubt that clusters are first of all the phenomenon arising from the needs of the market. Nevertheless, the intervention from public sector is desirable if enabling a better and more effective use of the clustering potential. Well-functioning cluster organisations are conducive to structural changes and general improvement of competitiveness, better exploitation of the innovative potential of SMEs and the bridging of the industry-academia gap while the role of competition is not undermined. Therefore the cluster policies should be more strategic, focused on cluster management professionalization including, among others, the financial needs of the cluster organisation operation.

The efforts of the European Commission to develop and upgrade the cluster policies have been numerous. Based on the European Cluster Memorandum and a Commission Communication on clusters in 2008, the cluster development programmes were reinforced by the European Cluster Policy Group (ECPG) establishment. The 18-months work of 20 partners led by Dr. Tea Petrin, the former Slovenian Minister of Economics, was topped by policy recommendations towards the Commission and also the Member States level<sup>1</sup>. The latter included the task to encourage better cluster programmes at the EU Member State level and streamline EU funding for clusters by creating a unified set of administrative procedures. The idea of a common/shared approach was considered to take place in this recommendation, in particular, the method of open coordination (OMC), i.e. the facilitation of the best practice learning between member countries to enhance the quality of these programmes.

Subsequently, the European Cluster Alliance (ECA - established by the EC in 2006) elaborated the overview of international good practices named "The Use of Data and Analysis as a Tool for Cluster Policy"<sup>2</sup>. Next to the definition of the cluster policy that refers to the range of actions aimed at improving cluster performance, the notion of a fact-based cluster policy was applied by the ECA. Hence, policy is said to be fact-based when it is derived – in part – based on concrete and measurable information or data. In other words, it is necessary to have common methodology for cluster-benefits assessment to ensure a good cluster policy.

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<sup>1</sup> European Cluster Policy Group (2010) Final Recommendations - A Call for Policy Action.  
[http://www.clusterobservatory.eu/common/galleries/downloads/ECPG\\_Final\\_Report\\_web-low1.pdf](http://www.clusterobservatory.eu/common/galleries/downloads/ECPG_Final_Report_web-low1.pdf)

<sup>2</sup> European Cluster Alliance (2009) The use of data and analysis as a tool for cluster policy. An overview of international good practices and perspectives prepared for the European Commission.

The countries of the Visegrad Group (V4) have been developing their national cluster strategies individually, losing the opportunity to learn from each other, share the capacities, create synergies and interlink the cluster policies structurally. The ClusterCOOP Project<sup>3</sup> (2011-2014) tried to enhance synergies among national/regional cluster policies and funding frameworks in CE countries. The project “V4 cluster policies and their influence on the viability of cluster organizations” financed by Visegrad fund and includes partners from all V4 countries follows the idea to exchange knowledge and experience to improve national and regional cluster policies in V4 countries.

Cluster policy in Poland at the national level is not defined as a separate policy. Since 2004 each subsequent strategic document has taken into account clusters as entities which promote the development of innovation and increase the competitiveness of the Polish economy. However, the development of clusters, as well as varying challenges for the Polish economy had influenced the different perception of clusters by policymakers during that time. Recently clusters have played an important role in the introduction of the national and regional smart specialisations. The supporting mechanisms for clusters were implemented primarily within the operational programmes, whereas the latest activities direct the functioning of the cluster towards the market participation model. This limited support to clusters is a consequence of cluster policy being based on the above said market participation model in which the clusters themselves must search for solutions to finance their development. There is observed the concentration of public spending on clusters with the greatest growth potential for the economy, ie. the Key National Clusters.

The report is divided into seven chapters. After “Introduction” the Chapter II defining general aspects of the cluster policy and introducing a smart cluster policy model is following. The unified methodology, introduced in Chapter III, was applied by all project partners. Chapter IV contains the analysis of development and current situation of cluster policy issues in Poland covering the dimensions of governments and agencies supporting cluster organisations development within the national and regional dimensions, and the level of cluster organisation managers. Cluster policy in Poland was compared with results of analyses in other V4 countries. On the basis of analysis of cluster policy approach (summarized in SWOT analysis, best practices and success story in Chapter V) in Poland and comparison with the smart cluster policy model and experience of project partners’ countries, recommendations for improvement of the Polish cluster policy have been prepared and described in Chapter VI. Chapter VII concludes the project results and benefits for Polish cluster policy.

## **II. THE GENERAL ASPECTS OF THE CLUSTER POLICY**

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### **2.1 THE DEFINITION AND TYPES OF CLUSTER POLICIES**

Cluster Policies can be defined as specific governmental efforts aimed to support clusters. According to the European Cluster Alliance, these governmental efforts can be sorted into three categories<sup>4</sup> (similar classification was provided by Oxford Research AS<sup>5</sup>):

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<sup>3</sup> [www.clustercoopproject.eu](http://www.clustercoopproject.eu)

<sup>4</sup> *European Cluster Alliance (2009) The use of data and analysis as a tool for cluster policy. An overview of international good practices and perspectives prepared for the European Commission.*

<sup>5</sup> *Oxford Research AS (2008) Cluster policy in Europe. A brief summary of cluster policies in 31 European countries. Europe Innova Cluster Mapping Project, Norway.*

1. **Facilitating policies** that are directed towards creating a favourable microeconomic business environment for growth and innovation. Support from the public sector tries to enhance the specific conditions that could improve a cluster's performance (e.g. regional cluster policy stimulating the mapping, facilitation and formalisation of cluster initiatives).
2. **Traditional framework policies**, such as industrial and SMEs policies, research and innovation policies, and regional policy often use the cluster approach to increase the efficiency of a specific instrument (e.g. R&D and/or SMEs support through clusters).
3. **Development policies** aim at creating, mobilising or strengthening business strategies and co-operation between organisations and people through knowledge sharing at a regional or cluster level. The public sector can support particular clusters through broader programmes (national funding competition for cluster organisations) or directly, by target specific clustering efforts (e.g. the Finnish centres of expertise programme to increase the regional specialisation or the strategic centres for science, technology and innovation – SHOKs - to carry out shared research).

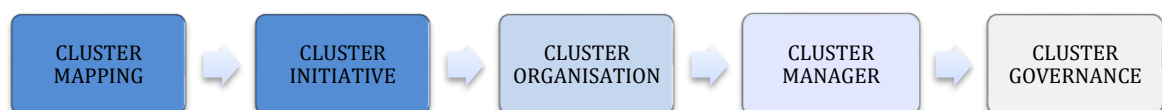
## 2.2 THE RATIONALE FOR SMART CLUSTER POLICY

When assessing the consistency and continuity of a cluster policy considering the cluster development stage aspects, we can discover an important dimension of a cluster policy - a **consistent and continual cluster policy** that should be aware of the needs of each cluster life cycle segment and should react on them in a systemic way:



In many countries the cluster policies show disproportions in consistency and continuity of the systemic and financial support throughout the cluster development stages:

- a) **Failure in keeping on the started initiative:** Developing/transition countries receiving foreign economic aid for cluster development do not continue it on their own, clusters fall out of the agenda of the governments after the external financial aid is terminated:



- b) **Concentration on cluster organisation only:** Countries with a long-term cluster policy underestimate the necessity of updating the cluster mapping and professional facilitation of cluster actors before the cluster organisation is established; low or not existing cluster governance on regional level (no funding for the “incubation” of the cluster organisation)

and little care of the cluster managers' position consolidation both financially and professionally (no training and/or mentoring/coaching capacities):



Aiming at the general functionality, broad exploitability and comparability of the state-of-the-art cluster policies in the Visegrád countries, the model of the **V4 Smart Cluster Policy** is proposed to be designed and piloted for a common use within this project. The smart cluster policy should identify the principal feedback and policy impact evaluation mechanisms so that it can permanently **balance the extended public inputs** (such as awareness and capacity building, training, operational funding, development programmes, supportive infrastructure, system of governance and evaluation mechanisms) according to specific needs of each phase and segment of the cluster development stage **with the expected cluster outputs** (e.g. cluster performance, employment and innovation, competitiveness and overall economic growth).

In its final upgrade, the Smart Cluster Policy can serve as an auto-corrective tool for the policy-makers and relevant cluster stakeholders in terms of demonstrability of the cluster concept performance and justification of public investment in it.

### 2.3 THE SMART CLUSTER POLICY MODEL

The Smart Cluster Policy Model (SCPM) issues from the identified deficits of the existing cluster policies causing that the potential of the cluster concept in favour of social capital creation, economic growth, competitiveness of businesses and regional development is not fully exploited.

The SCPM approach requires that the national/regional cluster policy documents and the related financial tools - the cluster-devoted funding programmes, embody the maximum understanding of the cluster concept, sensible attention to the needs of the cluster development stages and provide tailored measures for keeping all the cluster processes at the highest level of the benefits and welfare generation. Thus, the SCPM represents the principal exigencies for the cluster policy's attainment of the ideal – most productive shape.

The following three aspects of cluster policies were taken into account when constructing the SCPM and designing the eight indicators for its assessment (in italics):

A. The time aspect of the SCPM postulates a long-term period of validity of the cluster policy and active attention to it in terms of up-dating the relevant government documents and programmes to keep them on the state-of-the-art level. The time aspect is reflected in both the ***Durability*** indicator of the cluster policy measuring in the length of the time span of the document/programme operation (long-term, mid-term and short-term duration) and the ***Continuity*** indicator expressing the confirmation of the governments positive attitude towards the cluster policy issue being, in the ideal case, the permanent part of the policy-making tools with regular updates to follow the new needs and context of the cluster policy.

B. The executive aspect of the SCPM is enlightened in three dimensions showing whether:

- a) the national/regional government recognizes the importance of the cluster policy issue in the most adequate way, i.e. devotes the cluster issue an independent or autonomous document/programme. The **Autonomy** indicator then expresses the degree of the focus on the cluster policy topic showing if the policy document/funding programme is exclusively devoted to it or, in less favourable cases, is a part of a broader/similar policy but with a corresponding proportion of the cluster policy focus, or the cluster issue is only generally mentioned without any specifications. If the cluster policy document is autonomous (not part of other policies/programmes), which is the condition of the SCPM, it gives better prerequisites for its effectiveness and up-grades.
  - b) the cluster policy is firmly anchored in the government system through relevant institutional measures ensuring that the cluster policy document/programme is fully operable - as determined by the **Functionality** indicator:
    - vertically, i.e. it has been adopted by the government as a government decree (or similar high-level policy document) or, in less favourable cases, as a strategic document or methodology with medium or low/no effectuality;
    - horizontally, i.e. it has a general force across the sectors of the governmental departments (i.e. industry, agriculture, services etc.) vs. some sectors only or limited to one sector;
    - functionally, i.e. the implementation of the policy is fully working in accordance with the planned scheme.
  - c) there is a clearly entrusted governance body for the cluster policy development, implementation and monitoring, which is incorporated in the **Viability** indicator. Here, the premise is used for the SCPM that there is an exclusively established institution (which used to be the case of the Hungarian "Pole Office") or, in less favourable cases, the cluster policy implementation is incorporated within duties of an existing interdepartmental body or only one ministry. The existing allocation of financing from the public budget is also an important criterion of the SCPM to be measured by the Viability indicator.
- C. The **thematic aspect** of the SCPM concentrates on the scope and content of the cluster policy document/programme with the aim to embrace all the now known needs and supportive activities to ensure the full use of the holistic nature of the cluster concept:
- a) The SCPM builds on the fact that a cluster can appear in any industry and be the specific competitive advantage of the given territory, so the inclusion of all government sectors and industries in the cluster support scheme is the necessity. Thus, the **Integrity** indicator for the SCPM should state the maximum degree of covering the sectors of public administration and the industries (no matter if traditional, such as automotive, or from technological or service/creative industries etc. including emerging and cross-sectoral industries) with no limits.
  - b) One of the most important aspects of a good cluster policy is to understand the needs of individual cluster development stages (cluster, cluster initiative, cluster organisation, cluster management, cluster governance) and offer each stage the necessary support. The **Complexity** indicator of the SCPM then analyses to which extent the following development segments of clusters are taken into account within the cluster policy structure and related measures (including involvement of expert capacities and budgeting the relevant financial resources) concerning:

- i. **Cluster mapping and analysis** (statistics, desk research and interviews);
  - ii. **Cluster initiative development** (cluster actors facilitation stage towards the cluster organisation establishment);
  - iii. **Cluster organisation incubation** (the start-up support for the cluster management capacity building, joint projects of a smaller scale);
  - iv. **Cluster organisation development** (R&D and internationalisation-focused joint projects, cluster management excellence);
  - v. **Cluster governance** provided by the government/delegated authority influencing all of the previous segments if efficiently performing.
- c) The SCPM finally assumes that the cluster policy document/programme includes all the currently known and suitable supporting activities that can lead to the best performance of cluster organisations as the resulting structure of the whole cluster development efforts and investments. Thus the **Consistency** indicator of the SCPM detects the degree of the provision of the maximum of the supportive measures and actions that the public sector institutions (policy-makers) can/should offer within their governance to assist and optimise the cluster policy with the conscious goal to receive the best quality on its output. Among the desirable supportive measures there are:
- i. The **national accreditation scheme** for cluster organisations, or a similar system, i.e. the cluster organisation's performance assessment based on a set of unified parameters for categorising the capability of cluster organisation to achieve the strategic goals and capitalise the public support efficiently);
  - ii. **The training schemes for cluster stakeholders** targeted at cluster analysts, cluster facilitators, cluster managers and the cluster organisation staff, cluster governance representatives and other actors of the regional/national cluster-relevant development and innovation infrastructure, including the availability of experienced lecturers and trainers;
  - iii. **The cluster concept awareness building** – the basic good that the policy-makers can do for clusters – to inform about them and communicate their successes, benefits, examples worth following and the best practices in all five types of cluster organisation activities (i.e. information & networking, HR development, R&D and innovation projects, PR & marketing and internationalisation) in the form of conferences and other public events, cluster managers meeting and cross-cluster matchmaking, publications and various media outputs. Many regional governments lack the proper understanding of the role of clusters in competitiveness improvement and how they can contribute to it.

Those countries that already have adopted and apply cluster policies can check their cluster policy “smartness” level through the screening exercise shown in the Methodology Guide of the V4ClusterPol methodology document, find possible deficits and introduce necessary changes to eliminate them.

Those countries that are in the stage of the cluster policy preparation may base the concept on the Smart Cluster Policy Model to avoid the deficits of the policy in its implementation phase.

*The following messages to policy-makers and public sector officials highlight their desired role in the Smart Cluster Policy:*



- *Act as a careful manager and sophisticated client - the “revealing” of existing clusters should be considered as a part of the government due diligence of the territory administration – clusters are the regional assets that wait for capitalisation.*
- *Build on local differences - prove the competitive advantage through the cluster mapping and cluster analysis tools, include the emerging and cross-sectoral industries.*
- *Understand which industries cluster and how to smooth the way to cooperation and trust among businesses through the cluster initiative and the cluster actors’ facilitation tools.*
- *Recognise the cluster development stages - differentiate actions in line with the needs of each stage – provide measures and funding that ensure the consistency and continuity of the cluster policy.*
- *Foster the dialogue between firms and government through a cluster organisation – perform the cluster governance in line with the region’s needs.*
- *Gain more through measuring, monitoring and evaluation!*

### **III. RESEARCH METHODOLOGY**

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#### **3.1 THE ANALYSIS OF DEVELOPMENT AND CURRENT SITUATION IN THE INDIVIDUAL COUNTRIES**

The analysis of development and current situation in the individual countries has been carried out by individual partners on behalf of their country. The project leader provided the guidelines for each step of the analysis in the most practical way (clear instructions in written, outlines for text descriptions, questionnaires for interviews, templates for collection of data, the required format of answers and the assessment) and in a due time before the start of each phase of the analysis.

The unified methodology of the research has been applied in each of the partners’ country covering the following dimensions:

##### **THE LEVELS OF THE ANALYSIS**

- i) The level of governments and agencies supporting cluster organisations development within the national and regional dimensions, and
- ii) The level of cluster organisation managers.

##### **THE DATA COLLECTION AND SURVEY PROCESS**

- i) The secondary data for research has been collected employing government strategic documents content analysis and utilizing statistical data concerning financial support (existing programmes)
- ii) The primary data has been assembled as a result of the survey that was conducted in a form of semi-structured interviews
- iii) The survey process consisted of two stages:

##### **Stage 1 – Preparation of inputs for the survey**

1. Elaboration of the draft questionnaire
2. The territorial scope definition (partner regions, national level) – map visualisation image
3. Contact database of potential respondents in each partner's country
4. Comments on questionnaire by project partners
5. Questionnaire verification and finalisation
6. The interview plan and scenario (issues to be dealt with face-to-face)
7. Adoption of the survey preparedness by expert group (academic workshop)

#### **Stage 2 – Survey implementation and conclusions delivery**

1. Instruction on data gathering, follow-up and deadlines – common workshop / skype-conference
2. Questionnaire distribution with an accompanying letter by the project partner's representative offering a face-to-face meeting for interview
3. Data collection and two follow-ups (after the questionnaire distribution and before the deadline)
4. Data processing and interpretation
5. Summary of the survey

#### **THE SCOPE OF THE ANALYSIS**

- i) The description of the cluster policy historical development, milestones and time-span
- ii) Existing/valid documents concerning the cluster policy implementation, their types (policy decree, programme, methodology, etc.)
- iii) Survey of responsible implementing bodies (ministries, national/regional authorities and development agencies), cluster supporting institutions and universities/research institutes.
- iv) The detailed description of the existing funding programmes:
  - their independency or being part of other policies
  - thematic focus – which cluster activities receive the support (human resources upgrading, cluster expansion, business and commercial activities development, R&D and innovation, business environment improvement, enhancing collective productivity by developing interdependencies and complementarities<sup>6</sup>)
  - the amounts of the programme financial allocations
  - quantitative and qualitative results of the programme
  - applied methods of the impact assessment
  - survey of the cluster organisations and their impact on the regional development

#### **THE ANALYSIS OUPUTS**

The analysis of the V4 cluster policies brought a profound information and knowledge on the state of the national/regional cluster policies, functional programmes and conditions of cluster organisations in the V4 countries. This, together with the knowledge sharing processes through national academic workshops, was enable to make the further steps in identification of the best practices, carrying out the comparison among the V4 countries and providing recommendation for cluster policies improvement within the Cluster Policy Reports in each V4 country.

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<sup>6</sup> European Commission (2006) Innovation clusters in Europe – A statistical analysis and overview of current policy support. DG Enterprise and Industry report, Luxembourg. ISBN 978-92-79-07289-5

### **3.2 THE V4 CLUSTER POLICIES COMPARISON**

The project partners used the data collected within the analysis phase for a systematic comparison of the cluster policies in the V4 countries including:

#### **THE COMPARATIVE MATRIX**

The comprehensive matrix of both quantitative and qualitative outputs of the analyses will be set up. It will enable to define the position of each country's cluster policy within the Visegrad Group from the point of view of the following criteria:

1. Characteristics of the policy papers, strategies, programmes and the involved actors on national/regional levels;
2. The scope of financial resources involved and their eligible use;
3. System of competition for funding with the impact on cluster organisation and cluster management performance level;
4. The degree of the consistency and continuity of the cluster policy regarding the cluster life cycle;
5. The cluster policy impact evaluation methods and tools.

#### **SWOT ANALYSIS**

The comparison results based on the comparative matrix enabled a deeper evaluation of the strong and weak sides of the cluster policy and its threads and opportunities.

#### **BEST PRACTICES SELECTION**

Each partner proposed two best practices showing the proven administrative, organisational, infrastructural, thematic, innovative and/or financial arrangements that helped to enhance the cluster development in a substantial way.

### **3.3 SUCCESS STORIES DISSEMINATION**

The identification of the country's best practices to learn from by the others, selection two best practices per country and the description of its practical impact on clusters in the form of a success story.

The V4 Cluster Policy best practices and success stories were disseminated via the workshops and final conference with the presence of cluster policy representatives and cluster organization managers.

### **3.4 THE V4 CLUSTER POLICY REPORTS**

Four Cluster Policy Reports (CPRs) with policy recommendations for the national and regional public authorities and development agencies as a result of joint research activities has been prepared by each partner. The CPRs consists of three parts:

## **EVALUATION**

The CPRs summarises the cluster policy analysis results and define the current position of the specific country within the Visegrad Group based on the conducted comparison.

This part of the report answers the question: **Where are we?**

## **RECOMMENDATIONS**

The valuable knowledge gained during the process of analysis, comparison and mutual learning among the partners within the academic workshops is materialised in a specific set of proposals and messages towards the government on possible improvements of the cluster policy. The special focus will be given to proven practices how to grow the competitive potential of a region and its clusters, optimise the cluster performance, including its monitoring and measurement, but also how to simplify and shorten process of the application for project funding and generally cut the red tape for cluster organisations.

The recommendations also include the basic elements and rules of comparability that must be applied within each update or new policy drafting so that the approaches used in individual countries in future can be benchmarked.

This part of the report answers the question: **What can be improved?**

## **3.5 THE SMART CLUSTER POLICY MODEL**

A specific part of the CPRs is devoted to the joint draft of the model of the Smart Cluster Policy. The aim is to deliver the relevant messages to each V4 country's cluster stakeholders and policy-makers. The principles of a Smart Cluster Policy will incorporate the best functioning basic approaches and tools to set up a model of a cluster policy respecting the needs of the cluster life cycle and deliberately mobilising of the still unexploited potential of the cluster concept. The Smart Cluster Policy model should address also the need of improving the cluster governance side that should lead to "knowing" policy-makers by means of training, regional and national cluster knowledge and cluster development infrastructure and general cluster expert capacity building.

This part of the report answers the question: **How can it be improved?**

## IV. CLUSTER POLICY DEVELOPMENT AND CURRENT SITUATION IN POLAND

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### 4.1 CLUSTER POLICY, STRATEGIC DOCUMENTS AND PROGRAMMES

The cluster policy in Poland on the national level is not defined explicitly. It results from several strategic documents defining and shaping the economic policy in Poland.

The first symbolic mention of clusters can be found in the **National Development Plan 2004-2006**, adopted by the Council of Ministers on 14th January 2003<sup>7</sup>. At that time the Polish Agency for Enterprise Development conducted the "Training programme for clustering promotion" funded by the European Social Fund – **Operational Programme Development of Human Resources, Measure 2.3 Development of personnel of modern economy**. Its aim was to build awareness of the clustering itself, define areas for potential cooperation between enterprises, help enterprises decide to get involved in cluster cooperation, as well as to realise joint projects important for the development of enterprises and regions. Within the 2005-2007 project there was provided a wide range of support in form of trainings, consulting and conferences. Selected aspects of cluster-support policy are also available in „Sectoral Operational Programme - Improvement of the Competitiveness of Enterprises, 2004-2006, Measure 1.1 „Enhancement of business support institutions” and Measure 1.4 „Enhancement of Cooperation between R&D Sector and Economy”. Moreover, several cluster-oriented support activities were realised under The Integrated Regional Development Operational Programme 2004-2006.

In the subsequent **National Development Plan (NPR) 2007-2013** there was identified the need for the investment project support for enterprises which operate or are engaged in activities, among others, in business networks and clusters. In addition, there was noted the role of research and technology clusters in strengthening the potential of science for the development of Knowledge-based Economy<sup>8</sup>. Simultaneously, in 2006 there was adopted a document of the Ministry of Economy entitled “**Directions for Increase of economy innovation for 2007-2013**”, which defined the area of "Support for joint activities of a business network aimed at the realisation of innovative projects." This was due to diagnosed high demand among entrepreneurs for specialist advisory services and training in the field of technology transfer as well as the process of implementation of innovation.

Following, the document **National Strategic Reference Framework for 2007-2013 supporting economic development and employment (NSRO) - National Cohesion Strategy**<sup>9</sup> defined the directions for the financial support available from the EU budget, which constituted the basis for the preparation of operational programs. There was indicated the need to promote cooperation

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<sup>7</sup> *Narodowy Plan Rozwoju 2004-2006* [online], Warszawa 2003, Available on WWW: <[https://www.funduszeuropejskie.2007-2013.gov.pl/OrganizacjaFunduszyEuropejskich/Documents/NPR\\_2004\\_2006.pdf](https://www.funduszeuropejskie.2007-2013.gov.pl/OrganizacjaFunduszyEuropejskich/Documents/NPR_2004_2006.pdf)>.

<sup>8</sup> *Narodowy Plan Rozwoju 2007-2013* [online], Warszawa 2005, Available on WWW: <<http://docplayer.pl/2437068-Projekt-narodowego-planu-rozwoju-2007-2013.html>>.

<sup>9</sup> *Narodowe Strategiczne Ramy Odniesienia 2007-2013 wspierające wzrost gospodarczy i zatrudnienie, Narodowa Strategia Spójności* [online]. Ministerstwo Rozwoju Regionalnego, Warszawa, Maj 2007, Available on WWW: <[https://www.funduszeuropejskie.2007-2013.gov.pl/WstepDoFunduszyEuropejskich/Documents/NSRO\\_maj2007.pdf](https://www.funduszeuropejskie.2007-2013.gov.pl/WstepDoFunduszyEuropejskich/Documents/NSRO_maj2007.pdf)>.

between companies on the regional level (support for the creation and development of cooperative business networks, including clusters of regional range).

At that time, the main instruments for the support of cluster activity and development on the national level were programmes subsidised from the European Funds as part of the operational programmes. The most important for the promotion of cluster development was the **Innovative Economy Operational Programme, 2007-2013 (PO IG), Measure 5.1 Support for the development of supra-regional cooperative relations**<sup>10</sup>. The aim of the measure was to strengthen the competitive position of enterprises through the development of cooperative relations between individual companies and entrepreneurs as well as business support institutions along with research institutions. Financial support was granted for:

- = early-stage development of business networks of technological and industrial profile in order to create technological and organisational conditions for the functioning of cooperative networks,
- the development stage of cooperative relations for the joint creation of an innovative product or service and its introduction to the market.

The Measure 5.1 supported trans-regional clusters (the beneficiaries were operating in two or more voivodeships). Support for regional clusters located on the territory of one voivodeship could be provided only from the Regional Operational Programmes (RPO), however, it was not the case everywhere.

In addition to Measure 5.1, the development of clusters was influenced by **Measure 5.2 Supporting the pro-innovation network of business support institutions of supra-regional**. Within the framework of Measure 5.2, there were supported pro-innovative business support institutions, such as science and technology parks, technology incubators, technology transfer centres, etc<sup>11</sup>.

The second important source of financing the cluster development was the **Operational Programme Development of Eastern Poland 2007-2013 (PO RPW), Measure 1.4.3 Promotion and cooperation, component "Cooperation"**. Its aim was to establish an ongoing cooperation platform between regions of Eastern Poland by, among others, creating clusters.

In addition, at this time there were conducted:

- **Programme Support for cluster development – pilot project (specific subsidy from the national budget)**. The objective of the project was to activate and stimulate the existing clusters in order to effectively use significant funds from the structural funds, allocated within the NATIONAL COHESION STRATEGY, for use in the years 2007 – 2013. There were supported the following areas for the cluster development: national and international cooperation, promotion, raising qualifications, cluster innovation.
- **Programme for support of international cluster cooperation "Innovation Express" (IE)**. The aim of the project was the development of international cluster cooperation in terms of research, technological development or innovation (pilot programme).

