

CLUSTER POLICY REPORT

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

CLUSTER POLICY IN HUNGARY

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I. INTRODUCTION

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 level¹. 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"². 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.

¹ 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

² 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 Project³ (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.

In Hungary, clusters have been forming since 2000 and they were part of economic development policies to a varying extent. Concepts and models from US, France, Italy have been studied and first attempts built on them. A major upswing in cluster development policy came when the Pole Programme was introduced in 2008, bringing clusters much more in the limelight of economic development than before. In recent years cluster development has become part of innovation and competitiveness policies although no separate cluster strategy exists. Currently, a visible setback to previous years is the lack of special treatment of accredited clusters in innovation calls. Hungary introduced various programmes to support clusters since 2000. First, domestic sources had been used but since the EU accession in 2004, cluster development programmes run from European Funds. Trust building among economic actors as a key feature of successful clustering is a slow and fragile process that has been going on for more than 15 years and consequently results are already visible. Notwithstanding that there is still a lot to do and learn from others, especially from the Visegrad and neighbouring countries of Hungary that are characterised with comparable patterns.

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 Hungary 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 Hungary 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 Hungary and comparison with the smart cluster policy model and experience of project partners’ countries, recommendations for improvement of the Hungarian cluster policy have been prepared and described in Chapter VI. Chapter VII concludes the project results and benefits for Hungarian cluster policy.

³ www.clustercoopproject.eu

II. THE GENERAL ASPECTS OF THE CLUSTER POLICY ANALYSIS

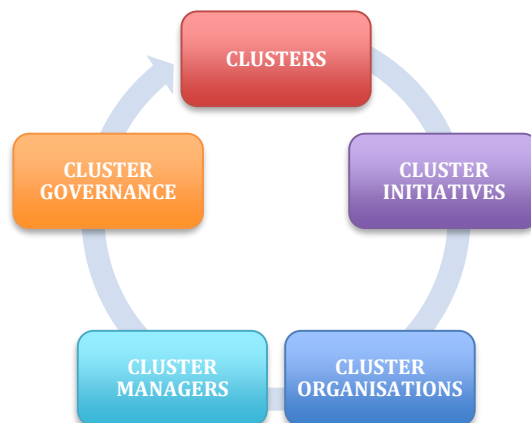
2.1 THE DEFINITION AND TYPES OF CLUSTER POLICIES

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 categories⁴ (similar classification was provided by Oxford Research AS⁵):

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 life cycle 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:

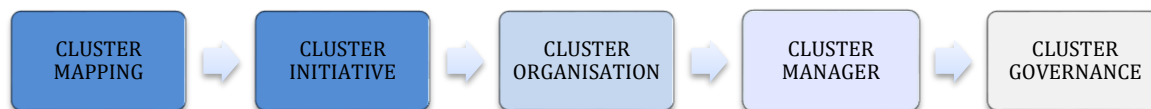


In many countries the cluster policies show disproportions in consistency and continuity of the systemic and financial support throughout the cluster development stages:

⁴ 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.*

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

- a) **Fail 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 life cycle **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.

III. RESEARCH METHODOLOGY

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 complementarities⁶)
 - 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 OUTPUTS

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.

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;

⁶ 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

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.

The final selection of the four best practices (one per country) out of the eight nominated was carried out by means of a voting campaign among the cluster managers and other involved cluster community members.

3.3 SUCCESS STORIES DISSEMINATION

The identification of the country's best practices to learn from by the others, selection of 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 to be 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 on 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 HUNGARY

4.1 CLUSTER POLICY, STRATEGIC DOCUMENTS AND PROGRAMMES

Cluster development has been a policy issue for more than a decade in Hungary starting from 2000. The first clusters were initiated by the Ministry of National Economy. These clusters can be characterized rather supplier chains with a top-down approach and relatively large number of members. Since no common goals has been defined these initiatives rapidly turn into apparent organizations and eroded.

In parallel, the government launched the Suppliers Programme (from 1998 to 2000) and the Revised Suppliers Programme (from 2000 to 2002). These programme were intended to serve as a new way for the promotion of FDI investment. They were targeted at the development of Hungarian small-size suppliers of multinational companies with Hungarian operations. The objective was strengthening the linkages between multinationals and suppliers based in Hungary. The two suppliers' programmes were the first central government initiatives in Hungary that directly aimed at supporting the establishment and deepening of co-operations between companies and other market actors. The direct outputs of the Suppliers' Programme lagged substantially behind the set objectives. The number of SMEs enrolled in the programme was very limited. No breakthrough was achieved in terms of established relations between Hungarian based multinationals and SMEs.

Szechenyi Plan 2001-2002

In 2001 the first Szechenyi Plan was launched as the comprehensive economic development policy of the government which aimed at increasing the economic potential of Hungary with preserving macroeconomic stability.

Through the activities of the Regional Economy Development Programme grant was available for the set-up and operation of cluster management organisations. The rate of subsidy was 50%. Max EUR 100 thousand was available for the set-up of the cluster management organisation and further max. EUR 100 thousand was available for the operation of the cluster management organisation. Eligible costs were the staff cost of the cluster management organisation, infrastructure and equipment cost, which was necessary to launch the services to the cluster members. The grant was provided from domestic Hungarian sources.

The Establishment of Regional Clusters activity resulted in the start-up and operation of the first 13 clusters in Hungary. By the end of 2002 altogether 20 clusters were established in Hungary.

National Development Plan 2004-2006

The National Development Plan (NDP) was the comprehensive development plan of Hungary for 2004-2006 addressing the most important challenges in the Hungarian society and economy. Through its Economic Competitiveness OP direct call was launched to support the development of services provided to clusters.

Under the frame of the National Development Plan, funds allocated for the development of clusters have diminished as compared to the Szechenyi Plan. In principle the open call procedure has not changed and the focus was on non-refundable grants available for cluster management organisation, but there was a continuous fine-tuning of eligibility criteria driven by the need to filter rent-seekers and to ensure efficient use of funding. As a total 23 cluster management organisation received non-refundable grants in a total volume of EUR 1.7 million. However, these clusters were still rather marginal actors of the Hungarian economy without real economic impact. Nevertheless, on the micro-level they managed to create a somewhat better business environment for their members.

New Hungary Development Plan 2007-2013

The Plan was the National Strategic Reference Framework of Hungary for 2007-2013. Even though its time frame is set at 2007-2013, a new government came to power in 2010, which pushed a new comprehensive development plan, the New Szechenyi Plan to the forefront of the economic policy. Overall objective of the NHDP was the enlargement of employment and the creation of the conditions for sustainable economic growth.

Cluster development had become a central issue of NHDP, therefore a comprehensive economic development program have been launched tackling cluster related issues which was the Pole Programme.

The Pole Program was designed to be overarching the separate operational programmes and coordinating them with a strong focus on cluster development and pole cities' development. The programme directly targeted clusters and the pole cities (the 8 major Hungarian towns). The programme's final target group was the innovative SMEs.

The total sum that was available in the form of grants in the Pole Program between 2007-2013 amounted to close to 1.7 billion euros, however this sum is allocated in the concerning OP's of the NHDP (mainly Economic Development OP, 7 Regional OPs, Social Infrastructure OP and Social Renewal OP). The Pole Programme has ensured a coordination mechanism between the different measures of the different OPs related to the development of Pole cities and clusters. Roughly EUR 1.1 billion was allocated for the horizontal economic development leg (the pole cities) of the Programme and approx. EUR 0.6 billion to the cluster development leg. By mid-2010 (when a new government entered into power) approx. EUR 1 billion has been committed under the frame of the Pole Programme.

Main actions and measures of the Pole Programme were:

- Establishment and operation of the Pole Programme Office (PPO) and its network brokers, a dedicated governmental unit tackling with cluster-related issues
- Launching a 4-stage cluster development model
- Launching the cluster accreditation scheme
- Dedicated funding to start-up co-operations and developing clusters
- Dedicated funding and special calls for the support of joint innovation projects of clusters
- Channelling internationalization and cross-boarder projects

The Pole Programme was the first economic development programme in Hungary that used a systematic approach to develop clusters and mobilised substantial grants for the support of cluster development.

The Pole Programme used a two-fold approach in cluster development. On one side it tried to respond to the fact that number of permanent business co-operations is few and the level of trust in general is relatively low in Hungary. To improve this situation it spurred the establishment and operation of new business co-operations (the first two level of the 4-stage cluster development model). As a result more than 100 local/regional co-operations started or continued to work in Hungary. On the other side the Pole Programme focused on innovation at the more mature clusters (3rd stage of the cluster development model/accredited clusters). In the case of accredited clusters the majority of the support in the Pole Programme was only available if they realised innovation projects. Owing to this by mid-2010 64 joint innovation projects have been launched by member companies of accredited clusters. By mid-2010 25 clusters received the accredited status. Total number of members of these clusters was 728, of which there were 554 SMEs.

Further, the Pole Programme tried to link clusters and the most important research actors of the Pole cities with the backing of the respective local governments. By this the developments of major research infrastructure or projects at the higher education institutions could have been harmonised with the needs of clusters operating in the proximity of these institutions. This activity brought mixed results. At some of the pole cities the pure fact that the major business, local government and research actors sat at one table regularly was already considered a success.

In 2011 the Pole Programme was transformed to the Cluster Development Programme of the New Szechenyi Plan, which is a continuation of most of the activities and measures.

New Szechenyi Plan 2011-2014

The overall objective of the NSZP was dynamic enlargement of employment. The NSZP sets the target of the creation of 1 million new jobs by 2020.

As a continuation of the Pole Programme the Cluster Development Programme of the New Szechenyi Plan targeted SMEs with good employment expansion potential. Further, innovative companies were in the focus of the programme that are able to carry out innovation projects in co-operation with other companies.

The most important building blocks of the Cluster Development Programme were the calls for proposal in the Enterprise Development Programme and the Knowledge, Innovation and Growth Programme of the NSZP. These Programmes were primarily funded from the Economic Development Operational Programme of the NSRF 2007-2013. The financial frame for these calls was around EUR 90 million.

The Cluster Development Programme intended to increase the number of accredited clusters and the number and value of projects that are realised by member companies of accredited clusters.

Management of the Programme was carried out by the Cluster Development Office which operated in the premises of MAG – Hungarian Economic Development Centre.

The application of the multi-stage cluster development model was continue with fine tuning of the different cluster-related calls. The accreditation system has been renewed reflecting the priorities of the NSZP.

Szechenyi 2020 2014-2020

In 2014 the Hungarian government launched the Szechenyi 2020 the framework programme of Hungary in the current 6 year financial period.

Cluster development continuously forms part of the economic development measures however its priority has been reduced. Just like in the past decade, Hungary did not defined a single cluster development strategy. Measure related to clustering is embedded in the relevant innovation strategies (Regional and national Smart Specialization Strategies, National R&D&I Strategy, relevant Ops).

Policy measures of the predecessor programmes are continuing, however significant changes have been made recently inter alia: the elaboration of a renewed cluster development model, complex revision of the accreditation scheme and launch of the new accreditation call.

Regarding financial supports grants related to cluster management services are still available, however clusters should face with much stricter criteria. Dedicated calls for joint innovation projects are not available in the new programming period, clusters and their members have different kind of preferences through Economic Development and Innovation OP.

