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Good Practices Guide on Clusters and Technology Transfers- Bulgaria

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GOOD PRACTICES GUIDE ON CLUSTERS AND TECHNOLOGY TRANSFERS

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List of the used abbreviations

ABC	Association of Business Clusters
ICT	Information and communications technology
CL	Commercial Law
OCA	Obligations and Contracts Act
NPLEA	Non – Profit Legal Entities Act
ESCA	European Secretariat for Cluster Analysis
OP	Operational Programme
ISSS	Innovation Strategy for Smart Specialisation
FDI	Foreign direct investment
ECEI	European Cluster Excellence Initiative
BSMEPA	Bulgarian Small and Medium Enterprises Promotion Agency
OPIC	Operational Programme Innovation and Competitiveness
MA	Managing Authority
TFA	Tangible fixed assets
ITFA	Intangible fixed assets
RDP	Rural Development Programme
KETs	Key Enabling Technologies
EC	European Commission
TTOs	Technology Transfer Offices
DTC-Ruse	Danube Transfer Centre
TTC	Technology Transfer Centre
CERN	European Organisation for Nuclear Research
BAS	Bulgarian Academy of Sciences
RES	Renewable energy sources
EE	Energy efficiency
UARD	University of Agribusiness and Rural Development
SEU	Scientific Engineering Union
BAIT	Bulgarian Association of Information Technologies
AA	Agricultural Academy
BFU	Burgas Free University
BCCI	Bulgarian Chamber of Commerce and Industry
CITT	Centre for Innovation and Technology Transfer
JIC	Joint Innovation Centre
R&D	Research and Development
AFS	Annual Financial Statement
GDP	Gross Domestic Product
EU	European Union

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SME	Small and medium-sized enterprises
TTF	Technology Transfer Fund
DG	Directorate-General
EBN	European Business and Innovation Centre Network

Cluster overview

Definition of cluster

In recent years, the business circles in Bulgaria have started using more and more the term “cluster”, directly transliterated from English. In literal translation, the word means a group but due to the lack of a good enough alternative in Bulgarian, and because of the tendency of introducing more foreign words into the language, this term has permanently settled and is being used widely. In fact, the word and its business meaning are not new at all - as early as 1890, Alfred Marshall defined the word “cluster” as *“Concentration of specialized industries in particular localities”*.

Nowadays, there are a number of definitions, among the most common ones are those of Professor Michael Porter of Harvard University, for whom: *“A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities”*. Another popular definition by Professor Porter is: *“Clusters are critical masses - in one place - of unusual competitive success in particular business areas”*.

According to K. Ketles: *“Clusters are groups of companies and institutions co-located in a specific geographic region and linked by interdependencies in providing a related group of products and/or services. Because of the proximity among them – both in terms of geography and of activities – cluster constituents enjoy the economic benefits of several types of positive location-specific externalities. These externalities include, for example, access to specialized human resources and suppliers, knowledge spillovers, pressure for higher performance in head-to-head competition, and learnings from the close interaction with specialized customers and suppliers”*.

The Association of Business Clusters (ABC) in Bulgaria gives a much broader and more detailed definition of a cluster, taking into account information and communication technologies (ICT) in the field of households and industry and the continuous globalization. According to its members, the cluster is: *“A union of legal entities and / or sole traders registered under the Commercial Law, the Obligations and Contracts Act or the Non-profit Legal Entities Act, which may also include universities, research organizations and/ or municipal and state bodies, non-governmental organizations and individuals from a particular sector or region, having common economic interest and/ or covering successive levels in the chain of production and realization of goods and services in order to increase administrative capacity, research potential,*

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competitiveness and business development of the members of the union and the union as a whole ".

The common part in all definitions is that it is a voluntary union of companies and organizations that pursue a common goal. However, the mere gathering of companies and defining a group of them as a cluster is not enough. There are other additional requirements, which must be present to make the cluster operational, such as:

- Proximity - for good exchange of information and knowledge and use of common resources;
- Coherence - to have a common goal (e.g. market search);
- Interaction - it is not enough to be close and to work on common problems. In order to have positive result, there must be some active interaction among them;
- Critical mass - the cluster should include a sufficient number of participants to be able to achieve significant impact on business performance as a result of the interaction.

Depending on the type of the relations among the companies in the cluster, we can define horizontal (companies are at the same production and marketing levels), vertical (companies are at successive production and marketing levels) and sectoral (companies are from the same sector) clusters.

Regardless of the types, relations and various definitions, the enormous benefit of clustering is unarguable. The development of clusters is also a key element of the national competitiveness strategy. The active (not only formally set up) clusters mobilize enormous economic potential, develop the skills of public and private sector leaders, build more effective cooperation, help overcome specific barriers to business, and lead to higher productivity that has an impact on national economy. Clusters are linked to government policy and dominate the markets of developed industries, they are a component of economic development that affects competition by increasing production, innovation and creating new businesses within the cluster.

Cluster development

Cluster development (or cluster initiative or economic clustering) is the economic development of business clusters. The cluster concept has rapidly attracted attention from governments, consultants, and academics since it was first proposed in 1990 by Michael Porter.

Many governments and industry organizations around the globe have turned to this concept in recent years as a means to stimulate urban and rural economic growth. As a result, a large number of cluster initiative organizations were started during the 1990s, and the trend continues. The first comprehensive study of cluster initiatives around the world was reported in the "Cluster Initiative Greenbook" published by Örjan Sölvell, Christian Ketels and Göran Lindqvist, with a foreword by Michael Porter. The report was presented at the annual meeting of The Competitiveness Institute, TCI, in Gothenburg in 2003. A follow up study in 2005 covered more than 1400 cluster initiative organizations around the globe.

In June 2007, the European Cluster Observatory was launched. Financed by the European Commission DG Enterprise and Industry, it provides information about clusters, cluster initiatives, and cluster policy throughout 32 European countries.

In 2009, under the Competitiveness and Innovation programme, the European Commission launched the European Cluster Excellence Programme from which the European Secretariat for Cluster Analysis (ESCA) was established. ESCA has since worked to spread best practice and improve the professionalism of Cluster managers across Europe by benchmarking, advising on best practice, analysing and accrediting Cluster organisations across the EU. ESCA's work has now extended beyond the borders of the EU including North America and Asia. ESCA analyses existing clusters and after an evaluation based on very strict criteria awards a bronze/ silver or gold label for the quality work of the respective cluster.

Clusters in the EU

The figures about the advantages of working in a cluster and the key role of clusters in the European economy speak for themselves:

- 3 000 strong clusters across Europe account for more than 54 million jobs and 45% of all traded industries' wages (23% of the overall economy);

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- wages in strong clusters are close to 3% higher than in industries not located in such regional hotspots, and the wage gap towards both other traded industries and the overall economy is growing;
- 103 leading clusters are in the top 20% of European peers across all four performance dimensions measured (size, specialisation, productivity, and dynamism);
- all parts of Europe have clusters;
- 55% of all European regions have between 30% and 60% of traded industries employment in strong clusters;
- strong clusters have shown resilience through the crisis; their share in total traded industry employment and wages has from 2008 to 2014 increased slightly to 45% (jobs) and 51% (wages);
- the industrial cluster landscape is constantly evolving as a result of changes in market conditions, technologies, and competition;
- about one fifth (20%) of all clusters significantly changed in their market position (strong, medium, weak) between 2008 and 2014.¹

¹ According to the EuropeanCluster Panorama2016 report

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territory of the whole country and they cannot be grouped/ differentiated on a regional basis.

The existing industrial clusters focus their efforts on technological activities related to the adaptation and utilization of already known technologies in their sectors. Because of the undeveloped Bulgarian industry, it is not unusual for them to look for competitive advantage options, mainly based on the adaptation and application of already known technologies instead of investing in expensive R&D projects. Potential clusters, as well as existing ones at different stages of their life cycle, will require support in a variety of areas, including improvement of management and entrepreneurial skills or investment support.

For the new programming period, cluster support measures are defined as specific to start-ups or supportive of the development of existing clusters. Classification of clusters in Bulgaria will help to improve macro-regional coordination. Clusters do not comply with regional boundaries, therefore improving coordination and strategic planning is key to creating conditions for generating innovation dynamics for Bulgarian clusters.

In the Strategic analysis of A.T.Kearney, key industrial clusters with growth potential were identified on the basis of a benchmarking analysis based on the attractiveness of foreign direct investment in Bulgaria, as a result of the local advantages in terms of agri-food and healthcare, transport and logistics, transport equipment and mechanical engineering, ICT and outsourcing, chemical industry, electronics and electrical engineering. The estimates in the Bulgaria 2020 Development Programme indicate that investments in priority areas could generate up to 33% growth by 2020.

As of April 2018, there are 243 clusters (with the word "cluster" in the name) registered in the BULSTAT registry and 82 in the Commercial Register. This makes quite a significant number of unions which could play an important role in the national economy. Unfortunately, a large number of these clusters were created during the implementation of EU-funded projects and after the finalization of project activities and the final reimbursement, they stop operating or being active. In some of these clusters, the union is formal, lacking well-structured organisation and management, action plan and cluster brand recognition. If we review more thoroughly the cluster categorization made by BSMEPA, required for the application process

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under the Operational Program “Innovation and Competitiveness” 2014-2020 for submission of project proposals under Priority Axis 2 “Entrepreneurship and capacity for growth of SMEs”, Investment Priority 2.2 “Capacity for growth of SMEs”, Specific Objective 2.2: Increasing the Productivity and Export Potential of Bulgarian SMEs, procedure No. BG16RFOP002-2.009 “Development of clusters in Bulgaria”, we can see the current status of the clustering process in Bulgaria.

The Bulgarian Small and Medium Enterprises Promotion Agency reviewed and according to its methodology categorized clusters based on their development stages. A total of 78 unions were divided into 4 categories, as shown below.

Diagram 2 Clusters by development stage

It is also interesting to note that one of the clusters - Trakia Economic Zone - is categorised as “start-up” and “developing” at the same time. Despite this technical error or poorly performed assessment according to the methodology, the categorization clearly shows that clusters in the start-up stage are twice as many as the developing ones. This means that the organisations in Bulgaria are still at a very early stage of development and they lack basic organizational and management bodies. The small number of developed clusters is also indicative of the weak development of this process in the country. The latter are organizations from well-developed industries such as mechanical engineering, furniture, mining, electronics and telecommunications.

Diagram 3 Clusters by age

In the process of research, it turned to be extremely difficult to find available public information on the cluster establishment. In most cases, detailed data on the creation, type and number of cluster members are missing on the respective websites. Many clusters do not even have their own webpage, while their activity and existence remain under question. Information about the year of the cluster establishment was obtained for only 42 of the 66 categorized clusters. It is more than obvious from the diagram above that sustainable clusters with over 10 years of existence are only few. The number of newly created clusters remains relatively constant in the years up to 2016 when there is a huge leap, possibly also due to the expected opening of a call for proposals under OPIC 2014-2020, where clusters could be beneficiaries. This, in turn, poses a threat to the sustainability of these clusters, whether their formation is not only project-

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based, with the aim of absorbing funds and not a real opportunity to improve the competitiveness of cluster members.