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<sup>10</sup> *Innovative Economy Operational Program 2007-2013, Measure 5.1 „Support of cooperation links of interregional importance”* [online], *Program Operacyjny - Innowacyjna Gospodarka, Działanie 5.1 Wspieranie powiązań kooperacyjnych o znaczeniu ponadregionalnym*, Available on WWW: <<http://poig.parp.gov.pl/index/index/593>>.

<sup>11</sup> *Detailed description of the Innovative Economy Operational Program 2007-2013. The National Strategic Reference Framework 2007-2013* [online], The Ministry of Regional Development, Warsaw 2008.

- Funding directed at specific economic sectors, e.g. **Rural Development Programme** which provided funds for developing cooperation in the agricultural sector by creating producer groups.

It should be noted that within this framework, non-financial support provided by the Polish Agency for Enterprise Development was also valuable and it took a variety of measures which indirectly supported the cluster development. There was provided support within the **Innovative Economy Operational Programme, Measure 2.1.3 Systemic support for increasing the adaptability of employees and enterprises**. The main objective was to increase qualifications of employers and employees in order to adapt the functioning of enterprises to modern economy. There were two systemic projects realised within the above mentioned measure where the Polish Agency for Enterprise Development was the immediate beneficiary who undertook the activities for the benefit of cluster members and coordinators:

- **“Human resources development by promoting knowledge, transfer and popularisation of innovation”** - a promotional and informational project. Its goal was to strengthen Polish clusters, improve their competitiveness and innovative capacity by human capital development and increasing the efficiency of creating the cluster policy.
- **“Cooperation relations between Polish companies”** - a training project. Its goal was to provide knowledge and expand experience on creating cluster and cluster initiatives, devising a vision of cooperation. Measures undertaken within the project among others included: clusters workshops and conferences in 16 regions of Poland, trainings, consultancy on creating clusters, their functioning and animating cluster initiatives, benchmarking of clusters and study visits to EU countries.

Within the 2007-2013 financial framework, the cluster structures of regional importance could also obtain funds from the European Regional Development Fund Regional Operational Programme of a given voivodeship (16 Regional Operational Programmes), which was linked to the development and implementation of the Regional Innovation Strategy (RIS). The analysis of the Regional Operational Programmes shows that the regions adopted at that time four tracks for the support of clusters and cluster initiatives<sup>12</sup>:

- a. Direct indication of the possibility of cluster support from structural funds and dedicating a separate action to this support (most common).
- b. Combining action to support clusters with other measures aimed at supporting entrepreneurship, business support institutions or aimed at building relationships between enterprises and the R&D sphere.
- c. Lack of a separate action dedicated to the support of clusters, while giving priority to actions implemented to favor the development of clusters by placing the appropriate entries in the selection criteria for projects funded under the programme.
- d. Lack of support to cluster initiatives, forcing potential beneficiaries to apply for funds at the national level.

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<sup>12</sup> W. Pander, M. Stawicki, *Metody ewaluacji polityk wspierania klastrów ze środków strukturalnych*, Szkoła Główna Gospodarstwa Wiejskiego, Katedra Polityki Agrarnej i Marketingu, Prace Naukowe Nr 47, Warszawa 2008.

In order to concretise activities in the area of clusters in 2011, the Polish Agency for Enterprise Development (PARP) in cooperation with the Ministry of Economy<sup>13</sup> appointed the Working Group for Cluster Policy in order to prepare recommendations for the future cluster policy. The document entitled „**Directions and principles for cluster policy in Poland until 2020**” published in 2012<sup>14</sup> was partly implemented in the following strategies adopted by government.

Thus, in subsequent policy documents, both in **National Reform Programme for Strategy Realisation Europe 2020<sup>15</sup> (2011)**, as well as **Medium-Term National Development Strategy 2020 (2012)**<sup>16</sup> there is indicated the importance of clusters at micro- and macroeconomic levels as entities which improve the competitiveness of enterprises and enhance the regional specialisations. Consequently, the measures had been divided into two phases<sup>17</sup>:

- Activities 2012-2015 - comprising the support for the creation of clusters,
- Activities 2016-2020 – directing the functioning of the cluster to the market participation model.

In 2013 there was adopted the **Strategy for Innovation and Efficiency of the Economy 'Dynamic Poland 2020 (SIEG)**, in which clusters are indicated, among other things, as instruments for the implementation of smart specialisations in Poland. According to the SIEG provisions, the cluster policy, by creating the conditions for the spread of development impulses to other areas, should allow for a better use of the development potential of regions. At that time, the development of clusters also contributed to the more dynamic development of Special Economic Zones.

In turn, the SIEG executive program, ie. **The Enterprise Development Programme 2020 / Program Rozwoju Przedsiębiorstw (PRP)**<sup>18</sup> draws the attention to the key clusters in the context of cooperation between enterprises and the sector of scientific research as well as the creation of new products and services better tailored to the needs of consumers. The achievement of the objectives of the PRP is to be realised primarily by the concentration of public spending on clusters with the greatest growth potential for the economy, ie. the key national clusters and key regional clusters. Therefore, at the core of the selection process for the Key National Clusters there lies the strategy of economic specialisation and streamlining the national and regional resources towards strong, well-functioning actors with high development potential.

In late 2014, the Polish Agency for Enterprise Development (PARP), as commissioned by the Ministry of Economy<sup>19</sup> and in collaboration with external experts, launched an initiative aimed at developing a coherent and comprehensive **system for selecting Key National Clusters (KNC) in**

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<sup>13</sup> Ministry of Economic Development, at present.

<sup>14</sup> *Kierunki i założenia polityki klastrowej w Polsce do 2020 roku. Rekomendacje Grupy roboczej ds. polityki klastrowej* [online], red. M. Dzierżanowski, PARP, Warszawa 2012, Available on WWW: <[http://www.pi.gov.pl/PARPFiles/file/klastry/Polskie\\_klastry/spotkania/Kierunki\\_i\\_zalozenia\\_polityki\\_klastrowej\\_w\\_Polsce\\_do\\_2020\\_roku.pdf](http://www.pi.gov.pl/PARPFiles/file/klastry/Polskie_klastry/spotkania/Kierunki_i_zalozenia_polityki_klastrowej_w_Polsce_do_2020_roku.pdf)>.

<sup>15</sup> *Krajowy Program Reform (KPK) na rzecz realizacji strategii Europa 2020* [online], Available on WWW: <<https://www.mr.gov.pl/media/19320/KPR20162017.pdf>>.

<sup>16</sup> *Strategia Rozwoju Kraju 2020* [online], Ministerstwo Rozwoju Regionalnego, Warszawa, Wrzesień 2012, Available on WWW: <[https://www.mr.gov.pl/media/3336/Strategia\\_Rozwoju\\_Kraju\\_2020.pdf](https://www.mr.gov.pl/media/3336/Strategia_Rozwoju_Kraju_2020.pdf)>.

<sup>17</sup> *Ibidem*.

<sup>18</sup> *Program Rozwoju Przedsiębiorstw do 2020 r. Program wykonawczy do Strategii Innowacyjności i Efektywności Gospodarki* [online], Ministerstwo Gospodarki, Warszawa, Kwiecień 2014, 114, Available on WWW: <<https://rio.jrc.ec.europa.eu/en/file/7285/download?token=GpjUFML9>>.

<sup>19</sup> Ministry of Economic Development, at present.



**Poland<sup>20</sup>.** In 2015 the Ministry of Economy along with the Polish Agency for Enterprise Development held the first round of the Call for the status of Key National Cluster, where 7 Key Clusters were selected out of 22 candidates. In May 2016, the Ministry of Economic Development announced the second call for proposals under the call and selected further 9 clusters. As a result, 16 clusters in Poland hold the status of a Key National Cluster.

Simultaneously, steps had been taken towards the professionalisation of clusters and their independence from public support. Hence, in 2014 the Polish Agency for Enterprise Development prepared the **Cluster Management Standards<sup>21</sup>**, which was an element of a systemic approach to professional preparation of cluster coordinators. As a result of the undertaking, cluster coordinators had been offered a practical tool for improving the effectiveness of their managerial activities, as well as provided with information necessary for the implementation of the standards. The verification whether managerial standards are met may be carried out by means of a dedicated self-evaluation sheet which has been made available on the Innovation Portal along with a manual containing practical guidelines and recommendations related to the implementation of the standards<sup>22</sup>.

Another project implemented by PARP in 2015 was a cluster inventory, aimed at establishing the real number of active clusters in Poland. **Inventory of clusters** operating on the territory of Poland has revealed the total number of 134 clusters<sup>23</sup>.

Within the new financial framework direct financial support to clusters was planned primarily for **Internationalisation of Key National Clusters**, within the **Operational Programme Smart Growth, Submeasure 2.3.3**. In addition, clusters located in the eastern part of Poland (regions: Lublin Voivodeship, Subcarpathian Voivodeship, Podlaskie Voivodeship, Świętokrzyskie Voivodeship and Warmian-Masurian Voivodeship) may apply for support under the **Operational Programme Eastern Poland, Submeasure 1.3.1. Implementation of innovation by SMEs and Submeasure 1.3.2 Creation of network products by SMEs**. Moreover, support is provided for cooperating partners within the Operational Programme Knowledge Education Development, Measure 2.2. Support for strategic management of enterprises as well as building their competitive edge on the market.

This limited support to clusters is a consequence of cluster policy being based on the above said market participation model in which the clusters themselves must search for solutions to finance their development.

The last strategic document, fusing the above direction of the cluster policy in Poland is the draft of the **“Strategy for the Responsible Development”** handed over for public consultation in 2016.

The proposed new strategic document is on the one hand an update to the Medium-Term National Development Strategy of 2012, whereas on the other hand it represents a new approach to

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<sup>20</sup> *Selection of Key National Clusters in Poland* [online], Polish Agency for Enterprise Development, Warsaw 2016, Available on WWW: <[http://www.pi.gov.pl/PARPFiles/file/ANG/clusters/Selection\\_of\\_Key\\_National\\_Clusters\\_Poland\\_2016.pdf](http://www.pi.gov.pl/PARPFiles/file/ANG/clusters/Selection_of_Key_National_Clusters_Poland_2016.pdf)>.

<sup>21</sup> *Standardy zarządzania klastrem* [online], red. M. Piotrowski, PARP, Warszawa 2014, Available on WWW: <[http://www.pi.gov.pl/PARPFiles/file/news/20141223\\_Publikacja\\_-\\_Standardy\\_zarzadzania\\_klastrem\\_-\\_wersja\\_finalna\\_po\\_korekcie.pdf](http://www.pi.gov.pl/PARPFiles/file/news/20141223_Publikacja_-_Standardy_zarzadzania_klastrem_-_wersja_finalna_po_korekcie.pdf)>.

<sup>22</sup> Available on WWW: <[http://www.pi.gov.pl/Klastry/chapter\\_95926.asp](http://www.pi.gov.pl/Klastry/chapter_95926.asp)>.

<sup>23</sup> G. Buczyńska, D. Frączek, P. Kryjom, *Raport z inwentaryzacji klastrów w Polsce 2015*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2016.

economic policy, focusing proposal activities around the five pillars of development<sup>24</sup>. The project notes that the concept of support concentration on the priority areas of R&D&I had been initiated by the adoption of the National Smart Specialisations (KIS), and at the regional level - Regional Smart Specialisations (RIS). However, due to limited resources and the need to direct them to support high value-added (leading) industries, relevant to the future of the economy, there is a need for further narrowing and thematic concentration. This means increasing thematic concentration of expenditure on R&D&I on the basis of the National Smart Specialisations and Key National Clusters among the so-called “first speed” programmes<sup>25</sup>.

On the regional level, the voivodeships focused primarily on identifying regional and intelligent specialisations. Only some of them have taken actions related to cluster support, including the selection of key regional clusters.

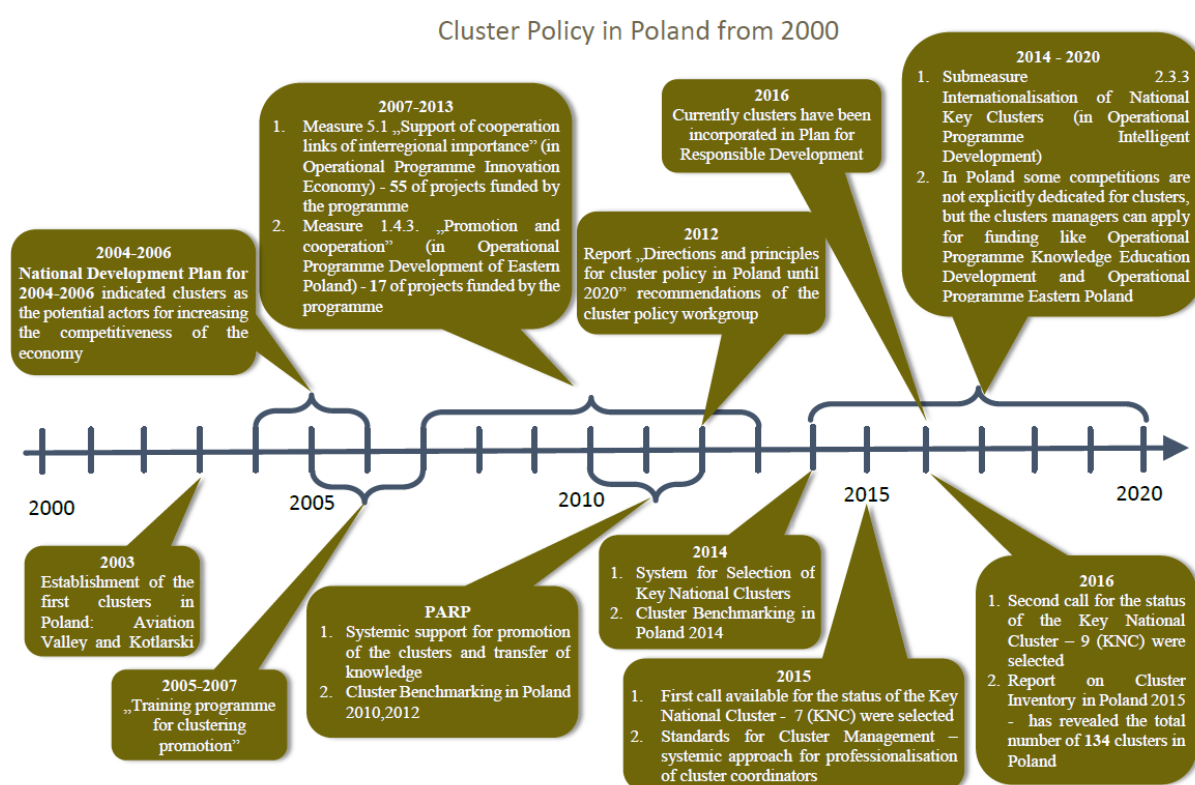


Figure 1: Time span of cluster policy development in Poland

Source: own processing.

Summary of relevant strategies, documents and programmes distinguished in two main periods 2007-2013 and 2014-2020 is stated on Figure 2.

<sup>24</sup> *Strategia na rzecz Odpowiedzialnego Rozwoju - projekt do konsultacji społecznych* [online]. Ministerstwo Rozwoju, Warszawa 2016, Available on WWW: <[https://www.mr.gov.pl/media/23749/SOR\\_29072016\\_projekt.pdf](https://www.mr.gov.pl/media/23749/SOR_29072016_projekt.pdf)>.

<sup>25</sup> *Strategia na rzecz Odpowiedzialnego Rozwoju - projekt do konsultacji społecznych* [online]. Ministerstwo Rozwoju, Warszawa 2016, Available on WWW: <[https://www.mr.gov.pl/media/23749/SOR\\_29072016\\_projekt.pdf](https://www.mr.gov.pl/media/23749/SOR_29072016_projekt.pdf)>.

The results of spider analyses (Figure 3, 4, 5, 6, 7 and 8) processed according to the Methodology Guide (Appendix 1) present the development of cluster policy in Poland and compare it with the development of the cluster policies in Hungary, Czech Republic and Slovakia.

More details concerning documents and programmes related to the cluster policy in Poland could be found in Appendix 2.

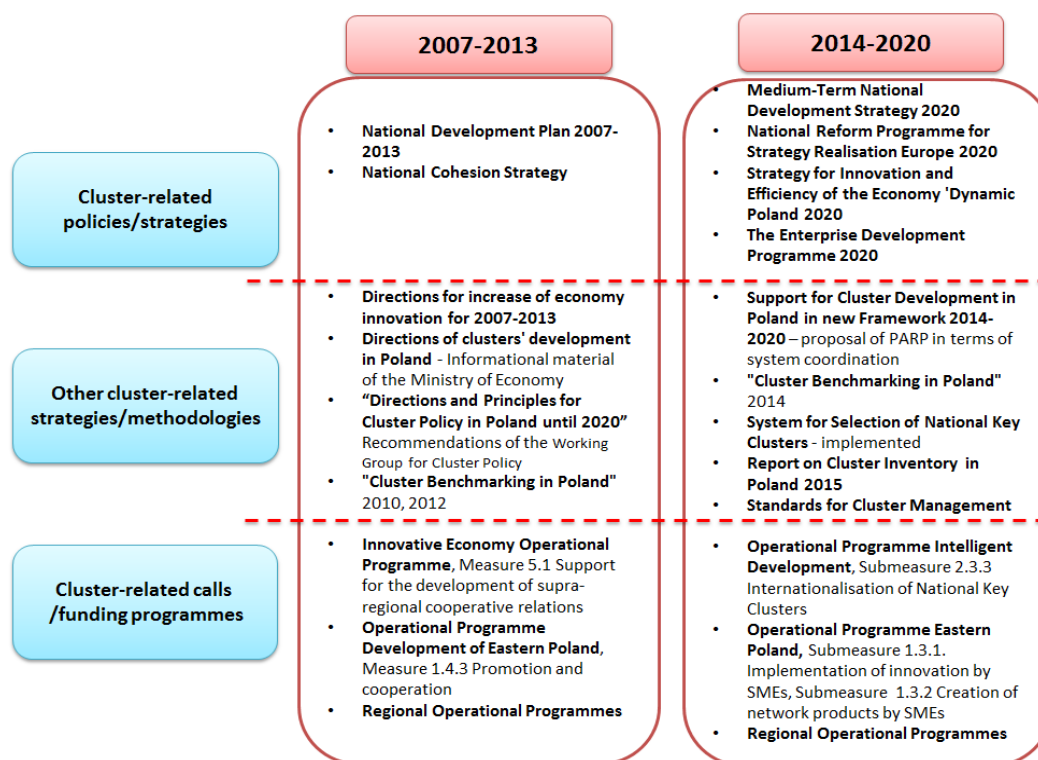
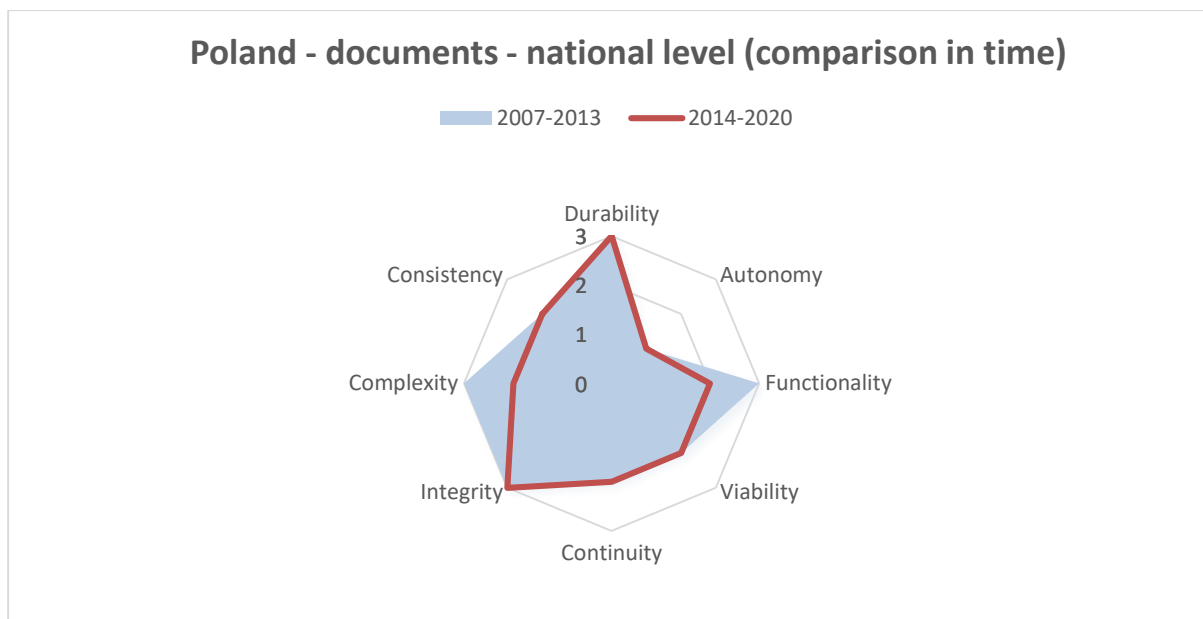


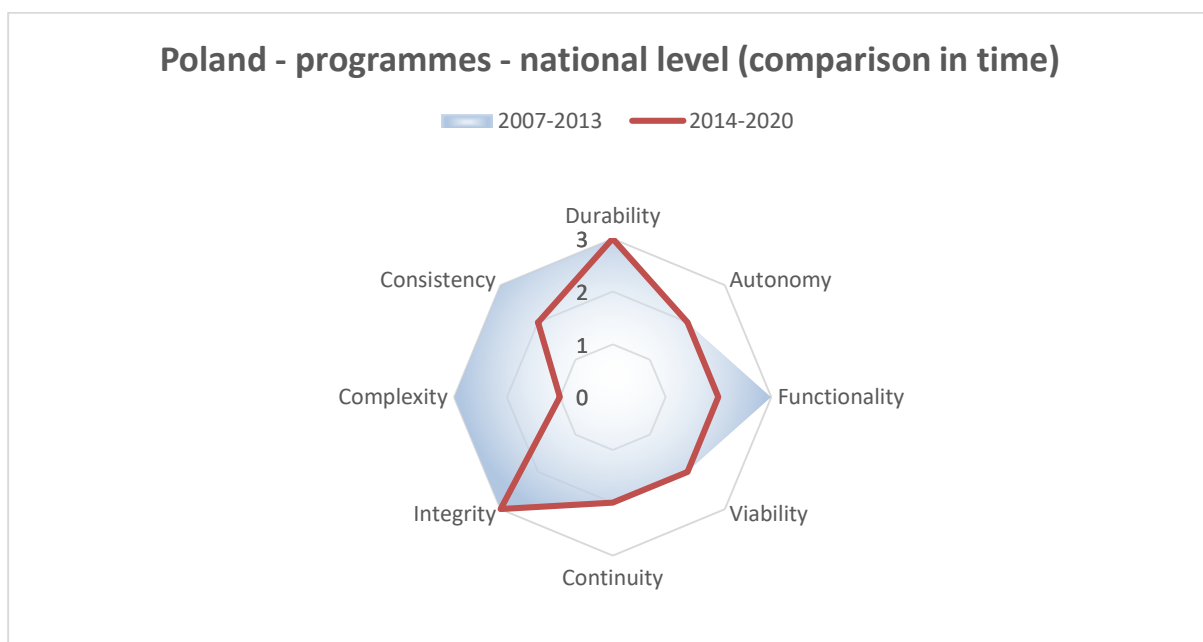
Figure 2: Summary of relevant strategies, documents and programmes for periods 2007-2013 and 2014-2020 in Poland

Source: own processing.