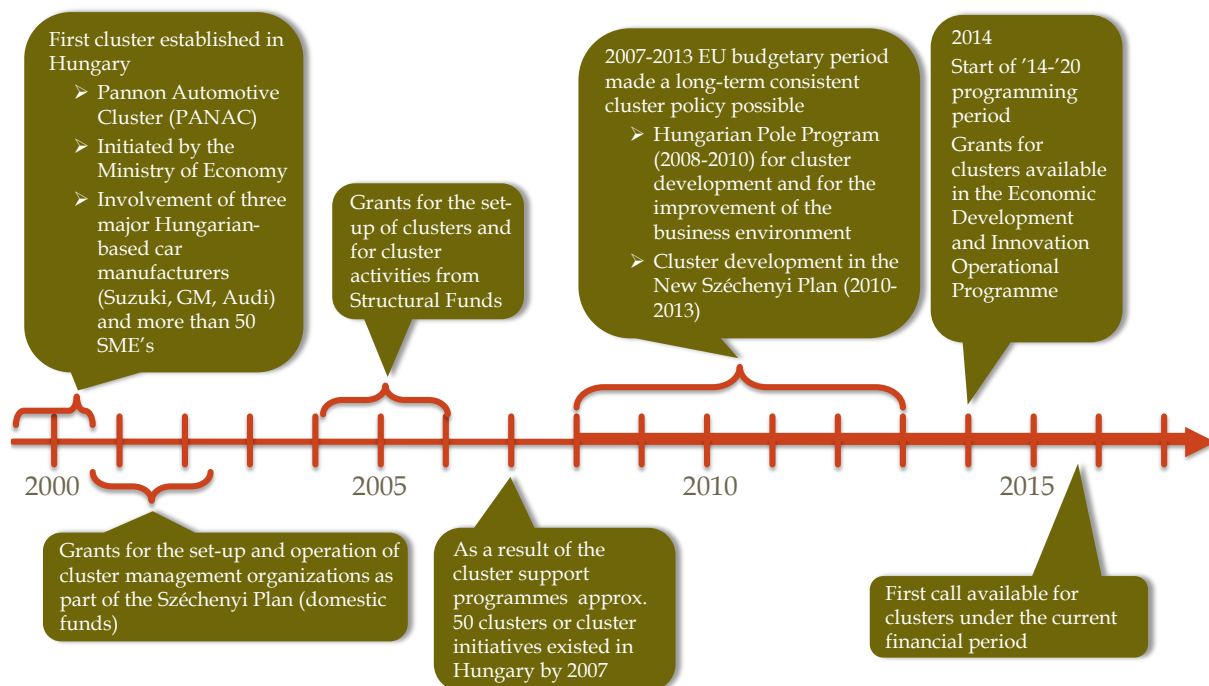


Figure 1: Time span of cluster policy development in Hungary

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.

Results of spider analyses (Figure 3, 4 and 5) processed according Methodology Guide (Appendix 1) show the development of cluster policy in Hungary and compare it with the development of the cluster policies in the Czech Republic, Poland and Slovakia.

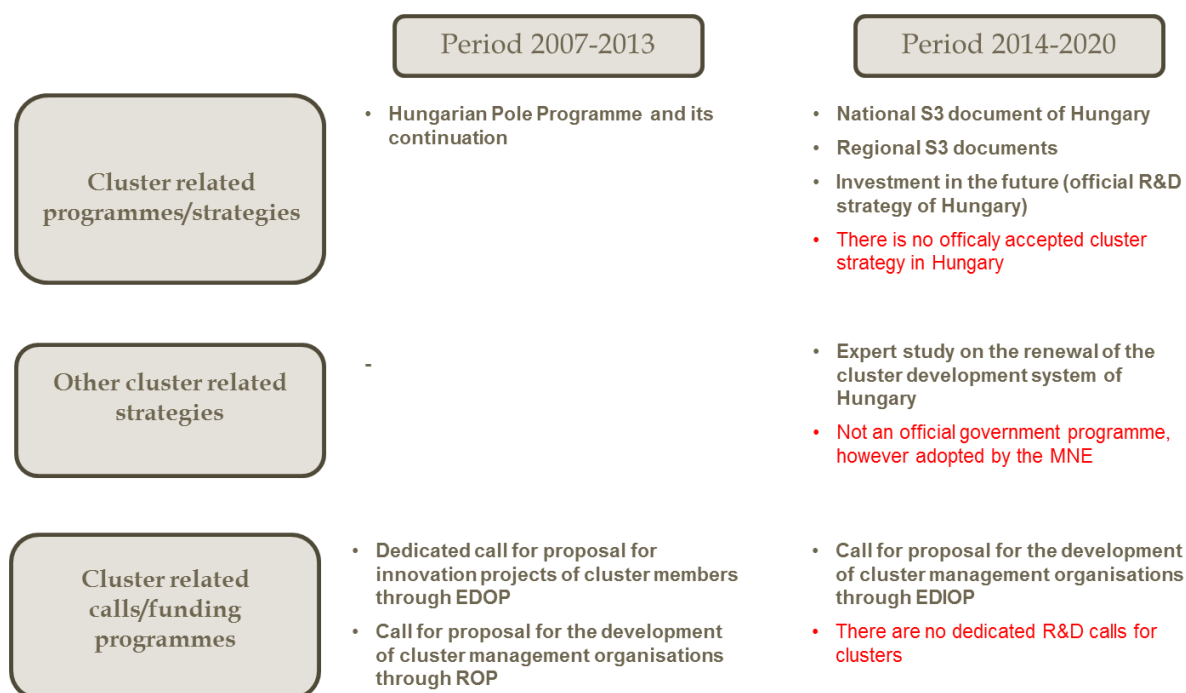


Figure 2: Summary of relevant strategies, documents and programmes for periods 2007-2013 and 2014-2020 in Hungary

Source: own processing

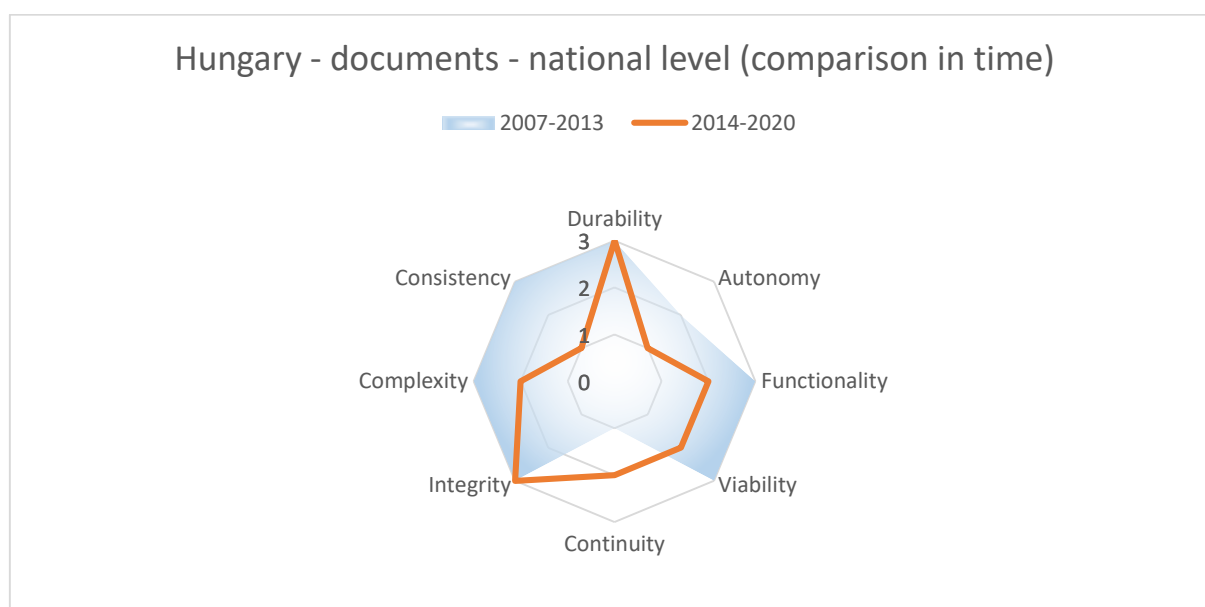


Figure 3: Spider analysis of the characteristics of the documents supporting development of cluster policy in Hungary

Source: own processing

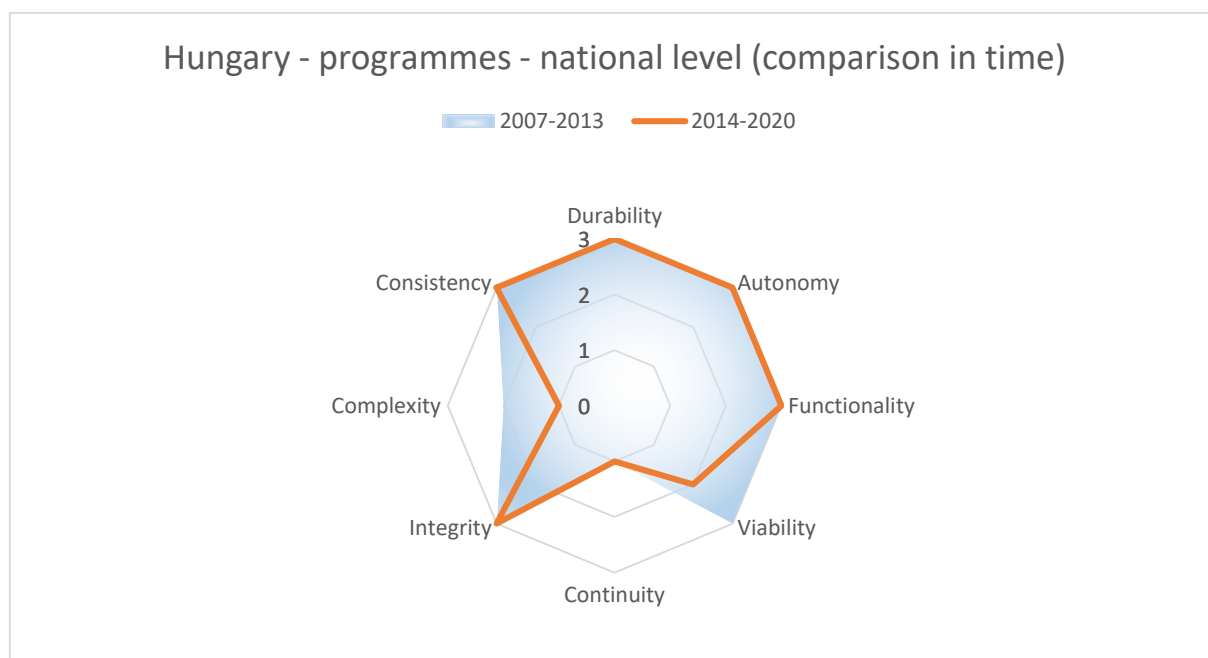


Figure 4: Spider analysis of the characteristics of the programmes supporting cluster organisations' development in Hungary
Source: own processing

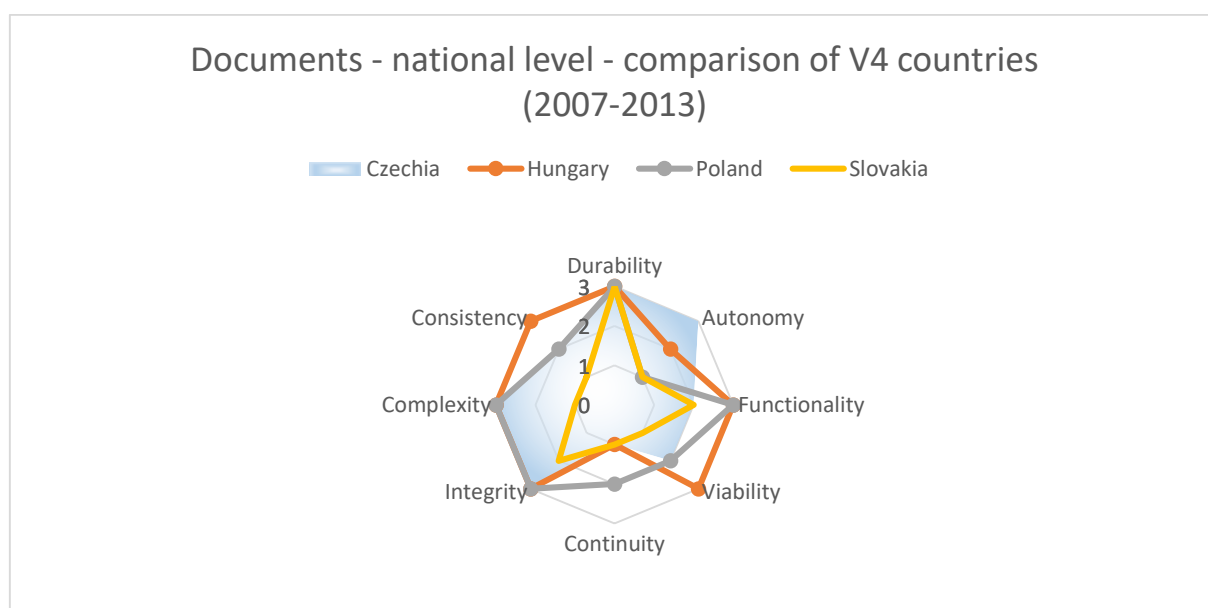


Figure 5: Comparison of the cluster policy characteristics in V4 countries in the period of 2007-2013 - documents
Source: own processing