Another feature of clusters in Bulgaria is their centralization in the capital - more than half of them are registered or headquartered in Sofia. Even though this is logical and due to the high concentration of science, qualified staff and other resources, the huge difference in the development of the capital and the rest of the regions in the country is clearly visible. The other big cities in the country - Plovdiv, Burgas and Varna – follow but with considerably smaller numbers.

Diagram 4 Distribution of clusters by headquarters

The level of development of a given branch can be judged by the level of clustering in it. The clusters reviewed are groupings of companies from various industries such as film and TV broadcasting, RES, biomass, eco innovations, road safety, metalworking, seismological research, food additives, telecommunications, aviation, wine-making, maritime affairs, medical services, export, activities in the field of agriculture, livestock breeding and food processing and so on. The cluster in the ICT sector is the largest. This is a clear sign of the rapid and good development of the sector, resulting from the collaboration of all members in each cluster, who use the benefits of working together. The industry uses new and up-to-date technologies and, in order to be competitive, all participants have to respond to the rapidly changing market environment. Clustering is a very successful approach to achieve this, especially for the smaller companies. The diagram below clearly shows the sectors with a large number of clusters, with the leading role of ICT and the rest also being knowledge-intensive industries. If we look at the members of the unions of these “successfully clustered sectors”, we will definitely find universities or other scientific organizations / institutions among them, the mandatory elements of a well-structured cluster. In three of the four clusters categorized by BSMEPA as “developed” - *Automotive Cluster Bulgaria*, *Bulgarian Furniture Cluster*, *Industrial Cluster Srednogie* and *Bulgarian Cluster Telecommunications* - the universities are alongside the companies within the cluster. Once again, this underlines the fact that a successful cluster is not just a union of companies from one industry but it

should be used as a tool for introducing innovation, finding new markets, increasing competitiveness, and hence for greater profits for its members.

Diagram 5 Sectors with the largest number of clusters

Many of the clusters studied do not convey information about the specific number of their members. Usually, their presentations lack concrete numbers. It is also hard to find out more about members, because they are shown on the cluster's website only as a name or logo, there are no hyperlinks to the members' own sites. For the reviewed clusters in detail, the number of cluster members was identified for 43 of them. In 3 of them there are even foreign participants. The largest number (63) belongs to the Electric Vehicles Industrial Cluster, and the smallest clusters have just 6-7 participants. The diagram below compiles the collected data and shows the tendency for the cluster members to be mainly between 10 and 30.

Diagram 6 Clusters by number of members

Besides the categorization by BSMEPA, another much more significant and representative feature of a successfully developing cluster is the obtaining of the "quality label" of the European Cluster Excellence Initiative (ECEI)- recognition at European level.

The European Cluster Excellence Initiative (ECEI), initiated by the European Commission, DG Enterprise and Industry, is aiming for the development of methodologies and tools in order to support cluster organisations to improve their capabilities in the management of networks and clusters. Within this context, 13 project partners from 9 countries – all well experienced in the field of cluster management and support – created a uniform set of cluster management quality indicators and developed a quality labelling system for professional cluster management with the aim to have this methodology and proof of evidence accepted and recognised all over Europe. The overall approach is the creation of an independent, voluntary proof of cluster management excellence which is accepted and recognised all over Europe, or even beyond. It is not only aimed at the distinction between "good" and "bad", but to motivate cluster managers to take part in an improvement process, to become better by comparing with others and learning from the best. Thus, the elements of "mutual learning" and "mutual benchmarking" play an important role. The Quality Label focuses on the cluster organisation management, not on the framework conditions or a cluster as such. Participation in a labelling process is voluntary and intended for the cluster organisations that would like an independent third body to assess their cluster organisation management

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excellence according to harmonised and transparent cluster organisation management excellence indicators (Quality Indicators).

The quality labelling system consists of three levels – Bronze, Silver and Gold.

Bronze Label of the European Cluster Excellence Initiative (ECEI)

Each cluster was analysed based on an interview of the cluster manager conducted by an impartial ESCA benchmarking expert. The interview covers 36 indicators with regard to the structure of the cluster, the cluster management and the governance of the cluster, financing of the cluster management, services provided by the cluster management, contacts and interaction within the cluster and achievements and recognition of the cluster.

As of April 2018 the list includes 997 clusters from 43 countries.

Bulgarian clusters, awarded the Bronze label, are presented in the table below:

Name	Field	www	Label valid until
BCT - Bulgarian Cluster Telecommunications	ICT	http://www.btcluster.org/	2016/07/15
Bulgarian Furniture Cluster	Production and engineering	http://www.furniturecluster.bg.com	2015/03/15
Cluster Microelectronics and Embedded Systems	Micro, nano and optical technologies	http://www.cmees.org	2015/04/27
EVIC - Electric vehicles industrial cluster	Transportation and mobility	http://www.emic-bg.org/	2015/06/05
Foundation Cluster Information and Communication Technologies	ICT	http://www.ictalent.org	2018/07/01
Green Synergy Cluster	Energy and environment	http://en.greensynergycluster.eu/	2019/02/17
MARINE CLUSTER BULGARIA	Maritime technologies, water resources	http://www.marinecluster.com/bg/	2016/11/04
Mechatronics Cluster Bulgaria	Production and engineering	http://www.cluster-mechatronics.eu	2015/04/01
SCIAT - Specialized Cluster	Production and	http://www.sciat.eu	2015/04/28

Name	Field	www	Label valid until
Institute for Apparel and Textile	engineering		
Srednogie Copper Industry Cluster	Production and engineering	http://srednogie.eu/	2015/10/04

Table 1 List of Bulgarian clusters, awarded the Bronze label

Although the ICT sector is one of the most well developed in Bulgaria, there are only 2 clusters (of all 124) which have been awarded the Bronze label. By contrast, neighbouring Romania ranks fourth, behind the top leaders Germany, Mexico and Spain.

Diagram 7 Clusters from the ICT sector with Bronze label

Silver Label of the European Cluster Excellence Initiative (ECEI)

While the Bronze label is not a quality label in the narrow sense, it just demonstrates that a cluster management is interested in improving its management performance, the Gold label is a quality label based on very high standards of cluster management practice. Cluster management organisations that do not meet the Gold standards yet, but are interested in demonstrating both to their cluster and potential partners that they are on the path towards cluster management excellence can subject themselves to a Silver label audit.

The Silver Label of the European Cluster Excellence Initiative is a quality label in its own right. The Silver Label quality confirms the successful implementation of improvement processes that were initiated following a Bronze label benchmarking. Organisations that are able to demonstrate improvements in the course of an audit conducted by an assessor of the European Cluster Excellence Initiative will be awarded with the Silver Label.

Cluster organisations subject themselves to a second Bronze Label benchmarking after 1.5 to 2 years of the first benchmarking and indicate three areas with regard to the quality indicators of the European Cluster Excellence Initiative in which they have improved. The audit will then be continued by an on-site visit by an auditor to validate the indicated areas of improvement.

99 clusters from 18 countries have received the Silver Label. There is only one Bulgarian cluster awarded this label - Srednogie Industrial Cluster /<http://srednogie.eu/>.

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Gold Label of the European Cluster Excellence Initiative (ECEI)

In order to qualify for the "Cluster Management Excellence Label GOLD" cluster management organisations need to meet certain "levels of excellence" in terms of structure of the cluster, governance, financing, strategy and services and recognition. In the course of a two-day thorough assessment conducted by two neutral cluster analysis experts 31 indicators are assessed.

There are 94 clusters from 18 countries with the Gold label and none from Bulgaria.

These figures are indicative enough that clustering in Bulgaria is still underdeveloped and there is a great need to work in this direction. The benefits of well-developed and working unions are undisputed, they are an extremely important tool for enhancing the competitiveness of the Bulgarian economy. Still, the huge potential of clustering to introduce technology transfer, bring innovation, share resources and expand markets remains untapped. According to ISSS, voluntary clustering of enterprises enables implementation of new manufacturing solutions and innovative potential development, resulting in increased productivity, increased manufacturing added value, access to markets, hence increased competitiveness of companies and expansion of their export capacity. Among the main challenges which clusters in Bulgaria are facing is the fact that they were created "artificially" under competitive procedures under various operational programme calls and not to solve specific problems of the companies they consist of; moreover, there are no clearly defined goals for the respective clusters to achieve; there are no links between clusters and scientific partners; there is no or little recognition of clusters in the country, they are even less known abroad; the participating companies themselves are not informed and motivated enough to work for the success of the cluster as one whole. Last but not least, clusters established within project implementation activities turn out to be less adaptive and flexible to the rapidly changing environment. However, there are few good examples of actively operating clusters in the field of new technologies, textiles and furniture industry, etc.

In line with the horizontal activities and the thematic areas of ISSS, OPIC 2014-2020 will support clusters (according to their needs and depending

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on their development stage – start-up, developing and developed) in order to increase the degree of integration of local suppliers towards maximum use of their capacity to develop competitive business products and services, as well as active presence on the regional, national and foreign markets. Thus, the start-up clusters will be supported mainly through “soft measures” aimed at their organizational and administrative strengthening and incentives for cooperation and collaboration across the whole value chain, including exchange of good European practices. For developing and developed well-established clusters, support will be directed to the development of shared innovation infrastructure and know-how, internationalization and participation in European and international forms of cooperation.

An important organization that strives to unite and defend the interests of clusters in Bulgaria is the Association of Business Clusters (ABC). The organization was established in 2009 by leading clusters in the country. Currently the ABC consists of 16 clusters from the following sectors: information and communication technologies, automotive and electric vehicles, health and health tourism, maritime industry, mechatronics and automatization, textiles industry, furniture industry, horizontally integrated technologies and systems, brokers, couriers, green freight transport.

The aims of the Association describe very well the various aspects of the activities of a successfully developing cluster:

1. Organizational and financial development of the cluster

- 1.1. Development of the administrative capacity
- 1.2. Development of membership in the cluster
- 1.3. Improving of financial status

2. More competitiveness and innovation

- 2.1. Support of state policy for competitiveness and innovations
- 2.2. Partnership between business and universities and research centres
- 2.3. Programmes and tools for financing of research and innovation

3. Stable development of entrepreneurship and clusters

- 3.1. Support of the state policy for cluster development
- 3.2. Support of clusters organizations and management
- 3.3. Promotion of cross-sector and cross-cluster cooperation

4. Support of the export development of the country

- 4.1. Analysis and evaluation of the export potential of clusters
- 4.2. Development of the institutional environment for supporting export

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4.3. Attraction of financial resources for export development

5. Better recognition of clusters in business and society

5.1. Promotion of best practises for cluster development

5.2. Partnership with employers, industry and professional organizations

5.3. Recognition and positioning of the cluster in the European cluster space

The Association of clusters³ has identified the following ones as their most active members:

- Automotive Cluster Bulgaria, Yugozapaden /South-west/ planning region - Sofia;
- Bulgarian Cluster “Telecommunications”, Yugozapaden /South-west/ planning region - Sofia;
- EVIC - Electric vehicles industrial cluster (awarded a Bronze label), Yugozapaden /South-west/ planning region - Sofia;
- ICT Cluster (awarded a Bronze label), Yugozapaden /South-west/ planning region - Sofia;
- Microelectronics and Embedded Systems Cluster, Yugozapaden /South-west/ planning region - Sofia;
- Mechatronics Cluster Bulgaria (awarded a Bronze label), Yugozapaden /South-west/ planning region - Sofia;
- Association Bulgaria Industrial Cluster, Severoiztochen /North-east/ planning region - Varna;
- Srednogorie Copper Industry Cluster (awarded a Bronze label), Yuzhen tsentralen /South central/ planning region - Srednogorie;
- SCIAT - Specialized Cluster Institute for Apparel and Textile (awarded a Bronze label), Yugozapaden /South-west/ planning region - Sofia;
- Bulgarian Furniture Cluster (awarded a Bronze label), Yugozapaden /South-west/ planning region - Sofia;
- Marine Cluster Bulgaria, Severoiztochen /North-east/ planning region - Varna;

³ The Association represents the interests of more than 250 companies with 18-20 000 employees

- Association “Cluster for Health Tourism – Bulgaria”, Yugozapaden /South-west/ planning region - Sofia.