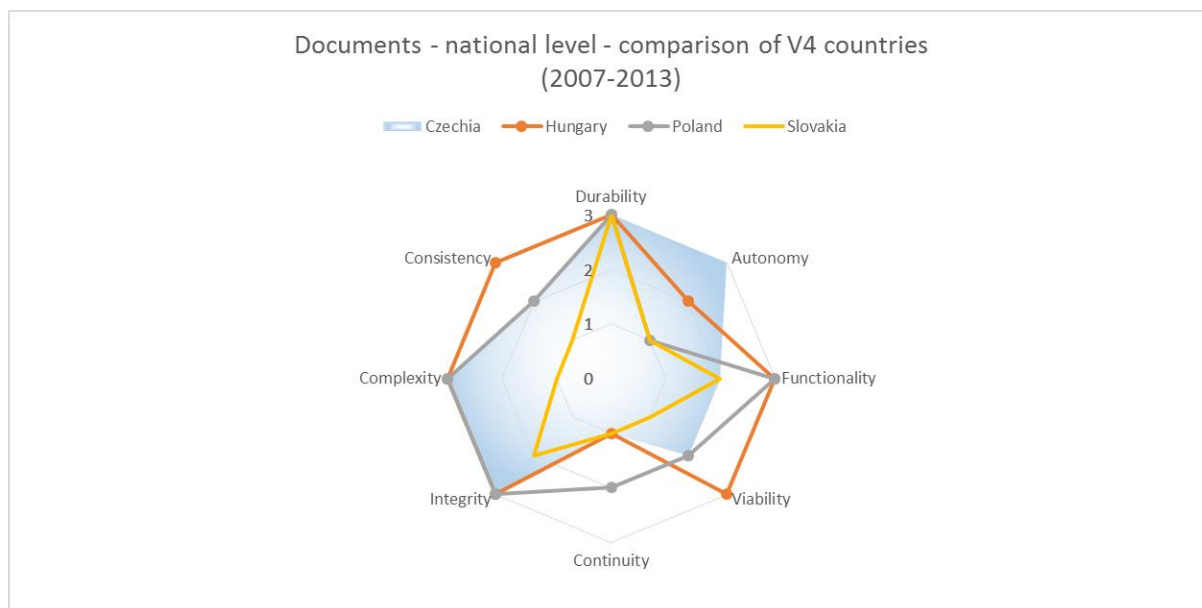
**Figure 3: Spider analysis of the characteristics of the documents supporting development of cluster policy in Poland**

*Source: own processing.*



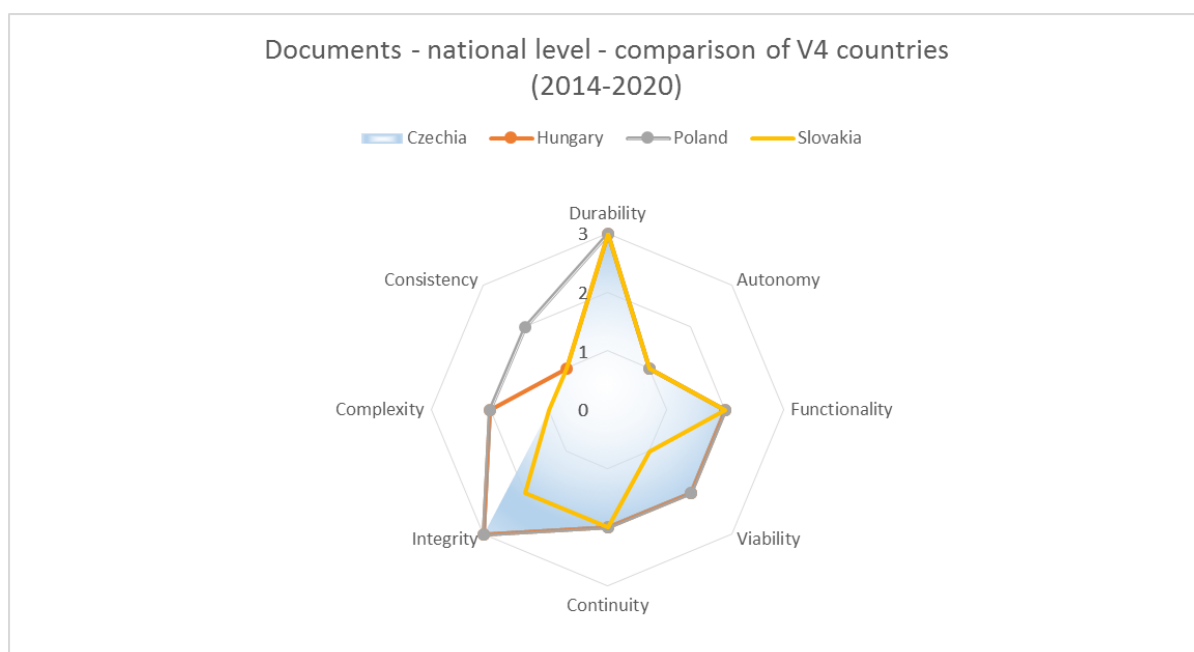
**Figure 4: Spider analysis of the characteristics of the programmes supporting cluster organisations' development in Poland**

*Source: own processing.*



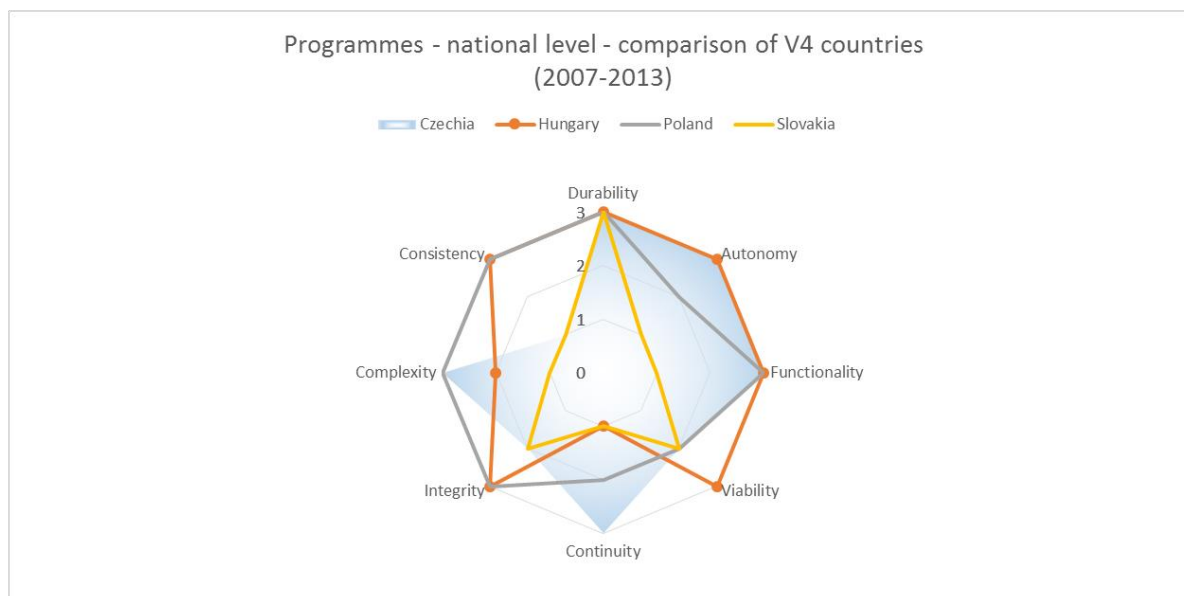
**Figure 5: Comparison of the cluster policy characteristics in V4 countries in the period of 2007-2013 - documents**

*Source: own processing.*

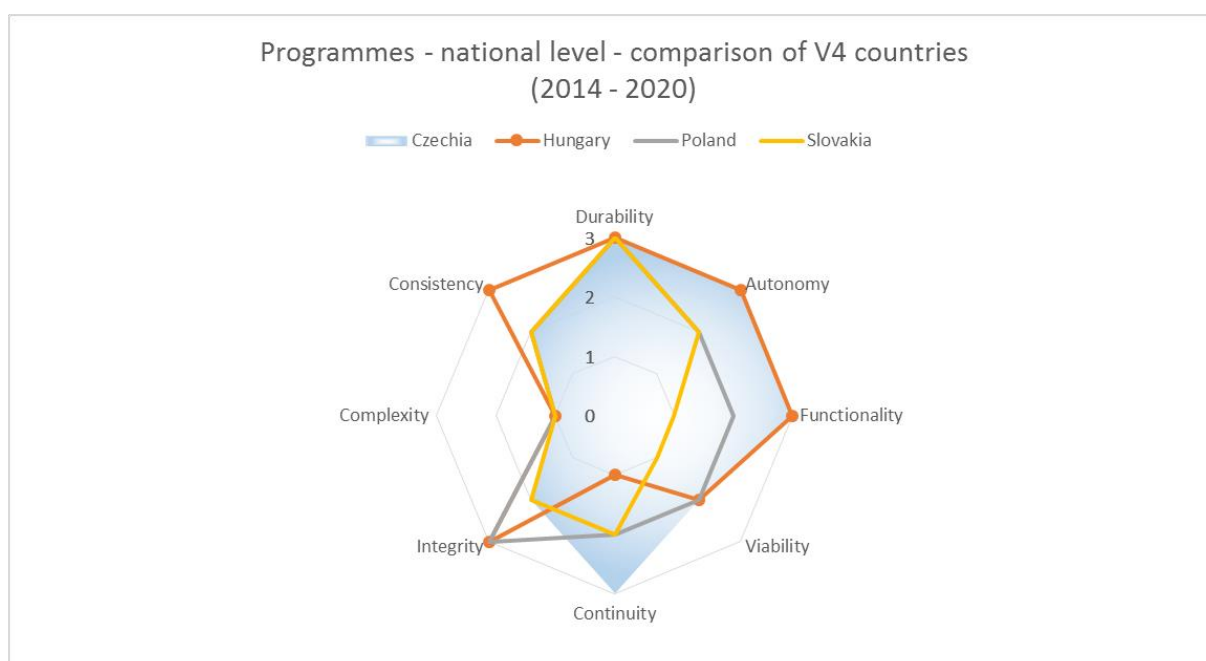


**Figure 6: Comparison of the cluster policy characteristics in V4 countries in the period of 2014-2020 - documents**

*Source: own processing.*



**Figure 7: Comparison of the cluster policy characteristics in V4 countries in the period of 2007-2013 - the programmes supporting cluster organisations' development**  
*Source: own processing.*



**Figure 8: Comparison of the cluster policy characteristics in V4 countries in the period of 2014-2020 - the programmes supporting cluster organisations' development**  
*Source: own processing.*

Over half of all founded cluster organisations benefited from a form of subsidy; the summary of support has been presented in Table 1.

**Table 1: Summary of cluster organisations' support within operational programmes in Poland**

| Operational programme |   | Cluster support programme  | Allocation (in EUR)                     | Min.-max. budget per project (in EUR) | No. of calls     | No. of supported cluster projects   |
|-----------------------|---|--|---|---------------------------------------|------------------|---|
| 2004-2006             | European Social Fund – Development of Human Resources | "Training programme for clustering promotion"  | 1 309 091                               | indirect support                      | Indirect support | 4232 project participants; 506 training 15 formalised cluster initiatives |
| 2007-2013             | Operational Programme Innovative Economy              | Measure 5.1 „Support of cooperation links of interregional importance”   | 104 300 000                             | undefined                             | 8                | 55 projects   |
|                       | Operational Programme Development of Eastern Poland   | Measure 1.4.3. „Promotion and cooperation”, component „Cooperation”  | 11 818 181                              | min. 454.545                          | 20               | 17 projects   |
|                       | Programme Support for cluster development             | Pilot project (specific subsidy from the national budget)  | 372 727                                 | min.34.090.909<br>max. 125.000        | 1                | 5 projects  |
|                       | „Innovation Express” (IE)                             | Programme for support of international cluster cooperation   | 409 090                                 | min. 27.272.727<br>max. 136.364       | 1                | 7 projects  |
|                       | Operational Programme Human Capital                   | Measure 2.1„Development of personnel of modern economy”.<br>2.1.3 „Systemic support for increase in adaptability of employees and enterprises” (PARP project "Polish clusters and cluster policy") | 527 383 171                             | indirect support                      | indirect support | indirect support  |
| 2014-2020             | Operational Programme Knowledge Education Development | Measure 2.2. Support for strategic management of enterprises as well as building the competitive edge on the market  | In total all measure 2.2.<br>55 651 107 | min. 11 360                           | n/a              | n/a   |
|                       | Operational Programme Smart Growth                    | Submeasure 2.3.3 Internationalisation of Key National Clusters   | 33.250.000                              | min. 120 000<br>max. 1 360 000        | n/a              | n/a   |
|                       | Operational Programme Eastern Poland                  | Submeasure 1.3.1. Implementation of innovation by SMEs,  | 100 052 666                             | min. 227 273<br>max. 1 600 000        | n/a              | n/a   |
|                       |   | SUBMEASURE 1.3.2 Creation of network products by SMEs  | 160 000 000                             | min. 4 550 000                        | n/a              | n/a   |

Source: own preparation.

## 4.2 SUPPORTING AUTHORITIES AND INSTITUTIONS

### MINISTRY OF ECONOMIC DEVELOPMENT

Ministry of Economic Development (previously Ministry of Economy) appoints the main directions for the cluster policy in Poland. Actions undertaken by the Ministry have to ensure the necessity to support the pillars of development in order to accelerate growth and increase the competitiveness of the Polish economy as well as the need for economic development based on regional and local specialisations, especially within cluster initiatives.

Actions were directed first and foremost at facilitating companies in accessing capital, encouraging networking, entrepreneurship, institutional, organisational and financial strengthening of the business environment, and what is more, bridging the information gap by disseminating the competitiveness analyses of the private sector. Starting 2015 Ministry of Economic Development in collaboration with PARP has organised the process of appointing Key National Clusters. According to new Strategy for Responsible Development, the main funding will be focused on R&D&I based on National Smart Specialisations and Key National Clusters. *(It follows from the provisions according to which there will be an increase in the thematic concentration of the R&D&I expenditure based on the National Intelligent Specialisations and the Key National Clusters).*

### POLISH AGENCY FOR ENTERPRISE DEVELOPMENT (PARP)

The Polish Agency for Enterprise Development is a governmental agency subordinate to the Minister of Economic Development. It came to existence by the Act of November 9, 2000. PARP belongs to the pioneers, both in the transfer of knowledge and dissemination of the idea of clustering in Poland, as well as providing direct support for cluster development since 2005. To support entrepreneurs, PARP uses the funds from the State budget and European Funds. PARP is actively involved in developing and implementing cluster policy in Poland. The examples of its activities are as following<sup>26</sup>:

- Initiator and coordinator of the Working Group on Cluster policy (2011-2012) .
- Co-foundation of the document "Directions and principles for cluster policy in Poland until 2020", which is the basis for the design of the current cluster policy (Enterprise Development Programme).
- Preparation of the proposals for mechanisms to coordinate the system support for the development of clusters in Poland in the financial framework 2014-2020 (March 2014).
- Dissemination and promotion of cluster management standards.
- Support for the internationalisation of Key National Clusters.
- Maintenance and development of Innovation Portal which is the knowledge exchange platform for clusters (among others, the Cluster Map, newsletters etc.)

Currently PARP is a member of TCI (The Practitioners Network for Global Competitiveness, Clusters and Innovation) - a leading global network, which conducts an active exchange of knowledge and experience in various forms of cluster support.

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<sup>26</sup> Available on WWW:

<[http://www.pi.gov.pl/klastry/chapter\\_95880.asp](http://www.pi.gov.pl/klastry/chapter_95880.asp), [http://www.pi.gov.pl/eng/chapter\\_86522.asp](http://www.pi.gov.pl/eng/chapter_86522.asp)>.



## PARLIAMENTARY GROUP ON CLUSTER POLICY (Parlamentarny Zespół ds. Polityki Klastrowej)

The Group was active in the period (10 deputies) and organised the Congress of Polish Clusters in the Parliament (2013, 2014 and 2015).

### **4.3 CLUSTER MAPPING, ESTABLISHMENT AND DEVELOPMENT OF THE CLUSTER ORGANISATIONS**

The first study of clusters in Poland took place in 2002. It was conducted by the Institute for Market Economics. The main objective was the preliminary identification of cluster initiatives, which became the basis for the analysis of the potential and opportunities for the development of cluster structures. The study allowed for the identification of the presence of clusters of economic activity and the preliminary assessment of maturity, barriers and opportunities for the development of cluster structures in Poland.

Further research on the formation and development of clusters in Poland was led mainly by the Polish Agency for Enterprise Development. The activities on the identification of clusters on a large scale were carried out by the Polish Agency for Enterprise Development (PARP) funded by the European Social Fund under Human Capital Operational Programme, Sub-measure 2.1.3 “Developing human resources through knowledge promotion, innovation transfer and dissemination”. One of the activities was the “Cluster benchmarking in Poland”<sup>27</sup> project performed for the period of eight months in 2010. The research included comparative analysis of 47 clusters in Poland. The key objective was, among others, to collect knowledge on the current cluster development stage in Poland and internal processes. The “Cluster benchmarking in Poland” was conducted again in 2012 and 2014.

In turn, the actions initiating the mapping of clusters in Poland were carried out in 2011-2012 with regard to the organisation (16) cluster conferences in each province in Poland. Then there were identified 212 cluster initiatives<sup>28</sup>. At that time, there was also created the Cluster Map, which is a database in form of an IT platform on the Innovation Portal (PARP), allowing for the presentation of cluster according to given criteria. The map was updated in 2015.

Last research untitled “Cluster Inventory in Poland” was carried out in 2015. According to research report Inventory of clusters operating on the territory of Poland has revealed the total number of 134 clusters, established between 2003 and 2015, most of them being relatively young, i.e. founded between 2011 and 2015 (60%). The oldest clusters include 12 (2 clusters) and the average cluster age is slightly more than 4 years. Figure 9 shows the cluster organisation’s year of establishment.

Location of clusters reflects the economic potential of Polish regions, as 48% of clusters are located in four most developed regions (according to GDP per capita, 2013): Mazovia (13 clusters), Lower

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<sup>27</sup> Available on WWW:

<[http://www.pi.gov.pl/PARPFiles/file/klastry/Benchmarking\\_klastrow/Benchmarking\\_klastrow\\_w\\_Polsce\\_2010.pdf](http://www.pi.gov.pl/PARPFiles/file/klastry/Benchmarking_klastrow/Benchmarking_klastrow_w_Polsce_2010.pdf)>.

<sup>28</sup> Data from catalogs of clusters in 16 voivodeships, published by PARP 2011-2012.

Silesia (11), Upper Poland (12) and Silesia with the highest number of 28 clusters. There are slightly more than 34 companies in a statistical cluster. Enterprises account for 78% of cluster participants, while SMEs constitute 72%. In 70 clusters which made their employment data available, there were 391,223 employees in total. Clusters represent 27 industries/specialisations, according to the classification pre-defined specifically for this purpose to make the data analysis possible as the cluster coordinators originally declared a very broad range of business sectors. The largest number of clusters are active in the following sectors: ICT, energy/renewable energy and construction, as well as in healthcare and tourism. Significant number of clusters represent business services, metal industry and production technologies (Figure 10).

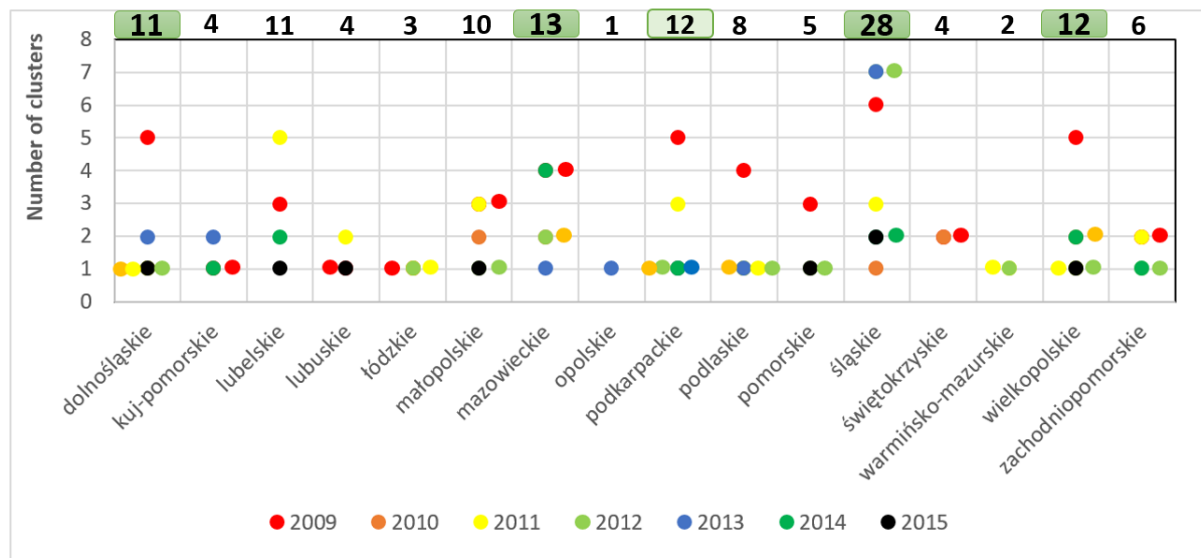
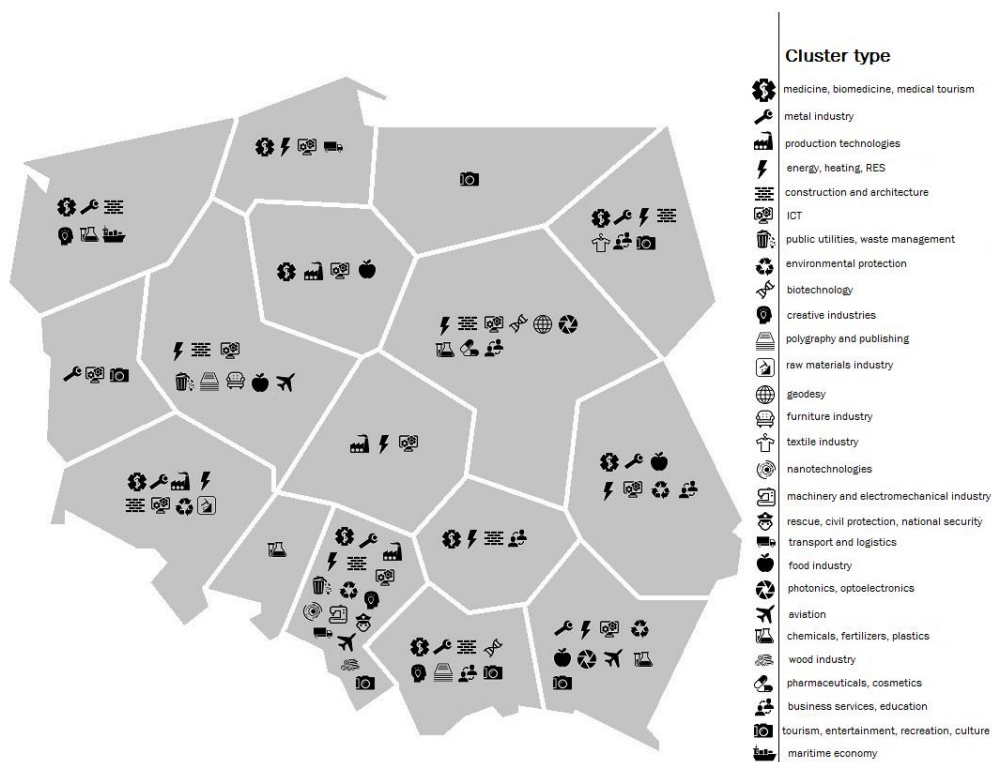


Figure 9: Year of cluster establishment, by voivodeship

Source: own preparation.



**Figure 10: Map of the cluster organisations distinguished by sectors in Poland**

Source: G. Buczyńska, D. Frączek, P. Kryjom, *Raport z inwentaryzacji klastrów w Polsce 2015*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2016, Available on WWW: <[http://pi.gov.pl/PARPPFiles/media/\\_multimedia/C1E1B3DE727F45C0990A2F06D8102839/20160308\\_152251%20Raport\\_z\\_inwentaryzacji\\_klastrow\\_w\\_Polsce\\_2015.pdf](http://pi.gov.pl/PARPPFiles/media/_multimedia/C1E1B3DE727F45C0990A2F06D8102839/20160308_152251%20Raport_z_inwentaryzacji_klastrow_w_Polsce_2015.pdf)>.

#### 4.4 EVALUATION OF CLUSTER ORGANISATION PERFORMANCE

##### Key National Clusters (KNC)

In order to achieve the goals of cluster policy outlined by the Polish Cluster Policy Group, in 2014 the Polish Agency for Enterprise Development (PARP), in collaboration with the Ministry of Economy and external experts, developed a set of criteria and drafted procedures for appointing the Key National Clusters (KNC)<sup>29</sup>. The objective of granting the KNC status is to select clusters which have a significant potential for developing the Polish economy and are competitive internationally<sup>30</sup>.

**Table 2 Selection criteria and the application evaluation process in the Key National Clusters competition**

| 1. Eligibility criteria<br>(formal check) | 2. Evaluation criteria<br>for stage 1 | 3. Evaluation criteria for the<br>Expert Panel |
|---|---------------------------------------|--|
|---|---------------------------------------|--|

<sup>29</sup> Available on WWW: <[http://www.pi.gov.pl/eng/chapter\\_95931.asp](http://www.pi.gov.pl/eng/chapter_95931.asp)>.

<sup>30</sup> *Selection of Key National Clusters in Poland*, Polish Agency for Enterprise Development, Warsaw, 2016, Available on WWW: <[http://www.pi.gov.pl/PARPPFiles/file/ANG/clusters/Selection\\_of\\_Key\\_National\\_Clusters\\_Poland\\_2016.pdf](http://www.pi.gov.pl/PARPPFiles/file/ANG/clusters/Selection_of_Key_National_Clusters_Poland_2016.pdf)>.

|   |  | (stage 2 of evaluation)   |
|---|--|---|
| <ul style="list-style-type: none"> <li>credibility of the applicant (coordinator),</li> <li>history of the cluster,</li> <li>strategy and action plan,</li> <li>critical mass,</li> <li>geographical concentration.</li> </ul>  | <ul style="list-style-type: none"> <li>management quality,</li> <li>coordinator,</li> <li>cluster resources,</li> <li>cluster recognition,</li> <li>economic potential,</li> <li>export potential,</li> <li>the innovation potential,</li> <li>innovation and knowledge transfer,</li> <li>collaboration and intensity of cooperation,</li> <li>internationalisation,</li> <li>significance for national and regional economy,</li> <li>strategy and development plans.</li> </ul> | <ul style="list-style-type: none"> <li>Cluster presentation,</li> <li>Implementation of the strategy of the cluster - a round of pre-defined questions, the same for all clusters,</li> <li>The round of open questions - the members of the Evaluation Committee and external experts may ask questions pertaining to the cluster, its activities and strategy.</li> </ul> |
| <ul style="list-style-type: none"> <li>✓ 5 criteria - 14 indicators</li> <li>✓ Evaluation: indicators of zero-one</li> <li>✓ To assess the merits only those applications which meet all the formal criteria proceed to the next stage</li> </ul>                           | <ul style="list-style-type: none"> <li>✓ 12 criteria - 35 indicators</li> <li>✓ Scoring - max 100 points</li> <li>✓ Clusters which achieved the min. thresholds of selected 22 indicators and obtained at least 57 points proceed to the next stage</li> </ul>   | <ul style="list-style-type: none"> <li>✓ 2 criteria - 6 indicators</li> <li>✓ Scoring - max 45 points</li> <li>✓ There is no minimum number of points</li> </ul>  |
| <p><b>4. Final score - grant the KNC status</b></p> <ul style="list-style-type: none"> <li>✓ The score from substantive assessment stage I and II is summarised</li> <li>✓ Max -145 points</li> <li>✓ Required min. 101 points (70%), the KNC status is granted.</li> </ul> |  |   |

Source: own preparation based on *Selection of Key National Clusters in Poland*, Polish Agency for Enterprise Development, Warsaw, 2016, Available on WWW: <[http://www.pi.gov.pl/PARPFiles/file/ANG/clusters/Selection\\_of\\_Key\\_National\\_Clusters\\_Poland\\_2016.pdf](http://www.pi.gov.pl/PARPFiles/file/ANG/clusters/Selection_of_Key_National_Clusters_Poland_2016.pdf)>; D. Frączek, J. Podgórska, *Konkurs o status Krajowego Klastra Kluczowego, edycja 2016-szczegółowe omówienie aktualnych wymagań wobec wnioskodawców*, PARP, Warszawa 2016, Available on WWW: <[http://www.pi.gov.pl/PARPFiles/file/klastry/20160421\\_KKK/2016\\_04\\_21\\_KKK\\_spotkanie\\_info\\_omowienie.pdf](http://www.pi.gov.pl/PARPFiles/file/klastry/20160421_KKK/2016_04_21_KKK_spotkanie_info_omowienie.pdf)>.

In 2015 in first round of the call for the status of KNC there were submitted 22 applications but only 7 clusters gained the status of the KNC. In 2016 in the second round of the competition, 18 applications were submitted, but the Minister of Development approved a list of 9 Key National Cluster recommended by the Evaluation Committee. Currently 16 clusters in Poland hold the status of the Key National Cluster (figure 11).



**Figure 11: Map of the Key National Clusters**

Source: M. Szczepańska, *Klasy w Strategii na rzecz Odpowiedzialnego Rozwoju*, Warszawa 2016, Available on WWW: <<https://www.mr.gov.pl/media/28145/3.pdf>>.

## 4.5 AWARENESS AND SATISFACTION OF CLUSTER ORGANISATIONS' MANAGERS

According to the Methodology Guide (see Appendix 1) cluster managers of six selected clusters from different sectors have been surveyed by means of semi-structured interviews.

The aim of the interviews with cluster managers was to obtain feedback on the cluster policy and funding programmes – how they are effective and helpful or whether they miss any of the important components and how it can be improved.

### 1) The structure of the respondents in POLAND

Six functional clusters in Poland were contacted with the questionnaire to be responded within the interview. The interview was conducted with the cluster manager. The sample of six clusters includes the following sectors, while each sector was represented by one cluster:

1. **Manufacturing** – traditional (processing) industries with value chains delivering final products to the market – **Association of West Pomeranian Chemical Cluster „Green Chemistry”** is the representative cluster;
2. **ICT** – **West Pomeranian ICT Cluster** is the representative cluster;
3. **KETs** (preferably one of the six key enabling technologies: micro and nanoelectronics, nanotechnology, industrial biotechnology, advanced materials, photonics, and advanced manufacturing technologies) or other technology / R&D-based cluster – **OPTOKLASTER - Mazovian Photonic Technology Cluster** is the representative cluster;
4. **Agro-food industries** – **Organic Food Valley Cluster** is the representative cluster;
5. **Services** – tourism, spa, health, social work, education, transport & logistic – **Southern Railway Cluster** is the representative cluster;
6. **Creative & cultural industries** – **Silesian Design Cluster** is the representative cluster.