Documents - national level - comparison of V4 countries (2014-2020)

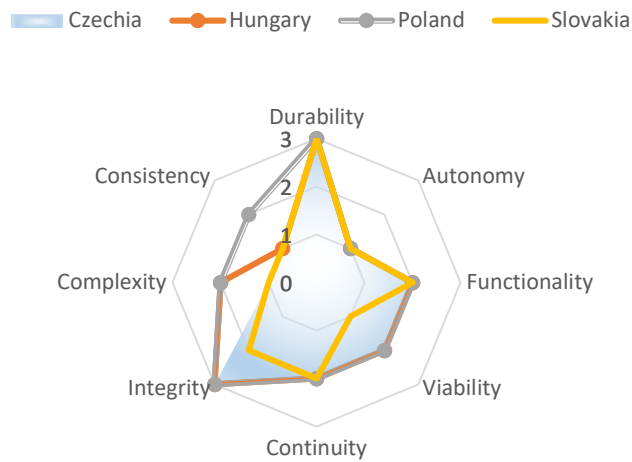


Figure 6: Comparison of the cluster policy characteristics in V4 countries in the period of 2014-2020 - documents

Source: own processing

Programmes - national level - comparison of V4 countries (2007-2013)

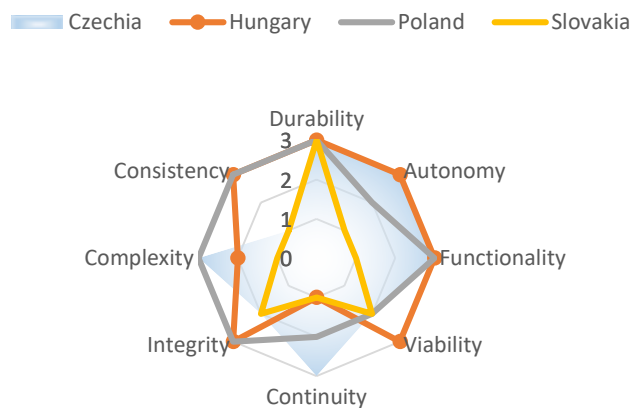


Figure 7: Comparison of the cluster policy characteristics in V4 countries in the period of 2007-2013 - the programmes supporting cluster organisations' development

Source: own processing

Programmes - national level - comparison of V4 countries (2014 - 2020)



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

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

Operational programme	Cluster supporting programme	Allocation (in 1000 EUR)	Min.-max. budget per project (in 1000 EUR)	No. of applications	No. of supported cluster projects	Total amount of support (in 1000 EUR)
Regional Development OPs	Supporting of joint investments, services of regional clusters	39,474	32,2-483,8	ca.500	237	24,648
Economic Development OP	Supporting the joint technological innovation of Accredited Innovation Clusters	120,796	320-4,838	83	31	72,083
	Supporting the complex technological innovation of Accredited Innovation Clusters members	120,080	48,4-3,225	228	154	127,564

Economic Development and Innovation OP	Supporting high quality services of professional cluster management organisations	6,450	16,1-161	19 (open call)	No funded projects so far
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Source: own processing

As mentioned before financial support of cluster organizations were available in Hungary even before joining to the European Union, however the financial framework was much narrow.

The first direct cluster calls were available through the Szechenyi Plan and the National Development Plan. Impact of these calls were rather moderate, however they helped to establish the first cluster initiatives in Hungary. Both the planning and the execution were the responsibility of the Ministry of National Economy.

From 2007 the New Hungary Development Plan was launched as well as the Pole Programme. The amount of financial support was greatly exceeded those in the previous periods. Calls for cluster organisations were available through the 7 regional operational programmes. During the two rounds of calls more than 200 start-up cluster initiatives and developing clusters have been supported. These tenders have been planned and managed by the National Development Agency and the Regional Development Agencies, the Pole Programme Office provided coordination and assistance through the planning phase.

As it seems, a large number of cluster initiative have been supported with relatively low economic impact even on regional level. The progression between two rounds of calls was lower than expected meaning that just small portion of the clusters could step into a higher stage in the development model. Large number of new initiative have been supported instead of leading further the already supported ones.

The other type of calls have supported those innovation projects which had been executed jointly by members of the accredited clusters. These calls were only available for the accredited clusters through the Economic Development OP. Beside these there were other innovation and SME-related calls where the accredited clusters members have had special advantages through the application process.

Management of EDOP was done by the National Development Agency, while the handling of the tenders was the responsibility of MAG – Hungarian Economic Development Centre. The Pole Programme Office and its successor MAG Cluster Development Office acted as a professional coordinator between the governmental organisations and the clusters.

Regional Innovation Agencies and Chambers of Commerce can be highlighted as the most relevant actors in clustering. These institutions played key role in the initiation of start-up clusters. Different kind of cluster associations were initiated as well in Hungary, however they have represented a relatively low portion of the whole cluster community.

In 2014 the government launched the Szechenyi 2020 framework programme of the current financial period. Support for the development of cluster management organizations services continued through the Economic Development and Innovation OP. Evaluation of the first round of proposals is currently in progress.

The application of the accreditation system continues on a revised form. According to the current plans dedicated calls for accredited clusters will not be announced in this period, however wider range of calls will be available were accredited cluster members have special preferences.

Financial advantages linked to the accreditation title is planned to be changed as well. The horizon of those calls where the accredited clusters has special preference will be widening, at the same time launching dedicated calls for these cluster will ended up.

Concerning the institutional background, significant changes had been executed. In line with the governments centralizing aspirations organizations responsible for the execution of economic development EU-supports have been reorganized. As a consequence, both the managing authority and the intermediary body of EDIOP have been integrated into structure of the Ministry of National Economy. Accordingly, the main responsible body for the current cluster development tasks in Hungary is the International and Cluster Unit of the Ministry of National Economy.

4.2 CLUSTER MAPPING, ESTABLISHMENT AND DEVELOPMENT OF THE CLUSTER ORGANISATIONS

The first comprehensive mapping of the Hungarian clusters was done in 2007 through the planning phase of the Pole Programme. From that time an electronic database of the clusters in Hungary has been compiled and continuously looked after by the Pole Programme Office and its successors.

Relevant data of the accredited clusters and its members have been analysed during the elaboration and revisions of the accreditation criteria. Reports on the situation of clustering in Hungary has been published several times. The latest and more comprehensive analysis of the cluster development in Hungary was done in 2015 with the direct involvement of 20 accredited clusters and 200 of their cluster members.

According to the statistics of the Ministry of National Economy 176 cluster initiatives have been supported in Hungary between 2007-13. Adding to this those initiatives without state support it can be stated that in Hungary more 200 'cluster-like' organisation exists on paper. However the empirical research of NME showed that less than 25% of all supported cluster can be considered as economically active.

The accredited clusters are exceptions thanks to the strict criteria, these clusters can be considered as flagship initiatives in Hungary. Currently 34 clusters hold the accreditation title out of which 8 clusters operate in the field of ICT, 8 in the machinery and vehicle production sector, the healthcare & biotechnology field has a good representation as well.

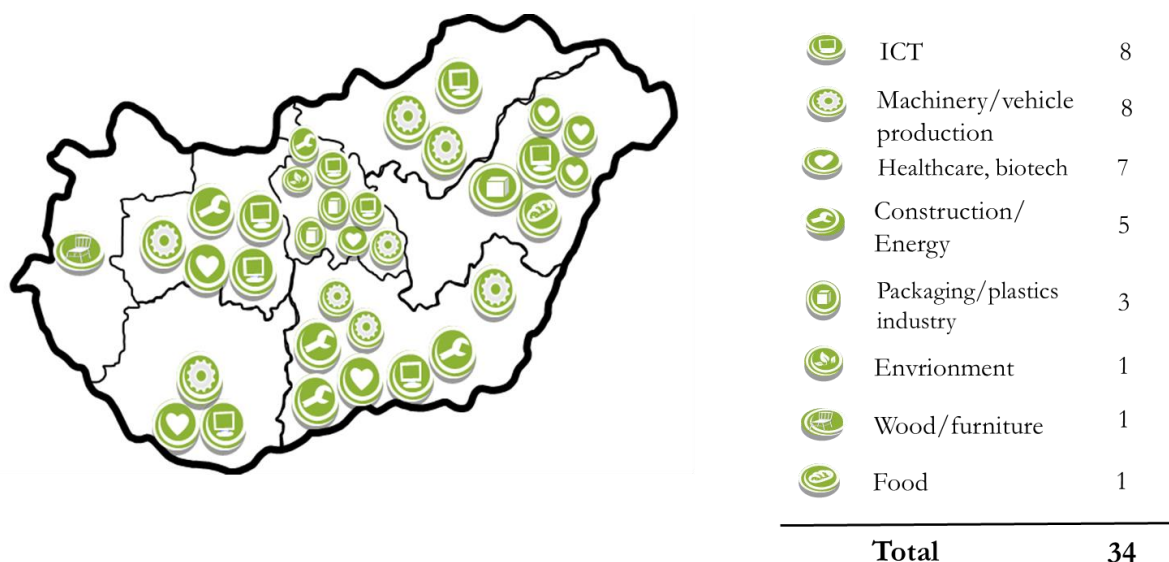


Figure 9: Accredited clusters in Hungary
Source: Ministry for National Economy

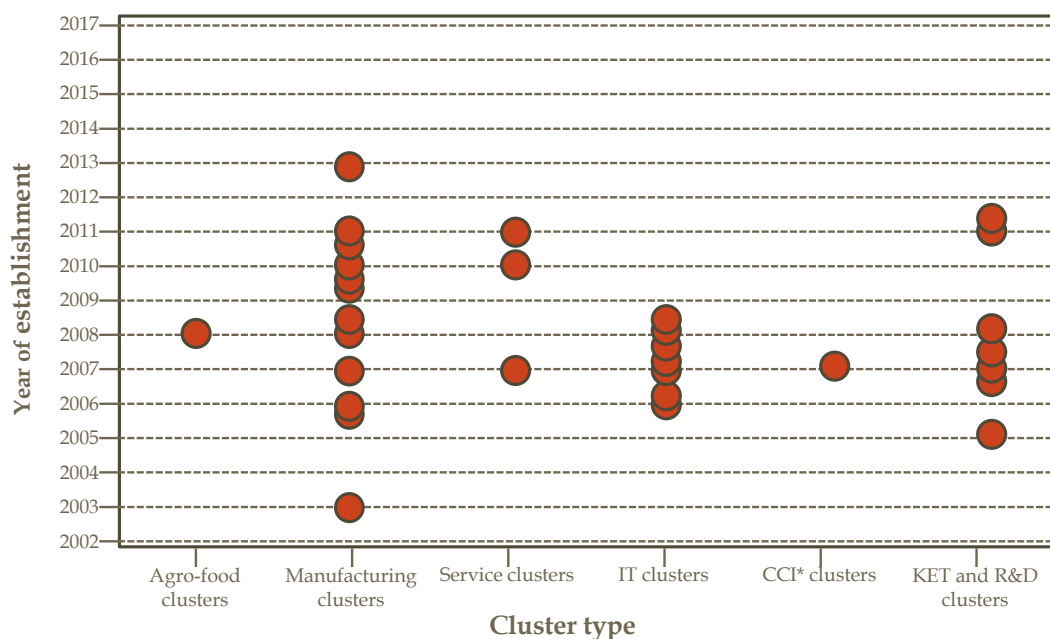


Figure 10: Typology of accredited clusters in Hungary
Source: own processing

4.3 AWARENESS AND SATISFACTION OF CLUSTER ORGANISATIONS' MANAGERS WITH THE CURRENT STATE OF CLUSTER POLICY

According Methodology Guide (see Appendix 1) cluster managers of six selected clusters from the different sectors have been involved in survey using semi-structured interviews.