The list clearly demonstrates the leading position of the capital and the better economic development of southern Bulgaria as a whole.

Among the good examples of clusters we can point out the Furniture Cluster of nearly EUR 30 million annually and a growth of 8-9 per cent; the Telecommunications Cluster, which is a visible proof of strengthening the link between education and businesses; Srednogorie Industrial Cluster, providing employment for more than 8 000 people in the region and the Automotive Cluster for its investments and cooperation with the institutions⁴.

Clusters, being networks of competing and collaborating companies and organizations, strengthen and enhance the specific and unique features at regional level. For this reason, the government has to turn “clustering” into its main priority in its work on stimulating and supporting the development of the national economy.

Advantages for the cluster members

Clusters operate together in regional markets. 38% of European jobs are based in such regional strongholds and SME participation in clusters leads to more innovation and growth. There are about 2000 statistical clusters in Europe, of which 150 are considered to be world-class in terms of employment, size, focus and specialisation.

According to the European Cluster Excellence Scoreboard, for a number of selected emerging industries and regions in the period 2010-2013, 33.3 % of firms in clusters showed employment growth superior to 10%, as opposed to only 18.2% of firms outside clusters.

According to ISSS, business clusters can be used as regional smart specialization locomotives in Bulgaria because they include the real existing innovation infrastructure components in the regions. Moreover, the development and creation of new clusters are prerequisites for developing the links among education, training and businesses. Clusters can contribute to establishing standards for the competencies required by different professions.

In the case of a cluster from the type “main producer and its suppliers”, the benefits for the members are quite clear. The main producing company

⁴ According to the statement of Mr Alexander Manolev, deputy Minister of the Ministry of Economy

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may rely on integrity and regularity of deliveries, accurateness of orders and no delays. On the other hand, the small supplier – companies participating in the cluster get a unique chance for rapid development alongside the main company. They can count on long-term contracts and reliable payments. Thus, the suppliers can forecast their future operations and cash flows. The development of the main company encourages the development of the smaller partner-companies. The results from these long-term relations are lower expenditures, i.e. lower production costs, i.e. higher competitiveness.

Although the Bulgarian cluster model is largely in the form of “association of companies, working in geographical proximity in the same economic sector, which unite themselves in order to cooperate and complement” - that is, there is lack of “scientific” partners, support from civil/ NGO organizations and public authorities – the benefits from the cluster activities are undoubted: improved efficiency and extended markets. The individual entrance in new markets, particularly in foreign ones, is almost impossible for small Bulgarian companies because of numerous reasons, such as lack of contacts, no foreign language skills, no capacity for large quantities, no capability to meet high quality demands, etc. That is why producers from all sectors start thinking of establishing clusters as a way of fighting off competition and surviving. Taking a specific part of the production activities of a given product leads to improved specialization of a company, including the purchase of expensive equipment hence the higher quality and the shorter lead times. The distribution of work on a product also helps to accomplish larger volume orders, while the organization of the activities within the cluster facilitates logistics and reduces the work/ efforts made by the counterparty. Instead of ordering small quantities from different manufacturers with different quality and delivery times, the entire production volume can be produced by the cluster members, i.e. all companies in the cluster have sufficient work and can keep their employees or even hire new ones.

Cluster associations can afford to make larger investments in assets than any individual member of the cluster and they can be used jointly by all companies. Often in the process of direct interaction and use of these assets, knowledge transfer on production processes is also made. This could be in the form of informal learning through direct personal contacts

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of a skilled employee with a long-term experience to a new employee of another company-partner in the cluster. The cluster can afford to provide its “scientific” members with the most up-to-date equipment for R&D, the results of which will be used by the „production” members and they will implement new technologies or introduce innovative products.

Another important advantage for the members of a cluster is the opportunity to improve the skills of their employees through the organization of highly specialized courses for professional qualification and retraining, seminars on new technologies, exchange of ideas and good practices, as well as providing information and assistance for submitting project proposals under the operational programmes or other national/international projects, including even assistance in drafting the necessary documentation. Very often, recognised experts in the field are invited to such trainings, the latter are organized only for the cluster members or at least they can benefit from preferential prices. This enables the company personnel to get acquainted with the latest innovations, up-to-date legal and market requirements, trends in consumer demand and preferences, expert opinions, statistics and research in the field of activity without investing large financial resources.

Another advantage that also saves resources for small businesses is the organization and participation at major international fairs and exhibitions for the respective sector. Apart from being extremely expensive, this participation is often out of the question for a single small entrepreneur. The cluster, however, can help with the technical part of the organization and enable the successful presentation of smaller companies at a big and nicely decorated exhibition stand.

Through clusters, the “voice” of businesses can be heard and they can propose legislative initiatives or other reforms that truly meet the needs of businesses. Thus, clusters are able to influence the formulation of different government policies, for example in terms of vocational education and the provision of an adequately skilled workforce and hence the labour market as a whole. Communication with various government bodies and institutions, national and international organizations in the sector is also more successful if carried out on behalf of the cluster.

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Tools and mechanisms for supporting clusters in Bulgaria

Operational programmes

In the previous programming period, a call for proposals was launched (in 2013), under the Operational Programme “Development of the Competitiveness of the Bulgarian Economy” 2007-2013, under Priority Axis 2 “Increasing efficiency of enterprises and promoting supportive business environment”, Impact area 2.4: “Encouragement of business cooperation and clusters”, grant scheme BG161PO003-2.4.02 **“Support to the Development of Clusters in Bulgaria”**. The purpose of the procedure was to contribute for the creation and development of clusters in Bulgaria as a factor for increasing the competitiveness of Bulgarian enterprises by providing support for building and strengthening the administrative and management capacity of the cluster, developing products and services, expanding market positions, attracting new cluster members, as well as promoting investment in advanced technology and equipment for joint cluster activities. About EUR 15 million was the overall support during the last programming period, with contracts at the value of EUR 6.5 million being implemented at present.

In the current programming period, the Operational Programme „Innovation and Competitiveness” 2014-2020 foresees support for sustainable clusters, while the specific cluster activities to be supported will be determined based on the classification of existing clusters into separate categories depending on their development stage (developed, developing and start-up). Specific measures and indicative allocation of the financial resources will be proposed for each category. Successful developing clusters need additional growth and scale in order to attract FDI and achieve interregional cooperation, added value and competitive advantages.

The deadline for submitting documents for categorization to BSMEPA was 30.01.2017, and for submitting project proposals under BG16RFOP002-2.009 procedure “Development of clusters in Bulgaria” to the MA was 28.04.2017. The main objective of the grant scheme is providing support for cooperation and cluster creation in Bulgaria, capacity building and Project co-funded by the European Union and National Funds of the participating countries

internationalization of already established ones as a factor for enhancing competitiveness and business development. Among the eligible activities are funding for building and supporting the organizational and administrative structure of the cluster, hiring the necessary staff to manage and coordinate cluster activities, purchase of computer equipment for the needs of the cluster's administrative body, increasing the management and coordination capacity of the cluster's administrative body - participation in seminars, trainings, conferences, information events, exchange of experience and good practices; support to cluster development and attracting new members; organizing and participating in specialized trainings in the country and abroad to increase the cluster's capacity to establish collaborations and internationalization; drafting a cluster marketing or internationalization strategy; promoting the name (brand) of the cluster and its products/ services; cluster participation at national and international exhibitions and fairs; obtaining a European cluster label issued by the European Secretariat for Cluster Analysis; acquisition of TFA for common cluster activities - equipment for training halls, training centres, testing laboratories, production centres, etc.; specialized software products, patents, licenses, know-how, trademarks and so on.

There are 29 projects, out of the total number of 59 proposals submitted by applicant-clusters, which were proposed for funding. For their implementation the MA of OPIC will provide a grant of BGN 17 417 820,27. As of March 2018, a total of 28 grant contracts were signed under the procedure amounting to a total of 17 307 491,00 BGN/ 8 849 179,63 EUR.

The Indicative Annual Work Program of OP "INNOVATIONS AND COMPETITIVENESS" under Priority Axis 1 "Technological Development and Innovation" envisages the opening of a grant scheme in order to support the creation and development of innovative clusters in Bulgaria. The total amount of the grant under the procedure will be 29 924 199 BGN / 15.3 million EUR /. Under this procedure, innovative clusters that are associations - legal entities or groupings that do not represent legal entities will be eligible to apply. Among the activities to be funded are improving cooperation, exchange of information to support businesses and technology transfer, cluster marketing to increase the participation of new businesses or organizations in it, organizing training programs, seminars and conferences. Each project proposal can be funded with a sum between 200 000 and 500 000 BGN, with the maximum percentage

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of the grant being 65%. This includes costs for TFA and ITFA, staff costs and office and administration costs (including overheads). The programme foresees the launch of the procedure to be in September 2018 and the deadline for submitting project proposals to be November 2018.

Rural Development Programme 2014-2020

Measure 16 of the RDP 2014-2020 provides support for the promotion of different types of horizontal and vertical cooperation in the agricultural sector, the food chain and forestry. The measure contributes mostly to strengthening the links between agricultural production and research. For agricultural and food-processing clusters a suitable sub-measure will be **16.2. Supporting pilot projects and development of new products, practices, processes and technologies**. Beneficiaries of the sub-measure are newly created clusters that implement specific cooperation projects. These may be clusters of independent enterprises, including start-ups, small, medium and large enterprises, as well as consultative bodies and/ or research organizations that aim to foster economic/ innovation activity by strengthening synergies, sharing facilities and exchanging knowledge and expertise, as well as by effectively contributing to knowledge transfer, networking and dissemination of information among cluster enterprises.

Support is provided to implement projects aimed at producing quality and safe foods; improving the competitiveness of primary producers by better integrating them into the agricultural and food chain; restoration, preservation and enhancement of biodiversity and environmental protection. Funding for newly created clusters can cover two implementation phases: the cluster establishment phase and the cluster operating phase. Beneficiaries of the sub-measure receive a grant, which is awarded in the form of standard costs of a certain amount. Eligible activities include feasibility studies on the cooperation project and stimulation of interest and bringing new members in the cluster (for the first phase of implementation); running costs related to the cooperation and direct costs of implementing a cooperation project, including investment costs, according to the submitted investment plan (for the second phase of implementation).