The reason for the above structure of respondents was as follows: the results of the cluster policy assessment by cluster managers representing all six sectors will show their opinions/experiences with respect to the indicator **6 - Integrity** from the desk research (Does the cluster policy cover all sectors and industries / Is it limited to certain sectors and industries / only one sector?) The answers of clusters from different sectors will help to evaluate the existing cluster policy rules and their possible changes when considering the justified needs of clusters and the consequent benefits for the society.

### 2) Results of the questionnaire

#### Item 0. Identification

The interviewed clusters are mature organisations as they are more than 3 years old. The youngest is Southern Railway Cluster which was established in 2013. The oldest is West Pomeranian Chemical Cluster “Green Chemistry” established in 2007, which also holds the status of the Key National Cluster in Poland.

#### Item 2. Awareness – policy

All cluster managers were aware of the cluster policy existing in Poland on the national level especially in previous years and practically all were able to specify „Directions and principles for

cluster policy in Poland until 2020. Recommendations of the Working Group for Cluster Policy” and “Medium-Term National Development Strategy 2020”.

The awareness of the cluster policy on the regional level was much weaker. However half of the cluster managers declared the awareness of the existence of cluster policy, but two of them indicated the regional operational programmes instead of regional documents concerning cluster policy. All cluster managers agreed that local cluster policy does not exist. The awareness of the policy on the European level was rather good, the cluster managers mentioned different documents.

### **Item 3. Awareness - funding programme**

Majority of cluster managers were aware of the cluster funding existing in Poland on the national level. Half of them have specified that the funding programmes support the Key National Cluster.

The answers of cluster managers differ significantly on the regional level depending on different regions and different cluster funding in these regions. All clusters managers agreed that there was no support on the local level. The awareness of European level was rather weak, however some of them were able to enumerate several EU programmes.

### **Item 4. Exploitation**

This item helped us to assess how the cluster funding programmes have been used by clusters from different sectors.

Clusters were primarily beneficiaries of funding in the previous financial framework, mainly from the regional funds. Possession of an appropriate R&D infrastructure and having large enterprises as members of the cluster allow for obtaining the European funds. We can state that innovative, but small clusters have pretty limited options to obtain external funding.

Almost all projects were connected with the obligatory co-financing. The share of own contribution per project can differ from 0 - 25% (on average own contribution was 15%). Financial amounts allocated to individual projects varied considerably from 85 to 625 thousands EUR/per project.

### **Item 5. Satisfaction**

The Satisfaction item helped us to assess the general attitude of cluster managers towards the existing cluster policies/programmes.

The level of satisfaction depends mainly on the cluster policy realised especially on the regional level. Thus, Silesian clusters have a higher level of satisfaction than Westpomeranian clusters. Optoklaster has the lowest level of satisfaction, as it does not fulfill the criteria for support. The reasons of dissatisfaction are as following:

- Assumptions of the policy and programmes are inadequate, taking into consideration the development of clusters in Poland and in given region.
- Cluster organisation are not supported by government and local authorities in comparison with neighbour countries, such as Germany, Czech Republic, Hungary). There are fields, where the cluster policy is not implemented and there is lack of funding programmes.

- There is support of selected clusters (key national clusters). In other programmes (e.g. R&D), there are limited opportunities for participation due to financial or administrative reasons.
- There is too weak awareness and education on the importance of clusters at regional and local level.

#### **Item 6. Relevance**

The Relevance item discovers the cases when cluster policy and its measures are not applicable to all clusters and, vice versa, the clusters cannot make full use of them, giving the objective reasons for its partial relevance or complete irrelevance.

Almost all cluster managers of the chosen clusters agreed that the cluster policy /programmes in Poland are partly relevant and they mentioned several reasons why they are not completely relevant:

- The previous assumptions of cluster policy in Poland connected regional development with cluster development. They assured support for economic development based on regional & smart specialities, especially within cluster initiatives. These provisions were implemented to a very small extent, both at the regional and national level.
- Cluster policy is implemented insignificantly, both on the national and regional level, despite the efforts to identify the Key National Clusters. The importance of the clusters in Poland has been marginalised. The undertakings for clusters have been greatly reduced within the present framework 2014-2020.
- Present assumptions of the policy and programmes are inadequate, considering the development of clusters in Poland, i.e.:
  - o Clusters in Poland, especially technological clusters are less numerous than in Western Europe.
  - o It does not cover the needs of developing clusters - currently only Key National Clusters are supported.
  - o Cluster policy does not take into account the specifics of the ICT clusters. They are often the ones which help their member companies not so much with R&D problems, but with talent shortage, internationalisation or network expansion. Currently most promoted are clusters dealing with R&D, in cooperation with research institutions. ICT cluster do cooperate with them, however, within a different scope - mostly on knowledge-exchange between enterprises and scholars (both ways), as well as students.

#### **Item 7. Needs**

This part presents the possible needs of clusters that can be potentially incorporated in the cluster policy upgrade. All cluster managers agreed that the cluster policy or programmes do not cover all their needs. Comments are as following:



- The most common need was higher awareness of authorities regarding cluster policy and better communication with national / regional authorities in terms of realised or planned cluster policy. Cluster managers need more information about public activities for clusters, creation of regional and international clusters cooperation, announcing joint projects within public-private partnership. They expect more extensive knowledge about future plans concerning the cluster policy.
- All cluster managers are agreed that there should be a lower amount of required own financial contribution in cluster-related projects. They highlighted that there were often the problems with high share of own contribution what was the important barrier for applying for the funding. Financing by the cluster - should amount to 10-15%
- Cluster managers require undertaking the programmes for cluster staff education, internationalisation, B2B meetings.
- For cluster managers in Poland the problem is not the periodicity of calls but lack of calls for cluster at all, one exception is the call for Key National Clusters.
- ICT Cluster confirmed that there should be funding available for start-up clusters and clusters in creative industries.

#### **Item 8. Improvement suggestions**

This open question motivated the cluster managers to suggest possible improvements of the cluster policy/programme so that they can fit the needs of the clusters better and are a valuable source of information for the policy-makers. There were several suggestions for improvement. They were related to following categories:

- All cluster managers admit that there are needed funding programmes for clusters (not only for Key National Clusters). They should support:
  - o Cluster coordinators,
  - o Internationalisation,
  - o Development of new technologies (R&D projects with clusters),
  - o Improvement of communication and closer cooperation between organisations associated in the clusters.
- Creation of better possibilities for communication and knowledge sharing:
  - o Platform dedicated to clusters, containing all important news, programs, changes etc.
  - o Newsletter dedicated to cluster organisations,
  - o Information about the possibility to obtain financial support for clusters at regional, national and European level,
  - o Meetings and exchange of experiences between cluster coordinators.
- Cluster policy
  - o Establishment of a dedicated unit at ministerial level for the cluster policy management or its interministerial coordination,
  - o Higher awareness of the role of clusters at the national and regional levels,
  - o Transparency measures taken by the government entities engaged in Cluster policy and actions for clusters.

The full records of semi-structured interviews are attached in Appendix 1.

## V. ANALYSIS OF CLUSTER POLICY APPROACH AND RESULTS

### 5.1 SWOT ANALYSIS OF CLUSTER POLICY IN POLAND

SWOT analysis of the Poland Cluster policy is stated in Table 3.

Table 3: SWOT analysis of the Poland cluster policy

| Strengths  | Weaknesses  |
|--|---|
| <ul style="list-style-type: none"> <li>Measures implemented by Polish Agency for Enterprise Development [PARP] in 2007-2013 attracted potential bottom-up cluster initiatives.</li> <li>Creation of "basis" for the development of clusters: <ul style="list-style-type: none"> <li>books,</li> <li>reports,</li> <li>catalogs of clusters,</li> <li>cluster benchmarking,</li> <li>Cluster Map,</li> <li>Innovation Portal.</li> </ul> </li> <li>Active involvement of a variety of actors in the process of formulating the cluster policy in Poland - the establishment of the Cluster Policy Work Group (2011-2012).</li> <li>Invitation of clusters by regional authorities to consult on relevant activities, eg. the development of regional innovation strategies and smart specializations and taking them into account for certain forms of regional promotion.</li> <li>Development of research infrastructure (R&amp;D).</li> <li>Development of a system for the selection of Key National Clusters and its implementation.</li> <li>Creation of opportunities for the professionalisation of cluster management through the implementation of "Cluster Management Standards".</li> </ul> | <ul style="list-style-type: none"> <li>No strategic document defining the cluster policy.</li> <li>No dedicated unit at ministerial level for cluster policy management or its interministerial coordination.</li> <li>Cluster support at the national level covers mainly the Key National Clusters (KNC).</li> <li>Combining support for clusters with support for other initiatives (eg. cooperative links, consortia) prevents from the actual monitoring of cluster development and the actual measurement of the effects of support.</li> <li>Administrative and organizational barriers: formal requirements in contests discriminate against clusters with fewer members or inadequate structure, non-complex formal structure or limited financial potential (own funds).</li> <li>Expectation of similar effects and methods of operation of clusters in Poland as in the countries of Western Europe, without offering sufficient support.</li> <li>Lack of coordination between the national and regional levels,</li> <li>Considerable variation in the perceived role of clusters and the financial support provided at regional level.</li> <li>At the regional level a noticeable shift away from the cluster policy towards the smart specialisations.</li> <li>Limited inclusion of the clusters and cluster coordinator within the mechanisms which promote business cooperation with the R&amp;D sector.</li> </ul> |

Table 3: SWOT analysis of the Poland cluster policy – cont.

| Opportunities  | Threats  |
|--|--|
| <ul style="list-style-type: none"> <li>• New Strategy for Responsible Development (in consultation) in the early assumptions is to focus on the economic development of Poland based on clusters and industrial valleys.</li> <li>• Growth of individual mechanisms in clusters which allow them to operate without a dedicated financial support at national / regional level.</li> <li>• The ability to use the international funds, for example Horizon 2020, by clusters.</li> <li>• Facilitation of the creation of venture capital funds based on the cooperation of banks with clusters.</li> <li>• Emphasis on intensification of cooperation between business sector and R&amp;D as well as education.</li> <li>• Opportunity to learn from experience and good practices of countries which have successfully implemented a cluster policy.</li> </ul> | <ul style="list-style-type: none"> <li>• Uncertainty as to the future cluster policy and the importance of clusters at national and regional level.</li> <li>• Risk of not taking into account the smaller clusters (bottom-up initiatives) in the new Strategy for Responsible Development.</li> <li>• Lack of support, including financial support to clusters can cause: <ul style="list-style-type: none"> <li>◦ Discouragement of clusters from development of their activity,</li> <li>◦ Preventing clusters from achieving an appropriate level of professionalisation,</li> </ul> </li> <li>• Limiting the opportunities for development and expansion of the clusters, including their activity towards internationalisation and innovation.</li> </ul> |

Source: own development.

## 5.2 CLUSTER POLICY BEST PRACTICES FROM POLAND

### Practice No. 1: Indirect support of clusters implemented by Polish Agency for Enterprise Development<sup>31</sup>

Period of its application: 2009-2014

**Responsible organization:** Polish Agency for Enterprise Development (PARP)

As system beneficiary, based on the Regulation of the Minister of Regional Development on granting financial aid by PARP within the Human Resources Operational Programme of 20.06.2008. (Law Gazette of 2008, No. 111, item 710, as amended) .

General introduction of the best practice:

Policymakers in various countries have developed specific cluster policies distinguishing direct R&D support and indirect networking/coordination support. Presented best practice concerns precisely the support programmes of the cluster policies conducted within the scheme of the funding programmes 2007-2014.

Some research results suggest that cluster participants who benefit from support programmes (especially indirect support measures) expand the industry-university-government network. Indirect support programmes can have an extensive and strong impact on the output, whereas direct R&D support might only present a weak effect<sup>32</sup>.

The undertakings of PARP were selected because of their influence onto the formation the bottom-up cluster initiatives, as well as the creation of "basis" for the professional development of the clusters.

These projects became one of the important tools for defining and furthermore implementing cluster policy by supporting cluster development indirectly.

Challenges:

At the end of the first decade of the twenty-first century, Poland was the 6th biggest economy in Europe and 20th in the world (2011), with gross domestic product (GDP) reaching 514 billion dollars. Between 2007 and 2010 the average pace of GDP increase amounted to 4.3%, while in other EU countries it was close to zero. At the same time, a number of studies, including those conducted on behalf of the Ministry of Economy, indicated that the tendency to cooperate among Polish enterprises is low. In the Polish-specific conditions a special role was played by broadly defined soft barriers in contacts and cooperation, both between companies and in cooperation between economic operators and representatives of R&D institutions. It stemmed from a relatively short period of development of the private sector, withbnintense competition in the local market. Such a situation, however, also had a clear mental / psychological background. The reason was the lack of trust between business partners, as well as the cultural dominance of predatory competition which failed to see the cooperation opportunities for the joint development and improvement in the competitive position of the individual. In 2007 the relationships of mutual trust were at the level of 11.5%, which was one of the lowest results in Europe. The testimony of this

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<sup>31</sup>Available on WWW: <<http://www.kapitalludzki.gov.pl/podpisane-umowy/priorytet-ii/dzialanie-21/poddzialanie-213/>>.

<sup>32</sup> J. Nishimura, H. Okamuro, *Subsidy and networking: The effects of direct and indirect support programs of the cluster policy*, Research Policy, Volume 40, Issue 5, June 2011.

state of affairs was very limited business involvement in associations, societies or employer organizations, both at the sectoral and / or regional level.

Thus, elimination or at least reduction of the negative impact of soft barriers onto the process of cooperation in economy and science was considered one of the key areas of activities undertaken in the framework of cluster initiatives.

Despite the fact that at that time clustering in Poland was still a relatively new phenomenon, we have seen a dynamic growth of cluster initiatives. As shown in Figure 6, in 2009 there were 45 clusters in Poland. Two years later their number was 80. Until March 2012 around 212 cluster initiatives were identified.

Public authorities and institutional entities such as PARP, which understood the importance of clusters for competitiveness and innovativeness of the economy, saw the need to increase the awareness of entrepreneurs of the benefits of cooperation with research institutions and other enterprises. Hence, there were undertaken wide efforts to raise awareness about clusters, to identify them and to offer targeted support.

#### Measures:

Within the scheme of **the Human Resources Operational Programme, Measure 2.1.3 Systemic support for increasing the adaptability of employees and enterprises**, PARP realized the projects in order to increase qualifications of employers and employees so as to adapt the functioning of enterprises to modern economy. Some of them were dedicated to the development of clusters. Thus, there were the systemic projects realised within the above-mentioned measure where the PARP was the immediate beneficiary and cluster members and coordinators were the end beneficiary. They were mainly:

- **„Human resources development by promoting knowledge, transfer and popularisation of innovation”** - Promotional and informational project. Its goal was to strengthen Polish clusters, improve their competitiveness and innovative abilities by human capital development and increasing the efficiency of creating cluster policy.
  - Project No: POKL.02.01.03-00-016/09
  - Project value: ~9.671.250 EUR (38 685 000,00 PLN), including cluster-related activities ~1 177 272 EUR (ok. 5 158 000 PLN)
  - Date of signing the agreement: 23.06.2009
- **„Cooperation relations between Polish companies”** - a training project. Its goal was to provide knowledge and expand experience on creating cluster and cluster initiatives, devising a vision of cooperation.
  - Project No: POKL.02.01.03-00-018/09
  - Project value: ~3.050.000 EUR (12 191 198,29 PLN)
  - Date of signing the agreement: 07.07.2009
- **Dissemination and promotion of innovation** - project aimed at cooperation with institutions and organizations active in the field of innovativeness (pro-innovation activity) in Poland, incl. with technology parks and incubators, technology transfer centers and clusters
  - Project no.: POKL.02.01.03-00-010/08
  - Project value: ~513.954 EUR (2 261 397,62 PLN), including cluster-related activities ~30.454,55 EUR (134.000 PLN)
  - Date of signing the agreement: 01.08.2008
- **“Innovation Portal as an information platform supporting the development of innovation”**
  - Project No: POKL.02.01.03-00-011/08
  - Project value: ~61.000 EUR (242 820,72 PLN)
  - Date of signing the agreement: 01.08.2008

### Selected major results:

There were several measures undertaken within the mentioned projects, so called „Polish clusters and cluster policy”. These were, among the others:

- Clusters workshops and conferences in 16 regions of Poland – in 2011-2012 took place regional conferences dedicated to clustering in the context of regional development. PARP invited the broad range of participants such as the representatives of regional and local authorities, universities and R&D institutions, clusters, companies, institutions supporting economic development and entrepreneurship, foreign guests (speakers, clusters), etc.
- National and regional (16) catalogs of clusters- included presentation of every cluster taking part in the regional conference. The catalogs contained their background, profile of activity in terms of value chain, database of cluster members as well as pictures of core enterprises or the most innovative/characteristic products.
- Consultancy on creating clusters, animating and managing cluster initiatives,
- Publication of more than 15 books in the series called „Polish Clusters and Cluster Policy”.

It included manuals, guides, reports, research results, e.g.:

- Guide for animators of cluster initiatives in Poland -2011 (Przewodnik dla animatorów inicjatyw klastrowych w Polsce),
- Cluster policies in Europe - enterprises, institutions and management -2011 (Polityki klastrowe w Europie – przedsiębiorstwa, instytucje i zarządzanie),
- Cluster initiatives: effective action and strategic development-2011 (Inicjatywy klastrowe: skuteczne działanie i strategiczny rozwój),
- Value generation in the cluster -2012 (Tworzenie wartości w klastrze),
- Clusters in the creative industries - the development-leading forces in cities and regions-2012 (Klasy w sektorach kreatywnych – motory rozwoju miast i regionów).
- Study visits in EU countries,
- Cluster benchmarking (2010, 2012) -the key objective was, among others, to collect knowledge on the current cluster development stage in Poland and their internal processes. Moreover, it was essential to:
  - provide clusters with a useful tool to improve their own operations, knowledge acquisition and learning,
  - present the best solutions, best practices in Polish clusters
  - provide recommendations to the cluster support policy, both at national and regional / local level,
  - provide recommendations for other entities which support and cooperate with clusters, in particular scientific institutions, research centers, centers for innovation and entrepreneurship support,
  - extend the knowledge on the state and development trends of clusters in Poland and the processes taking place in them.
  - promote the idea of clusters in Poland
- Cluster Map - the database in form of an IT platform published on Innovation Portal (PARP), allowing for the presentation of clusters according to given criteria. The map was updated in 2015,
- Innovation Portal - a source of knowledge on supporting innovativeness and technology transfer. One of its part includes information on clusters. There are included the following sections: News, PARP for clusters, Cluster benchmarking, Good practices, Clusters and cluster associations in Poland and abroad, Cluster policy, Cluster library. Recently it was extended by new sections: Key National Clusters and Cluster Management Standards.

- The establishment of the Working Group for Cluster Policy and publication of its report entitled “Directions and Principles for Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy”.

#### Lesson learned:

Implementation of the above said measures have had a large impact on the development of clustering in Poland.

- In the period of dynamic growth in the cluster number, the preparation of regional conferences and directories allowed for the identification of clusters and cluster initiatives in the regions (mapping).
- Development of national and regional directories (PL / ENG) legitimized numerous cluster initiatives as well as organizations, and supported domestic and international promotional activities
- The publication of several books on the cluster animation and management as well as practices in the countries of Western Europe helped to create a substantive basis for the development of clusters.
- Cluster benchmarking enabled to acquaintance with the processes taking place both in clusters and in their environment.
- Cluster Map was a powerful tool for visualizing the range of clustering in Poland and simultaneously the promotion of clustering.
- Innovation Portal with its “Clusters” tab became a place of exchange of knowledge focusing on clusters both in the domestic and foreign markets.
- Establishment of the Working Group for Cluster Policy launched a broad debate on cluster policy in Poland and concluded in the publication of directions and principles for Polish Cluster Policy until 2020.

### **Practice No. 2: The formulation process of the cluster policy foundations - establishment and recommendations of the Working Group for Cluster Policy<sup>33</sup>**

Period of its application: 2011-2012

#### Responsible organization:

Polish Agency for Enterprise Development (PARP), under the honorary auspices of the Minister of Economy.

The establishment of the Working Group for Cluster Policy and publication of its report was carried within the scheme of “Polish Clusters and Cluster Policy” and was co-financed by the European Union from the Human Resources Operational Programme, sub-measure 2.1.3., within PARP systemic project entitled “Human Resources Development through promotion of knowledge, transfer and dissemination of innovation”.

#### General introduction of the best practice:

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<sup>33</sup> *Elaboration based on: Directions and Principles of Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy*, red. M. Dzierżanowski, I. Mitroczuk, J. Podgórska, G. Buczyńska, D. Frączek, P. Kryjom, PARP, Warszawa 2012.

The Polish Agency for Enterprise Development (PARP) in cooperation with the Ministry of Economy appointed the Working Group for Cluster Policy in order to prepare recommendations for the future cluster policy.

The Working Group have brought together the representatives of over twenty central administration bodies, in particular ministries responsible for economy, regional development, education and higher education as well as regional administration, government agencies, entrepreneurs organizations and clusters themselves. As a result, there was prepared the roadmap of further activities aimed at ensuring the development and strengthening of Polish clusters, especially the best ones.



**Figure 12: The publication entitled „Directions and Principles of Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy”**

**Source:** Available on WWW:

**<[http://www.pi.gov.pl/PARPFiles/file/klastry/Polskie\\_klastry/20121120\\_Report\\_Working\\_Group\\_Cluster\\_Policy.pdf](http://www.pi.gov.pl/PARPFiles/file/klastry/Polskie_klastry/20121120_Report_Working_Group_Cluster_Policy.pdf)>.**

The proposed recommendations for the future cluster policy, entitled „Directions and principles for cluster policy in Poland until 2020”, were based on the assumptions adopted in government documents, as well as they were consistent with the EU strategy Europa 2020 and the concept of smart specializations stipulated by the European Commission.

One of the recommendations was the selection and support of key clusters (national/regional).

#### Challenges:

According to the statement of the Ministry of Economy, innovation should be considered the main pillar of economic development in Poland. Aiming at achieving a high level of innovation, the Polish economy must go through subsequent stages of development. Clusters were perceived as directly connected with the regional innovation systems. Therefore, it was necessary to conduct thorough analysis and discussion regarding the appropriate organization of the Polish National Innovation System, creating conditions for the engagement in innovative ventures and directing this engagement. Thus, PARP had initiated a wide debate on the further directions of clusters' and cluster policy development in Poland as part of the “Polish Clusters and Cluster Policy” undertaking. As a consequence, the Working Group for Cluster Policy was established. Their recommendations for the future cluster policy were based on the assumptions adopted in government documents and had taken into consideration the EU strategy Europa 2020 and the concept of smart specialization stipulated by the European Commission. It is worth noticing that the EU postulated that every country and region should concentrate their efforts and resources on a specific small number of priorities or economic specializations with a significant innovative potential in which they would have real competences, resources and might achieve prominence and competitiveness on a global scale. Preparation of a smart specialization strategy on the national and regional level was



supposed to be an ex ante condition of awarding EU funds for investments in the area of research, development and innovation. Thus, an important element of discussions was the contribution of the European Commission representatives outlining the conditions for shaping cluster policy resulting from the guidelines and planned policies of the European Union.

The assumptions for recommendations stipulated that the main aim of the future cluster policy should concentrate on supporting innovativeness and competitiveness of the Polish economy based on:

- the intensification of cooperation, interaction and flow of knowledge within the clusters,
- supporting the development of strategic economic specializations (key clusters).

#### Measures:

The starting point for the Group's work was the Opening Report based on the assumptions adopted in government documents. Each meeting of the Group was summarized with a short report, whereas the final conclusions were published as "Directions and Principles of Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy" was the result of over 12 months of activity of the Working Group for Cluster Policy and an accompanying comprehensive debate, as well as, wide public consultations.

The Group was officially launched in May and the first meeting took place in June, 2011. Further meetings were held in September and December of 2011 and March, May as well as September of 2012. The Working Group for Cluster Policy was composed of representatives of central government institutions, including ministries and agencies, regions, metropolises, business organizations, clusters as well as experts. Foreign experts representing various approaches to supporting cluster development shared their knowledge during those meetings. The basis for the recommendations included also the examples of cluster programmes implemented abroad, in particular in Sweden, Germany, France and Hungary.

The recommendations prepared by the Group created a broader cluster-based development policy model. All documents, materials and publications were collected and made available at the Innovation Portal.

#### Main results:

"Directions and Principles of Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy" contains suggested objectives for the future cluster policy, the principles, as well as recommendations for the policymakers in Poland.

The suggested principal aim of the future cluster policy was to strengthen the innovativeness and competitiveness of the Polish economy through intensified cooperation, interactions and knowledge transfer (through providing support for the existing and newly created clusters), as well as through supporting the development of key economic specializations (selecting key national and regional clusters and focusing part of public support on them). There were identified the specific aims whose fulfillment would be necessary to achieve the above mentioned principal goal.

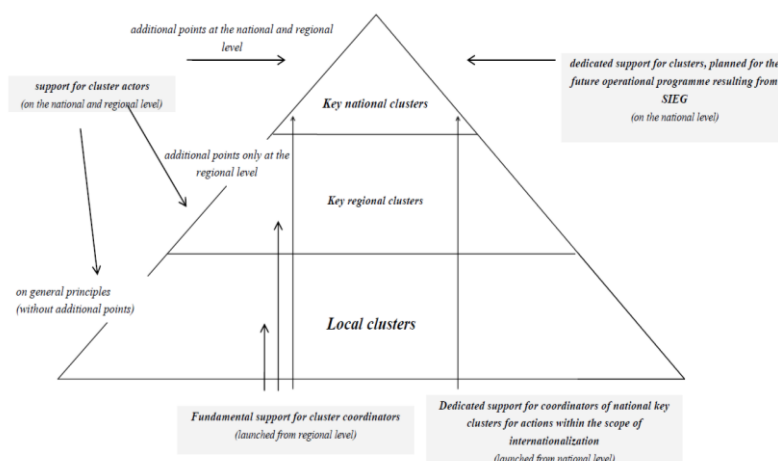
- stimulation of internal interactions, knowledge transfer and cooperation as well as the formation of the necessary social capital;
- expansion of the external networking of clusters and entities operating within them, especially in the cross-sector and international dimensions,
- strengthening of joint and integrated strategic planning processes within clusters,
- increase of the number of innovative goods and services offered on domestic and international markets by companies and entities operating within clusters, which should lead, among other things, to the growth of export,

- mobilization of private investment in clusters, including the creation of new companies and inflow of foreign investment as well as increasing private spendings on R&D and innovation-oriented activities,
- the development of the ecosystem of supporting institutions (e.g. education and research institutes, technological parks and technology transfer centers, etc.) and better customization of their offer and activities to the needs of companies operating within the clusters,
- boosted effectiveness of using public funds by their concentration and obtaining synergy between different policies and support instruments (e.g. with respect to infrastructure development, human capital, R&D, promotion, internationalization, etc.).