The aim of the interviews with cluster managers was 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.

1) The structure of the respondents in Hungary

Six functional clusters in Hungary were contacted with the questionnaire to be responded within the interview. The interview was carried out with the cluster manager or other delegated person. The sample of six clusters comprise of 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 – **Bakony-Balaton Mechatronics and Automotive Industry Cluster** is the representative cluster
2. **ICT** – **Information Management Innovation 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 – **ArchEnerg Cluster** is the representative cluster
4. **Agro-food industries** – **PharmAgora Quality of Life Cluster** is the representative cluster
5. **Services** – tourism, spa, health, social work, education, transport & logistic – **Szent-györgyi Albert Life Science Cluster** is the representative cluster
6. **Creative & cultural industries** – **Mobility and Multimedia 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 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

Cluster organisation/cluster established in the year

All the selected clusters have the accreditation title thus they are all well-established with significant track-record. All 6 clusters were established in 2007-2008.

Item 2. Awareness – policy

All of the involved clusters managers are well aware of the national cluster strategies and programmes since they are relevant partners of policy makers. The Pole Programme and its successor programmes have strong regional relevance, as well. Local cluster programmes do not exist in those cities effected by the involved clusters. Awareness about the international cluster

policies shows a mixed picture. Those clusters that are more active in international programmes are well aware of the different programmes and strategies of the European Commission. The European Cluster Management Excellence Initiative was mentioned the most. The other part of cluster managers have less interest on EU-strategies and programmes and their focus is on national ones.

Item 3. Awareness - funding programme

The result of the awareness of funding programmes is very similar to the awareness of cluster policies. All the interviewed cluster managers were well aware of the current and past cluster related calls in Hungary. The involved clusters were all beneficiaries of the regional cluster calls of ROP, their members executed several innovation projects in the framework of EDOP.

The involved clusters are active on international calls as well. FP7 and the current Horizon 2020 programme, COSME and the Ambient Assisted Living Programme were mentioned during the interviews.

Item 4. Exploitation

As mentioned earlier all 6 clusters have significant experience on involving EU-funds to their operation. Regional supports of the cluster management organisation (call - Supporting of joint investments, services of regional clusters) was used by all the interviewed clusters. Projects related to the administrative operation of the management organisations were more common. These 2-year-long projects effectively helped the CMOs to provide better services to their partners as well as financing their day-to-day operation. The amount of support varies between EUR 80,000-120,000, maximum support ratio was 80%. Projects completed with some kind of joint investment had lower support ratios. The investments should have served the entire partnership of the cluster.

Activity of the involved clusters on the dedicated innovation calls is more divided. While the members of the Bakony-Balaton Mechatronics and Automotive Industry Cluster did not apply in these calls, there are other clusters (Mobility and Multimedia, PharmAgora Quality of Life) whose members have executed more than 20 innovation projects in the past years. Size of these projects vary from EUR 100,000 to nearly EUR 4 million. Maximum support ratio could reach 65%, however the average was around 45-50%.

Item 5. Satisfaction

Opinions about cluster development measures in Hungary is mixed regarding to the answers of the interviewed cluster managers. In general, a consensus was made that in 2008 the Pole Programme gave momentum of clustering with its long term cluster concept which soon has led to a clustering revolution in Hungary, however support of start-up cluster initiatives on such a large scale have diluted and have eroded the Hungarian cluster community as well.

The past 1-2 years have been characterized as the time of stagnation, uncertainty and purification as no clear cluster strategy exist and the financial sources have drowned for clusters.

Positive measures mentioned by the interviewees were:

- segmented, multi-level cluster development model,

- cluster accreditation,
- dedicated calls for accredited clusters
- cross clustering on national and international level,
- cluster benchmarking events,
- cluster management portfolio based on the members needs

Negative circumstances are:

- unpredictable cluster environment (not clearly defined goals for the national cluster policy, taxation and EU-supports)
- very slow transaction of supported innovation projects from government side,
- missing Cluster managers Club events,
- disharmony between accreditation and international cluster labelling.
- too broad explanation of cluster definition,
- insufficient amount of support for cluster management
- self-financing problems of clusters which result capacity problems sometimes.

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 it, giving the actual reasons for its partial relevance or complete irrelevance.

All 6 cluster managers explained that the current governmental cluster programmes have great relevance towards their clusters, however several proposals and suggestions have emerged for future policy making.

Item 7. Needs

Cluster managers have explained those issues that would be necessary to create more favourable conditions to clusters in Hungary, as such:

- Stable cluster policy and programmes with clear vision and determined goals are needed
- Launching dedicated calls for joint innovation projects of cluster members as before
- Organizing management trainings for cluster managers according to a common high standard

- Ensuring and supporting more partner search facilities (platforms, fora) by the government
- Securing predictability during the handling of EU-supports and general economic environment
- Government should put more emphasis on creating better business environment for clusters (business administration, taxation, flexible regulations etc.)

Item 8. Improvement suggestions

Most frequently mentioned suggestion of cluster managers was to stimulate and further improve the international activities of clusters through international conferences and projects.

Many of the interviewed cluster managers miss the benchmarking club events of cluster managers which was considered as an excellent platform for changing ideas and making connections between clusters in Hungary.

The third most frequently mentioned issue was to provide high quality training programmes for cluster managers to improve their skills.

Several cluster managers mentioned that cluster supports should focus on more complex cluster programmes and projects.

V. Analysis of cluster policy approach and results

5.1 SWOT ANALYSIS OF CLUSTER POLICY IN HUNGARY

SWOT analysis of the Hungarian cluster policy

Strengths	Weaknesses
Nearly 10 years of experience on cluster development and policies	Inconsistency of cluster programmes
Design and execution of long term, systematic cluster development programmes	Currently there are no clearly defined goals and strategy regarding to clusters
Cluster programmes based on international benchmarks, however adjusted to the specificities of the Hungarian economy	Clusters are excessively dependent on state support
Significant amount of EU supports for clusters in the past	Rent-seeking clusters
Emergence of a strong and wide cluster community	Large number of non-viable cluster initiatives had been supported
Cluster accreditation	Lack of state regulations, guidelines regarding to cluster specific cases
Dedicated governmental unit for cluster development	
Cluster managers club initiative	
Good examples on internationalization	

Opportunities	Threats
Purification of the cluster community due to the lack of state support	Decreasing motivation of clusters without clear strategies
Rethink and renewal of the cluster development model	Postponed innovation projects without EU supports
Centralized allocation of tasks within the Ministry for National Economy	Less competitive services of cluster management organizations without EU supports
High innovation potential of the accredited clusters	
Increasing international activity of clusters	

Strengths

Cluster development forms part of the Hungarian economic development strategies since the very beginning of 2000s. After the first ad-hoc actions of creating clusters with a top-down approach the government formed its first strategic concept to help and support cluster development along with a middle and long run vision. The Pole Programme and its successor (New Széchenyi Plan Cluster Development Programme) was an integral part of the economic development strategies between 2008 and 2015. However it is important to underline that in Hungary officially adopted cluster policy has never existed.

Concepts of the cluster programmes were based on international benchmarks, which have been formed and adopted in line with specificities of the Hungarian economic environment.

As in most countries, cluster programmes have always been strongly linked to EU-supports, however in Hungary higher amount of EU-funds have been allocated into direct cluster development goals compared to the neighbouring countries.

The development programmes mentioned above resulted in the emergence of a strong and relatively wide cluster community in Hungary, cooperation through clustering have widely spread between economic actors. We can highlight several actions and tools of the cluster development programmes, which can be considered as strengths.

1. Cluster accreditation: the selection process of the clusters in Hungary has been considered a good practice before. The selection process leans on a fact-based evaluation system with predefined criteria, the evaluation of a joint cluster strategy and the final decision is made by a high level policy group. Results confirmed the legitimacy of accreditation, the accredited innovation clusters are significant actors of the Hungarian economy with strong innovation background.
2. One of the main success factors of the cluster development in the past was the operation of a dedicated unit in the public administration (Pole Programme Office, later Cluster Development Office) which is responsible for the coordination of the development processes and to channel strategic goals into real actions.
3. The cluster managers club (CMC) was an initiative of the Cluster Development Office aiming to organize regular meetings among the accredited clusters and relevant regional clusters managers in a rather informal manner compared to a regular conference or workshop. Feedback from cluster managers were overwhelmingly positive and several cross-cluster initiatives were born at CMC events.
4. Internationalization is always referred to as one of the main challenges to become competitive. In past years internationalization has formed a relevant part of the Hungarian cluster development goals resulting in the increasing involvement of Hungarian clusters into international initiatives. Last year (2015) one of the accredited clusters became entitled for the Gold-label of the ECEI ESCA cluster excellence programme.

Weaknesses

Nearly all the interviewed cluster managers mentioned inconsistency as a weakness when talking about cluster development in Hungary. This statement is more referred to the financial supports of clusters. Call for proposals are often delayed, the evaluation and decision making processes are rather slow. In such cases clusters struggle in securing financial stability which results in sub-optimal performance.

As of now (Q3 2016) clusters face uncertainty concerning to governmental cluster strategies. As our interviewers said, clusters are not aware, what are the directions, aims of the government right now. As a result of the past strategies a large number of new cluster initiatives have been founded thanks to the favourable conditions of EU-supports. However, apparently it seems that only a relatively small percentage of these initiatives were viable on middle run. In the future filtering rent-seekers and clusters with overambitious goals should be set in focus as well as fostering self-sustainability of clusters.

It can be stated that governmental regulations connecting to clusters are poor in Hungary. Governmental bodies are not familiar with clusters as a form of collaboration resulting in administrative barriers and misinformation.

Opportunities

Beside the negative effects of the current situation - such as the lack of financial support to clusters – cluster managers think that the purification of the cluster community is going on, because under current circumstances only self-sustainable and viable cluster organizations can survive.

From the policy makers view it is time to summarize and analyse the results of the past programmes and renew cluster development strategies eliminating the failures of the past.

It is a good opportunity to fasten up the decision making and supporting processes since the most relevant governmental units related to clusters are centralized in the Ministry for National Economy. Future cluster strategies should focus on the already existing clusters with proven track-record. The accredited clusters could play a key role in this. More efforts than current should be taken to utilize the international potential of the Hungarian clusters.

Threats

Without clear visions and strategies the motivation of the already existing clusters about cooperation would stagnate or decline. Companies and other organizations could lose their positive attitude to cooperate through clusters if the government does not express its goals and expectations about clusters.

Slowly managed EU-funds and the termination of dedicated cluster supports could result in less effective, postponed innovation projects and the lack of cooperation between enterprises. Support of the cluster management organizations should be done in a more predictable way helping the best performing clusters widen their service portfolio.