European Cluster-Related Initiatives

The 2014 Communication, 'For a European Industrial Renaissance' highlighted clusters as being able to facilitate cross-sectoral and cross-border collaboration, helping SMEs to grow and internationalise. The Commission is launching several initiatives under COSME and Horizon2020 to support SME innovation and growth through clusters.

European Business and Innovation Centre Network - <http://www.ebn.eu/>

EBN is a network of around 150 quality-certified EU|BICs (business and innovation centres) and 70 other organisations that support the development and growth of innovative entrepreneurs, start-ups and SMEs. EBN is also a community of professionals whose day-to-day work helps these businesses to grow in the most effective, efficient and sustainable way.

European Cluster Alliance - <http://www.eca-tactics.eu/eca/about>

The European Cluster Alliance is an open platform established to maintain a permanent policy dialogue at EU level among national and regional public authorities responsible for developing cluster policies and managing or funding cluster programmes in their countries or regions.

The main objectives of the European Cluster Alliance are:

- to share the experience gained so far in cluster policies by public authorities at national and regional level in order to fine-tune existing, or develop new and better cluster policies in the future;
- to go beyond the identification of good cluster policies and to facilitate a true policy dialogue between those who wish to jointly advance the European cluster agenda in areas of common interest;
- to become the single place at EU level for elaborating and exchanging new ideas and practical tools, new funding initiatives for improving cluster policies in Europe and for fostering European cooperation at policy level;
- to raise the level of excellence and efficiency of cluster policies in Europe which will result in the creation of more competitive world-class clusters in Europe, as proposed by the Commission Communication on clusters.

Enterprise Europe Network - <http://een.ec.europa.eu/>

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The Enterprise Europe Network helps businesses innovate and grow on an international scale. It is the world's largest support network for small and medium-sized enterprises (SMEs) with international ambitions.

The Network is active in more than 60 countries worldwide. It brings together 3,000 experts from more than 600 member organisations – all renowned for their excellence in business support.

Technology transfer overview

Definition of technology transfer

In modern economic conditions concepts such as “innovation” and “technology transfer” have become obligatory in the process of development of a company and are among the mandatory conditions for its success. There are many different definitions for the *transfer of technologies*. Contemporary concepts explain technology as “a set of scientific and engineering knowledge and resources needed to achieve certain goals - creating a product (process) or seeking new knowledge”⁵.

Technology transfer⁶ may include activities carried out by enterprises exploring:

- the viability of converting research, development, skills, knowledge, technology or innovation into commercial applications, products, processes or services; and / or
- the transfer of products, processes or services existing in developed markets into non-developed ones where such activities are currently not yet explored, tested, adapted or not commercialised.

Such activities may take any of the following forms:

- Commercial demonstration and commercialisation (including but not limited to development, demonstration, prototyping, market development, scaling up, and support less developed technology transfer infrastructures).
- IP out-licensing, IP in-licensing or optimisation thereof, cross licensing activities (including via project financing), sale of patents.
- Creation of new companies, including via spin-outs.
- Business planning support, starting spin-offs or joint ventures, and building strategic alliances with other organizations.
- Collaboration between universities, research organisations and industry notably via research/consulting contracts.

⁵ According to Prof. Dr. Teodora Georgieva, “Technology transfer”, 2016

⁶ According to the Term sheet of the Technology Transfer Fund Financial Instrument

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Since the object of the transfer may be diverse (technology, knowledge, information) and it is to be transferred to another environment and used by another subject, it is therefore extremely difficult to summarize the number of transfers made. In addition, transfers can also be made vertically (knowledge of the process stages till its industrial implementation) and horizontally (sales of technological products already in use) or technologies to be transferred into new areas of application. The “technology” to be transferred may be in the literal meaning equipment and devices or information databases, know-how, etc. The purchase and use of certain technologies is very often protected by the so-called “trade secret” because it brings competitive advantages to the user and can even be the subject of industrial espionage. In this sense, the collection of data on the transfers made is extremely difficult, even impossible because of the confidential nature of the information.

Types of technology transfers

Not only the collection but also the summary of the received data is hampered by the great differences and the specificity of technology transfers. The transfer of information/ knowledge/ technology can take place as described above both horizontally and vertically; depending on the territory covered this can happen within a single company/ organization or at national and very often international level, using an intermediary organization or directly between the participants in the transfer.

Theory defines two main types of technology transfers that are differentiated according to the results and the economic benefit that a company would get in case of a technology transfer made.

Non-commercial technology transfer

In this type of transfer, companies can use widely available knowledge and technology, for which they have learned from specialized literature, a scientific conference or training. In this form, knowledge is in such a form that even being very innovative, such as a scientific discovery in a given field, it is practically inapplicable at the moment. It takes a lot of time, experience, research, resources, and sometimes extra knowledge /

technology before it can be used for a specific economic purpose by the company.

Commercial technology transfer

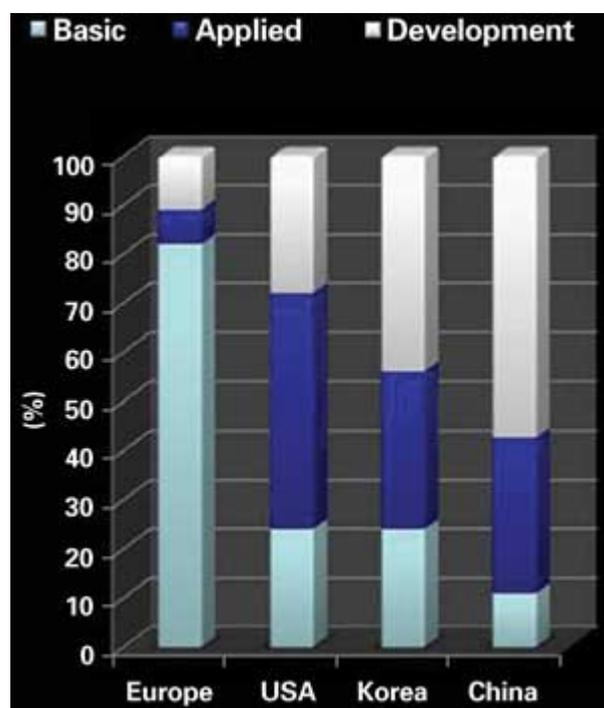
Unlike non-commercial types, in this case knowledge and technology are usually protected and patented, because the company could receive a specific economic advantage straightaway after the transfer. Commercial forms are most often related to intellectual property rights such as licence and know-how contacts, franchising, leasing, turnkey projects, foreign direct investment and sale of science-intensive products.

The contracts and their terms may be many and varied, but they must be drawn up by specialists in order to defend the rights of both parties. The rapid technology development, the increased needs for investment in research and development and the short “life” of a product before it is replaced by a better one are all reasons why businesses enter into such contractual relations.

Technology transfer in the EU

Research is a word, which has become a term from the every day vocabulary and its importance is well-acknowledged for both the scientific and business sectors of the developed economies in the EU. Research in the EU ranks very high, unlike commercialization of the research results. The reasons are many and of different nature – funding issues, clumsy procedures for issuing patents, cultural issues, unwillingness to risk-taking, to name but a few.

According to statistics “*Europe lags behind competitor nations when it comes to transforming basic research into commercial development*”. The graph shows the immense difference between Europe and the rest of the world regarding research and its practical application into economy. Almost 80 % of the research in Europe is basic, while in the USA and Korea it is 4 times less; the Chinese basic research is even less



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than 10%. Huge “unfavourable” differences could be also seen in the percentages for the applied and development sections.

In order to cope with this issue, the EC is placing a greater emphasis on **Key Enabling Technologies (KETs)**. Their importance makes them a key element of European industrial policy. KETs are a group of six technologies: micro and nanoelectronics, nanotechnology, industrial biotechnology, advanced materials, photonics, and advanced manufacturing technologies. They have applications in multiple industries and help tackle societal challenges. Countries and regions that fully exploit KETs will be at the forefront of creating advanced and sustainable economies.

One of the major weaknesses of Europe with regards to KETs lies in the difficulty of translating its knowledge base into marketable goods and services. This innovation gap has been identified as the European **“Valley of Death”**. KETs-related manufacturing is decreasing in the EU and patents are increasingly being exploited outside the EU.

KETs and their practical application could be funded by the EU’s Framework Programme for Research and Innovation Horizon 2020, which with an €80 billion budget, aims to drive and create new growth and jobs in Europe. Horizon 2020 will run till 2020 and can assist in cases where lack of funding prevents product development. Despite an excellent research base, Europe lags in turning inventions into innovations. Most of the EU’s research funding is oriented toward applied research or demonstrating the first prototype, most resources are actually spent subsequently on engineering. Financial resources are extremely important for smaller companies, which would need more time to gain enough funds in order to be able to invest in the technology transfer of a new product.

Technology transfer in Bulgaria

Number and types of technology transfers made in Bulgaria

It is impossible to collect and process official data on the number and type of technology transfers in Bulgaria due to the specificity of the transfer nature, the broadly interpreted concept of “technology” and the confidentiality of data on innovation and new technologies. Some conclusions can be drawn based on the R&D expenditure and the launch of new products by enterprises.

Overall, rates of R&D expenditure as a percentage of GDP are relatively stable through the years, with a slight upward trend after 2010.