The document proposed some basic principles whose observance might be of key importance for the success of the future cluster policy. These are, as follows:

- I. Comprehensive support of networking and cooperation establishment in Polish economy.
- II. Combining bottom-up and top-down approaches with respect to supporting cluster development.
- III. Building an effective ecosystem of institutions supporting cluster development,
- IV. Concentration of public support on clusters with the largest potential for the development and creation of strong smart economic specializations.
- V. Coordination of policies and public instruments (e.g. on infrastructure, R&D or education) around key clusters.
- VI. Private co-financing of cluster development.

Realization of the goals and principles would require a number of activities, which were discussed by all participants of the Group and their experts. This has led to the development of a list of recommendations. In schematic way they are illustrated in Figure 13.



**Figure 13: Map of cluster support**

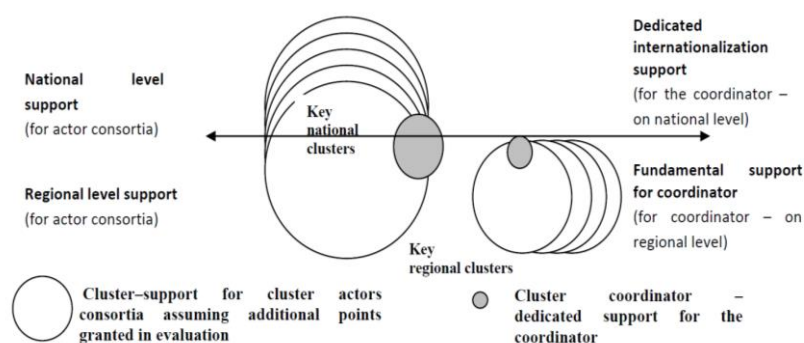
**Source:** *Directions and Principles of Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy*, red. M. Dzierżanowski, I. Mitroczuk, J. Podgórska, G. Buczyńska, D. Frączek, P. Kryjom, PARP, Warszawa 2012.

The main recommendations proposed by the Group are presented below:

1. Reinforcing the development and creation of clusters should be implemented by supporting cluster initiatives and cluster coordinators.

2. Stimulating the development of key clusters (national and regional) should be implemented with the support directed not only towards the cluster coordinator, but also directly to cluster actors.
3. There is proposed separation of the support from the regional and national level. Support for the basic coordinating functions within the clusters should be available on a regional level, whereas the dedicated support for internationalization should be available for the key cluster coordinators on the national level.
4. It is desirable to prepare a support scheme for cluster coordinators which could be used by all regions, so as to eliminate the risk that in some voivodeships there will be no support instruments in this scope.
5. On the national level it is proposed to select clusters with the largest potential and relevance for the Polish economy, which are competitive on an international scale. The selection of key clusters on the national level should go hand in hand with the concentration and coordination of public funds available on the national level (especially expenditure on R&D, development of human capital, export-oriented activities), as well as regional level – implemented by the mechanism of awarding additional points for projects from key clusters.
6. It is recommended that the selection of key national clusters would be possible throughout the entire period of the financial perspective and take the form of a competitive tender based on the precisely defined quality criteria, qualitative evaluation and expert analysis.
7. The key national cluster assessment conducted within the selection process should have, to a large extent, qualitative character which would be individualized and refer to the development potential of a given cluster and to the strategy and action plan prepared by its actors.
8. In order to ensure the credibility and transparency of the selection of key national clusters a selecting committee should be established (representatives of ministries, agencies, independent experts).
9. It is recommended that the support for Key National Clusters would be wide, comprehensive and include public funds allocated to R&D, investment, development of human capital, promotion and internationalization.
10. Acknowledging the autonomy of regions, it is proposed that particular voivodeships should also establish priorities of their own development policies by appointing key regional clusters within their smart specializations.
11. Regional authorities of particular voivodeships should cooperate with each other in order to coordinate support for clusters which will be supra-regional in nature.
12. It is recommended to implement mechanisms that would direct public support available both from the national and regional level, to the activities and undertakings conducted by entities functioning within key clusters (system of awarding of additional points to projects filed by entities from key clusters).

The breakdown of the support for key clusters is presented in Figure 14.



**Figure 14: Support for actors and key cluster coordinators according to their type, type of support and division into national and regional levels.**

**Source:** *Directions and Principles of Polish Cluster Policy until 2020. Recommendations of the Working Group for Cluster Policy*, red. M. Dzierżanowski, I. Mitroczuk, J. Podgórska, G. Buczyńska, D. Frączek, P. Kryjom, PARP, Warszawa 2012.

Main lessons learned:

The establishment of the Working Group for Cluster Policy and publication of its report was momentous for several reasons:

- At the time of the establishment of the Group's public opinion in Poland had matured towards the discussion on the cluster policy and had had in fact experience in the earlier and contemporary (2007-2013) financial framework and knowledge about the functioning of the clusters.
- The process of developing recommendations for the cluster policy in Poland involved a large group of stakeholders representing both public authorities, business support institutions, as well as the clusters themselves. The presentation of proposals was preceded by discussions with foreign experts, and above all - the public consultation.
- Publication of interim reports from the Working Group allowed for ongoing participation in the work progress on the recommendations and for obtaining comments from a large crowd of interested parties.
- Regardless of the broad social involvement in the work of the Group, it should be emphasized that the recommendations were based on the main strategic documents of both Poland and the EU, and therefore take account the economic and political background and the directions for development.
- The recommendations developed take into consideration diverse positions of: representatives of the national and regional authorities, the EU, cluster coordinators, cluster enterprises and experts on cluster policy.

To conclude, in retrospect both the operations of the Working Group for Cluster Policy and the quality of the recommendations developed should be highly assessed. It seems that this corresponded to the need to organize activities in the area of cluster policy in Poland and long-term planning of activities by both clusters and public authorities.

### **5.3 SUCCESS STORY**

#### **Case study - implementation**

##### **Initiation of the cooperation between Metal Cluster METALIKA and Metal Industry Cluster Berlin-Brandenburg**

Within the undertakings called „Polish clusters and cluster policy” (IE OP, Measure 2.1.3) PARP organised conference in Szczecin (West Pomerania) in 2015, entitled „Rola Klastrow w obszarach transgranicznych” [“Role of clusters in cross-border areas”].

One of the goals of the conference and B2B meetings was to start the process of cluster internationalization. Thus, after consultation with the West Pomeranian clusters, their potential partners from abroad were invited. Local clusters had been equipped with basic promotional tools: a cluster catalog and individual exhibition stands. In this way there was initiated a fruitful cooperation of Metal Cluster METALIKA with the Metal Industry Cluster Berlin-Brandenburg.

The first working meeting of the partners was held in Szczecin. Then the representatives of the German Cluster participated in the meeting of the Metal Cluster METALIKA. Subsequently, meetings were held during the metalworking trade fairs EMO 2013 in Hannover, Germany, and the signing of the MoU of not only inter-cluster, but also cross-regional character. They were supplemented by joint workshops called Building Bridges - Setting up the Cluster Cooperation between the Klaster Metalowy METALIKA and the Metal Industry Cluster Brandenburg. The workshop was divided into two parts: cooperation in the field of R&D projects and the training of personnel for the metalworking industry. In 2013, Metal Cluster METALIKA participated as partner in the annual conference of the German cluster Eisenhutttestadt in Germany and co-organized matchmaking event for companies. This allowed companies to start cooperation. In 2014 representatives of companies participated in Hannover in the workshop "EEN H2020 Elevator Pitch" CONCEPT FOR A JOINT HORIZON 2020 ACTIVITY for metalworking industry from the sphere of business and R&D sector. W 2015, during the European Cluster Conference in European Parliament in Strasbourg were presented the results of survey conducted on the potential of internationalization within companies of both clusters. As the next step there is planned a joint workshop for the companies within the biggest industrial fair Hannover Messe 2017 when Poland is an official country-partner.

## VI. RECOMMENDATIONS FOR IMPROVEMENT OF POLISH CLUSTER POLICY

The description of current situation in Poland concerning cluster policy and cluster organisations is basis for analysis what aspects are most importance for consideration what could be improved and how it can be done. Table 4 summarizes all these aspects and recommendations for cluster policy being close to a smart cluster policy model.

**Table 4: Summarization of the results of analyses and recommendations for improving cluster policy in Poland**

| Smart cluster policy model   | Where are we in Poland?   | What is necessary to improve in the Polish cluster policy?  | How can it be improved?  |
|--|---|---|--|
| A. Time span   |   |   |  |
| Document/<br>programme operation<br>has long-term<br>character   | <p>Cluster policy in Poland at the national level is not defined as a separate policy. It results from several strategic documents defining the economic policy in Poland.</p> <p>References to cluster policy can be found primarily in subsequent strategic documents since 2004, of medium- and long-term character.</p> <p>Cluster-supporting programs are implemented under 7-year EU perspectives, with the exception of the first period of 2004-2006.</p>   | It is recommended to formalize the Polish cluster policy in a dedicated strategic document or explicit inclusion of cluster policy in another strategy, similar to eg. Polish Space Strategy.   | The appointment, by the Minister responsible for the economy, of a working group or expert team to prepare a strategic document on the cluster policy. This document, among others, would define the long-term directions for the development of the cluster policy. |
| Governments positive attitude towards the cluster policy issue is the permanent part of the policy-making tools with regular updates to follow the new needs and context of the cluster policy | <p>Since 2004 each subsequent strategic document has taken into account clusters as entities which promote the development of innovation and increase the competitiveness of the Polish economy.</p> <p>The analysis of the development of clusters and development challenges for the Polish economy had influenced the perception of clusters in different periods and the selection of tools.</p> <p>Presently, (consulting of the new Strategy for Responsible Development) it is planned at the national level to increase the thematic concentration of expenditure on R&amp;D&amp;I on the basis of the National Smart Specialisations and mainly Key National Clusters.</p> | <p>Greater predictability in planning activities for clusters.</p> <p>Planning activities and tools considering the needs of:</p> <ul style="list-style-type: none"> <li>clusters at various stages of development,</li> <li>cluster coordinators.</li> </ul> <p>Including the protection of cluster development at the regional level, especially Key Regional Clusters.</p> | <p>Consultations of the planned activities in the field of cluster policy.</p> <p>The development of coordination mechanisms to enable cluster operation towards developing the economy and implementing the strategic development goals.</p>                        |

| Smart cluster policy model   | Where are we in Poland?   | What is necessary to improve in the Polish cluster policy?   | How can it be improved?   |
|--|---|--|---|
|  | At the regional level, only some of voivodeships have taken actions related to cluster support, including the choice of key regional clusters.  |  |   |
| B. Executive aspects   |   |  |   |
| The national/regional government recognizes the importance of the cluster policy issue, i.e. devotes the cluster issue an independent or autonomous document/ programme. | <p>There is no separate cluster policy in Poland at the national nor regional level. It is always an element of the economic or innovation strategy. So far, there were relatively a wide range of programmes devoted to the clusters. Presently there is one call available (Operational Programme Smart Growth 2014-2020, Submeasure 2.3.3 Internationalization of Key National Clusters). Cluster coordinators (not only Key National Clusters) which are innovation centers and are accredited by Ministry of Economic Development can provide services to SMEs which are financed from EU funds (submeasure 2.3.1 Pro-innovation BEI services for SMEs Operational Programme Smart Growth).</p> <p>At the regional level great diversification can be observed: from direct support of clusters (including the selection of key regional clusters) to lack of recognition of the clusters.</p> | <p>It is recommended to continue the programs dedicated to clusters. Within the scheme of regional smart specializations, clusters might be appointed by the voivodeships but not supported within Regional Operational Programmes (no devoted programmes).</p> <p>There is the support for cluster companies (within regional smart specialization) and lack of support for cluster coordinators who play an important role in stimulation and development of the relations between cluster companies and R&amp;D institutions. Submeasure 2.3.3 OP SG includes support for coordinators.</p> | <p>The aim should be for clusters to be included in the specific instruments implementing the development objectives at the national and regional level.</p> <p>Preparation of such solutions for all regions which take into account the cluster coordinators, so as to eliminate the risk that in some voivodeships there will be no support instruments in this scope.</p> |
| Cluster policy document/ programme is fully operable vertically, i.e. it has been adopted by the government as a government decree                                       | <p>Cluster policy in Poland at the national level is not defined as a separate policy, however it results from several strategic documents defining the economic policy in Poland, adopted by the government as a government decree.</p> <p>In 2011, there was appointed the Working Group for Cluster Policy by Polish Agency for Enterprise Development (PARP) in cooperation with the Ministry of Economy, in order to prepare recommendations for the future cluster policy.</p>  | Preparation of the government document dedicated to cluster policy or explicit inclusion of cluster policy in the Strategy for Responsible Development. However clusters are pointed out in some activities planned in the Strategy for Responsible Development.   | Establishment of the Working Group for Cluster Policy appointed by the Ministry of Economic Development.  |
| Cluster policy document/ programme is fully operable horizontally,   | Although the strategic documents refers to clusters as innovative organizations, in reality there are no limits as to   | Improvement not required, since there is no sector limitation.   | Improvement not required, since there is no sector limitation.  |

| Smart cluster policy model   | Where are we in Poland?  | What is necessary to improve in the Polish cluster policy?  | How can it be improved?   |
|--|--|---|---|
| i.e. it has a general force across the sectors of the governmental departments   | <p>their sector and support may cover a cluster of a traditional industry.</p> <p>This also applies to the current perspective 2014-2020, where there is offered support for the Key National Clusters, which must demonstrate, among other things their innovativeness (R&amp;D projects) to achieve this status.</p> <p>Doubt is raised by the announcement of the new Strategy for Responsible Development, which concerns the need for continued concentration of resources on so-called "first speed" programmes.</p>             | Uncertainty concerns the future Strategy for Responsible Development.   | Uncertainty concerns the future Strategy for Responsible Development.   |
| The existing allocation of financing from the public budget  | Presently there is one call available (Operational Programme Smart Growth 2014-2020, Submeasure 2.3.3 Internationalization of Key National Clusters). Limited application might have also submeasure 2.3.1 Pro-innovation BEI services for SMEs Operational Programme Smart Growth in which accredited innovation centers (also coordinator of cluster) can provide services to SMEs.  | <p>It is recommended to continue the programs dedicated to clusters.</p> <p>There is the support for cluster companies (within regional smart specialization) and lack of support for cluster coordinators who play an important role in stimulation and development of the relations between cluster companies and R&amp;D institutions.</p> | <p>The aim should be for clusters to be included in the specific instruments implementing the development objectives at the national and regional level.</p> <p>Preparation of such solutions for all regions which take into account the cluster coordinators, so as to eliminate the risk that in some voivodships there will be no support instruments in this scope.</p>                |
| Cluster policy document/ programme is fully operable functionally, i.e. the implementation of the policy is fully working in accordance with the planned scheme. | <p>Current situation in the area of cluster policy in Poland:</p> <ul style="list-style-type: none"> <li>• The desire to concentrate limited resources at the national level and to use them in the most effective way - support mainly for the Key National Clusters (without the support of coordinators).</li> <li>• At the regional level there is support for smart specializations (mainly cooperation of businesses with the R&amp;D sector).</li> </ul> <p>In this approach the role of cluster coordinators is decreased.</p> | Extend the scope of support to coordinators of the Key National Clusters, via including them in programmes which implement the development objectives. Taking into account the role of cluster coordinators in building relationships / realizing projects: enterprises + R&D institutions.   | <p>The clusters and clusters coordinators should be included in the specific instruments which implement the development objectives at the national and regional level</p> <p>Preparation of such solutions for all regions which take into account the cluster coordinators, so as to eliminate the risk that in some voivodeships there will be no support instruments in this scope.</p> |
| There is a clearly entrusted   | Lack of presence of a managing body for cluster  | There is a need for a coordination activities   | Appointment of a unit dedicated to the cluster policy.  |



| Smart cluster policy model  | Where are we in Poland?  | What is necessary to improve in the Polish cluster policy?  | How can it be improved?   |
|---|--|---|---|
| governance body for the cluster policy development, implementation and monitoring   | <p>development encompassing representatives from various ministries.</p> <p>Lack of coordination and complementarity of national and regional implementation of cluster policy.</p>  | <p>at the ministerial level, which will however take into account the interdisciplinary character of clusters (a wide range of sectoral specializations of the clusters)</p> <p>The coordinating activities should target both resorts (including the Ministry of Economic Development, Ministry of Science and Higher Education and others), as well as between the central and regional levels. Monitoring the effects of cluster policy would be equally important.</p> <p>To raise awareness of the regional authorities in order better recognition of the importance of clusters in the developed policy and instruments.</p> | Preparation of such solutions for all regions which take into account the cluster coordinators, so as to eliminate the risk that in some voivodeships there will be no support instruments in this scope.                         |
| <b>C. Thematic aspects</b>  |  |   |   |
| The SCPM builds on the fact that a cluster can appear in any industry and be the specific competitive advantage of the given territory, so the inclusion of all government sectors and industries in the cluster support scheme is the necessity. | In principle, there are no sector limitation for clusters organizations. Therefore there is foreseen the support only for companies within regional or national smart specialization which affects the activity of the clusters. | Taking into account the role of cluster coordinators in building relationships / realizing projects: enterprises + R&D institutions within regional and national smart specializations.   | The aim should be for clusters to be included in the specific instruments implementing the development objectives at the national and regional level (regional and national smart specializations).                               |
| All development stages of clusters are taken into account within the cluster policy structure and related measures  | <p>In earlier periods, the funding included the support of cluster initiatives and mature clusters.</p> <p>Nowadays, there is observed the need to concentrate limited resources at the</p>                                      | It is recommended to continue the programs dedicated to clusters at different stages and different levels.  | <p>The aim should be for clusters to be included in the specific instruments implementing the development objectives at the national and regional level.</p> <p>Preparation of such solutions for all regions which take into</p> |

| Smart cluster policy model   | Where are we in Poland?   | What is necessary to improve in the Polish cluster policy?  | How can it be improved?  |
|--|---|---|--|
|  | <p>national level and to use them in the most effective way - support mainly for the Key National Clusters (without the support of coordinators).</p> <p>At the regional level there is observed low or not existing cluster governance.</p>  |   | account the cluster coordinators, so as to eliminate the risk that in some voivodeships there will be no support instruments in this scope.  |
| The national accreditation scheme for cluster organisations, or a similar system, i.e. the cluster organisation's performance assessment based on a set of unified parameters for categorising the capability of cluster organisation to achieve the strategic goals and capitalise the public support efficiently | <p>There is implemented the procedure for appointing Key National Clusters (KNC). The objective of granting the KNC status is to select clusters which have a significant potential for developing the Polish economy and which are competitive internationally.</p> <p>Lack of identification of key regional clusters, and consequently the selection procedures (individual actions in selected regions). Often inadequate knowledge in terms of the importance of clusters at regional level.</p>   | <p>After the first call in 2015 the selection criteria have been refined and updated. The second call in 2016 proceeded with consideration for the updated criteria.</p> <p>Development of procedures for selecting the key regional clusters adjusted to the regional level.</p> | <p>No need for improvement, at the national level.</p> <p>Establishment of the Working Group for Cluster Policy appointed by the Ministry of Economic Development. The aim would be to develop an accreditation system for regional clusters.</p>  |
| The training schemes for cluster stakeholders, including the availability of experienced lecturers and trainers efficiently operates.  | <p>Until 2014 there were conducted trainings and additional support in the form of conferences, cluster-related publications, coordinators' meetings within the cluster benchmarking scheme.</p> <p>2015 - creation of opportunities for the professionalisation of cluster management through the implementation of "Cluster Management Standards". There was prepared a practical tool for improving managerial activities effectively, as well as provided information necessary for the implementation of the standards.</p> <p>Besides these, there are no systems or tools of public support for education of cluster managers and other cluster stakeholders. There were initially announced training activities for clusters.</p> | Cluster managers require undertaking the programmes for cluster staff education, internationalisation, B2B meetings   | <p>Creation of better possibilities for communication and knowledge sharing:</p> <ul style="list-style-type: none"> <li>- Information about possibility of financial support for clusters at regional, national and European level,</li> <li>- Meetings and exchange of experiences between Polish cluster coordinators,</li> <li>- Financing the participation in international conferences and cluster meetings.</li> </ul> <p>Activities related to the coordination body (ministry) which could maintain a data repository (studies, reports on cluster policy and its effects).</p> |

| Smart cluster policy model                | Where are we in Poland?   | What is necessary to improve in the Polish cluster policy?   | How can it be improved?   |
|---|---|--|---|
| The cluster concept awareness is building | <p>Activities of the Polish Agency for Enterprise Development within the indirect support have stimulated the creation and development of clusters but also raised awareness among stakeholders. Several undertakings such as: Cluster Map at Innovation Portal, publications of the books, analyses, reports, Benchmarking of Polish Clusters, the establishment of the Working Group for Cluster Policy etc. had an important impact on the promotion of clusters in Poland as well as the awareness and professionalization of cluster managers and stakeholders.</p> <p>The undertakings for clusters concept awareness have been greatly reduced within present perspective 2014-2020.</p> | <p>Support actions should be continued.</p> <p>The most common need is higher awareness of authorities regarding cluster policy and better communication with national / regional authorities in terms of realised or planned cluster policy.</p> <p>Cluster managers need more information about public activities for clusters, creation of regional and international clusters cooperation, announcing joint projects within public-private partnership. They expect better knowledge about future plans concerning the cluster policy.</p> | <p>Activities related to the coordination body (ministry).</p> <p>The aim should be to allow clusters to be included in the specific instruments implementing the objectives of development at the national and regional level.</p> <p>It would be of great importance to formalize the Polish cluster policy and specifying long-term directions for the its development in the context of economic development in Poland.</p> |

**Source:** Own processing

## VII. CONCLUSION

The European Commission's objective concerning clusters is to maximise clusters' contribution to the reindustrialisation of the European economy, entrepreneurship & SME growth and regional economic competitiveness (through synergies with smart specialisation)<sup>34</sup>. The efforts towards upgrading and at least partially integrating cluster policies within the Visegrad countries through the "V4 Cluster Policies and their influence on the viability of cluster organisations" project are thus more than relevant.

The project methodology consequently tends to streamline the V4 cluster policies from just a policy to a fact-based policy, from a partial cluster concept oriented to a more holistic and consistent view, from separate and incompatible to smart and strong V4 cluster policies based on a long-term partnership and collaboration of the Visegrad countries.

The results of the project in the form of recommendations based on the analysis and evaluation of current situation and exchange among the project partners could be relevant for the

<sup>34</sup> Ekroth-Manssila Kirsi (2015). *Overview of latest developments in EU Cluster Policy. Head of Unit – SMEs: Clusters Emerging Industries*, Cluster Excellence Day 2015, Brussels.  
<http://static1.squarespace.com/static/514068dbe4b07e09335cbef0/t/54eb6266e4b02db31b49b612/1424712294010/Clusters+in+COSME+and+H2020+-+Kirsi+Ekroth-Manssila.pdf>

improvement of the cluster policy in Poland, mainly in the aspects of implementing holistic strategy for cluster development at the national and regional level (depending on the stage of development of the cluster initiatives and organisations) across the different sectors based on long-term policy documents and programmes and with the involvement not only of the Ministry of Economic Development but also other ministries (or by establishment of a special managing authority for clusters development).

However, the development of clusters, as well as the changing challenges for the Polish economy had influenced the different perception of clusters by policymakers during the time. The role of the clusters was seen as: promotion of the cooperation between companies, strengthening the potential of science for the development of knowledge-based economy , contribution to more dynamic development of Special Economic Zones, improvement of the competitiveness of enterprises as well as, recently, the enhancement of the national and regional smart specialisations.

Thus, the formalization of the Polish cluster policy and specifying long-term directions for its growth in the context of economic development in Poland seem to be very important issues for improvement. Within that framework, the clusters should be included in the specific instruments implementing the development objectives at the national and regional level. What is more, this is associated with the need for improvement of the coordinating activities between both resorts (including the Ministry of Economic Development, Ministry of Science and Higher Education and others), as well as between the central and regional levels.

The results of the project were introduced and discussed at the final conference on 8th December, 2016 in Prague. The representatives of ministries responsible for cluster policy implementation of project partners' countries (including representatives of the Ministry of Economic Development PL) took part at the conference and panel discussion.

This final report is available at web site of the project: <http://klastr-portal.cz/en/v4clusterpol-documents>.

## **APPENDIX 1: METHODOLOGY GUIDE**

### **V4 CLUSTER POLICIES AND THEIR INFLUENCE ON THE VIABILITY OF CLUSTER ORGANISATIONS**

#### **METHODOLOGY GUIDE**

- I. Desk research**
- II. Semi-structured interviews**

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## I. Introduction

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This Methodology Guide is considered to be the first step towards the design and evaluation of the Smart Cluster Policy (SCP) model based on the V4ClusterPol project pilot. This guide has been built respecting the V4ClusterPol methodology framework. All recommendations in this guide are practical and realistic to achieve the goals of the project within its timeframe and with given resources. However, the criteria used in this guide for comparative analysis of cluster policies in the Visegrad countries are new in the sense of the holistic approach and qualitative point of view especially in the part of the desk research which forms the first part of this guide giving the detailed instructions to the project partners. The second part of the guide (chapter III) will include the semi-structured interviews with cluster managers.

## II. Instructions for the desk research

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### 1) The structure of the data collection forms

There are three types of forms for two periods of time prepared for the comparable assessment of cluster policies in the Visegrad countries and their degree of approximation to the Smart Cluster Policy (SCP) model:

- a. Existing/Preceding cluster policies/strategies (mandatory documents)
- b. Other existing/preceding documents for cluster policy (optional documents)
- c. Existing/Preceding cluster funding programmes

Expressed as a percentage, the SCP represents 100% (the highest values) in all surveyed parameters. Based on data gained from the desk research, it will be possible to identify the proximity of each cluster policy of the V4 country to the SCP model using the spider graph visualisation.

Concerning the **two periods of time**, we mean the programming periods of 2007-2013 and 2014-2020. Filling in the tables for both periods of time (2 x 3 forms), it will be possible to better compare the results in the V4 countries based on the already closed period (2007-2013), especially in case of the funding programmes where data, such as allocation of funds, number of calls, number of projects funded and the total expended, are available.

For the current period 2014-2020, the desk research will only show how the policy is set conceptually in each country, and this will serve for the comparison, as the output data are not known yet.

Concerning the **regional level** of documents/programmes, it is the **partner's region** only to be analysed. So, on the regional level, we will have **four V4 regions** for evaluation and comparison of the existing and preceding cluster policies/strategies materialised in documents and programmes.