5.2 CLUSTER POLICY BEST PRACTICES FROM HUNGARY

Practice No. 1.: Cluster accreditation process

Period of its application: 2008 - currently

Responsible organization: International and Cluster Department of the Ministry for National Economy (and its predecessors)

General introduction of the best practice:

In the past 10-12 years several programmes and supports have been launched to develop clusters in Hungary. As a result, a relatively large number of small and fragmented cluster initiatives emerged as well as some relatively large and strong ones. A decision was made in 2007 that cluster development should be continued using a systematic approach, putting focus on the most promising initiatives. After studying several international best practices (e.g. the French Pole de Compétitivité Programme and the German Spitzencluster Programme) a unique tool has been developed which was tailor-made for the Hungarian economic situation, which was the Cluster Accreditation.

The most important goal of cluster accreditation is to select network co-operations which have intense innovation and export activities, whose co-operation effectiveness can help implement major development projects and which can remarkable economic performance in their region.

Introduction to the accreditation:

The cluster accreditation scheme has been embedded into the current EU framework programmes (New Hungary Development Plan from 2008-2010, New Széchenyi Plan from 2010-2013, Széchenyi 2020 from 2014 until now). The main aim of the accreditation is to concede and to award the performance of those clusters which have proceeded into the starting and developing phase, have proven track record. Furthermore, the accreditation helps select - from the large number of cluster initiatives - those ones which:

- have significant impact on employment in Hungary;
- have outstanding cooperation activity and trust between members;
- the effects of the cooperation between members is significant at national or cross-border level;

- have a significant potential to enter foreign markets;
- have a significant innovation potential.

Clusters can apply for the accreditation through a standard call for proposal (previous title Call for proposals for acquiring the 'Accredited Innovation Cluster' title). Currently the proposal is completely managed by the International and Cluster Department of the Ministry for National Economy (ICD) including the design, publication, handling of the submitted proposals and the formation of the decision proposals. The most important difference between the accreditation and other standard calls is that no direct financial support is granted to the cluster when awarding the 'Accredited Innovation Cluster' title. The main advantage of holding the accreditation title was that the accredited cluster and its members were exclusively entitled to submit project proposals for calls in the frame of the Economic Development Operational Programme (EDOP) 2007-2013 and also they could apply with preferential conditions on certain other calls.

The decision making process:

The proposals are evaluated in quarterly batches. The proposals are submitted by the cluster management organisations. The main steps of the accreditation procedure after the submission of the proposal are as follows: 1) check of eligibility criteria, 2) check of selection criteria, 3) decision on the accreditation title by the Accreditation Committee.

1. Check of eligibility criteria

The two most important eligibility criteria are:

- The management organisation should be a domestic company
- The cluster as a whole should have a track-record of at least two years.

2. Check of selection criteria

The selection system of the accreditation contains two different parts:

A. Fact based evaluation of the performance of the cluster members through the following subgroups

- I. Evaluation of the effect of the cluster on employment
- II. Evaluation of the business performance of SME members
- III. Evaluation of the export potential of member companies
- IV. Evaluation of the framework and content of the co-operations within the cluster
- V. Analysis of R&D and innovation activities in the cluster

B. Qualitative assessment through the evaluation of the complex cluster strategy

Altogether 100 points can be achieved during the scoring.

3. The Accreditation Committee

Reaching 50 points in the scoring does not automatically mean the receipt of the accreditation title - the Accreditation Committee brings the final decision. The Committee comprises of governmental decision makers and private sector experts. The Committee brings its decision based on the proposal of ICD, however the authorization of the Committee is unrestricted.

In case of positive decision of the Committee, the selected cluster becomes entitled to hold the accreditation certificate for 2 years and becomes eligible to validate those advantages on call for tenders which are only available for accredited clusters (e.g. dedicated calls, higher support rate, plus points through the evaluation).

Main results:

Currently 34 clusters are entitled to hold the Accredited Innovation Cluster title. Basic statistical data of these clusters:

- Total number of cluster members: 1,261 from which 1,140 are enterprises;
- Total revenue of member companies ('14): EUR 30.6 billion;
- Total export revenue of SMEs ('14): EUR 7.6 billion;
- Total employment of cluster member companies: ca. 117,000;

Between 2007-2013, the members of the accredited clusters launched more than 200 joint R&D and innovation projects financed by the Economic Development OP. The total granted support which has been allocated to AIC members exceeds EUR 420 million.

Main lessons learned:

- In the past 8 years the Cluster Accreditation system had become a significant incentive of economic development.
- The accreditation of clusters can be flexibly used to „pre-filter” a large scale of companies applying for grants in the field of innovation and technology development.
- The „Accredited Innovation Cluster” title had become a well-known brand in Hungary.
- Thorough testing of the evaluation criteria is essential before launching the proposal.
- Flexibility and stability should be concerned at the same time through operating the accreditation system.
- Strong backing is needed from relevant authorities for a sound management process.
- Clearly defined advantages are the main factors of motivation for participation to clusters.
- The accreditation requires the handling of a large database, thus a well-functioning operational team is needed. Clusters data help monitoring, evaluation and planning processes.

Future steps:

The renewal of the accreditation system is currently going on by the Ministry for National Economy. The publication of the new call for proposal for the accreditation title is expected in Q4 2016.

The planning process of the new call will take into consideration the following principles:

- Entry eligibility criteria will be more strictly defined and more entry criteria will be used in order to define those basic requirements which every accredited cluster should comply with.
- Instead of assessing economic data of clusters more emphasis will be given to the analysis of the cooperation and the cooperation activity of the cluster members.
- More emphasis will be given to the evaluation of the performance and service portfolio of the cluster management organisations.
- More emphasis will be taken to the examination of international activity of the cluster than before.

Practice No. 2: Multi stage cluster development model

Period of its application: 2008 - currently

Responsible organization: International and Cluster Department of the Ministry for National Economy (and its predecessors)

General introduction of the best practice:

Cluster development was part of the Hungarian economic development from the beginning of the 2000s. At the beginning, domestic funds, after 2004 EU-funds were available for the support of cluster organisations. However, no consistent, long term cluster development policy existed until 2008. In 2008, the government launched the so-called Pole Programme with its multi-stage cluster development model which provides a fairly stable frame for cluster development in Hungary.

From 2010 changes were effected in the model along the new governmental policies. Cluster development programme continued in the framework of the New Széchenyi Plan. At the end of 2013 the previous EU financial period was ended up and in 2014 the government launched Széchenyi 2020 the framework programme of Hungary for the financial period of 2014-20. As a result the framework of the cluster development model was changed as well and the renewed version of the multi stage model was launched in 2015.

Challenges:

The following challenges and problems were identified at the conceptualization of the Pole Programme in 2007:

1. General lack of trust and confidence among business actors – as a result inadequate number of business co-operations
2. Existing and successful business co-operations could not count on stable policies
3. Mixed experience and result of cluster support programmes
4. No consistent national policy on clustering
5. Imbalance of the tradable and non-tradable sectors (overweight of non-tradable sectors):
 - a. Decreasing export and competitiveness
 - b. Growth rate lags behind potential rate
 - c. Low and stagnating level of employment

Challenges of economic development in the field of R&D&I:

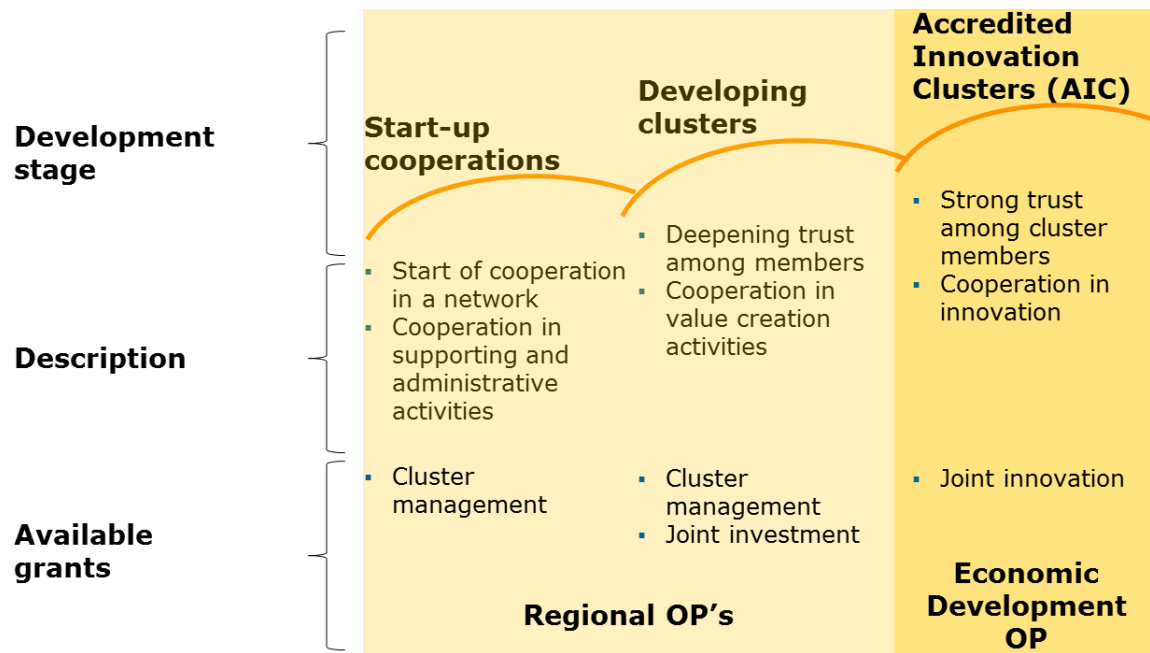
- Macroeconomic aspect:
 - R&D expenses over GDP is well below EU average
 - Overweight of state R&D both in research staff and in financing
- Propensity of enterprises for R&D:
 - Low propensity for risk and entrepreneurship
 - Lack of trust and co-operation
- Education:
 - Moderate number of professionals in science and technology
- Research:
 - Brain-drain
 - Gap between science and business, inadequate number of patents
 - Universities oriented at basic research
- Financing:
 - Enterprises face slow, expensive and bureaucratic procedures to get loans
 - Lack of risk capital and business angel network

Complex cluster development programmes in Hungary:

- Pole Programme (2008-2010);
- New Széchenyi Plan - Cluster Development Programme (2010-2014)
- Széchenyi 2020 Cluster Programme (2014-)

Launching the multi-stage cluster development model:

The core idea behind the model was that clusters at different level of their maturity need different kind of assistance or support.



At first stage of the model grant was provided for start-up initiatives to start co-operation and to set up and operate a cluster management organisation. The subsidy for the projects was relatively low at this stage as compared to the higher stages in the model but it was sufficient for a two-year-long project focusing on cluster management. The second step was the developing cluster stage. Besides giving support to cluster management the focus was more on joint investments of cluster members. The first two stages of the model were financed from the Regional OPs.

After the second stage there was the accreditation of clusters which was the entry to the third stage.

Here the focus was on joint innovation investments of clusters. It is important to note that support was available only to joint innovation investments not just joint investments, so it was a must to have a strong innovation element in the projects. Support for projects could reach EUR 6 million at this stage. Support was provided from the Economic Development OP.

The highest stage of the model was the Pole Innovation Clusters. This level would have been open only for those clusters that had been successful in a further accreditation. This stage did not come effective so far.

The Pole Programme Office elaborated an accreditation system of clusters which was a fact-based evaluation system with the aim of selecting the best-performing and/or most promising clusters. The accreditation model is based on levers that were determined by experts and have been tested on operating clusters (level of co-operation, economic performance, R&D performance, etc.). Obtaining the accreditation title did not mean any financial support but it

brought special rights for the cluster to apply for certain dedicated sources and earning plus points in various calls.