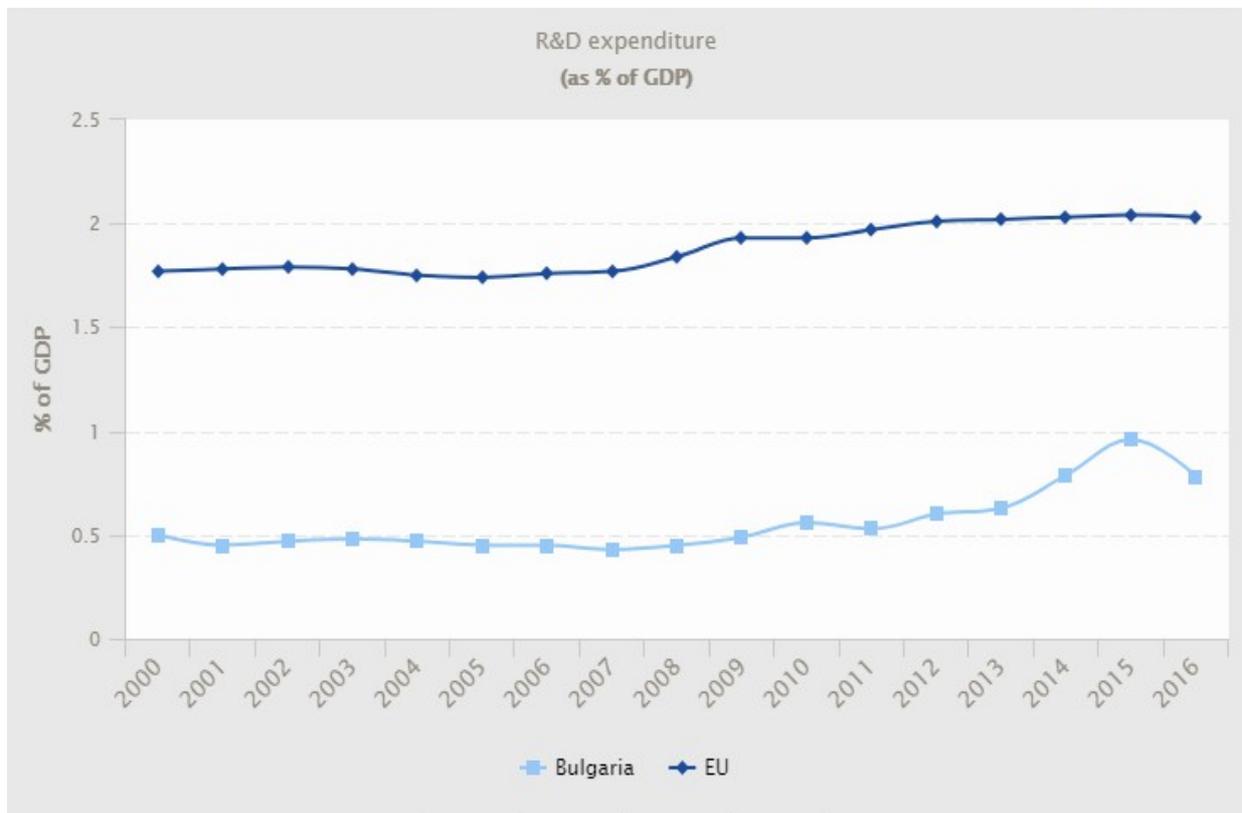


Diagram 8 R&D expenditure as a percentage of GDP for the 2000-2016 period for Bulgaria and EU

Unfortunately, this percentage remains well below the EU average and only four countries allocate less than Bulgaria to R&D.

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Diagram 9 R&D expenditure as a percentage of GDP for 2016 of all EU countries

Companies are extremely cautious about developing new products or improving existing ones, as proved by the statistics - only 5,7% have dared to innovate.

Diagram 10 Enterprises that introduced new or significantly improved products new to the market, as a share of all enterprises, 2014

The distribution by types of enterprises is also logical as the ratio of the “innovative” companies is directly proportional to the number of the company’s employees, i.e. larger organizations can afford or need to develop and improve their products, including through technology transfer. Unfortunately, microenterprises do not have even a minimal involvement. The enterprises with innovative cooperation are little over 1/5 from the total number of enterprises with technological innovation⁷ in

⁷ Enterprises with technological innovation include the enterprises with product and process innovation (whether or not they have organizational or marketing innovation)

2014, keeping the same trend again - the largest numbers are made by the largest companies.

Diagram 11 Enterprises that have new or significantly improved products new to the market, as a share of all enterprises by types of enterprises, 2014

R&D expenditure, aimed at improving industrial production and technology, is only 11% of all R&D expenditure, compared to over 47% aimed at general knowledge development, i.e. development of “pure science”. Unfortunately, almost half of the resources fund the development of science and not the application of scientific results and the technology transfer into practice.

GOVERNMENT BUDGET ALLOCATIONS FOR R&D BY SOCIO-ECONOMIC OBJECTIVES

	2016	
	Thousand BGN	per cent
Exploration and exploitation of the earth	18601	9,9
Environment	709	0,4
Exploration and exploitation of space	2966	1,6
Transport, telecommunication and other infrastructures	4947	2,6
Energy	661	0,4
Industrial production and technology	20620	11
Health	3373	1,8
Agriculture	30732	16,4
Education	11296	6
Culture, recreation, religion and mass media	1809	1
Political and social systems, structures and processes	3192	1,7
General advancement of knowledge: R&D financed from General University Funds (GUF)	11329	6
General advancement of knowledge: R&D financed from other sources	77199	41,2
Defence	31	0
Total	187465	100

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Table 2 Government budget allocations for R&D by socio-economic objectives

Not only are the R&D allocations small but they are also extremely unevenly distributed throughout the country. The position of the capital in the South-west region provides a logical explanation for the high percentage of expenditure and shows the big differences with all other regions where it is 7-14 times less. All 5 remaining regions allocate 2 times less for R&D compared to the South-west region. The data clearly show the huge lagging behind the leading South-west region, even for the South central one, which ranks second.

Advantages for the companies, which made a technology transfer

It is undisputed that technology transfer brings a number of advantages to the companies, while depending on its type and subject, they can be extremely varied. In today's highly competitive economic environment, technology transfer is what can bring a company ahead of its competitors and help it survive and grow on the market.

Franchise agreements, for example, are considered as one of the successful examples of technology transfer, as according to statistics only between 2% and 4% of companies that started business as franchisees go bankrupt. For comparison, the percentage for the rest is about 65%.

The leasing type of technology transfer (renting out entire businesses or parts of them, machinery and equipment, land and buildings, raw materials, highly skilled labour) has great advantages for new and innovative companies as it saves money to buy expensive high-tech equipment, which in turn helps the company's competitiveness.

In the case of foreign direct investment, along with the introduction of new technology, many other good practices are being transferred from a sufficiently well-developed and working business into a developing one. Besides advanced technologies, organizational and management processes improvements can be made - a specific approach to customers, staff training, environmental attitudes, etc.

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Tools and mechanisms for supporting technology transfers in Bulgaria

Types of intermediaries

In addition to the direct participants in the technology transfer, “the owner” of the technology (university, laboratory, inventor) and its “buyer” (enterprise) the process can also involve intermediaries whose task is to facilitate and support the transfer activities. These may be different types of structures such as:

Innovative centres

The innovative centres play an increasingly important role in modern economy. They are the intermediaries between scientists, universities, research laboratories as creators of new “technologies” on the one hand, and investors, companies that will implement these technologies and place them on the market on the other hand. Scientific developments are essential for the successful development of modern economy. By themselves, however, even in large volumes, they are not a sufficient condition for stimulating business development. Science needs to be quickly and successfully implemented in practice and lead to positive economic performance. Only then can we talk about a knowledge-based economy.

Business Incubators

Business incubators are the structures that support start-up companies in their activity. By providing a certain set of services for the company free of charge or at preferential terms (office space, production facilities, consultancy services, etc.), they save companies resources that can be invested in purchasing new technologies, for example. The ICT development has introduced the concept of virtual business incubators, focusing on providing access to specialized databases, information and technology transfer networks on the Internet.

Science and Technology Parks

The International Association of Science Parks and Areas of Innovation defines the science park as “an organisation managed by specialised Project co-funded by the European Union and National Funds of the participating countries

professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions. To enable these goals to be met, a Science Park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities". There are a number of other definitions of science and technology parks, but the main and most important point in all of them is the presence of university/ research centre, i.e. an obligatory "scientific partner" and the creation of a favourable environment for technology transfer.

Technopolises

Technopolises are scientific and manufacturing complexes created on the grounds of newly built or reconstructed cities and urbanized areas. They include a large number of high technology enterprises, universities and research organizations that actively interact with local authorities. Their common goal is to create conditions for the development of priority scientific branches and the practical implementation of the achieved results through promotion of entrepreneurial activities.

EU Intermediaries

At EU level, the Commission launched an initiative for enhancing collaboration on knowledge transfer among the TTOs (Technology Transfer Offices) of large European public research organisations - the "*European TTO circle*". The TTO Circle includes 25 of the largest research organisations in Europe. The Innovation Union flagship initiative⁸ stresses the importance of developing mechanisms to strengthen knowledge transfer offices in public research organisations, in particular through trans-national collaboration ([Commitment 21](#)).

Another example of a support office is the established in February 2016 EU-Japan Technology Transfer Helpdesk, a new service aimed at supporting EU and Japanese companies and individuals in their steps to search for and acquire technologies, as well as bridging the knowledge gap about current available technologies from both Japan and the EU. The service is backed by a web portal <http://www.eu-jp-tthelpdesk.eu>, which provides general content about intellectual property rights and their use in the form

⁸ https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication-brochure_en.pdf

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of webinars, videos and presentations. It is aimed at both EU and Japanese companies, universities, and research institutions and their employees.

Technology transfer centres in Bulgaria

Most of the technology transfer centres were established at the universities in Bulgaria under Phare programme and OP Competitiveness projects during the previous programming period. They usually have up to 9 people staff, their funding is project-based (via participation in different projects) and/ or from own sources (from the services they provide). They all work to promote collaboration between the research community of the respective university and industry, to transfer knowledge and technology between them, to develop technology assessment and technology audit methodologies, training modules and materials related to sources of funding, guides on creating new businesses and business plans, technology transfer forms and solving intellectual property issues.

- **Technology Transfer Centre at Sofia University “St. Kliment Ohridski”**
<http://tto.bg/>

It participates in the CERN Technology Transfer Centres Network and is the CERN contact office for Bulgarian businesses.

- **Technology Transfer Centre at Ruse University** <http://tto.uni-ruse.bg/>

The Danube Transfer Centre (DTC-Ruse) is the successor of the acting Technology Transfer Centre at Angel Kanchev University of Ruse and follows the Danube Transfer Centre methodology of Steinbeis Europa Zentrum Danube-INCO.NET project.

- **TRANSMISSION Technology Transfer Centre**
<http://transmission.igic.bas.bg>

TRANSMISSION TTC is a Centre for Transfer of Environmentally Oriented Technologies and Innovations in the Field of Inorganic Chemistry. There is no available information if the TTC is still operational.

- **GIS-Transfer Centre** <http://www.gis-tc.org>

GIS-Transfer Centre is the first and only one in Bulgaria organisation structured a national network of 29 centres which cover the main sectors of economy and science and supports the process of technology transfer of Project co-funded by the European Union and National Funds of the participating countries

research competitive products, know-how, advice and expertise with an emphasis on SMEs and vice versa. GIS-TC is working closely with the STEINBEIS Foundation – Germany. The foundation experts participated in the development and implementation of over 30 innovative and technological projects in chemical industry, machinery, energy, including renewable energy sources (for bioethanol, biogas, biodiesel, hydroelectricity, etc.), food technology etc. as well as the establishment of the Mechatronics Cluster.