### 2) The structure of the value of the indicators within one category

Based on the structure of indicators with one choice of three options within each category of indicators, the evaluation of the data will count with three levels of values:

1. **High-level** aspect of the country/region's cluster policy that is fully functional and corresponding to the SCP model.
2. **Medium level** of cluster policy attention is given to this aspect of the SCP model and thus it still gives the possibility to the policy-makers to increase the given status by new, better targeted policy measures;
3. **Low level** aspect of the cluster policy in the country/region, maybe not addressed at all by policy measures and thus showing the deficit in relation to the SCP model, which offers the space for policy action;

3) The explanation of the categories of indicators used:

0. **Identification** – the basic identification data including the name of the document/programme, the responsible body/author/managing body, implementation body or the target group that is the document devoted to, the year of the adoption/issue of the document/programme.
1. **Durability** – the length of the time span of the document/programme operation divided into long-term, mid-term and short-term duration.
2. **Autonomy** – the degree of focus on cluster policy showing that the document is either exclusively devoted to it, or is a part of a broader/similar policy but with a corresponding proportion of the cluster policy focus, or the cluster issue is only generally mentioned without any specifications.
3. **Functionality** – the combination of the government level of the document adoption, its scope of force throughout the sectors of the governmental departments (i.e. industry, agriculture, services etc.) and the degree of implementation. The criterion should show whether the cluster policy is firmly anchored in the system vertically (the government decree vs. just strategic document), horizontally (general force throughout the sectors vs. some sectors only) and functional in terms of whether the implementation of the policy is working. For the programme evaluation, the functionality includes specific quantitative data.
4. **Viability** – the premise is used that viability is connected with the existence of clearly entrusted governance body (an exclusively established institution for cluster policy vs. incorporated within duties of an existing government body) and existing allocation of financing from the public budget.
5. **Continuity** – the confirmation of the governments positive attitude towards the cluster policy issue being a permanent part of the policy-making tools with regular updates to follow the new needs and context vs. just included in the current programme period – or something in between?
6. **Integrity** – the degree of covering the sectors of public administration and the industries (no matter if traditional, such as automotive, or from technological or service/creative industries etc. including emerging and inter-sectoral industries) with no limits. A cluster can appear in any industry and be the specific competitive advantage of the given territory, so the inclusion of all government sectors and industries in the supporting scheme is the optimum.

7. **Complexity** – One of the most important aspects of a good cluster policy is to understand the needs of individual cluster development stages and offer the cluster's developmental stage the relevant support. The development segments of clusters, in this methodology, are:
  - vi. **Cluster mapping and analysis;**
  - vii. **Cluster initiative development** (cluster actors facilitation);
  - viii. **Cluster organisation incubation** (the start-up support for the cluster management capacity building);
  - ix. **Cluster organisation development** (cluster management excellence, R&D projects, internationalisation)
  - x. **Cluster governance** influencing all of the previous segments if efficiently performing.
8. **Consistency** – the degree of the provision of the essential supportive measures and actions that the public sector institutions (policy-makers) can/should offer within their governance to assist and optimise the cluster policy with the conscious goal to receive the best quality on its output. For the purpose of this analysis, the supportive measures include the existence of:
  - i. **The national accreditation scheme for cluster organisations**, or a similar system, i.e. the cluster organisation's performance assessment based on a set of unified parameters for categorising the capability of cluster organisation to achieve the strategic goals and capitalise the public support efficiently);
  - ii. **The training scheme for cluster stakeholders** targeted at cluster analysts, cluster facilitators, cluster managers and the cluster organisation staff, cluster governance representatives and other actors of the regional/national cluster-relevant development and innovation infrastructure;
  - iii. **The cluster concept awareness building** – the basic good that the policy-makers can do for clusters – to inform about them and communicate their successes, benefits, examples worth following and the best practices in all five types of cluster activities (i.e. information & networking, HR development, R&D and innovation projects, PR & marketing and internationalisation) in the form of conferences and other public events, publications and various media outputs.

#### 4) The instructions for the desk research in individual steps

***Step 1 – Search out the existing cluster policy documents in your country according to the three types of documents to be described in the three types of questionnaire forms:***

##### **1. Existing/Preceding cluster policies/strategies (mandatory documents)**

This questionnaire is targeted at those identified policies/strategies that are embodied in legally approved documents and adopted by some of the government administrations in a form of a government decree or other binding procedure.

##### **2. Other existing/preceding documents for cluster policy (optional documents)**

This questionnaire is designed for those less binding documents concerning the cluster policies and strategies that have the form of recommendations, best practices,



methodologies, studies etc. and can be used as the basis for some policy/strategy implementation but are not mandatory.

### **3. Existing/Preceding cluster funding programmes**

This questionnaire will be used for the description of all financial tools identified to allow the cluster policy implementation.

***Step 2 – Classify the identified documents according to their belonging to the territorial administration: national, regional, local and fill in the relevant data in the right columns.***

***Step 3 – Fill in the available data in four possible ways:***

- a) Write complete texts / figures after the colon (:)
- b) Mark with x your answer on the questions (?) to show your choice of the three options.
- c) Add specification in text/figure where needed (Which one/s?)
- d) Choose the right statement from the proposed options, add your own one where appropriate (for example “Choose the type of the document ...” – question 2 in the Form 2) and write the right word/s in the column.

***Step 4 – Fill in the Partner’s identification data***

## **III. Instructions for the semi-structured interviews with cluster managers**

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The aim of the interviews with cluster managers is to get the feedback on the cluster policy and funding programmes – how they are effective and helpful or whether they miss some of the important components and how it can be improved. The results of the interviews evaluation and their comparison in the V4 countries together with the results of the desk research on cluster policies will enable to formulate the recommendations towards the policy-makers and propose relevant upgrades and/or amendments.

### **1) The structure of the respondents**

Each partner will contact five (5) functional cluster organisations / clusters represented by cluster managing organisations with the questionnaire to be responded within the interview. The interview will be carried out with the cluster manager or other delegated person.

The sample of five clusters will comprise of the following sectors while each sector will be represented by one cluster:

- 1. Manufacturing** – traditional (processing) industries with value chains delivering final products to the market and ICT;

2. KETs (preferably one of the six key enabling technologies: micro and nanoelectronics, nanotechnology, industrial biotechnology, advanced materials, photonics, and advanced manufacturing technologies) or other technology / R&D-based cluster;
3. Agro-food industries;
4. Services – tourism, spa, health, social work, education, transport & logistic;
5. Creative & cultural industries.

The reason for the above structure of respondents is as follows: The results of the cluster policy assessment by cluster managers representing all five sectors will show their opinions/experiences with respect to the indicator **6 - Integrity** from the desk research (Does the cluster policy cover all sectors and industries / is limited to certain sectors and industries / only one sector?) The answers of clusters from different sectors will help to evaluate the existing cluster policy rules and their possible changes when considering the justified needs of clusters and the consequent benefits for the society.

## 2) The structure of the questionnaire and explanations/instructions for the interview

The questionnaire consists of a cluster identification item (0) and eight thematic items (1 - 8) containing the questions and options of answers. The first column serves for ticking the selected answer (**Tick the choice - x**) and the second column serves for the specifications and more details (**Specification details**).

### Item 0. Identification

- Name of the cluster organisation/cluster vs. Name of the cluster managing body (HU, PL)

While the cluster organisations in a form of legal body with its executive management exist in the Czech Republic and Slovakia (associations, cooperatives etc.), the Hungarian and partly Polish clusters have a specific cluster managing body – a legal entity with its own name which differs from the name of the cluster.

- Cluster organisation/cluster established in the year

The year of establishment of the cluster organisation or cluster defines the “age” of the cluster in terms of the cluster development segment (start-up/immature – e.g. up to three years; developed/mature – above three years) that can play role in the cluster policy exploitation, its relevance for clusters and needs of a cluster.

### Item 1. - Sector of operation

**Question:** Choose one sector where your cluster belongs (see the explanation in the Guide)

- a) Manufacturing, specify which:
- b) ICT, specify which:
- c) KETs or other technology/R&D-based cluster, specify which:
- d) Agro-food industries, specify which;
- e) Services, specify which:
- f) Creative & cultural industries, specify which:

The sector of operation of the interviewed cluster is defined by one of the five sectors – see the previous paragraph ad III 1) The structure of the respondents.

### Item 2. Awareness – policy

**Question:** Are you aware of the cluster policy existing in your country?

- If YES, please specify the document (name, period of validity, responsible body)

- a) on the national level
  - b) on the regional level
  - c) on the local level (municipality, sub-region)
  - d) on the European level
- if NOT, please specify why:
- i) I am not aware
  - ii) no policy existing in the country

This question should give the feedback on the existence of different cluster policies and the respondent's awareness of it.

### **Item 3. Awareness - funding programme**

**Question:** Are you aware of cluster-devoted funding programme? If yes, please specify the programme (name, period of validity, responsible body)

- a) on the national level
- b) on the regional level
- c) on the local level (municipality, sub-region)
- d) on the European level
- e) no

Similar as the Item 2.

### **Item 4. Exploitation**

**Question:** Are you the beneficiary of the funding programme/s ad 3 a), b), c)? If yes, specify and use next columns for more programmes you exploited.

- a) Name of programme/s you applied for funding
- b) Number of projects applied for / time period of projects duration (years from-to per project)
- c) The value of each project implemented (in €)
- d) The obligatory co-financing percentage per project (%)

This item helps to see, how the cluster funding programmes have been used by clusters from different sectors.

### **Item 5. Satisfaction**

**Question:** Are you satisfied with the concept, scope of measures and support of clusters within the cluster policy / programmes in your country?

- a) fully satisfied
- b) rather satisfied
- c) neutral
- d) rather dissatisfied - specify the reasons why:
- e) fully dissatisfied - specify the reasons why:

The Satisfaction item will help to assess the general attitude of cluster managers towards the existing V4 cluster policies/programmes and discover some of the reasons for dissatisfaction.

### **Item 6. Relevance**

**Question:** How would you assess the relevance of the cluster policy / programmes in your country towards your cluster?

- a) completely relevant
- b) partly relevant - specify the reasons why:
- c) irrelevant - specify the reasons why:

The Relevance item discovers the cases when cluster policy and its measures are not applicable to all clusters and, vice versa, the clusters cannot make full use of it, giving the objective reasons for its partly relevance or complete irrelevance.

#### **Item 7. Needs**

Question: Does the cluster policy/programmes in your country cover all your needs? If not, please choose what you are missing and specify:

- a) the periodicity of calls at least once a year (if other - please specify)
- b) the higher amount of allocated money/lower co-financing (if other – please specify)
- c) more and better awareness building and training – lack of human capital for cluster management (please specify)
- d) funding for start-up clusters and clusters in services, agro-food and creative industries (please specify)
- e) better governance from the public sector – more communication, care and involvement in support of cluster activities (please specify)
- f) other needs/comments

The item offers possible needs of clusters that can be potentially incorporated in the cluster policy upgrade.

#### **Item 8. Improvement suggestions**

Question: Can you suggest some improvements of the cluster policy / programmes in your country that would help your cluster to prosper better?

- a)
- b)
- c)

The open question motivates the cluster managers to suggest possible improvements of the cluster policy/programme so that they can better fit the needs of the clusters and are a valuable source of information for the policy-makers.

## APPENDIX 2: DOCUMENTS AND PROGRAMS RELATED TO THE CLUSTER POLICY IN THE REPUBLIC OF POLAND

### 0. The project partner's identification and contact data

|   |   |   |
|---|---|---|
| 1 | <b>Country</b>                            | Poland  |
| 2 | <b>Region</b>                             | Central level   |
| 3 | <b>Project partner</b>                    | University of Szczecin  |
| 4 | <b>Form Completed by</b>                  | Marzena Frankowska<br>Justyna Myszak<br>Mariusz Jedliński   |
| 5 |   | <a href="mailto:marzena.frankowska@wzieu.pl">marzena.frankowska@wzieu.pl</a> +48 606 280 653                |
| 6 | <b>Consultations<br/>(if appropriate)</b> | Justyna Choińska-Jackiewicz, Ministry of Economic Development<br>Joanna Podgórska PARP<br>Piotr Kryjom PARP |

PARP

Polish Agency for Enterprise Development

## 1.A Existing cluster policies/strategies (mandatory documents/ 2014-2020)

| INDICATORS |                   |                                       | Cluster policy territorial administration level   |  |   |   |
|------------|-------------------|---------------------------------------|---|--|---|---|
| No.        | Type              | Questions                             | National  | National   | National  | National  |
| 1          | 0. Identification | Name of the document:                 | Średniookresowa Strategia Rozwoju Kraju 2020 (ŚSRK)<br>[Medium-Term National Development Strategy 2020] | Krajowy Program Reform (KPK) na rzecz realizacji strategii Europa 2020<br>[National Reform Programme for Strategy Realisation Europe 2020] | Strategia Innowacyjności i Efektywności Gospodarki „Dynamiczna Polska 2020” (SIEG)<br>[Strategy for Innovation and Efficiency of the Economy 'Dynamic Poland 2020'] | Program Rozwoju Przedsiębiorstw do 2020 (PRP)<br>[The Enterprise Development Programme 2020]          |
| 2          |                   | Responsible body:                     | Government  | Government   | Government  | Ministry of Economy (currently Ministry of Economic Development)                                      |
| 3          |                   | Implementation body:                  | Ministries responsible for given field  | Ministries responsible for given field   | Government coordinator – Minister of Economy  | Ministry of Economic Development, cooperation with PARP<br>[Polish Agency for Enterprise Development] |
| 4          |                   | Adopted by the government in the year | RESOLUTION OF COUNCIL OF MINISTERS No. 157, 22.11.2012  | Accepted by Council of Ministers, 26.04.2011   | Ministry of Economy, January 2013   | Council of Ministers, April 2014  |
| 5          | 1. Durability     | Long-term (7 years and more)?         | 8 years   | 9 years  | 7 years   | -   |
| 6          |                   | Mid-term (3-6 years)?                 | -   | -  | -   | 6 years   |
| 7          |                   | Short-term (1-2 years)?               | -   | -  | -   | -   |
| 8          | 2. Autonomy       | Specifically devoted to clusters?     | -   | -  | -   | -   |

|    |                  |  |  |   |  |   |
|----|------------------|--|--|---|--|---|
| 9  |                  | Explicit part of another policy document?<br>Which one?                    | -  | -   | <p>SIEG is one of the 9 sectoral integrated strategies, which at the national level ensures the goal attainment of Polish economy, as defined in the Long-term National Development Strategy and the Medium-Term National Development Strategy.</p> <p>Objective 2: Stimulating innovation by increasing the efficiency of knowledge and work,</p> <p>Measure direction: 2.3: Promoting cooperation in the innovation system</p> <p>Measure 2.3.3: Support for cooperation within the clusters</p> <p>Objective 4: Increase the internationalization of the Polish economy</p> <p>Measure direction 4.2: support the influx of innovative and responsible investments, including foreign investments</p> <p>Measure 4.2.2 .: Activities for the implementation of cluster policy on special economic zones</p> | <p>Executive programme to Strategy for Innovation and Efficiency of the Economy „Dynamic Poland 2020” (SIEG);</p> <p>Selection of Key National Clusters;</p> <p>Priority 2.2. cooperation for innovation, 2.2.2. Strengthening and development of clusters.</p> |
| 10 |                  | Generally mentioned in an existing strategy?                               | The development objectives for the Long-term National Development Strategy (DSRK) will be realised by means of integrated strategies, and especially the Medium-term National Development Strategy till 2020. Generally mentioned the role of the clusters at macro and microeconomic level. | Second medium-term strategic document. Takes into account realisation of objectives included in Europa 2020 strategy. Priority 2: Innovation for smart growth, 2.3: new directions for the development of innovation, Measure 2.3.7 is devoted to the clusters. | -  | -   |
| 11 | 3. Functionality | Adopted as the government decree with general force and fully implemented? | -  | -   | -  | -   |
| 12 |                  | Adopted as the government decree with sectoral force /partly implemented?  | <b>government document, in realisation (realization in the frame of the SIEG strategy and regional strategies)</b>   | <b>government document, in realisation</b>  | <b>government document, in realisation (not implemented in relation to special economic zones)</b>   | <b>government document, in realisation. Implemented mainly as regards to Key National Clusters.</b>   |
| 13 |                  | Adopted as strategic document with unstated force / not implemented?       | -  | -   | -  | -   |

|    |               |   |  |  |   |   |
|----|---------------|---|--|--|---|---|
| 14 | 4. Viability  | Supported by public budget and governed by specialised institution?     | -  | -                                      | -   | -   |
| 15 |               | Supported by public budget and governed by traditional government body? | Ministries responsible for given field   | Ministries responsible for given field | Ministry of Economy (currently Ministry of Economic Development) and PARP | Ministry of Economic Development, cooperation with PARP [Polish Agency for Enterprise Development]. PRP will be implemented via instruments within Operational Programme Smart Growth [Program Operacyjny Inteligentny Rozwój (PO IR)] as well as Regional Operational Programmes (RPO) |
| 16 |               | Not supported by public budget / partly governed by a government body?  | -  | -                                      | -   | -   |
| 17 | 5. Continuity | Continuously valid with regular updates?                                | -  | -                                      | -   | -   |
| 18 |               | Valid for the period 2014-2020 and existing also in previous years?     | National Development Strategy 2020 (ŚSRK) is an element of the new national development management system, whose foundations had been described in ammended Act of 6 Decemeber 2006 on principles for development policy (Law Gazette of 2009 No. 84, entry 712, with further amendments) as well as in accepted by the Council of Ministers on 27 April 2009 document Principles for Poland's development management. | -                                      | -   | -   |
| 19 |               | Valid in the period 2014-2020?  | -  | yes                                    | yes   | yes   |



|    |               |   |  |   |   |   |
|----|---------------|---|--|---|---|---|
| 20 | 6. Integrity  | Covering clusters in all sectors and industries?                        | <b>Covers clusters in all sectors and industries, especially Polish export industries</b><br><b>(Objective II.1.4. Developing export of goods and services)</b> "Development of clusters in Poland's product specialty areas may and should be an important lever for the development of Polish export, in high-tech sectors (ICT, machine, aerospace and automotive industries), as well as in traditional ones (fashion, amber, yachts and motorboats, agriculture and food) and services (creative industry, film, medical services and others)". | <b>Covers the most competitive clusters in all sectors and industries, especially technology clusters</b> | Covers clusters in all sectors and industries         | Covers clusters in all sectors and industries |
| 21 |               | Limited to certain sectors/industries? Which ones?                      | -  | -   | -   | -   |
| 22 |               | Only one sector supported? Which one?                                   | -  | -   | -   | -   |
| 23 | 7. Complexity | Measures for all cluster development stages included?                   |  |   | -   | yes   |
| 24 |               | Measures only for three to four cluster development stages? Which ones? | 2012-2015 measures for all cluster development stages<br>2016-2020 – only mature clusters (maturity of the clusters will allow for directing the support -based on the functioning of the cluster on market-participation model)   | Higher phase for development of cluster organisations   | Higher phase for development of cluster organisations | -   |
| 25 |               | Measures only for one to two cluster development stage? Which one/s?    | -  | -   | -   | -   |

|    |                |  |   |  |   |  |
|----|----------------|--|---|--|---|--|
| 26 | 8. Consistency | National accreditation of cluster organisations, training of cluster syeseholders and cluster concept awareness building provided? | building awerness of clusters, cooperation with R&D, innovation, building human capital and internationalisation in terms of Polish export industries |  |   |  |
| 27 |                | Only two of the cluster concept support activities provided?<br>Which ones?  | -   | yes, cluster policy is an element for realisation of investment priorities of the Smart Growth by means of the above said instruments: PO IR [Operational Programme Smart Growth] and PO PW [Operational Programme Eastern Poland] | Yes, internationalisation, knowledge and technology transfer, common EU research projects | -  |
| 28 |                | At least one of the cluster concept suport activities provided?<br>Which one?  | very general statements regarding the goals at the micro and macro level  | -  | -   | support of Key National Clusters (internationalization), at present. |

### 1.B Preceding cluster policies/strategies (mandatory documents 2007-2013)

| INDICATORS |                   |  | Cluster policy territorial administration level   |   |
|------------|-------------------|--|---|---|
| No.        | Type              | Questions  | National  | National  |
| 1          | 0. Identification | Name of the document:  | National Development Plan (NPR) 2007-2013   | Narodowe Strategiczne Ramy Odniesienia [National Strategic Reference Framework] for 2007-2013 supporting economic development and employment (NSRO)<br>- National Cohesion Strategy |
| 2          |                   | Responsible body:  | Government  | Government  |
| 3          |                   | Implementation body:   | Ministries responsible for given field  | Ministries responsible for given field  |
| 4          |                   | Adopted by the government in the year:                                     | 2005  | The Ministry of Regional Development, 2007  |
| 5          | 1. Durability     | Long-term ( 7 years and more)?   | 7 years   | 7 years   |
| 6          |                   | Mid-term (3-6 years)?  | -   | -   |
| 7          |                   | Short-term (1-2 years)?  | -   | -   |
| 8          | 2. Autonomy       | Specifically devoted to clusters?  | -   |   |
| 9          |                   | Explicit part of another policy document? Which one?                       | -   |   |
| 10         |                   | Generally mentioned in an existing strategy?                               | PRIORITY: ENTREPRENEURSHIP AND INNOVATION; Direction no. 1: Creation of favourable environment for enterprises (Support of cooperation between enterprises and business support institutions) | Objective 4: Increase of competitiveness and innovation of enterprises, especially high value-added production sector and development of service sector                             |
| 11         | 3. Functionality  | Adopted as the government decree with general force and fully implemented? |   | Government document, fully implemented  |
| 12         |                   | Adopted as the government decree with sectoral force /partly implemented?  | yes   | -   |
| 13         |                   | Adopted as strategic document with unstated force / not implemented?       | -   | -   |

|    |               |   |   |  |
|----|---------------|---|---|--|
| 14 | 4. Viability  | Supported by public budget and governed by specialised institution?     | -   |  |
| 15 |               | Supported by public budget and governed by traditional government body? | Ministries responsible for given field  | Document describes directions for support by the funds available from the EU budget with the European Regional Development Fund (ERDF), European Social Fund (ESF) and Cohesion Fund                         |
| 16 |               | Not supported by public budget / partly governed by a government body?  | -   |  |
| 17 | 5. Continuity | Continuously valid with regular updates?                                | Continued: National Development Plan (NDP) 2004-2006  |  |
| 18 |               | Valid for the period 2007-2013 and existing also in previous years?     |   |  |
| 19 |               | Valid in the period 2007-2013?  | -   | yes, it is result of National Cohesion Strategy  |
| 20 | 6. Integrity  | Covering clusters in all sectors and industries?                        | Support of cooperation of enterprises and business support institutions in terms of creation of producer's groups (incl. groups of agricultural producers), cooperation, distribution and capital links, associations of enterprises and self-government units, among others, by creation of network structures – clusters (incl. eg. Polish maritime cluster), technology centres, industrial parks, cooperation links and links between business support institutions as well as between business support institutions and enterprises. |  |
| 21 |               | Limited to certain sectors/industries? Which ones?                      | -   | Development of cooperation links between enterprises, creation of clusters around large enterprises, technological networks with scientific institutions and production chains of SMEs and large enterprises |
| 22 |               | Only one sector supported? Which one?                                   | -   | -  |
| 23 | 7. Complexity | Measures for all cluster development stages included?                   | yes   | yes  |
| 24 |               | Measures only for three to four cluster development stages? Which ones? | -   |  |
| 25 |               | Measures only for one to two cluster development stage? Which one/s?    | -   | -  |

|    |                |  |  |   |
|----|----------------|--|--|---|
| 26 | 8. Consistency | National accreditation of cluster organisations, training of cluster syeseholders and cluster concept awareness building provided? | -  |   |
| 27 |                | Only two of the cluster concept support activities provided? Which ones?   | -  | Helps with investments, consulting and training for enterprises,complex support for creation new enterprises (so-called start-ups) is planned, especially in industries essential for the development of a given region, as well as cooperation between companies on regional level will be promoted <b>(support for creation and development of cooperation links between enterprises, including regional-range clusters).</b> |
| 28 |                | At least one of the cluster concept suport activities provided? Which one?   | R&D, development of research-technology clusters around strong scientific, technological and academic centres, integrating teams of higher education institutions, Polish Academy of Science and R&D units, as well as other scientific units. |   |