New Széchenyi Plan - Cluster Development Programme (2010-):

In 2010 a changed Hungarian government launched the New Széchenyi Plan (NSZP) which is in line with the government program 2010-2014 entitled 'The Programme of National Co-operation.' The overall objective of the NSZP is the dynamic enlargement of employment. The NSZP sets the target of the creation of 1 million new jobs by 2020.

Due adjustments have been carried out in the cluster development model used in the Pole Programme to reflect the employment focus of the NSZP but the core idea of the model remained the same, i.e. clusters at different level of their maturity need different kind of assistance or support.

Measures:

Measure for start-up co-operations between 2008-2011: Grant was available for the set-up and operation of the cluster management organisations and to limited joint investments. Cluster management organisations were eligible to apply for the call. In the cluster at least 10 companies should have been members to make the cluster management organisation eligible for application. It can be seen that this minimum eligibility criterion is rather loose and the applicants could represent more like start-up co-operations than clusters. The grant amount per project was approx. EUR 200,000. The rate of support was 80% for the cluster management and max. 50% for the joint investments. (Grant value and rate of support varied in the different Hungarian regions.)

Measure for developing clusters between 2008-2011: Grant was available for the operation of the cluster management organisations for deepening the business relations of cluster members and for joint investments. In this call, compared to the call for the start-up co-operations the joint investment was in the focus. The cluster needed to have at least a 1-year-long track record so that the cluster management organisation could apply. The grant amount reached EUR 800,000, from which the support to the cluster management organisation was limited to EUR 200,000; the rest of the grant amount had to serve the joint investment of the cluster members. The rate of support was 80% for the cluster management and max. 50% for the joint investments. (Grant value and rate of support varied in the different Hungarian regions.)

Measure for the joint innovation activities of accredited cluster member companies between 2008-2013 (EDOP-1.3.1/B): Grant was available for member companies of accredited clusters for joint innovation projects. Only those innovation projects were eligible, in which companies co-operate in the innovation of a new product/service. The grant amount per project was between EUR 0.05-1.7 million. The rate of support was max 55%. Eligible costs were R&D staff costs, purchase of know-how and services, investment in infrastructure and machinery and marketing.

Measure for innovation project companies jointly established by accredited cluster members between 2008-2011 (EDOP-1.2.1): Grant was available for member companies of accredited clusters if they decided to set-up jointly a project company implementing an innovation project. The beneficiary was the jointly established project company. The grant amount per project was between EUR 0.3-3.3 million. The rate of support was maximum 60%. Eligible costs were R&D staff costs, purchase of know-how and services, investment in infrastructure and machinery and marketing.

In the framework of EDOP 2007-2013 several other call for proposals were launched where member companies of the accredited clusters could take some kind of advantage e.g. higher support ratio, higher amount of support for a project, earning plus points through the project selection process etc.

Main results:

Between 2008-2014 different schemes under the umbrella of Regional Operational Programmes provided assistance for ca. 200 start-up and developing clusters up to a value of EUR 26 million. These funds were primarily allocated for the establishment of the structural framework for co-operation and joint investments.

Currently 34 accredited clusters operate in Hungary. The members of the accredited clusters launched more than 200 joint R&D and innovation projects financed by the Economic Development OP 2007-2013. The total granted support exceeds EUR 126 million. Other relevant but not quantifiable result is that there is a significant increase in the cooperation of willingness in Hungary, clustering become a widely-used tool in business co-operations.

Main lessons learned:

- In the last 7 years, cluster development process in Hungary can be considered as a forward-looking process with good results.
- Clearly defined cluster strategies, policy expectations and deliberate tendering processes are needed in the future.
- Financial supports made a key role in the development process of clusters. With the help of these supports significant innovation projects have been realized which effectively intensified the operation of clusters.
- The stable and quality operation of cluster management organizations are essential for successful clusters.
- The valuation and selection of a cluster through the accreditation is considered as a positive and forward-looking process by the clusters and decision makers.
- Reaching dedicated sources or other preferences through financial supports are the most motivating factors for cluster to apply for the accreditation.
- There is a huge need among Hungarian clusters for financial supports for both cluster management and joint innovation.
- Support of staff costs, internationalization and export activities, cluster marketing and communication related activities are the most relevant for cluster managers.

Future steps:

The International and Cluster Department of the Ministry for National Economy published its study on the revision of the past cluster strategies in Hungary. The study contains the revised vision of cluster development model and its main features.

The main principle for future cluster strategies are: Hungarian cluster strategy should be built upon the support of those professional accredited and non-accredited clusters that are able to bring quality cooperation in-line with the development priorities of the Hungarian economy as well as the mentoring support of those start-up initiatives with high growth potential. The number of supported clusters should be in-line with structural characteristics of the Hungarian economy.

5.3 SUCCESS STORY

ArchEnergy Accredited International Cluster for Renewable Energy, Innovation and Building Trade from South Hungary was founded in 2007 and has produced remarkable results therefore we propose them as a success story.

The cluster was established when the Pole Programme was kicked off in Hungary. The cluster targets the fast growing sector of renewables and highly efficient energy systems. Due to

continuous increase in the number of partners the cluster has currently 71 members, most of them with operations in the South-Great-Plain Region of Hungary. The cluster contains mainly SMEs that are engaged in businesses related to renewable energy sources and advanced energy efficiency. In addition, it includes academic partners (most importantly the University of Szeged) and large companies like GYSEV Cargo Ltd. (a major railway carrier in West-Hungary and East-Austria) and the Magyar Közút Nonprofit Ltd (state-owned nation-wide company for the operation and maintenance of roads in Hungary). A selection of completed, successful projects are listed in the Table 4 below.

Table 4: Selection of completed, successful projects in ArchEnerg

#	Participants	Topic	Includes grant support?
1	Energotest Ltd.	Development of heat-pump system, enhancing its efficiency	No
2	Solartech Ltd. (the cluster management organisations) + 3 additional cluster members	Technology modernisation of solar thermal collector	Yes
3	IC Product Ltd.	Utilisation of sewage sludge as fuel	Yes
4	VASBETA Ltd.	Development of unique product identification technology	Yes
5	Békés Drén Ltd.	Green reutilisation of used oil waste	Yes

Members of Archenerg are very active in applying for EU funds, close to 200 projects have been approved for funding since 2007.⁷ Concerning dedicated programmes for clusters, members of Archenerg were involved in 9 projects between 2009 and 2015. Current project plans include:

- Implementation of complex energy efficient systems
- Development of intelligent energy systems, SMART City and SMART houses
- Development and optimisation of passive building technology
- Production of energy efficient building materials with regional traditions
- Integrated biomass systems

ArchEnerg is repeatedly successful in applying for the Accredited Cluster title in Hungary. Furthermore, it was the first Central-East European cluster to be awarded with the ESCA Gold Label in 2015.

⁷ Without the projects of Magyar Közút Nonprofit Ltd.

VI. Summary of analysis of development and current results of Hungarian cluster policy and recommendations

The description of current situation in Hungary concerning cluster policy and cluster organisations is basis for analysis what aspects are most important for consideration what could be improved and how it can be done. Table 5 summarizes all these aspects and recommendations for the Hungarian cluster policy being close to a smart cluster policy model.

Table 5: Summarization of the results of analyses and recommendations for improving cluster policy in Hungary

Smart cluster policy model	Where are we in Hungary?	What is necessary to improve in Hungary?	How can it be improved?
A. Time span			
Document/programme operation has long-term character	Overwhelmingly long-term programmes fitting to the 7-year-long EU programming cycles	Include cluster development in all relevant long-term comprehensive concepts both at national and local level	Policy making at national level: active involvement of the Cluster Development Office concerning the relevant thematic fields Policy making at local level: awareness raising at policy makers on local level Cluster level: better performance at clusters, stronger management of clusters
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	Since 2000 clusters have been recognised as relevant economic development tools to a varying extent by policy makers. Cluster development has been serving economic development objectives – since economic development objectives change over time this had an impact on the approach for cluster policies. Even if there is a generally positive attitude towards clusters, actual programmes have changed substantially over time. Therefore some clusters may find it difficult to rely on long term stable programmes.	Stable, reliable, consistent programmes to develop and improve clusters, cluster members companies and cluster management	Incremental improvement of preceding and current programmes using the accumulated experience
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.	Cluster development is embedded in relevant economic development, SME, innovation and R&D strategies including the S3 strategy, as of current no independent or autonomous document or programme exists.	It is worth considering devoting an independent or autonomous document/programme to cluster development. This would help to clearly see which economic development or innovation objectives	The autonomous document should provide an analysis of the overall performance of clusters in Hungary and present programmes and calls in which clusters and their members can participate

Smart cluster policy model	Where are we in Hungary?	What is necessary to improve in Hungary?	How can it be improved?
	The most relevant programme is the Economic Development and Innovation Operational Programme 2014-2020, which is part of the Partnership Agreement.	are to be reached through clusters and which are not affected by them. However, it must be noted that concrete measures shall fit the structure of the relevant operational programmes of the Partnership Agreement.	
Cluster policy document/programme is fully operable vertically, i.e. it has been adopted by the government as a government decree	There is no autonomous cluster development strategy/ cluster policy document. The applied methodology of the accreditation scheme is approved by concerned deputy state secretaries.	An autonomous cluster policy document could be supported by the government or by the parliament (the latter was the case with the Pole Programme).	The autonomous cluster policy document with the content proposed above could be brought to the government or the parliament for informational purposes (i. e. for the agreement of the government/parliament and not for its approval).
Cluster policy document/programme is fully operable horizontally, i.e. it has a general force across the sectors of the governmental departments	Clusters are included in a broad range of policy documents, as such the clusters are present horizontally in economic development. Cluster policy is represented by the Cluster Development Office at the Ministry for National Economy horizontally across other governmental departments. Since there is no officially approved cluster development strategy it is the formal authority (rather limited) and informal network (fairly comprehensive) of the Cluster Development Unit to horizontally 'enforce' the cluster policy. The emergence of clusters in concerned policy papers is due to the decision of the respective policy making body.	A better (i. e. stronger) coordination of cluster related policies could bring added value in policy making.	Stronger role (i.e. authority) to the Cluster Development Office at the Ministry for National Economy in relevant policy making.
The existing allocation of financing from the public budget	It is registered and monitored how large funds are allocated for the development of clusters and for the development of cluster members. Cluster development as such has no dedicated or fixed allocation, nevertheless there is dedicated call for cluster development and there are further calls in which members of accredited clusters are preferred.	Support programmes that include business mentoring/coaching, business incubation could recognise the cluster management organisations as potential beneficiaries. This would enlarge the available financial allocation for clusters.	Scanning and identifying relevant support schemes and including cluster management organisations as potential beneficiaries.
Cluster policy document/programme is fully operable functionally, i.e. the implementation of the	Currently there are delays in schedules of the operational programme calls but this is general and not specific to cluster related calls.	Delays should be eliminated, announced schedules should be followed.	Better central governance of relevant calls.