The Bulgarian Technology Transfer Network includes:

1. GIS-TC on “Technology transfer of the Institute of Mechanics”;
2. GIS-TC on “RES and EE”;
3. GIS-TC on “Geospace modelling and prognosis”;
4. GIS-TC on “Gene engineering in medicine and ecology”;
5. GIS-TC on “Biochemical technology for effective and ecological agriculture”;
6. GIS-TC on “Electro energy automation”;
7. GIS-TC on “Sustainable planning of territories and energy efficiency architecture”;
8. GIS-TC on “Innovative management”;
9. GIS-TC “Office for technology transfer – Bourgas”;
10. GIS-TC on “Food and cosmetic technology”;
11. GIS-TC on “Information technology in healthcare”;
12. GIS-TC & Steinbeis-Transfer-Institut “Business, Engineering and Technology – Bulgaria”;
13. GIS-TC “Transport management and smart transport vehicles”;
14. CTT “Sofia University”;
15. TTO “ICT for Energy Efficiency”;
16. TTO “Proino”;
17. TTO “Risk Space”;
18. TTO “Bioinnovative pool”;
19. TTO “Genome centre”;

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20. TTO “Reprobiomed”;
 21. TTO “VUABRR”;
 22. TTO “NTS on Machine engineering”;
 23. GIS-TC “Arte Classica”;
 24. GIS-TC “Bulgarian-Romanian cooperation on the Danube Strategy”;
 25. GIS-TC “Innovative Management - Vratsa”;
 26. TTO “Information and Communication Technologies”, BAIT;
 27. TTC “Maritsa” - at Institute of vegetable cultures - Agriculture Academy of Sciences;
 28. TTO “Innovative Capital”;
 29. GIS-TC “Social Innovation”.
- **Technology Transfer Office at BFU** <http://ott.bfu.bg>

There is an informational website and a virtual office but there are no updates since June 2017.

- **Technology Transfer Centre at the BCCI Innovation Council** /in the process of establishment/

<http://www.evroproekti.org/index.php/tehnologichen-transfer/148-tzentarat-za-transfer-na-tehnologii-pri-saveta-po-inovatzii-i-tehnologichno-razvitie>

The Technology Transfer Centre at BCCI Innovation Council will carry out marketing and advertising activities to promote the activities and capacities of the existing scientific organizations in the country and especially at the Bulgarian Academy of Sciences, the Agricultural Academy, the universities and other schools of higher education and colleges, as well as to support the Bulgarian innovative small and medium enterprises to implement technological cooperation projects in Bulgaria and the EU.

- **CITT Global Ltd** <http://www.citt-global.net/>

CENTRE FOR INNOVATION AND TECHNOLOGY TRANSFER-GLOBAL Ltd. is a Bulgarian company set up with the aim of facilitating transfer of innovative knowledge and technologies on international level.

The company's priority is to cooperate with European state organizations, scientific link-teams and private firms working in the same sphere. CITT GLOBAL's major objective is, through cooperation with those organizations ,to contribute to the use of European's extensive experience with innovations and technology transfer, as well as, to popularize its cooperation model in the field of networking on national and regional level. The company specializes in education, consultation and implementation of innovative projects associated with the transfer of know-how and technologies to small and medium enterprises and the state administration in the field of information technology, ecology, new building materials, new energy resources, etc.

- **Joint Innovation Centre** <https://www.jic-bas.eu/>

The Joint Innovation Centre at BAS is a coordination unit for implementing the policy of BAS – in the fields of innovation and patent activities, and project competence. The Centre provides information for applying on EU Structural Funds and the Framework Programme of EU “Horizon 2020” calls; supports the preparation and implementation of project proposals. The Centre maintains business contacts in the country and abroad concerning innovations and applied research transfer, and supports the establishment of contacts “science – business” and “science – science”. The JIC Patent Office consults and offers optimal legal protection for the created in BAS intellectual products, as well as, for the exercising of their exclusive rights. JIC is a co-founder of “Proino” Technology Transfer Office.

Enterprise Europe Network

The Enterprise Europe Network offers, free of charge, a wide range of services to the companies, including support of technology transfer and innovation, such as:

- Providing information on programmes dedicated to funding innovations and on European policies related to innovations, especially Horizon 2020;
- Dissemination and support to integration of research studies results;
- Intermediation in support of technology transfer and creating partnerships among different players in the innovation process;

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- Stimulating the capacity of companies to develop and apply innovations – technological audit, technology watch, sector meetings for technology transfer, etc.

Financing

- *Financial instruments* for technology transfer are described in the Operational Programme “Innovations and Competitiveness” 2014-2020, under Priority Axis 1 “Technological development and innovation” by the establishment of a **Technology Transfer Fund**, which will use a financial resource of 33 million euros (30 mln EUR from the Fund of Funds and 3,3 mln EUR from private investors). TTF investments will be aimed at SMEs and large enterprises in the sectors defined in the national strategy for smart specialisation: ICT, pharmaceutical and bio technologies, mechatronics, nano- and clean technologies, creative and recreational industries. Among the main goals that the Fund has set are bridging the gap between science and business, commercialisation and internationalisation of R&D, fostering innovation, in particular: supporting the research and development activities of enterprises; increasing/establishing the innovation capacity and resources; improving the cooperation between enterprises and/or enterprises and research organisations that develop and/or implement new or significantly improved processes and products; supporting the commercialisation of innovations resulting into products, processes and technologies; acquisition, management and commercialization of intellectual property.
- **ISSS** foresees the *development of an adequate and secure environment for the design and dissemination of innovation*, i.e. support for the development of technology transfer offices and technology centres. The support will focus on enhancing the capacity to identify research that could be of interest for the industry, management of science-business relations, patents and intellectual

property rights, commercialization through licenses and start-ups, researchers' awareness of intellectual property rights and commercialization. **OPIC** will promote activities for the development of innovation and research environment and infrastructure, such as: creation, establishment and accreditation of thematically focussed certification laboratories, laboratories for testing and demonstration of experimental models concepts, other shared infrastructure supporting the development and the innovation activity of enterprises, including Phase 2 of the Sofia Tech Park project.

Difficulties when making a technology transfer

Inevitably, any process of technology transfer is linked to certain conditions and/ or requirements. They may be of a different nature and their absence would turn into an obstacle to the transfer. Among the more substantial factors that influence the process, we can point out financial, competence, communication and market related barriers; there are also technical, attitudinal, cultural, and market barriers; political and institutional, organizational and economic, system, procedural and behavioural, and many others.

Regulations

Sometimes legislation and regulatory requirements impose restrictions on technology transfer even if it is made at national level. Differences in or lack of knowledge of legal requirements may be even detrimental in case of international transfer. Lobby groups and interests often hamper efforts to make changes to legislation aimed at facilitating and making technology transfer more efficient.

“Attitude” to the technology transfer process

There is a lack of understanding between industry and academia. Transfer is not a one-time one-way action (scientist -> company), but is more often referred to as a “two-way street”. Researchers and inventors must clearly understand how both parties contribute to implement the full potential of technology transfer. Continuous feedback is needed from both potential customers and manufacturers of the product/ service where the technology was used. It will help developers refine the product/ service, thus making it more successful on the market.

Obstacles also result from the collision of the different types of participants in the transfer: science and business. The stable academic structure with years of experience against the mobile, flexible and changing industry; the

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scientific body that focuses on knowledge dissemination i.e. presenting the results publicly even before protecting them with a patent, just contrary to the requirements of businesses and trade secrets; the industry is interested in financing the end result rather than the R&D process itself, carried out by the scientific organization.

„Technical issues”

Difficulties may also arise due to poor transmission of technical information and inadequate interaction between the R & D organization and the user of technology at the stage of technology development. If technologies are too specific, changing or adapting to a particular market would be quite difficult or even impossible. Innovative technologies usually start in short series or single pieces, which means that their production is very expensive and therefore uncompetitive. The prototype of a technology may be inappropriate for the mass production requirements - the high technical parameters achieved do not provide satisfactory economic parameters.

Difficulties may also arise due to poor transmission of technical information and inadequate interaction between the R&D organization and the user of the technology at the stage of technology development. If the technology is too specific, changing or adapting it to production/ particular market will be quite difficult or even impossible. The production of innovative technology items usually starts in small batches or single pieces, which means that the process is very expensive, hence the products are less competitive on the market. The prototype of a technology may turn to be inappropriate for mass production requirements - the high technical parameters achieved do not provide satisfactory economic results.

The transfer may not pass smoothly unless the most appropriate mechanism is used. Difficulties arise with regard to intellectual property rights, especially in the case of joint innovation development by a consortium. The lack of enough time for new technology testing and demonstration before it is able to compete with already established ones in the field, hinders the process of practical application of the technology.

Dissemination of results of implemented scientific projects requires specialized marketing skills, which are often lacking in scientific organizations; Moreover, well-trained and experienced specialists are

needed to market and sell innovative products that can effectively increase sales and hence the efficiency of technology transfer activities.

Financing

Financing every new thing entails risks of failure. Especially in cases where larger amounts are involved, investors are too restrained and may refuse to allocate enormous funds for a good idea that eventually may not be realized or deliver the expected profit. There is a lack of well-developed infrastructure, market and public incentives to support innovation. Most of the financial resources under the Operational Programmes are targeted at SMEs while at the same time project proposals submitted by SMEs are rejected by the evaluators because of the low scientific level of the technologies that are planned to be developed during the implementation of the project in spite of their potential to bring huge revenue. Generally, there is no funding for the extremely expensive phase of technology application in business, which limits the use of new technologies.

These are only a small part of the barriers to the transfer of innovation, which we can summarize as “any kind of limitations and features that hamper the effective operation of a technology transfer and research commercialization system and, as a result, block interactions between the R&D sector and enterprises, thus hampering the development of innovative entrepreneurship”.

In practice, different types of barriers act simultaneously, so they need to be recognizable and ways to reduce or eliminate them must be identified. This approach should be applied before even taking the decision to develop certain technology (in advance) and during its development (current). Depending on the different obstacles, an individual approach at the level of the organization or a joint action with other institutions should be taken, while in the long run emphasis should be placed on the establishment of specialized centres and research teams that can meet the needs of entrepreneurs.

It is possible to work towards directing the studying and research work towards solving practical business problems, creating conditions for promotion, support and targeted policy in relation to public and private R&D and innovation, building skills and procedures for effective commercialization of research results, change in the R&D assessment system - the organizations to be evaluated based on the practical application and not on mere research achievements as it is now.

In order to overcome the obstacles and difficulties with technology transfer, nowadays the concept of “academic entrepreneurship” is becoming widely exploited by establishing the so-called spin-off

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companies - new micro/ small businesses, founded by research organisations in order to commercialize research results. The creation of such companies has a number of advantages such as effect on local economic and technological development, commercialization of initial scientific results and further technology development, commitment of researchers, generation of revenues for the given scientific organization, feedback on the technology feasibility, etc.

In Europe, including Bulgaria, a large part of the research organizations are publicly funded. Their main purpose and task are scientific achievements, not business-oriented technologies. In order to set up a spin-off company, the organization must select certain technologies with profit and innovation potential. Unlike similar companies in the United States, for example, the approach here is for the organization to “incubate” a new business, i.e. technology rather than environment / needs are leading. This logic leads to the so-called European innovation paradox - the EU has a leading role in creating scientific knowledge, but it is far behind the United States and Japan in being able to transform these achievements into innovation generating economic prosperity.

There is a need for targeted policies that will support the commercialization of research results, the intellectual property protection and the mobility of scientists; creating intermediary structures to compensate for the lack of “business-specific” knowledge and skills in managing such businesses; special financial schemes to support academic entrepreneurship - venture capital, business angels, public research grants, parent institutions funding, indirect support through technology parks and incubators, etc.