### 3.A Existing cluster funding programmes (2014-2020)

| INDICATORS |                   |  | Cluster policy territorial administration level   |   |   |
|------------|-------------------|--|---|---|---|
| No.        | Type              | Questions  | National  | National  | National  |
| 1          | 0. Identification | Name of the programme:   | Program Operacyjny Wiedza Edukacja Rozwój (PO WER) [Operational Programme Knowledge Education Development]<br>Measure 2.2. Support for strategic management of enterprises as well as building competitive edge on the market | Programu Operacyjny Inteligentny Rozwój (PO IR) [Operational Programme Smart Growth] Submeasure 2.3.3<br>Internationalisation of Key National Clusters  | Program Operacyjny Polska Wschodnia (PO PW) 2014-2020 [Operational Programme Eastern Poland] regions: lubelskie, podkarpackie, podlaskie, świętokrzyskie i warmińsko-mazurskie.<br>SUBMEASURE 1.3.1. Implementation of innovation by SMEs,<br>PODDZIAŁANIE 1.3.2 Creation of network products by SMEs |
| 2          |                   | Managing body:   | Ministry of Infrastructure and Development (currently Ministry of Economic Development)   | Ministry of Infrastructure and Development (currently Ministry of Economic Development)   | Ministry of Infrastructure and Development (currently Ministry of Economic Development)   |
| 3          |                   | Implementation body:   | Intermediate body: PARP [Polish Agency for Enterprise Development]  | Intermediate body, call announced by PARP [Polish Agency for Enterprise Development].   | Intermediate body: PARP [Polish Agency for Enterprise Development]  |
| 4          |                   | Choose the priorities of the programme: networking, human resources, R&D and innovation projects, marketing, internationalisation, others: | Consulting and training measures, development needs analysis, preparation of development plans and dissemination of knowledge among cooperating partners (clusters, cooperation links etc..),                                 | The measures undertaken within the programme are concentrated mainly on the strengthening of links between business and science, and simultaneously on the increase in commercialisation of R&D results and their practical implementation in economy, as well as enterprise innovation support.<br>Objective of the measure:<br>Increase in internationalisation of enterprises active within the Key National Cluster | Measure 1.3.1: realisation of innovation processes, implementation of R&D, Measure 1.3.2: creation and development of network products, enterprise integration  |
|            |                   | Officially approved by the government in the year:   | yes, PO WER was accepted by the European Committee on 17 December 2014  | yes,<br>Programme was accepted by the European Committee with decision C(2015) 855 of 12 February 2015  | 2015  |
| 5          | 1. Durability     | Long-term/ długoterminowy ( 7 years and more)?   |   |   | no  |
| 6          |                   | Mid-term/ średnioterminowy (3-6 years)?  | 6 years (2014-2020)   | 6 years (2014-2020)   | 6 years (2014-2020)   |
| 7          |                   | Short-term/ krótkoterminowy (1-2 years)?   |   |   | no  |

|    |                  |   |   |   |   |
|----|------------------|---|---|---|---|
| 8  | 2. Autonomy      | Specifically devoted to clusters?   |   | yes   | yes, enterprises which are members of the cooperation links   |
| 9  |                  | Explicit part of another programmer? Which one?                                 |   |   |   |
| 10 |                  | Partly concerning clusters?   | yes   |   |   |
| 11 | 3. Functionality | Allocated funds for the whole programme concerning clusters in thousands €:     | <b>In total all measure 2.2.55 651 107 EUR, incl. EU funds 46 905 041 EUR</b>   | <b>33.250.000 EUR</b>   | SUBMEASURE 1.3.1 - <b>100 052 666</b><br>EURSUBMEASURE 1.3.2- <b>160 000 000 EUR</b>  |
| 12 |                  | Min.-max. budget per project in thousand€: / min-max budżet na projekt w tys €: | Minimum project budget: 50.000 PLN ≈11.360 EUR  | <b>Minimum value of eligible costs of the project is 500 000,00 PLN = ~120.000 EUR</b><br><br><b>Maximum value of qualifiable costs of the project is 6 000 000,00 PLN = ~1.360.000 EUR</b> | <b>SUBMEASURE 1.3.1. - Minimum value of eligible costs of the project</b> – 1.000.000 PLN ≈227.273 EUR, maximum 7.000.000 PLN ≈1.600.000 EUR<br><b>EURSUBMEASURE 1.3.2</b> , Minimum value of eligible costs of the project – 20.000.000 PLN ≈4.550.000 EUR, minimum own funding: 30% eligible costs; |
| 13 |                  | Average percentage of public funding per project:                               | max. 90%<br>Up to 1.800.000 PLN ≈409.091 EUR  | max. 50% for cluster coordinator,<br>80% for micro- and small enterprise,<br>70% medium enterprise,<br>50% large enterprise   | max.70% (up to 85% for consulting services)   |
| 14 |                  | Number of calls published/to be published:                                      | First application phase completed 2015.03   | First application phase will be announced in 2016.09  | Measure 1.3.1: first application in 2015.08<br>Measure 1.3.2: first application in 2016.04  |
| 15 |                  | No. of projects funded by the programme/total expended in thous. €:             | max. allocation in call for projects<br>40.000.000 PLN ≈9.090.909 EUR   | planned allocation for first competition 61.000.000 PLN ≈13.865.000 EUR   | Measure 1.3.1.: 80.000.000 PLN ≈1.800.000 EUR<br><br>Measure 1.3.2: 320.000.000 PLN ≈72.000.000 EUR   |
| 16 | 4. Viability     | Supported by public budget and governed by specialised institution?             | PO WER is co-financed from the European Social Fund in 2014–2020. Intermediate Body is PARP [Polish Agency for Enterprise Development]. | PO IR is a national and one-fund programme; Fund: European Regional Development Fund  | PARP [Polish Agency for Enterprise Development]   |
| 17 |                  | Supported by public budget and governed by traditional government body?         |   |   |   |
| 18 |                  | Not supported by public budget / not governed by a specific body?               |   |   |   |
| 19 | 5. Continuity    | Continuously valid with regular updates?  |   |   |   |
| 20 |                  | Valid for the period 2014-2020 and existing also in previous years?             |   |   |   |

|    |                |   |  |  |   |
|----|----------------|---|--|--|---|
| 21 |                | Valid in the period 2014-2020?  | yes  | yes  | yes   |
| 22 | 6. Integrity   | Covering clusters in all sectors and industries?  | Covers clusters in all sectors and industries  | yes, if they have the Key National Cluster status  | yes   |
| 23 |                | Limited to certain sectors/industries? Which ones?  |  |  |   |
| 24 |                | Only one sector supported? Which one?   |  |  |   |
| 25 | 7. Complexity  | Funding covering all 5 cluster development stages?  | yes  |  |   |
| 27 |                | Funding only for three to four cluster development stages? Which ones?  |  | obejmuje klastry w wyższych fazach dojrzałości organizacyjnej  | organizacje po fazie inkubacji (min. 1 rok działalności)      |
| 28 |                | Funding only for one to two cluster development stages? Which one/s?  |  |  |   |
| 29 | 8. Consistency | Does the evaluation of applications for funding valorize the cluster organisation's achievements in the national accreditation system, participation in trainings and other capacity indicators with respect to eligibility for different levels of grants? | Key National Clusters receive additional points and preferences in application process | Funding will be available only to the coordination of the Key National Cluster in reference to:<br>a) cluster activation in order to facilitate cooperation, exchange information as well as for providing or directing specialised and customised support services for business;<br>b) cluster marketing in order to increase the share of new enterprises or organisations as well as increase the cluster brand awareness;<br>c) cluster back-office management, organisation of training, workshops and conferences in order to support sharing knowledge, network creation and international cooperation. | a wide range of support, but without the accreditation system |
| 30 |                | Does the evaluation of applications for funding valorize some type of cluster organisation's capacity indicators with respect to eligibility for different levels of grants?  |  |  |   |
| 31 |                | No levels of grants to differentiate the cluster organisation capacity?   |  |  |   |



### 3. B Preceding cluster funding programmes (2007-2013)

[illegible]

|   |               |  |   |  |   |  |   |                                     |
|---|---------------|--|---|--|---|--|---|-------------------------------------|
| 4 |               | Choose the priorities of the programme: networking, human resources, R&D and innovation projects, marketing, internationalisation, others: | Measure 5.1 „Support of cooperational links of interregional importance”<br>Two types of measures:<br>a/ for early-stage cooperation links,<br>b/ for mature cooperation links.<br><br>Priority: innovation diffusion | Programme is an additional element of the support from structural funds and amplifies the functioning of other programmes in the area of Eastern Poland by realisation of selected activities for the stimulation of economic and social development | The objective of the project was to activate and stimulate the existing clusters in order to effectively use significant funds from structural funds, allocated within NATIONAL COHESION STRATEGY, for use in the years 2007 – 2013<br>The following support areas for the cluster development: 1) national and international cooperation, 2) promotion 3) raising qualifications, 4) cluster innovation. | Development of international cluster cooperation in terms of research, technological development or innovation (pilot program) | Bulding awareness of clustering, defining areas for potential potencjalnej cooperation between enterprises, helping enterprises decide about cluster cooperation, as well as realisation of common projects important for the development of enterprises and regions. | Human capital, consulting, training |
| 5 |               | Officially approved by the government in the year:   | 2006  | 2007.10  | 2007  | 2009   | 2005.10 - 2007.12   | until 2012                          |
| 6 | 1. Durability | Long-term/ długoterminowy (7 years and more)?  | 7 years   | 7 years  |   |  |   | 7 years                             |
| 7 |               | Mid-term (3-6 years)?  |   |  |   |  |   |                                     |
| 8 |               | Short-term (1-2 years)?  |   |  | yes   | yes  | yes   |                                     |
| 9 | 2. Autonomy   | Specifically devoted to clusters?  | yes   | Measure 1.4.3. „Promotion and cooperation”, area cluster creation and development  | yes   | yes  | yes   |                                     |

|    |                         |   |  |  |   |   |  |  |
|----|-------------------------|---|--|--|---|---|--|--|
| 10 |                         | Explicit part of another programmer? Which one?                             |  |  |   |   |  | <b>Measure</b><br><b>2.1</b> „Development of personnel of modern economy”.<br>2.1.3 „Systemic support for increase in adaptability of employees and enterprises” (PARP project "Polish clusters and cluster policy") |
| 11 |                         | Partly concerning clusters?   |  |  |   |   |  |  |
| 12 | <b>3. Functionality</b> | Allocated funds for the whole programme concerning clusters in thousands €: | <b>440.000.000 PLN = ~104 300 000 EUR, incl.: 88 655 000 EUR of EU funds, 15 645 000 EUR of national public funds)</b> | <b>52.000.000 PLN = ~ 11.818.181 EUR</b> | <b>1.640.000 PLN = ~ 372.727 EUR</b>  | <b>1.800.000 PLN = ~ 409.090 EUR</b>                                    | <b>5.760.000 PLN = ~ 1.309.091 EUR</b> | <b>2.320.485.952~PLN = 527 383 171 EUR</b>   |
| 13 |                         | Min.-max. budget per project in thousand €:                                 | undefined  | min. 2.000.000 PLN = ~454.545 EUR        | min. <b>150 000 PLN</b> = ~34.090.909 EUR<br>max. <b>550 000 PLN</b> = ~ <b>125.000 EUR</b> | min. 120.000 PLN = ~ 27.272.727 EUR<br>max. 600.000 PLN = ~ 136.364 EUR | systemic project, indirect support     | systemic project, indirect support   |
| 14 |                         | Average percentage of public funding per project:                           | 35% -100%  | do 90%                                   | max.95%   | <b>max, 100%</b>  | systemic project, indirect support     | systemic project, indirect support   |
| 15 |                         | Number of calls published/to be published:                                  | <b>8</b>   | 20                                       | 1   | 1   | systemic project, indirect support     | systemic project, indirect support   |

|    |                      |   |   |   |  |   |  |   |
|----|----------------------|---|---|---|--|---|--|---|
| 16 |                      | No. of projects funded by the programme/total expended in thous. €:     | <b>55 projects</b>                              | <b>17 projects</b>  | <b>5 projects</b><br><b>1 636 835,19 PLN = ~ 372.008 EUR</b> | <b>7 projects</b>                               | results: 4232 project participants; 506 training (component I - 76; component II - 430); 15 formalised cluster initiatives | systemic project, indirect support              |
| 17 | <b>4. Viability</b>  | Supported by public budget and governed by specialised institution?     | PARP [Polish Agency for Enterprise Development] | Financed from the European Regional Development Fund and national public funds.                                 | PARP [Polish Agency for Enterprise Development]              | PARP [Polish Agency for Enterprise Development] | PARP [Polish Agency for Enterprise Development]  | PARP [Polish Agency for Enterprise Development] |
| 18 |                      | Supported by public budget and governed by traditional government body? |   |   |  |   |  |   |
| 19 |                      | Not supported by public budget / not governed by a specific body?       |   |   |  |   |  |   |
| 20 | <b>5. Continuity</b> | Continuously valid with regular updates?                                | Updated and valid in term, ie. 2007-2013        |   | Valid in 2007-2013   | Valid in 2007-2013                              | Valid in 2007-2013   | Valid in 2007-2013                              |
| 21 |                      | Valid for the period 2014-2020 and existing also in previous years?     |   | yes, currently as: Program Operacyjny Polska Wschodnia (PO PW) [Operational Programme Eastern Poland] 2014-2022 |  |   |  |   |
| 22 |                      | Valid in the period 2014-2020?  |   |   |  |   |  |   |

|    |               |  |   |  |                                 |  |   |     |
|----|---------------|--|---|--|---------------------------------|--|---|-----|
| 23 | 6. Integrity  | Covering clusters in all sectors and industries?                       | Within PO IG inter-regional clusters are supported(2 and more regions). Beneficiaries: "enterprise groups, incl.: clusters, production chains of SMEs and large enterprises, technological networks (SMEs and academic institutions) represented by authorised subjects; technological platforms, national business support institutions, institution networks on inter-regional importance, specialised innovation centres, entrepreneurs" | Programme allows for realisation of projects initiated by, among others, higher education institutions, local government units as well as their unions and associations, state agencies,R&D institutes, enterprises, NGOs, development agencies. | yes                             | yes                                      | yes, with reference to food, machinery, milk-and wood-processing industries | yes |
| 24 |               | Limited to certain sectors/industries? Which ones?                     |   |  |                                 |  |   |     |
| 25 |               | Only one sector supported? Which one?                                  |   |  |                                 |  |   |     |
| 26 | 7. Complexity | Funding covering all 5 cluster development stages?                     | yes   | yes  |                                 |  | yes   | yes |
| 27 |               | Funding only for three to four cluster development stages? Which ones? |   |  | all phases of existing clusters | mature clusters in terms of organisation |   |     |
| 28 |               | Funding only for one to two cluster                                    |   |  |                                 |  |   |     |

|    |                |   |   |                       |                       |   |  |                       |
|----|----------------|---|---|-----------------------|-----------------------|---|--|-----------------------|
|    |                | development stages?<br>Which one/s?   |   |                       |                       |   |  |                       |
| 29 | 8. Consistency | Does the evaluation of applications for funding valorize the cluster organisation's achievements in the national accreditation system, participation in trainings and other capacity indicators with respect to eligibility for different levels of grants? | wide range of support, incl:investment and consulting and training connected with developmento of cooperation links of interregional importance, incl. Clusters | wide range of support | wide range of support | 1) dissemination of information and promotion;<br>2) consulting;<br>3) creation of international cooperation link networks;<br>4) recruitment and exchange of specialists;<br>5) training and workshops;<br>6) preparation of international projects. | wide range of support, training, consulting, conferences | wide range of support |
| 30 |                | Does the evaluation of applications for funding valorize some type of cluster organisation's capacity indicators with respect to eligibility for different levels of grants?  |   |                       |                       |   |  |                       |
| 31 |                | No levels of grants to defferentiate the cluster organisation capacity?   |   |                       |                       |   |  |                       |

### APPENDIX 3: LIST OF CLUSTER ORGANISATIONS BY TYPE IN POLAND

| Lp.                      | Lp. in voivod eship | Data CLUSTER  |                             | Industry aggregation                      | DETAILS OF COORDINATOR CLUSTER                                       |  |           |           |
|--------------------------|---------------------|---|-----------------------------|---|--|--|-----------|-----------|
|                          |                     | Cluster name  | Website                     |   | Name of the coordinator  | Street                                   | Code town | Locality  |
| dolnośląskie voivodeship |                     |   |                             |   |  |  |           |           |
| 1.                       | 1.                  | Dolnośląski Klaster Metalowy  | www.dkm.arleg.pl            | przemysł metalowy                         | Agencja Rozwoju Regionalnego ARLEG S.A.                              | ul. M. Rataja 26                         | 59-220    | Legnica   |
| 2.                       | 2.                  | Klaster B+R&I   | www.klasterbri.pl           | ochrona środowiska                        | Fundacja Rozwoju Nauki Biznesu w Obszarze Nauk Medycznych i Ścisłych | ul. Legnicka 65                          | 54-206    | Wrocław   |
| 3.                       | 3.                  | Klaster Centrum Technologii Energetycznych  | www.cte.fea.pl              | budownictwo i architektura                | Oddział Terenowy Stowarzyszenia "Wolna Przedsiębiorczość"            | ul. Stalowa 2                            | 58-100    | Świdnica  |
| 4.                       | 4.                  | Klaster Innowacyjna Medycyna  | www.innowacyjnamedycyna.eu  | medycyna, biomedycyna, turystyka medyczna | Klaster Innowacyjna Medycyna   | ul. Żelazna 34                           | 53-428    | Wrocław   |
| 5.                       | 5.                  | Klaster "Wałbrzyskie Surowce"   | www.walbrzyskiesurowce.pl   | przemysł surowcowy                        | Agencja Rozwoju Regionalnego "AGROREG" S.A.                          | ul. Kłodzka 27                           | 57-402    | Nowa Ruda |
| 6.                       | 6.                  | Nutribiomed Klaster   | www.nutribiomed.pl          | technologie produkcji                     | Wrocławski Park Technologiczny S.A.                                  | ul. Muchoborska 18                       | 54-424    | Wrocław   |
| 7.                       | 7.                  | Ogólnopolski Klaster e-Zdrowie  | www.klaster-ezdrowie.pl     | medycyna, biomedycyna, turystyka medyczna | Data Techno Park Sp. z o.o.  | ul. Borowska 283B                        | 50-556    | Wrocław   |
| 8.                       | 8.                  | Polski Klaster Kamieniarski   | www.klasterkamieniarski.pl  | przemysł surowcowy                        | Fundacja "BAZALT"  | ul. Niepodległości 22                    | 58-150    | Strzegom  |
| 9.                       | 9.                  | SIDE CLUSTER  | www.side-cluster.pl         | budownictwo i architektura                | Stowarzyszenie SIDE – CLUSTER  | ul. Św. Antoniego 23                     | 50-073    | Wrocław   |
| 10.                      | 10.                 | Wspólnota Wiedzy i Innowacji w Zakresie Generacji i Użytkowania Energii od Skali Mega do Nano | www.klaster-energia.wroc.pl | energetyka, ciepłownictwo, OZE            | Politechnika Wrocławska  | ul. Wybrzeże Stanisława Wyspiańskiego 27 | 50-370    | Wrocław   |

|                                       |     |   |  |   |   |  |        |           |
|---------------------------------------|-----|---|--|---|---|--|--------|-----------|
| 11.                                   | 11. | Wspólnota Wiedzy i Innowacji w Zakresie Technik Informatycznych i Komunikacyjnych (Klaster ICT) | www.ict-cluster.wroc.pl  | ICT                                       | Politechnika Wrocławska   | ul. Wybrzeże Stanisława Wyspiańskiego 27 | 50-370 | Wrocław   |
| <b>kujawsko-pomorskie voivodeship</b> |     |   |  |   |   |  |        |           |
| 12.                                   | 1.  | Agro Klaster Kujawy   | www.agroklaster.pl   | przemysł spożywczy                        | Agro Klaster Kujawy - Stowarzyszenie na Rzecz Innowacji i Rozwoju                         | ul. Bernardyńska 6-8                     | 85-403 | Bydgoszcz |
| 13.                                   | 2.  | Bydgoski Klaster Informatyczny  | www.bki.org.pl   | ICT                                       | Stowarzyszenie Bydgoski Klaster Informatyczny   | ul. Mikołaja Kopernika 1                 | 85-074 | Bydgoszcz |
| 14.                                   | 3.  | Bydgoski Klaster Przemysłowy  | www.klaster.bydgoszcz.pl   | technologie produkcji                     | Stowarzyszenie Bydgoski Klaster Przemysłowy   | ul. Mennica 6                            | 85-112 | Bydgoszcz |
| 15.                                   | 4.  | Klaster Turystyki Medycznej i Uzdrowiskowej   | www.kpoplewiatan.pl/klaster-turystyki-medycznej-i-uzdrowiskowej/o-klastrze-turystyki-medycznej-i-uzdrowiskowej | medycyna, biomedycyna, turystyka medyczna | Kujawsko-Pomorska Organizacja Pracodawców LEWIATAN  | ul. Św. Katarzyny 4a/2                   | 87-100 | Toruń     |
| <b>lubelskie voivodeship</b>          |     |   |  |   |   |  |        |           |
| 16.                                   | 1.  | Klaster Dolina Ekologicznej Żywności  | www.dolinaeko.pl   | przemysł spożywczy                        | Wyższa Szkoła Przedsiębiorczości i Administracji w Lublinie                               | ul. Bursaki 12                           | 20-150 | Lublin    |
| 17.                                   | 2.  | Klaster Ekoinnowacje  | www.klaster-ekoinnowacje.org   | energetyka, ciepłownictwo, OZE            | Niemiecko-Polska Fundacja Nowa Energia  | ul. Koncertowa 19/35                     | 20-866 | Lublin    |
| 18.                                   | 3.  | Klaster Gospodarki Odpadowej i Recyklingu   | www.klasterodpadowy.com  | ochrona środowiska                        | Centrum Kooperacji Recyklingu - not for profit system Sp. z o.o. Oddział w Skierniewicach | ul. Metalurgiczna 15c                    | 20-234 | Lublin    |
| 19.                                   | 4.  | Klaster Group.pl  | www.klaster-group.pl   | ICT                                       | Netrix Group Sp. z o.o.   | ul. Związkowa 26                         | 20-148 | Lublin    |
| 20.                                   | 5.  | Klaster Usług Dla Biznesu   | www.alter.info.pl/klaster-uslug-dla-biznesu  | usługi biznesowe, edukacja                | Alter Sp. z o.o.  | Al. Warszawska 102                       | 20-824 | Lublin    |



|                            |     |   |   |   |   |  |        |              |
|----------------------------|-----|---|---|---|---|--|--------|--------------|
| 21.                        | 6.  | Lubelski Klaster Ekoenergetyczny                              | www.fundacja.lublin.pl/<br>klaster  | energetyka,<br>ciepłownictwo, OZE               | Fundacja Rozwoju<br>Lubelszczyzny         | ul. Droga<br>Męczenników<br>Majdanka 181 | 20-325 | Lublin       |
| 22.                        | 7.  | Lubelski Klaster Instytucji Otoczenia Biznesu                 | www.lkiob.pl  | usługi biznesowe,<br>edukacja                   | Lubelska Fundacja Rozwoju                 | ul. Rynek 7                              | 20-111 | Lublin       |
| 23.                        | 8.  | Lubelska Medycyna - Klaster Usług Medycznych i Prozdrowotnych | www.medycyna.lublin.eu  | medycyna,<br>biomedycyna,<br>turystyka medyczna | Gmina Lublin                              | ul. Bernardyńska<br>3                    | 20-109 | Lublin       |
| 24.                        | 9.  | Wschodni Klaster ICT  | www.ecict.eu  | ICT   | Wschodnia Agencja Rozwoju Sp. z o.o.      | ul. Pana Balcera<br>6/148                | 20-631 | Lublin       |
| 25.                        | 10. | Wschodni Klaster Innowacji                                    | www.wki.org.pl/   | ICT   | Fundacja "Wschodni Klaster Innowacji"     | ul. Lubelska 88                          | 23-200 | Kraśnik      |
| 26.                        | 11. | Wschodni Klaster Obróbki Metali                               | www.wschodniklaster.pl  | przemysł metalowy                               | Wojewódzki Klub Techniki i Racjonalizacji | ul. Szewska 4                            | 20-386 | Lublin       |
| <b>lubskie voivodeship</b> |     |   |   |   |   |  |        |              |
| 27.                        | 1.  | Klaster Archiwizacji Cyfrowej                                 | www.nca.org.pl  | ICT   | Narodowe Centrum Archiwizacji             | ul. Inżynierska 8                        | 67-100 | Nowa Sól     |
| 28.                        | 2.  | Lubuski Klaster Metalowy                                      | www.lubuskiklaster.pl   | przemysł metalowy                               | Lubelski Klaster Metalowy                 | ul. Jagiellończyka<br>17/1               | 66-400 | Gorzów Wlkp. |
| 29.                        | 3.  | Lubuski Klaster Przedsiębiorczości i Turystyki                | www.europe-direct.izba.zgora.pl/lubuski-klaster-przedsi%C4%99biorczo%C5%9Bci-i-turystyki.html | turystyka, rozrywka,<br>rekreacja, kultura      | Lokalna Organizacja Turystyczna ŚWIEBODA  | ul. Klasztorna                           | 66-218 | Lubrza       |
| 30.                        | 4.  | Zachodni Klaster Informatyki i Bezpieczeństwa IT              | www.ecoop.pl  | ICT   | Fundacja Rozwoju Inicjatyw Gospodarczych  | ul.<br>Siemiradzkiego<br>28              | 65-231 | Zielona Góra |
| <b>łódzkie voivodeship</b> |     |   |   |   |   |  |        |              |

|                                |    |   |  |  |  |                                |        |                        |
|--------------------------------|----|---|--|--|--|--------------------------------|--------|------------------------|
| 31.                            | 1. | Bioenergia dla Regionu  | www.bioenergiadlaregi<br>onu.eu                | energetyka,<br>ciepłownictwo, OZE          | Centrum Badań i Innowacji<br>Pro-Akademia                      | ul. Innowacyjna<br>9/11        | 95-050 | Konstantynów<br>Łódzki |
| 32.                            | 2. | ICT Polska<br>Centralna Klaster   | www.ictcluster.pl                              | ICT  | Politechnika Łódzka  | ul. Stefana<br>Żeromskiego 116 | 90-924 | Łódź                   |
| 33.                            | 3. | Klaster<br>Innowacyjnych<br>Nawierzchni<br>Sportowych i<br>Rekreacyjnych<br>VERDE | www.verde-klaster.eu                           | technologie<br>produkcji                   | Fundacja Innowacyjnych<br>Nawierzchni Sportowych<br>VERDE      | ul. Sterlinga<br>27/29         | 90-212 | Łódź                   |
| <b>małopolskie voivodeship</b> |    |   |  |  |  |                                |        |                        |
| 34.                            | 1. | Klaster<br>Edutainment  | www.klaster.edutainme<br>nt.net.pl             | usługi biznesowe,<br>edukacja              | M.M. Druk Serwis Sp. z o.o                                     | ul. Żagłowa 13                 | 31-979 | Kraków                 |
| 35.                            | 2. | Klaster<br>Innowacyjne<br>Odlewnictwo   | www.moderncast.pl                              | przemysł metalowy                          | Technologiczny Klaster<br>Odlewniczy Modern Cast Sp. z<br>o.o. | ul. Łowińskiego<br>9           | 31-752 | Kraków                 |
| 36.                            | 3. | Klaster<br>Inteligentne<br>Budownictwo  | www.klaster.inteligentn<br>ebudownictwo.com.pl | budownictwo i<br>architektura              | DLJM System Sp. z o.o.   | ul. Balicka 125B               | 30-149 | Kraków                 |
| 37.                            | 4. | Klaster<br>LifeScience<br>Kraków  | www.lifescience.pl                             | biotechnologie                             | Fundacja Klaster LifeScience<br>Kraków                         | ul.<br>Bobrzyńskiego<br>14     | 30-348 | Kraków                 |
| 38.                            | 5. | Klaster<br>Zrównoważona<br>Infrastruktura   | www.klasterzi.pl                               | budownictwo i<br>architektura              | Instytut Doradztwa Sp. z o.o.                                  | ul. Cegielniana<br>6b/2        | 30-404 | Kraków                 |
| 39.                            | 6. | Krakowski<br>Klaster Filmowy  | www.film-krakow.pl                             | przemysły<br>kreatywne                     | Krakowski Park<br>Technologiczny Sp. z o. o.                   | ul.<br>Życzkowskiego<br>14     | 31-864 | Kraków                 |
| 40.                            | 7. | Małopolski<br>Klaster<br>Poligraficzny  | www.klastermalopolski.<br>pl                   | poligrafia i<br>wydawnictwa                | M.M. Druk Serwis Sp. z o.o.                                    | ul. Żagłowa 13                 | 31-979 | Kraków                 |
| 41.                            | 8. | Małopolski<br>Klaster<br>Turystyczny<br>"Beskid"                                  | www.mktbeskid.pl                               | turystyka, rozrywka,<br>rekreacja, kultura | Małopolski Operator<br>Integracji Turystycznej Sp. z<br>o.o.   | ul. Nawojowa<br>597            | 33-335 | Nawojowa               |
| 42.                            | 9. | Małopolsko-<br>Podkarpacki<br>Klaster Czystej<br>Energii                          | www.klaster.agh.edu.pl                         | energetyka,<br>ciepłownictwo, OZE          | AGH Kraków   | Al. Mickiewicza<br>30          | 30-059 | Kraków                 |

|                                |     |  |                                   |   |  |                                       |        |          |
|--------------------------------|-----|--|-----------------------------------|---|--|---------------------------------------|--------|----------|
| 43.                            | 10. | MedCluster   | www.medcluster.pl                 | medycyna,<br>biomedycyna,<br>turystyka medyczna | Stowarzyszenie Medycyna<br>Polska  | Pl. Sobieskiego 2                     | 33-100 | Tarnów   |
| <b>mazowieckie voivodeship</b> |     |  |                                   |   |  |                                       |        |          |
| 44.                            | 1.  | Digital<br>Knowledge<br>Cluster  | www.knowledgecluster.<br>pl       | ICT   | Fundacja Obserwatorium<br>Zarządzania  | ul. Puławska 465                      | 02-844 | Warszawa |
| 45.                            | 2.  | Dolina Czystej<br>Energii  | www.dolinaczystejenter<br>gii.org | energetyka,<br>ciepłownictwo, OZE               | FITiOE   | ul.<br>Świeradowska<br>47             | 02-662 | Warszawa |
| 46.                            | 3.  | Klaster Centrum<br>Inżynierii<br>Biomedycznej  | www.kcibio.wat.edu.pl             | biotechnologie                                  | Wojskowa Akademia<br>Techniczna im. Jarosława<br>Dąbrowskiego  | ul. Gen.<br>Sylwestra<br>Kaliskiego 2 | 00-908 | Warszawa |
| 47.                            | 4.  | Klaster GeoPoli  | www.geopoli.pl                    | geodezja  | Geodezyjna Izba Gospodarcza  | ul. Czackiego 3/5                     | 00-043 | Warszawa |
| 48.                            | 5.  | Klaster Innowacji<br>w Agrobiznesie  | www.klaster.sggw.pl               | usługi biznesowe,<br>edukacja                   | Szkoła Główna Gospodarstwa<br>Wiejskiego w Warszawie   | ul.<br>Nowoursynowsk<br>a 166         | 02-787 | Warszawa |
| 49.                            | 6.  | Klaster<br>Przemysłowy<br>Dawnych<br>Terenów<br>Centralnego<br>Okręgu<br>Przemysłowego<br>im. Premiera<br>Eugeniusza<br>Kwiatkowskiego;<br>w skrócie: Klaster<br>COP | www.klastercop.pl                 | budownictwo i<br>architektura                   | Stowarzyszenie na rzecz<br>Klastra Przemysłowego<br>Dawnych Terenów<br>Centralnego Okręgu<br>Przemysłowego im. Premiera<br>Eugeniusza Kwiatkowskiego | ul. Marywilska<br>34                  | 03-228 | Warszawa |
| 50.                            | 7.  | Klaster<br>Roślinnych<br>Produktów<br>Lecznicznych i<br>Suplementów<br>Diety   | www.klasterzdrowia.pl             | farmacja, kosmetyki                             | Narodowy Instytut Leków  | ul. Chełmska<br>30/34                 | 00-725 | Warszawa |
| 51.                            | 8.  | Mazowiecki<br>Klaster Audytu i<br>Consultingu  | www.klasteraudytu.pl              | usługi biznesowe,<br>edukacja                   | Ecovis System Rewident Sp. z<br>o.o.   | ul. Rakowiecka<br>30A                 | 02-528 | Warszawa |