Smart cluster policy model	Where are we in Hungary?	What is necessary to improve in Hungary?	How can it be improved?
policy is fully working in accordance with the planned scheme.			
There is a clearly entrusted governance body for the cluster policy development, implementation and monitoring	The Cluster Development Office in the Ministry for National Economy deals with basically all cluster related issues. Most importantly it runs the accreditation schemes, it makes proposals to other units and other public bodies/ministries for the inclusion of cluster development dimensions in relevant calls and projects. It keeps regular contacts to cluster managers, organises conferences, workshops other events. It coordinates between public bodies on cluster issues and intermediates between clusters and the public administration. The Cluster Development Unit regularly takes part in transnational projects.	It is worth considering to increase the role of the Cluster Development Office concerning related policy making.	Concerning the broadening of the authority of the Cluster Development Office, it seems feasible that the Office should receive all relevant policy paper drafts for commenting from concerned public administration bodies.
C. Thematic aspects			
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.	Clusters can be established in any sector or industry in Hungary. The accreditation scheme is open for all clusters, nevertheless the selection system prefers clusters from the manufacturing sector. Support schemes also prefer manufacturing clusters and their members either directly or indirectly. This is in line with the current economic development policy in Hungary.	All clusters could be better assisted than currently in getting prepared for successful participation in cross-border, transnational and EU level programmes irrespective of their industry or sector focus. This way clusters that are not in the primary focus of domestic economic development policies have the opportunity to involve additional external support for the implementation of their strategies.	Specific funding schemes and/or broad eligibility of related costs for getting prepared for participation in cross-border, transnational and EU level programmes.
All development stages of clusters are taken into account within the cluster policy structure and related measures	Until 2013 all development stages of clusters were supported by fitting measures including early phase start-up initiatives, which led to a strong proliferation of such clusters. Currently the focus is on the development of established clusters with proven track record, nevertheless limited support is available to newly established clusters, as well.	Agreeing with the current focus of the cluster development policy on established clusters, a specific scheme could be elaborated for early stage initiatives.	The assistance to early stage initiatives should focus on the support of cluster management services.

Smart cluster policy model	Where are we in Hungary?	What is necessary to improve in Hungary?	How can it be improved?
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>A national accreditation scheme proposed by the Smart Cluster Policy Model functions in Hungary since 2008. Selection criteria are regularly updated based on operational experience and are adjusted to economic development priorities.</p> <p>As a result of the accreditation process relevant longitudinal data about the cluster and the cluster management organisation are accumulated and analysed for the continuous improvement of the system.</p>	Regular analysis and update to the accreditation scheme is necessary.	To be able to deliver regular analysis and formulate recommendations for updating the accreditation system, systematic and consistent data collection is necessary.
The training schemes for cluster stakeholders, including the availability of experienced lecturers and trainers efficiently operates.	Skills development of cluster managers would be needed through trainings. At central level a number of policy officers responsible for cluster development have participated in European level or globally acknowledged training schemes (train-the-trainers, ECEI, Cluster Academy Clusterland Upper Austria). Cluster managers have been supported to participate on such trainings on an occasional basis. Mass trainings for cluster managers have not been launched however. It is questionable whether country-specific or event macro-regional training schemes should be developed (for differing reasons).	Using the existing EU training schemes and building on the already trained HU and foreign experts trainings could be organised for cluster managers.	Setting up and implementing training programmes for mainly cluster managers using existing, acknowledged, EU and global methodologies.
The cluster concept awareness is building	<p>Cluster concept awareness is fairly high among business actors, policy makers, universities, local governments in Hungary. Past years have witnessed active PR activities from the Pole Programme Office and currently from the Cluster Development Unit at the Ministry for National Economy (regular conferences, workshops, cluster manager club).</p> <p>Cluster managers are fully aware of the available national support programmes in Hungary. Most of them know about direct European/transnational/cross-border level programmes but only few have direct experience with them.</p>	<p>It is important to continue with centrally initiated PR activities.</p> <p>Clusters should be encouraged and supported to participate in EU/transnational/cross-border calls that indirectly helps build the cluster concept in Hungary.</p>	<p>Regular awareness raising activities by the Cluster Development Unit at the Ministry for National Economy, by cluster managers and by the cluster associations.</p> <p>Inclusion of clusters to all support programmes where they may be relevant:</p> <ul style="list-style-type: none"> - clusters, cluster member companies, cluster management organisations considered as beneficiaries - positive discrimination of clusters in the decision making process

Smart cluster policy model	Where are we in Hungary?	What is necessary to improve in Hungary?	How can it be improved?
	Most of the clusters belong to one of the two cluster associations in Hungary. At this stage the role of these associations is limited.		

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)⁸. 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 exchange of experience through the analysis of the past and current situation and discussions with concerned stakeholders from the V4 countries have brought relevant conclusions for Hungary. It is reconfirmed by partners that Hungary should go on with the national accreditation scheme that runs from 2008 since it is considered as a good practice by all partners. Poland has introduced a similar system and they are satisfied with its results. In Hungary the accreditation system assesses both the performance of the cluster and the cluster management organisation and provides a good complement to the European ESCA label, which concentrates solely on cluster management.

Concerning full life cycle assistance to clusters, as of now, Hungarian cluster policy focuses clearly on clusters with proven track-records but from discussions with partners it may be worth to consider some form of assistance to new initiatives. On the other hand the assistance to clusters for their involvement in direct EU programmes like Horizon2020, COSME, etc. is proposed.

Trainings for cluster stakeholders, among them cluster managers should be high on the agenda in Hungary as the knowledge and skills gap is perceivable between cluster managers of developed countries and those of the V4.

It is also advised to scan all running and planned programmes from a cluster point of view and add clusters as potential beneficiaries to all relevant programmes.

The results of the project were introduced and discussed at the final conference on December, 8, 2016 in Prague. The representatives of ministries responsible for cluster policy implementation of project partners' countries (including representatives of the Ministry of Industry and Trade CR, Ministry for National Economy HU) 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>.

⁸ 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>

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

METHODOLOGY GUIDE

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

© Pavla Břusková, National Cluster Association

I. Introduction

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

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:
 - i. **Cluster mapping and analysis;**
 - ii. **Cluster initiative development** (cluster actors facilitation);
 - iii. **Cluster organisation incubation** (the start-up support for the cluster management capacity building);
 - iv. **Cluster organisation development** (cluster management excellence, R&D projects, internationalisation)
 - v. **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

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.

3) 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:

7. Manufacturing – traditional (processing) industries with value chains delivering final products to the market and ICT;
8. 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;
9. Agro-food industries;
10. Services – tourism, spa, health, social work, education, transport & logistic;
11. 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.

4) 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 Hungary

0. The project partner's identification and contact data

1	Country	Hungary
2	Region	national level
3	Project partner	Tenderix Ltd.
4	Form Completed by	Mátyás Somkuti
5		somkuti.matyas@tenderix.hu ; +36 30 883 2871
6	Consultations (if appropriate)	-

1.A Existing cluster policies/strategies (mandatory documents 2014-2020)											
INDICATORS		Cluster policy territorial administration level									
No.	Type	Questions	National	National	Regional	Regional	Regional	Regional	Regional	Regional	Local
1	0. Identification	Name of the document:	National Smart Specialization Strategy	Investment in the future	Smart Specialization Strategy of South Great Plain	Smart Specialization Strategy of South Transdanubia	Smart Specialization Strategy of North Great Plain	Smart Specialization Strategy of North Hungary Region	Smart Specialization Strategy of Central Transdanubia	Smart Specialization Strategy of Central Hungary	Smart Specialization Strategy of West Transdanubia
2		Responsible body:	National Research, Development and Innovation Office	National Research, Development and Innovation Office	South Great Plain Regional Innovation Agency	South Transdanubian Regional Innovation Agency	INNOVA North Great Plain Regional Development and Innovation Agency	NORRIA North Hungarian Regional Innovation Agency	Central Transdanubian Regional Innovation Agency	Equinox Consulting Ltd.	Pannon Novum West Transdanubian Regional Innovation Agency
3		Implementation body:	Hungarian Government	Ministry for National Economy							
4		Adopted by the government in the year:	2014	2013	It is not officially adopted by the government	It is not officially adopted by the government	It is not officially adopted by the government	It is not officially adopted by the government	It is not officially adopted by the government	It is not officially adopted by the government	It is not officially adopted by the government
5		Long-term (7 years and more)?		2013-2020							
6	1. Durability	Mid-term (3-6 years)?	Visions and goals defined in the S3 document should be implemented by 2020.		2014-2020	2014-2020	2014-2020	2014-2020	2014-2020	2014-2020	2014-2020
7		Short-term (1-2 years)?									
8		Specifically devoted to clusters?	No.	No.	No.	No.	No.	No.	No.	No.	No.
9		Explicit part of another policy document? Which one?	No.	no.	No.	No.	No.	No.	No.	No.	No.
10		Generally mentioned in an existing strategy?	The role of clusters are generally mentioned in the strategy as a policy measure. The SWOT analysis mentions among the opportunities the increased role of clusters.	The strategy refers to technological clusters as an opportunity of the national innovation system. The strategy also refers to supplier chain type clusters which effectively channel the knowledge between large companies and SMEs.	The document mentions clusters through the following policy tool: Strengthening the connections between innovation stakeholders at national level. This includes the support of industry and business clusters related to the region's sectorial priorities.	The strategy recognizes regional clusters as possible break-out points in the regional development tools. Thus, the development of innovation clusters is one of the main aim of the strategy.	Regarding cluster development the strategy aims to: - Provide advisory, training and other services to already established clusters in order to support their internationalization and export activities. - Stimulate clusterization in the region especially along regional priorities - Stimulating and supporting the establishment of clusters, business cooperations and supplier networks which are in line with the regions development potential. - Joining to international technology networks and connecting to international R&D infrastructures	Regarding cluster development the strategy aims to: - Share the regions innovation resources through networks and clusters - Establishment of a regional cluster integrator organisation - To connect matured clusters into into the international value chain through advisory, training and other services - Stimulating and supporting the establishment of clusters, business cooperations and supplier networks which are in line with the regions development potential. - Development of a Machinery and Mechatronics Cluster	Regarding cluster development the strategy aims to: - Development of high added value supplier networks on the basis of already existing clusters - Support of cluster development in the region primarily the developing and accredited clusters. - Specific goals: - Establishment of a regional cluster integrator office - Establishment of communication networks, company database, joint information platform - Support of joint R&D and innovation services of clusters - Cross-clusterization, meta clusters - Support of cluster excellence, cluster labeling	Regarding cluster development the strategy aims to: - Development of innovation clusters through the following tools: - Establishment of strategic R&D&I cooperations to establish large scale innovation on national level - Building bridges between the academic and business sector, stimulating the knowledge transfer - Further development of networking between innovative companies	Regarding cluster development the strategy aims to: - Help cluster networking by stimulating technology- and knowledge transfer - Introduction of a cluster benchmark system which based on self-assessment
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?	x	x							
13		Adopted as strategic document with unstated force / not implemented?			x	x	x	x	x	x	x
14	4. Viability	Supported by public budget and governed by specialised institution?									
15		Supported by public budget and governed by traditional government body?									
16		Not supported by public budget / partly governed by a government body?	The S3 is not supported directly by any budget however it appoints policy measures, investment priorities of the related ERDF Operational Programmes and domestic R&D Funds.	This is a general R&D strategy, which appoints the main strategic priorities of the national innovation system.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.	The goals defined in the strategy are in line with the Operational Programmes of ERDF, which supports their realization.
17	5. Continuity	Continuously valid with regular updates?									
18		Valid for the period 2014-2020 and existing also in previous years?		x							
19		Valid in the period 2014-2020?	x		x	x	x	x	x	x	x
20	6. Integrity	Covering clusters in all sectors and industries?	There is no sectorial limitation in the strategy related to clusters.	There is no sectorial limitation in the strategy related to clusters.							
21		Limited to certain sectors/industries? Which ones?			Biotechnology and health industry Photonics Automotive industry Agriculture and renewable energy Software industry	The strategy focuses on the further development of the already existing clusters (biotechnology, ICT, creative industry, machinery)	Food industry Thermal industry Health industry	Emerging industries and key technologies	Green industry	Health industry ICT Green innovation	No sectorial priority concerning clusters
22		Only one sector supported? Which one?									
23		Measures for all cluster development stages included?	No separation of cluster stages are mentioned in the S3.	No separation of cluster stages are mentioned in the strategy.							
24		Measures only for three to four cluster development stages? Which ones?									
25	7. Complexity	Measures only for one to two cluster development stage? Which ones?			Accredited clusters	Accredited clusters	Accredited clusters	Accredited clusters	Accredited clusters	Accredited clusters	Accredited clusters
26		National accreditation of cluster organisations, training of cluster stakeholders and cluster concept awareness building provided?	No cluster concept support activities are mentioned	No cluster concept support activities are mentioned			All three of them are mentioned in the strategy				
27		Only two of the cluster concept support activities provided? Which ones?					Accreditation and training	Accreditation and training			
28	8. Consistency	At least one of the cluster concept support activities provided? Which one?							Accreditation	Accreditation	