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Annexes

List of clusters, registered in the Trade Register⁹

List of clusters, registered with BULSTAT¹⁰

List of studied clusters, categorized by BSMEPA

⁹ The data is obtained on 22 April 2018

¹⁰ The data is obtained on 22 April 2018

List of clusters, registered with BULSTAT

	BULSTAT	Name
1	104691139	СДРУЖЕНИЕ "КЛЪСТЕР БЪЛГАРСКА ЕКО ФЛОРА"
2	11764309 4	СДРУЖЕНИЕ "СПЕЦИАЛИЗИРАН КЛЪСТЕР И ИНСТИТУТ ПО ОБЛЕКЛО И ТЕКСТИЛ - ДУНАВ"
3	11764309 40012	СДРУЖЕНИЕ "СПЕЦИАЛИЗИРАН КЛЪСТЕР И ИНСТИТУТ ПО ОБЛЕКЛО И ТЕКСТИЛ - ДУНАВ"КЛОН
4	11764309 40027	СДРУЖЕНИЕ "СПЕЦИАЛИЗИРАН КЛЪСТЕР И ИНСТИТУТ ПО ОБЛЕКЛО И ТЕКСТИЛ -ДУНАВ" - КЛОН ВАРНА
5	11767006 0	СДРУЖЕНИЕ "ИНДУСТРИАЛЕН КЛЪСТЕР СЕЛСКОСТОПАНСКА ТЕХНИКА"
6	117681006	СДРУЖЕНИЕ "ПРОИЗВОДСТВЕН КЛЪСТЕР ПТИЦЕВЪДСТВО"
7	119678973	НАЦИОНАЛЕН БРАНШОВ КЛЪСТЕР "ЕКО ВЪЛНА ПРОЕКТ"
8	12369245 9	СДРУЖЕНИЕ С НЕСТОПАНСКА ЦЕЛ "ИНДУСТРИАЛЕН КЛЪСТЕР ЕНЕРГИЙНОТО СЪРЦЕ НА БЪЛГАРИЯ"
9	123727853	СДРУЖЕНИЕ С НЕСТОПАНСКА ЦЕЛ "КЛЪСТЕР ТРАДИЦИОННИТЕ БЪЛГАРСКИ ПРОДУКТИ-НА ЕВРОПЕЙСКАТА ТРАПЕЗА"
10	131374292	ФОНДАЦИЯ "КЛЪСТЕР ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ"
11	131531726	"ИНДУСТРИАЛЕН КЛЪСТЕР СРЕДНОГОРИЕ "
12	160133091	КЛЪСТЕР ЮГ ЕНЕРДЖИ
13	175131203	СДРУЖЕНИЕ "СОФИЙСКИ ТУРИСТИЧЕСКИ КЛЪСТЕР"
14	175278819	СДРУЖЕНИЕ "КЛЪСТЕР БЪЛГАРСКА МЕДИЯ И ПЕЧАТ"
15	175341810	СДРУЖЕНИЕ "КЛЪСТЕР ЕКОЛОГИЧНА ВЪЗОБНОВАЕМА ЕНЕРГИЯ-БЪЛГАРИЯ"
16	175433917	ТУРИСТИЧЕСКИ КЛЪСТЕР ВАРНА
17	17545973 0	СДРУЖЕНИЕ "НАЦИОНАЛЕН ОХЛЮВЪДЕН КЛЪСТЕР"
18	17546733 9	КЛЪСТЕР ПО ТЕЛЕКОМУНИКАЦИИ
19	17547489 2	НАЦИОНАЛЕН КЛЪСТЕР МУЛТИТЕК ИНВЕСТ
20	17547982 9	СДРУЖЕНИЕ "ЗЕЛЕН БИООРГАНИЧЕН КЛЪСТЕР"
21	17557835 7	СДРУЖЕНИЕ "ИКТ КЛЪСТЕР-ВАРНА"
22	175621036	СДРУЖЕНИЕ "БИЗНЕС КЛЪСТЕР БУРГАС"
23	175677501	СДРУЖЕНИЕ "КЛЪСТЕР ЕКОТУРИЗЪМ"
24	17578246 2	ВИСОКОТЕХНОЛОГИЧЕН КЛЪСТЕР БУРГАС

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25	17579005 0	ТЕКСТИЛЕН КЛЪСТЕР "КОПРИНА" /ТКК/
26	17579634 5	СДРУЖЕНИЕ "БЪЛГАРСКИ МЕБЕЛЕН КЛЪСТЕР"
27	175815607	СДРУЖЕНИЕ "ИНДУСТРИАЛЕН КЛЪСТЕР ЕЛЕКТРОМОБИЛИ"
28	17581605 0	СДРУЖЕНИЕ "АСОЦИАЦИЯ НА БИЗНЕС КЛЪСТЕРИТЕ"
29	17582043 3	СДРУЖЕНИЕ "КЛЪСТЕР ЕЛЕКТРОИНСТРУМЕНТИ ЛОВЕЧ"
30	17582997 3	СДРУЖЕНИЕ "ПРО-СЪПОРТ КЛЪСТЕР"
31	175862910	СДРУЖЕНИЕ "КЛЪСТЕР МИКРОЕЛЕКТРОНИКА И ИНДУСТРИАЛНИ ЕЛЕКТРОННИ СИСТЕМИ"
32	17588095 7	СДРУЖЕНИЕ "КЛЪСТЕР МЕТАЛОЛЕЕНЕ"
33	17588678 9	СДРУЖЕНИЕ "БЪЛГАРСКИ КЛЪСТЕР ТЕЛЕКОМУНИКАЦИИ"
34	17588678 90011	СДРУЖЕНИЕ "БЪЛГАРСКИ КЛЪСТЕР ТЕЛЕКОМУНИКАЦИИ" - КЛОН БУРГАС
35	17592903 0	СДРУЖЕНИЕ "КЛЪСТЕР ВЪЗОБНОВЯЕМИ ЕНЕРГИЙНИ ИЗТОЧНИЦИ"
36	175991733	КУЛТУРЕН КЛЪСТЕР ПЛОВДИВ И СВЕТА
37	17600232 5	СДРУЖЕНИЕ "КЛЪСТЕР АЕРОКОСМИЧЕСКИ ТЕХНОЛОГИИ ИЗСЛЕДВАНИЯ И ПРИЛОЖЕНИЯ"
38	176015956	СДРУЖЕНИЕ "БЪЛГАРСКИ ЕКОЛОГИЧЕН КЛЪСТЕР ЗЕЛЕНИ ТЕХНОЛОГИИ"
39	17602864 0	СДРУЖЕНИЕ "ВАРНА УЕЛКЪМ КЛЪСТЕР"
40	17603887 2	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ДОСТЪПЕН ТУРИЗЪМ"
41	17604086 3	СДРУЖЕНИЕ "КЛЪСТЕР ЕКСПЕРТЕН ЦЕНТЪР ЗА ПРИЛОЖНИ КОМПЕТЕНТНОСТИ ВАРНА"
42	176074171	СДРУЖЕНИЕ "КЛЪСТЕР ИНОВАЦИОННИ И ЕКОЛОГИЧНИ ТЕХНОЛОГИИ-ЗЕЛЕНО СТРОИТЕЛСТВО И ВЕИ"
43	176116962	СДРУЖЕНИЕ "БУРГАСКИ ТУРИСТИЧЕСКИ КЛЪСТЕР"
44	17613504 4	СДРУЖЕНИЕ "КЛЪСТЕР ЗЕЛЕНА ЕНЕРГИЯ /КЗЕ/"

45	17616098 7	СДРУЖЕНИЕ "ЧЕРНОМОРСКИ ЕНЕРГИЕН КЛЪСТЕР"
46	176162212	СДРУЖЕНИЕ "КЛЪСТЕР ШИВАШКА ПРОМИШЛЕНОСТ "ЗЛАТНА ИГЛА""
47	176168560	СДРУЖЕНИЕ "КЛЪСТЕР ЗЕЛЕНА СИНЕРГИЯ" - гр. ПЛОВДИВ
48	176175245	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ЗДРАВЕН ТУРИЗЪМ - БЪЛГАРИЯ"
49	176182492	СДРУЖЕНИЕ "КЛЪСТЕР БЪЛГАРСКИ СПОРТЕН ИНСТИТУТ"
50	176197195	СДРУЖЕНИЕ "ТЕКСТИЛЕН И КОНФЕКЦИОНЕН КЛЪСТЕР - БУЛКЛЪСТ"
51	176199787	СДРУЖЕНИЕ "КЛЪСТЕР ПЛОВДИВ - ДРЕВЕН И СЪЗИДАТЕЛЕН"
52	176212989	СДРУЖЕНИЕ "КЛЪСТЕР МЕХАТРОНИКА И АВТОМАТИЗАЦИЯ"
53	17624643 6	СДРУЖЕНИЕ "КЛЪСТЕР ЗЕЛЕН ТРАНСПОРТ"
54	17624753 8	СДРУЖЕНИЕ С НЕСТОПАНСКА ЦЕЛ "БЕК-БЪЛГАРСКИ ЕКОЛОГИЧЕН КЛЪСТЕР"
55	176276461	СДРУЖЕНИЕ "ТЕЛЕКОМУНИКАЦИОНЕН КЛЪСТЕР СОФИЯ"
56	17628004 3	СДРУЖЕНИЕ "РЕГИОНАЛЕН КЛЪСТЕР ЗА КРЕАТИВЕН ДИЗАЙН"
57	176280381	СДРУЖЕНИЕ "КЛЪСТЕР ЗЕЛЕНИ ТЕХНОЛОГИИ И МАШИНОСТРОЕНЕ"
58	17628696 8	Български клима клъстер
59	176301765	СДРУЖЕНИЕ "КЛЪСТЕР ФОТО СТИЛ"
60	17636286 4	СДРУЖЕНИЕ "ИНДУСТРИАЛЕН КЛЪСТЕР ПОДЗЕМНА ИНФРАСТРУКТУРА"
61	176373451	КЛЪСТЕР "ФОТОВОЛТАИК НЕТ"
62	176377617	КЛЪСТЕР "ХЕЛТ"
63	17638023 2	СДРУЖЕНИЕ "БИООРГАНИЧЕН ЗЕЛЕН КЛЪСТЕР"
64	17638143 0	СМАРТ КОНСУЛТИНГ КЛЪСТЕР
65	17638463 9	СДРУЖЕНИЕ "КЛЪСТЕР ЗА РАЗВИТИЕ НА МОРСКИ СПЕЦИАЛИСТИ"
66	17640938 1	СДРУЖЕНИЕ "КЛЪСТЕР СТРИМОН - САНДАНСКИ"
67	17641005 6	СДРУЖЕНИЕ "АУТОМОТИВ КЛЪСТЕР БЪЛГАРИЯ"
68	176411197	КЛЪСТЕР ЗА ПОДПОМАГАНЕ И РАЗВИТИЕ НА БЪЛГАРСКИТЕ КОМПАНИИ В ОБЛАСТТА НА ЕНЕРГЕТИКАТА
69	176412146	СДРУЖЕНИЕ "КЛЪСТЕР ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ ПЛОВДИВ"
70	176418633	КЛЪСТЕР ЗА РАЗВИТИЕ НА ЕНЕРГИЙНО ЕФЕКТИВНО ОСВЕТЛЕНИЕ
71	17642887 8	СДРУЖЕНИЕ "КЛЪСТЕР БЕЗРАЗРУШИТЕЛЕН КОНТРОЛ В РЕПУБЛИКА БЪЛГАРИЯ"