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|---------------------------------|-----|--|---|---|---|--------------------------|--------|------------------|
| 52.                             | 9.  | Mazowiecki Klaster Chemiczny   | www.klasterchemiczny.com                            | chemia, nawozy, tworzywa sztuczne       | Płocki Park Przemysłowo-Technologiczny S.A.   | ul. Łukasiewicza 39      | 09-400 | Płock            |
| 53.                             | 10. | Mazowiecki Klaster Efektywności Energetycznej i Odnawialnych Źródeł Energii  | www.mae.com.pl/mazowiecki-klaster-ee-i-oze.html     | energetyka, ciepłownictwo, OZE          | Mazowiecka Agencja Energetyczna   | Al. Jerozolimskie 151/25 | 02-326 | Warszawa         |
| 54.                             | 11. | Mazowiecki Klaster ICT   | www.klasterict.pl                                   | ICT                                     | Stowarzyszenie Rozwoju Społeczno-Gospodarczego "Wiedza"                                     | ul. Żelazna 67/18        | 00-871 | Warszawa         |
| 55.                             | 12. | OPTOKLASTER - Mazowiecki Klaster Innowacyjnych Technologii Fotonicznych      | www.optoklaster.pl                                  | fotonika, optoelektronika               | Instytut Optyki Stosowanej  | ul. Kamionkowska 18      | 03-805 | Warszawa         |
| 56.                             | 13. | Polski Klaster Edukacyjny  | www.pke.org.pl                                      | usługi biznesowe, edukacja              | Fundacja Zapobieganie Wypadkom Drogowym   | ul. Ratuszowa 11 lok.110 | 03-450 | Warszawa         |
| <b>opolskie voivodeship</b>     |     |  |   |   |   |                          |        |                  |
| 57.                             | 1.  | Klaster Chemii Specjalistycznej Chem-Ster                                    | www.klasterchemster.pl                              | chemia, nawozy, tworzywa sztuczne       | Kędzierzyńsko-Kozielski Park Przemysłowy Sp. z o.o.   | ul. Szkolna 15           | 47-225 | Kędzierzyn-Koźle |
| <b>podkarpackie voivodeship</b> |     |  |   |   |   |                          |        |                  |
| 58.                             | 1.  | Dolina Lotnicza  | www.dolinalotnicza.pl                               | lotnictwo                               | Stowarzyszenie Grupy Przedsiębiorców Przemysłu Lotniczego "Dolina Lotnicza"                 | ul. Szopena 51           | 35-959 | Rzeszów          |
| 59.                             | 2.  | Innowacyjny Klaster Zdrowie i Turystyka "Uzdrowiska Perły Polski Wschodniej" | www.klasterzit.pl                                   | turystyka, rozrywka, rekreacja, kultura | Stowarzyszenie Innowacyjny Klaster Zdrowie i Turystyka "Uzdrowiska Perły Polski Wschodniej" | ul. Sucharskiego 2       | 35-225 | Rzeszów          |
| 60.                             | 3.  | Karpacki Klaster Turystyczny   | www.procarpathia.pl/pl/karpacki_klaster_turystyczny | turystyka, rozrywka, rekreacja, kultura | Stowarzyszenie na rzecz Rozwoju i Promocji Podkarpacia "Pro Carpathia"                      | ul. Rynek 16/1           | 35-064 | Rzeszów          |

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|------------------------------|-----|---|----------------------------|---|--|------------------------|--------|-------------------|
| 61.                          | 4.  | Klaster Firm Informatycznych Polski Wschodniej  | www.klasterit.pl           | ICT                                     | Stowarzyszenie Informatyka Podkarpacka                                 | ul. Sucharskiego 2     | 35-225 | Rzeszów           |
| 62.                          | 5.  | Klaster Fotoniki i Światłowodów                 | www.pcfs.org.pl            | fotonika, optoelektronika               | Polskie Centrum Fotoniki i Światłowodów                                | ul. Rogoźnica 312      | 36-060 | Głogów Małopolski |
| 63.                          | 6.  | Klaster Lotnictwa Lekkiego i Ultralekkiego      | www.klasterlotniczy.pl     | lotnictwo                               | Stowarzyszenie B4  | ul. Zagłoby 7 b        | 35-304 | Rzeszów           |
| 64.                          | 7.  | Klaster „Podkarpackie Smaki”                    | www.podkarpackiesmaki.pl   | przemysł spożywczy                      | Stowarzyszenie na Rzecz Rozwoju i Promocji Podkarpacia „Pro Carpathia” | ul. Rynek 16/1         | 35-064 | Rzeszów           |
| 65.                          | 8.  | Klaster Przetwórstwa Tworzyw Sztucznych POLIGEN | www.poligen.pl             | chemia, nawozy, tworzywa sztuczne       | INNPuls Sp. z o.o.   | ul. Hetmańska 40 a     | 35-045 | Rzeszów           |
| 66.                          | 9.  | Klaster Spawalnicy KLASTAL                      | www.klastal.org            | przemysł metalowy                       | Regionalna Izba Gospodarcza  | ul. 1-go Sierpnia 26 b | 37-450 | Stalowa Wola      |
| 67.                          | 10. | Podkarpacki Klaster Energii Odnawialnej         | www.energia.rzeszow.pl     | energetyka, ciepłownictwo, OZE          | Stowarzyszenie „Podkarpacka Ekoenergetyka”                             | ul. Pigionia 8         | 35-959 | Rzeszów           |
| 68.                          | 11. | Wschodni Klaster Komunalny                      | www.swkk.pl                | ochrona środowiska                      | MZK Sp. z o.o.   | ul. Żwirki i Wigury 3  | 37-300 | Leżajsk           |
| 69.                          | 12. | Wschodni Klaster Odlewniczy KOM-CAST            | www.kom-cast.pl            | przemysł metalowy                       | Stowarzyszenie Producentów Komponentów Odlewniczych KOM-CAST           | ul. Hetmańska 120      | 35-078 | Rzeszów           |
| <b>podlaskie voivodeship</b> |     |   |                            |   |  |                        |        |                   |
| 70.                          | 1.  | Klaster Instytucji Otoczenia Biznesu            | www.biznesklaster.pl       | usługi biznesowe, edukacja              | Polskie Stowarzyszenie Doradcze i Konsultingowe                        | ul. Studzienna 2       | 15-771 | Białystok         |
| 71.                          | 2.  | Klaster Marek Turystycznych Polski Wschodniej   | www.klaster turystyczny.pl | turystyka, rozrywka, rekreacja, kultura | Polskie Stowarzyszenie Doradcze i Konsultingowe                        | ul. Studzienna 2       | 15-771 | Białystok         |
| 72.                          | 3.  | Klaster Obróbki Metali                          | www.metalklaster.pl        | przemysł metalowy                       | Centrum Promocji Innowacji i Rozwoju                                   | ul. Lniana 41          | 15-665 | Białystok         |

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|------------------------------|----|---|--------------------------|---|--|--------------------------|--------|-----------|
| 73.                          | 4. | Ogólnopolskie Centrum Badania, Edukacji i Monitorowania Problemów Płodności | www.centrumplodnosci.pl  | medycyna, biomedycyna, turystyka medyczna | Stowarzyszenie na Rzecz Doskonalenia Współczesnych Metod Diagnostyki i Leczenia Niepłodności "Dziecko" | ul. Brukowa 28b/2        | 15-889 | Białystok |
| 74.                          | 5. | Podlaski Klaster Bielizny   | www.spkb.pl              | przemysł odzieżowy                        | Stowarzyszenie Podlaski Klaster Bielizny   | ul. Legionowa 30/108     | 15-281 | Białystok |
| 75.                          | 6. | Północno-Wschodni Klaster Edukacji Cyfrowej                                 | www.cdedu.pl             | usługi biznesowe, edukacja                | Park Naukowo-Technologiczny "Polska-Wschód" w Suwałkach Sp. z o.o.                                     | ul. Innowacyjna 1        | 16-400 | Suwałki   |
| 76.                          | 7. | Północno-Wschodni Klaster Ekoenergetyczny                                   | www.pwkee.pl             | energetyka, ciepłownictwo, OZE            | Podlaska Fundacja Rozwoju Regionalnego   | ul. Starobojarska 15     | 15-073 | Białystok |
| 77.                          | 8. | Wschodni Klaster Budowlany  | www.budowlanyklaster.pl  | budownictwo i architektura                | Polskie Stowarzyszenie Doradcze i Konsultingowe  | ul. Studzienna 2         | 15-771 | Białystok |
| <b>pomorskie voivodeship</b> |    |   |                          |   |  |                          |        |           |
| 78.                          | 1. | Bałtycki Klaster Ekoenergetyczny  | www.bkee.pl              | energetyka, ciepłownictwo, OZE            | Instytut Maszyn Przepływowych PAN  | ul. Fiszer 14            | 80-231 | Gdańsk    |
| 79.                          | 2. | Interizon Pomorski Klaster ICT  | www.interizon.pl         | ICT                                       | Fundacja Interizon   | Al. Grunwaldzka 472      | 80-309 | Gdańsk    |
| 80.                          | 3. | Klaster Logistyczno Transportowy Północ - Południe                          | www.klasterlogtrans.pl   | transport i logistyka                     | Zarząd Nadbałtyckich Inicjatyw Klastrowych Sp. z o.o.  | ul. Trzy Lipy 3          | 80-172 | Gdańsk    |
| 81.                          | 4. | Klaster Pomorska Dolina Medyczna  | www.dolinamedyczna.pl    | medycyna, biomedycyna, turystyka medyczna | Polskie Stowarzyszenie Turystyki Medycznej   | ul. Kotwiczników 10 A /3 | 80-881 | Gdańsk    |
| 82.                          | 5. | Polski Klaster Morski   | www.klastermorski.com.pl | transport i logistyka                     | Akademia Morska w Gdyni  | ul. Morska 81-87         | 81-225 | Gdynia    |
| <b>śląskie voivodeship</b>   |    |   |                          |   |  |                          |        |           |
| 83.                          | 1. | Human Cloud   | www.humancloud.pl        | ICT                                       | Fundacja na Rzecz Wspierania Rozwoju Technologii Human Cloud   | ul. Ligocka 103          | 40-568 | Katowice  |

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| 84. | 2.  | Klaster Budownictwa Pasywnego i Energooszczędne go                             | www.klasterbudownictwa.pl  | budownictwo i architektura                            | Górnośląski Park Przemysłowy Sp. z o.o.                                   | ul. Konduktorska 39A      | 40-155 | Katowice      |
| 85. | 3.  | Klaster e-Południe   | www.e-poludnie.pl  | ICT   | Stowarzyszenie Na Rzecz Rozwoju Społeczeństwa Informacyjnego "e-Południe" | ul. Józefczaka 29/40      | 41-902 | Bytom         |
| 86. | 4.  | Klaster Innowacji Budowlanych  | www.klasterbudowlany.eu  | budownictwo i architektura                            | Bielska Fundacja Wspierania Przedsiębiorczości i Kultury                  | ul. Żywa 55               | 43-300 | Bielsko-Biała |
| 87. | 5.  | Klaster Innowacyjne Strategie  | www.innowacyjnestrategie.pl  | energetyka, ciepłownictwo, OZE                        | Klaster Innowacyjne Strategie S.A.  | ul. Johna Baildona 22b/13 | 40-115 | Katowice      |
| 88. | 6.  | Klaster Kultury i Turystyki Przemysłowej                                       | www.klasterkultury.pl  | turystyka, rozrywka, rekreacja, kultura               | Stowarzyszenie Kopalnia Sztuki  | ul. Hagera 41             | 41-800 | Zabrze        |
| 89. | 7.  | Klaster Maszyn Górniczych  | www.klastermg.eu   | przemysł maszynowy i elektromaszynowy                 | Instytut Techniki Górniczej KOMAG   | ul. Pszczyńska 37         | 44-101 | Gliwice       |
| 90. | 8.  | Klaster na Rzecz Rozwoju Rynku Prosumenckiego                                  | www.klaster.riph.com.pl  | energetyka, ciepłownictwo, OZE                        | Regionalna Izba Przemysłowo-Handlowa w Gliwicach                          | ul. Zwycięstwa 36         | 44-100 | Gliwice       |
| 91. | 9.  | Klaster Ratownictwa, Bezpieczeństwa, Ochrony Ludności i Środowiska Naturalnego | www.klasterratownictwa.pl  | ratownictwo, ochrona ludności, bezpieczeństwo państwa | Nowe Technologie Sp. z o.o.   | ul. Cieszyńska 313        | 43-300 | Bielsko-Biała |
| 92. | 10. | Klaster Technologii Drewna LIGNUM  | www.klasterlignum.pl   | przemysł drzewny                                      | CTP Polska Sp. z o.o.   | ul. Wyzwolenia 45a        | 44-292 | Zwonowice     |
| 93. | 11. | Klaster Technologii Energooszczędnych "Euro-Centrum"                           | www.ligocka103.pl/onas/grupa/klaster-technologie-energooszczednych | technologie produkcji                                 | Park Naukowo-Technologiczny Euro-Centrum Sp. z o.o.                       | ul. Ligocka 103           | 40-568 | Katowice      |
| 94. | 12. | "MedSilesia" Śląska Sieć Wyrobów Medycznych                                    | www.medsilesia.com   | medycyna, biomedycyna, turystyka medyczna             | Górnośląska Agencja Przedsiębiorczości i Rozwoju Sp. z o.o.               | ul. Wincentego Pola 16    | 44-100 | Gliwice       |

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|------|-----|---|----------------------------|---|--|------------------------------|--------|------------------|
| 95.  | 13. | Obszar Zaawansowanych Technologii Bezpieczeństwa i Obronności | www.oztbio.polsl.pl        | ratownictwo, ochrona ludności, bezpieczeństwo państwa | Politechnika Śląska (Centrum Zaawansowanych Technologii Bezpieczeństwa i Obronności) | ul. Akademicka 2A pok. 40    | 44-100 | Gliwice          |
| 96.  | 14. | Polski Innowacyjny Klaster Medyczny PIKMED                    | www.pikmed.pl              | medycyna, biomedycyna, turystyka medyczna             | PIKMED Polinnovation Sp. z o.o.  | ul. Wojkowska 14A            | 41-250 | Czeladź          |
| 97.  | 15. | Polski Klaster Aluminium                                      | www.polskiealuminium.pl    | technologie produkcji                                 | City Consulting Institute Sp. z o.o.   | ul. Gliwicka 228             | 40-861 | Katowice         |
| 98.  | 16. | Polski Klaster dla Innowacji I Środowiska                     | www.pcie.eu                | ochrona środowiska                                    | Stowarzyszenie Komitet Rozwoju Zagłębia  | ul. Koksownicza 1/423        | 42-523 | Dąbrowa Górnicza |
| 99.  | 17. | Polski Klaster Linowy   | www.liniarstwo.pl          | przemysł metalowy                                     | Stowarzyszenie Liniarstwo Polskie  | ul. Kamienna 7               | 40-067 | Katowice         |
| 100. | 18. | Polski Klaster Techniczno Technologiczny POWEARTH             | www.powearth.pl            | energetyka, ciepłownictwo, OZE                        | IRGIA Sp. z o.o.   | ul. Obrońców Westerplatte 11 | 40-336 | Katowice         |
| 101. | 19. | Południowy Klaster Kolejowy                                   | www.klasterkolejowy.com.pl | transport i logistyka                                 | Stowarzyszenie Południowy Klaster Kolejowy   | ul. Gallusa 12               | 40-594 | Katowice         |
| 102. | 20. | Śląski Klaster Dizajnu  | www.klasterdizajnu.pl      | przemysły kreatywne                                   | Zamek Cieszyn  | ul. Zamkowa 3 abc            | 43-400 | Cieszyn          |
| 103. | 21. | Śląski Klaster Gospodarki Odpadami                            | www.skgo.pl                | gospodarka komunalna, gospodarka odpadami             | Zrzeszenie Ekspertów Ekologii  | ul. Dąbrówki 10              | 40-081 | Katowice         |
| 104. | 22. | Śląski Klaster ICT  | www.ict-silesia.pl         | ICT   | Centrum Naukowo-Przemysłowe ICT Sp. z o.o.   | ul. Mariacka 17              | 40-014 | Katowice         |
| 105. | 23. | Śląski Klaster ICT i Multimediów Hub Club                     | www.hubclub.pl             | ICT   | Fundacja INNOVARE  | ul. Karola Goduli 36         | 41-703 | Ruda Śląska      |
| 106. | 24. | Śląski Klaster IT   | www.slaskiklasterit.pl     | ICT   | Stowarzyszenie Rytm Śląska   | ul. Gałęczki 61              | 41-506 | Chorzów          |
| 107. | 25. | Śląski Klaster Kultury, Turystyki i Rekreacji                 | www.slaskiklaster.pl       | turystyka, rozrywka, rekreacja, kultura               | Instytut Wyszehradzki w Pszczynie  | ul. Jodłowa 59               | 41-800 | Zabrze           |



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|--|-----|--|----------------------------------|---|---|----------------------|--------|------------------|
| 108.                                   | 26. | Śląski Klaster Lotniczy                                  | www.aerosilesia.eu               | lotnictwo                                 | Federacja Firm Lotniczych Bielsko-                                  | ul. Stefana Kóski 43 | 43-512 | Kaniów           |
| 109.                                   | 27. | Śląski Klaster Nano                                      | www.nanoslask.pl                 | nanotechnologie                           | Fundacja Wspierania Nanonauk i Nanotechnologii NANONET              | ul. Bankowa 14/218   | 40-007 | Katowice         |
| 110.                                   | 28. | Technopolia Śląska                                       | www.tsig.pl                      | technologie produkcji                     | Izba Gospodarcza w Wodzisławiu Śląskim                              | ul. Rynek 6          | 44-300 | Wodzisław Śląski |
| <b>świętokrzyskie voivodeship</b>      |     |  |                                  |   |   |                      |        |                  |
| 111.                                   | 1.  | Grono Targowe Kielce                                     | www.gronotargowe.pl              | usługi biznesowe, edukacja                | Izba Gospodarcza „Grono Targowe Kielce”                             | ul. Zakładowa 1      | 25-672 | Kielce           |
| 112.                                   | 2.  | Klaster Nauka Medycyna i Nowoczesne Technologie          | www.promykdrowia.pl              | medycyna, biomedycyna, turystyka medyczna | Promyk Zdrowia Sp. z o.o.   | ul. Małogoska 25     | 28-300 | Jędrzejów        |
| 113.                                   | 3.  | Świętokrzysko-Podkarpacki Klaster Budowlany INNOWATOR    | www.klaster-innowator.pl         | budownictwo i architektura                | Staropolska Izba Przemysłowo-Handlowa                               | ul. Sienkiewicza 53  | 25-002 | Kielce           |
| 114.                                   | 4.  | Świętokrzysko-Podkarpacki Klaster Energetyczny           | www.klasteroze.it.kielce.pl      | energetyka, ciepłownictwo, OZE            | Świętokrzyskie Centrum Innowacji i Transferu Technologii Sp. z o.o. | Al. Solidarności 34  | 25-323 | Kielce           |
| <b>warmińsko-mazurskie voivodeship</b> |     |  |                                  |   |   |                      |        |                  |
| 115.                                   | 1.  | Elbląski Klaster Turystyczny                             | www.klaster-elblaskaturystyka.pl | turystyka, rozrywka, rekreacja, kultura   | Elbląski Klaster Turystyczny  | Pl. Słowiański 2     | 82-300 | Elbląg           |
| 116.                                   | 2.  | Mazurski Klaster Turystyczny                             | www.klaster.mazury.pl            | turystyka, rozrywka, rekreacja, kultura   | Lokalna Organizacja Turystyczna Ziemia Mrągowska                    | ul. Warszawska 26    | 11-700 | Mrągowo          |
| <b>wielkopolskie voivodeship</b>       |     |  |                                  |   |   |                      |        |                  |
| 117.                                   | 1.  | Centrum Innowacji Fotowoltaicznych (Dolina Fotowoltaiki) | www.dolinafotowoltaiki.pl        | energetyka, ciepłownictwo, OZE            | EN2EN   | ul. Krokusowa 5      | 62-090 | Kobylniki        |

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|------|-----|---|-------------------------------|---|---|------------------------------|--------|------------|
| 118. | 2.  | IT Leszno Klaster   | www.itleszno.pl               | ICT                                       | Leszczyńskie Centrum Biznesu Sp. z o. o.  | ul. Geodetów 1               | 60-400 | Leszno     |
| 119. | 3.  | Klaster Kotlarski   | www.klasterkotlarski.pl       | energetyka, ciepłownictwo, OZE            | Stowarzyszenie Klaster Kotlarski  | ul. Kaliska 65               | 63-300 | Pleszew    |
| 120. | 4.  | Klaster "Leszczyńskie smaki"  | www.leszczynskiesmaki.pl      | przemysł spożywczy                        | Leszczyńskie Centrum Biznesu Sp. z o.o.   | ul. Geodetów 1               | 64-100 | Leszno     |
| 121. | 5.  | Klaster Poligraficzno-Reklamowy w Lesznie                             | www.poligrafia.leszno.eu      | poligrafia i wydawnictwa                  | Stowarzyszenie Klaster Poligraficzno-Reklamowy w Lesznie                            | ul. Bolesława Chrobrego 35 a | 64-100 | Leszno     |
| 122. | 6.  | Klaster Przetwórców Szkła Budowlanego                                 | www.polskieszyby.pl           | budownictwo i architektura                | Stowarzyszenie Przetwórców Szkła Budowlanego  | ul. Kamienna 6               | 62-081 | Wysogotowo |
| 123. | 7.  | Klaster Spożywczy Południowej Wielkopolski - Stowarzyszenie w Kaliszu | www.klaster.kalisz.pl         | przemysł spożywczy                        | Regionalna Izba Gospodarcza w Kaliszu   | ul. Częstochowska 25 p. 9    | 62-800 | Kalisz     |
| 124. | 8.  | Leszczyński Klaster Budowlany   | www.lkb.leszno.pl             | budownictwo i architektura                | Leszczyńskie Centrum Biznesu Sp. z o. o.  | ul. Geodetów 1               | 64-100 | Leszno     |
| 125. | 9.  | Swarzędzki Klaster Producentów Mebli                                  | www.swarzedzki-klaster.com.pl | przemysł meblowy                          | Cech Stolarzy Swarzędzkich  | ul. Wrzesińska 41            | 62-020 | Swarzędz   |
| 126. | 10. | WASTE-Klaster   | www.waste-klaster.pl          | gospodarka komunalna, gospodarka odpadami | Fundacja Uniwersytetu im. Adama Mickiewicza w Poznaniu                              | ul. Rubież 46                | 61-612 | Poznań     |
| 127. | 11. | Wielkopolski Klaster Lotniczy   | www.wkl.org.pl                | lotnictwo                                 | Stowarzyszenie Przedsiębiorców Przemysłu Lotniczego "WIELKOPOLSKI KLASTER LOTNICZY" | ul. Częstochowska 93A        | 62-800 | Kalisz     |
| 128. | 12. | Wielkopolski Klaster Teleinformatyczny                                | www.wklaster.pl               | ICT                                       | Wielkopolski Klaster Teleinformatyczny  | ul. Zwierzyniecka 20         | 60-814 | Poznań     |

| zachodniopomorskie voivodeship |    |  |                           |   |   |                         |        |          |
|--------------------------------|----|--|---------------------------|---|---|-------------------------|--------|----------|
| 129.                           | 1. | Klaster Budowlany                                    | www.budownictwo.izba.info | budownictwo i architektura                | Północna Izba Gospodarcza w Szczecinie                              | Al. Wojska Polskiego 86 | 70-482 | Szczecin |
| 130.                           | 2. | Klaster Metalowy METALIKA                            | www.polskieklastry.org    | przemysł metalowy                         | MP Polskie Kłastry sp. z o.o.                                       | ul. Dolomitów 15        | 71-784 | Szczecin |
| 131.                           | 3. | Klaster Morski Pomorza Zachodniego                   | www.klastermorski.com     | gospodarka morska                         | Terminale Polskie S.A.  | ul. Bytomska 7          | 70-603 | Szczecin |
| 132.                           | 4. | Klaster Przemysłów Kreatywnych                       | www.klaster.biz           | przemysły kreatywne                       | Północna Izba Gospodarcza w Szczecinie                              | Al. Wojska Polskiego 86 | 70-482 | Szczecin |
| 133.                           | 5. | Zachodniopomorski Klaster Chemiczny "Zielona Chemia" | www.zielonachemia.eu      | chemia, nawozy, tworzywa sztuczne         | Stowarzyszenie Zachodniopomorski Klaster Chemiczny "Zielona Chemia" | Al. Piastów 48          | 70-311 | Szczecin |
| 134.                           | 6. | Zachodniopomorski Klaster Medyczny iSynergia         | www.isynergia.pl          | medycyna, biomedycyna, turystyka medyczna | Fundacja Dom Lekarski Innowacyjna Medycyna                          | ul. Bagienna 6          | 70-772 | Szczecin |

Source: G. Buczyńska, D. Frączek, P. Kryjom, *Raport z inwentaryzacji klastrow w Polsce 2015*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2016, Available on WWW:  
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