1.8 Preceding cluster policies/strategies (mandatory documents 2007-2013)											
INDICATORS			Cluster policy territorial administration level								
No.	Type	Questions	National							Regional	Local
1	0. Identification	Name of the document:	Hungarian Pole Programme								
2		Responsible body:	Hungarian Pole Programme Office								
3		Implementation body:	National Development Agency, Regional Development Agencies, MAG - Hungarian Economic Development Centre								
4		Adopted by the government in the year:	2007								
5	1. Durability	Long-term (7 years and more)?									
6		Mid-term (3-6 years)?	x								
7		Short-term (1-2 years)?									
8		Specifically devoted to clusters?									
9	2. Autonomy	Explicit part of another policy document? Which one?	The Pole Programme was a comprehensive economic development programme and coordination mechanism between OPs focusing on the development of "pole cities" and clusters.								
10		Generally mentioned in an existing strategy?									
11	3. Functionality	Adopted as the government decree with general force and fully implemented?	The "pole cities" were appointed by Parliament Resolution No. 97/2005. (XII. 25.) on the National Territorial Development Concept of Hungary. The Founding Document of the Pole Programme as a strategic programme was accepted by its Strategic Steering Committee								
12		Adopted as the government decree with sectoral force / partly implemented?									
13		Adopted as strategic document with unsated force / not implemented?									
14	4. Viability	Supported by public budget and governed by specialised institution?	x								
15		Supported by public budget and governed by traditional government body?									
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 2007-2013 and existing also in previous years?									
19		Valid in the period 2007-2013?	x								
20	6. Integrity	Covering clusters in all sectors and industries?	x								
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?	At the Pole Programme 4 stages of clusters were differentiated according to their development level: start-up cooperations, developing clusters, Accredited Innovation Clusters, Pole Innovation Clusters (never been implemented)								
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 stakeholders and cluster concept awareness building provided?	x								
27		Only two of the cluster concept support activities provided? Which ones?									
28		At least one of the cluster concept support activities provided? Which one?									

2.A Other existing documents for cluster policy (optional 2014-2020)

INDICATORS			Cluster policy territorial administration level		
No.	Type	Questions	National	Regional	Local
1	0. Identification	Name of the document:	Revision of the Hungarian cluster accreditation system and recommendations for its renewal based on the current situation and international examples, proposal for the cluster development concept 2014-20		
2		Choose the type of the document: methodology, recommendation, expert study, other:	Expert study and recommendations		
3		Author:	Colosseum Budapest Ltd.		
4		Implementation target group/s:			
5		Issued in the year:	2015		
6	1. Durability	Long-term (7 years and more)?			
7		Mid-term (3-6 years)?	2014-20		
8		Short-term (1-2 years)?			
9	2. Autonomy	Specifically devoted to clusters?	x		
10		Explicit part of another policy document? Which one?			
11		Generally mentioned in an existing strategy?			
12	3. Functionality	Certified by a government authority?	The recommendations are adopted by the Ministry of National Economy		
13		Adopted /recommended by an expert initiative?			
14		Individual initiative?			
15	4. Viability	Supported by public budget and governed by specialised institution?			
16		Supported by public budget and governed by traditional government body?	Yes, Ministry of National Economy		
17		Not supported by public budget / not governed by a specific body?			
18	5. Continuity	Continuously valid with regular updates?			

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

INDICATORS			Cluster policy territorial administration level				
No.	Type	Questions	National		Regional		Local
1	0. Identification	Name of the programme:	Supporting high quality services of professional cluster management organisations				
2		Managing body:	Ministry of National Economy				
3		Implementation body:	Ministry of National Economy				
4		Choose the priorities of the programme: networking, human resources, R&D and innovation projects, marketing, internationalisation, others:	call for proposal for cluster management support				
5		Officially approved by the government in the year:	2015				
6	1. Durability	Long-term (7 years and more)?					
7		Mid-term (3-6 years)?					
8		Short-term (1-2 years)?	Project duration: maximum 2 years				
9	2. Autonomy	Specifically devoted to clusters?	x				
10		Explicit part of another programmer? Which one?					
11		Partly concerning clusters?					
12	3. Functionality	Allocated funds for the whole programme concerning clusters in thousands €:	EUR 6,450 thousand				
13		Min.-max. budget per project in thousand €:	EUR 16.1-161 thousand (only the amount of support)				
14		Average percentage of public funding per project:	Maximum 75% of total project costs				
15		Number of calls published/to be published:	1				
16	4. Viability	No. of projects funded by the programme/total expended in thous. €:	First deadline of the call is 31.05.2016, no funded projects so far				
17		Supported by public budget and governed by specialised institution?					
18		Supported by public budget and governed by traditional government body?	The call is managed by the Ministry of National Economy				
19		Not supported by public budget / not governed by a specific body?					
20	5. Continuity	Continuously valid with regular updates?					
21		Valid for the period 2014-2020 and existing also in previous years?					
22		Valid in the period 2014-2020?	The call is continously open from 30.05.2016-15.01.2018				
23	6. Integrity	Covering clusters in all sectors and industries?	Accredited clusters from all sectors are eligible, however manufacturing industry is preferred through the evaluation criteria				
24		Limited to certain sectors/industries? Which ones?					4
25		Only one sector supported? Which one?					
26	Complexity	Funding covering all 5 cluster development stages?					
27		Funding only for three to four cluster development stages? Which ones?					

3. Preceding cluster funding programmes (2007-2013)

INDICATORS							Cluster policy territorial administration level				
No.	Type	Questions	National	National	National	Regional	Local				
1	0. Identification	Name of the programme:	Supporting the joint technological innovation of Accredited Innovation Clusters	Supporting the complex technological innovation of Accredited Innovation Clusters members	Funding for the Pole Programme Office's activities	Supporting of joint investments, services of regional clusters					
2		Managing body:	National Development Agency (currently Ministry for National Economy)	National Development Agency (currently Ministry for National Economy)	National Development Agency, Coordination Managing Authority	National Development Agency (currently Ministry for National Economy)					
3		Implementation body:	MAG - Hungarian Economic Development Centre (currently Ministry for National Economy)	MAG - Hungarian Economic Development Centre (currently Ministry for National Economy)	National Development Agency, Coordination Managing Authority	Regional Development Agencies					
4		Choose the priorities of the programme: networking, human resources, R&D and innovation projects, marketing, internationalisation, others:	call for proposal for supporting innovation projects of the accredited clusters members	call for proposal for supporting innovation projects of the accredited clusters members	Networking, human resources	call for proposal for cluster management support					
5		Officially approved by the government in the year:	2008	2008	2008	2008					
6	1. Durability	Long-term (7 years and more)?									
7		Mid-term (3-6 years)?	x	x	x	x					
8		Short-term (1-2 years)?									
9	2. Autonomy	Specifically devoted to clusters?	x	x	x	x					
10		Explicit part of another programmer? Which one?									
11		Partly concerning clusters?									
12	3. Functionality	Allocated funds for the whole programme concerning clusters in thousands €:	EUR 120,796 thousand	EUR 120,080 thousand	Approx EUR 1 million	EUR 39,474 thousand					
13		Min.-max. budget per project in thousand €:	EUR 320 - 4,838 thousand (only the amount of support)	EUR 48.4 - 3,225 thousand (only the amount of support)	Not applicable - Indirect support for clusters	EUR 32.2 - 483.8 thousand (only the amount of support)					
14		Average percentage of public funding per project:	Maximum 60% of total project costs	Maximum 65% of total project costs	Not applicable - Indirect support for clusters	Regionally different funding rate for investments: 25-50% 80% for cluster management activities					
15		Number of calls published/to be published:	3	4	2	2 rounds in every region					
16	4. Viability	No. of projects funded by the programme/total expended in thous. €:	31 / EUR 72,083 thousand (total project value)	154 / EUR 127,564 thousand (total project value)	Not applicable - Indirect support for clusters	237 / EUR 24,648 thousand (only the amount of support)					
17		Supported by public budget and governed by specialised institution?	the call was managed by the National Development Agency and was handled by MAG - Hungarian Economic Development Centre	the call was managed by the National Development Agency and was handled by MAG - Hungarian Economic Development Centre	The call was managed by the National Development Agency, the beneficiary was the Pole Programme Office	the call was managed by the National Development Agency and was handled by the Regional Development Agencies					
18		Supported by public budget and governed by traditional government body?									
19		Not supported by public budget / not governed by a specific body?									
20	5. Continuity	Continuously valid with regular updates?									
21		Valid for the period 2007-2013 and existing also in previous years?									
22		Valid in the period 2007-2013?	x	x	x	x					
23	6. Integrity	Covering clusters in all sectors and industries?	x	x	x	x					
24		Limited to certain sectors/industries? Which ones?									
25		Only one sector supported? Which one?									

APPENDIX 3: List of cluster organisations by type in Hungary

#	Cluster name	Year of foundation	Cluster type
1	3P Plastic, Packaging and Printing Cluster	2007	KET and R&D clusters
2	Alföld Industrial Business Development Cluster	2010	Manufacturing
3	Alliance Informatics and Innovation Cluster	2007	IT
4	ArchEnerg Accredited International Cluster for Renewable Energy, Innovation and Building Trade	2007	KET and R&D clusters
5	Bakony-Balaton Mechatronics and Automotive Cluster	2007	Manufacturing
6	Biotechnology Innovation Base Cluster	2005	KET and R&D clusters
7	Packaging Technology, Innovation and Environmental Cluster	2013	Manufacturing
8	South West Hungarian Engineering Cluster	2011	Manufacturing
9	Building Industry Research, Innovation and Technology Transfer Cluster	2011	Manufacturing
10	North Hungarian IT Cluster	2007	IT
11	Hírös Supplier Cluster	2008	Manufacturing
12	Information Management Innovation Cluster	2008	IT
13	INNOSKART ICT Cluster	2006	IT
14	KEXPORT Environmental Export Cluster	2011	KET and R&D clusters
15	Hungarian Bus Manufacturers' Cluster	2010	Manufacturing
16	Hungarian Innovative Construction Industry Open Cluster (HIBOC)	2010	Manufacturing
17	Cluster of Hungarian Medical Manufacturers and Service Providers (MediKlaszter)	2006	Manufacturing
18	Hungarian Space Cluster	2007	KET and R&D clusters
19	Mobility and Multimedia Cluster	2007	Creative and cultural industries
20	MSE Hungarian Sport & Lifestyle Development Cluster	2011	Service
21	North Hungarian Automotive Cluster	2006	Manufacturing
22	Omnipack First Hungarian Packaging Technology Cluster	2003	Manufacturing
23	ECOPolis Cluster	2008	KET and R&D clusters
24	Pannon Wood and Furniture Cluster (PANFA)	2001	Manufacturing
25	PharmAgora Quality of Life Cluster	2007	Agro-food
26	Pharmapolis Debrecen Innovative Pharmaceutical Cluster	2008	KET and R&D clusters

27	Pharmapolis Innovative Food Cluster	2008	Agro-food
28	System Science Innovation Cluster	2006	IT
29	Sárrét Metal Cluster	2008	Manufacturing
30	Albert Szent-Györgyi Life Sciences Cluster	2007	Service
31	Silicon Field Regional IT Cluster	2008	IT
32	Software Innovation Pole Cluster	2007	IT
33	Thermal- Health Industrial Cluster	2010	Service
34	Green Current Renewable Energetics and Innovation Cluster	2011	KET and R&D clusters