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72	17643055 <u>7</u>	СДРУЖЕНИЕ "КЛЪСТЕР ЕКОЛОГИЧНИ ЕНЕРГОСПЕСТЯВАЩИ СИСТЕМИ"
73	17644076 <u>1</u>	ОБЕДИНЕН КОНСУЛТАНТСКИ КЛЪСТЕР - ПРАЙМ КЛЪСТ КОНСУЛТ
74	17644144 <u>3</u>	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ИНОВАЦИИ И КУЛТУРА"
75	176441614	КЛЪСТЕР БЪЛГАРСКИ БИЗНЕС КОНСУЛТАНТИ
76	17644516 <u>0</u>	СДРУЖЕНИЕ "КЛЪСТЕР РАЗВИТИЕ"
77	17644542 <u>0</u>	СДРУЖЕНИЕ "КЛЪСТЕР ПРИРОДЕН ГАЗ"
78	176463071	СДРУЖЕНИЕ "КЛЪСТЕР ИНВЕСТИТОРИ В ЗАРЯДНА ИНФРАСТРУКТУРА И ЕЛЕКТРИЧЕСКИ ПРЕВОЗНИ СРЕДСТВА"
79	17646505 <u>6</u>	СДРУЖЕНИЕ "КЛЪСТЕР ТУРИЗЪМ"
80	17647042 <u>7</u>	СДРУЖЕНИЕ "КЛЪСТЕР ЗАВАРЯВАНЕ И ЗАВАРЪЧНИ ТЕХНОЛОГИИ"
81	17648072 <u>0</u>	КОНСОРЦИУМ - КЛЪСТЕР " ЛаБиоХимМаш"
82	17648237 <u>2</u>	КЛЪСТЕР ЗА УСТОЙЧИВО РАЗВИТИЕ И РЕКЛАМА НА КУЛТУРНИЯ ТУРИЗЪМ В БЪЛГАРИЯ
83	17648324 <u>3</u>	КЛЪСТЕР "ХОРИЗОНТАЛНО ИНТЕГРИРАНИ ТЕХНОЛОГИИ И СИСТЕМИ"
84	17648337 <u>8</u>	СДРУЖЕНИЕ " Е - БИЗНЕС КЛЪСТЕР"
85	176483531	КЛЪСТЕР "ЛЕЧИТЕЛ - ЗДРАВЕ ЗА ХОРАТА И ЖИВОТНИТЕ"
86	17648403 <u>5</u>	ХЕПИ КЛЪСТЕР
87	17648416 <u>3</u>	СДРУЖЕНИЕ "КЛЪСТЕР ЗА УСТОЙЧИВО РАЗВИТИЕ НА ГРАДСКАТА СРЕДА"
88	17648447 <u>4</u>	СДРУЖЕНИЕ "КЛЪСТЕР ВАРНА БИЗНЕС КОНСУЛТ"
89	17648449 <u>4</u>	СДРУЖЕНИЕ "ИТ КЛЪСТЕР ВАРНА"
90	17648467 <u>2</u>	СДРУЖЕНИЕ "СТРОИТЕЛЕН КЛЪСТЕР"

91	17648486 8	СДРУЖЕНИЕ "РЕГИОНАЛЕН Е-КЛЪСТЕР"
92	17648499 6	ТРАНСПОРТЕН КЛЪСТЕР
93	17648506 2	СДРУЖЕНИЕ "БЪЛГАРСКИ ИНДУСТРИАЛЕН КЛЪСТЕР"
94	17648514 4	ИНОВАТИВЕН ДЕНТАЛЕН КЛЪСТЕР
95	176485169	СДРУЖЕНИЕ "БЪЛГАРСКИ МЕДИЕН КЛЪСТЕР"
96	176485176	ВИСОКОТЕХНОЛОГИЧЕН КЛЪСТЕР СОФИЯ
97	17648538 6	СДРУЖЕНИЕ "КЛЪСТЕР - УЕЛНЕС БГ"
98	176485411	ЕКЗЕКЮТИВ СЪРЧ КЛЪСТЕР
99	17648544 3	СДРУЖЕНИЕ "КЛЪСТЕР ТРАКИЯ ИКОНОМИЧЕСКА ЗОНА"
100	17648549 0	КЛЪСТЕР ИНФОРМИРАНО ОБЩЕСТВО ЗА УСТОЙЧИВО РАЗВИТИЕ
101	17648554 2	КЛЪСТЕР ЗА РАЗВИТИЕ НА ПУБЛИЧНО-ЧАСТНОТО ПАРТНЬОРСТВО В БЪЛГАРИЯ
102	176485621	СДРУЖЕНИЕ "КЛЪСТЕР ОБЕДИНЕНА БОРБА"
103	17648605 0	КЛЪСТЕР ЗА РАЗВИТИЕ НА ЕНЕРГИЙНО ЕФЕКТИВНИ РЕШЕНИЯ И АЛТЕРНАТИВНИ ЕНЕРГОИЗТОЧНИЦИ ЗА ДОМАКИНСТВА И СГРАДИ
104	17648660 2	КОНСУЛТАНТСКА МРЕЖА В УСЛУГАТА НА БЪЛГАРСКИЯ БИЗНЕС/КЛЪСТЕР/
105	17648686 9	СДРУЖЕНИЕ "КЛЪСТЕР ЧЕРНОМОРСКИ ПЪТ"
106	17648688 3	СДРУЖЕНИЕ "КЛЪСТЕР ЗА РАЗВИТИЕ И ПОПУЛЯРИЗИРАНЕ НА ЧАСТНО ОБРАЗОВАНИЕ В БЪЛГАРИЯ"
107	17648692 6	СДРУЖЕНИЕ "КЛЪСТЕР МОБИЛНИ ПРИЛОЖЕНИЯ"
108	17648693 3	СДРУЖЕНИЕ "КЛЪСТЕР БГ АВТОПАРК"
109	17648701 7	СДРУЖЕНИЕ "КЛЪСТЕР ЕКОЛОГИЯ, НАУКА, ИНОВАЦИИ, ЕФЕКТИВНОСТ"
110	17648707 0	СДРУЖЕНИЕ "КЛЪСТЕР ИНОВАЦИИ В ИНДУСТРИЯТА"
111	176487215	БЪЛГАРСКИ ДЕНТАЛЕН КЛЪСТЕР
112	17648723 4	СДРУЖЕНИЕ "КЛЪСТЕР ЕЛОПЕД" - гр. ПЛОВДИВ
113	17648724 1	КЛЪСТЕР ИНОВАЦИИ В БЪЛГАРИЯ

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114	17648740 5	СДРУЖЕНИЕ "КЛЪСТЕР ЗА РАЗВИТИЕ И ПОПУЛЯРИЗИРАНЕ НА РАЙОН ЛОВЕЧ"
115	17648766 1	ИНТЕРСТАРТ - КЛЪСТЕР ЗА ИНТЕРНАЦИОНАЛИЗАЦИЯ НА БЪЛГАРСКИТЕ МСП
116	17648767 9	КЛЪСТЕР БИО ИНОВАТИВНИ ТЕХНОЛОГИИ
117	17648771 1	КЛЪСТЕР АЙТОС
118	17648773 6	КЛЪСТЕР НА БЪЛГАРСКИТЕ СОЦИАЛНО ОТГОВОРНИ ИЗНОСИТЕЛИ
119	17648775 0	СДРУЖЕНИЕ "КЛЪСТЕР НА СОФТУЕРНИТЕ ИНЖЕНЕРИ"
120	17648776 8	СДРУЖЕНИЕ "КЛЪСТЕР ЗА РЕЕРАЕДС"
121	17648780 0	КЛЪСТЕР ЗА МЕДИЦИНСКИ ТУРИЗЪМ
122	17648786 4	"СДРУЖЕНИЕ КЛЪСТЕР ИНТЕРАКТИВНА МЕДИЙНА УСЛУГА"
123	17648790 7	СДРУЖЕНИЕ "КЛЪСТЕР НА ЗДРАВНИТЕ РЕГИОНИ"
124	17648794 6	"СДРУЖЕНИЕ КЛЪСТЕР ЗА УСТОЙЧИВИ СОЦИАЛНИ ПРЕДПРИЯТИЯ"
125	17648797 8	СДРУЖЕНИЕ "МЕДИЦИНСКИ КЛЪСТЕР"
126	17648802 5	СДРУЖЕНИЕ "НАЦИОНАЛЕН ТУРИСТИЧЕСКИ КЛЪСТЕР БЪЛГАРСКИЯТ ПЪТЕВОДИТЕЛ"
127	17648806 9	КЛЪСТЕР ИНТЕЛИГЕНТНИ СИСТЕМИ ЗА УПРАВЛЕНИЕ НА ЖЕЛЕЗОПЪТНИЯ ТРАНСПОРТ
128	17648811 9	ИНДУСТРИАЛЕН КЛЪСТЕР" ДОМ НА ТРУДА"
129	17648815 8	ЕКО КЛЪСТЕР БЪЛГАРИЯ
130	17648816 5	СДРУЖЕНИЕ "КЛЪСТЕР МАРКЕТИНГ И РЕКЛАМА"
131	17648821 5	СДРУЖЕНИЕ "КЛЪСТЕР ЕКО И ЗДРАВΟΣЛОВЕН ТУРИЗЪМ"
132	17648833 6	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ОБРАЗОВАНИЕ, ОБУЧЕНИЯ И КВАЛИФИКАЦИИ"
133	17648835	ИКТ КЛАУД КЛЪСТЕР

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134	17648839 3	Клъстер "Енергийна ефективност и възобновяеми енергийни източници"
135	17648842 5	КЛЪСТЕР МОНТЕ ЕНТЪРТЕЙНМЪНТ
136	17648848 9	КЛЪСТЕР АВТОНОМНА ПЛАТФОРМА ЗА ГРАЖДАНСКИ ВЪЗДУШНИ УСЛУГИ
137	17648856 0	СДРУЖЕНИЕ "КЛЪСТЕР БЪЛГАРСКА АУТДООР ГРУПА"
138	17648861 0	ЮГОЗАПАДЕН В2В КЛЪСТЕР
139	17648883 8	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ПОДПОМАГАНЕ НА ДЕЙНОСТТА НА МАЛКИ И СРЕДНИ ФИРМИ В ПРОЕКТИРАНЕТО, СМР, УЗАКОН. И ЕКСПЛ. НА ОВК, ВИК, ЕЛ. И ГАЗОВИ ИНСТАЛАЦИИ"
140	17648895 9	КЛЪСТЕР ОРГАНИЗАЦИОННИ ИНОВАЦИИ И ЛОГИСТИКА
141	17648942 0	СДРУЖЕНИЕ "БИЗНЕС КОНСУЛТАНТСКИ КЛЪСТЕР"
142	17648984 0	КЛЪСТЕР УРБАН АРТ
143	17649023 0	КЛЪСТЕР НА ПР И КОМУНИКАЦИОННИТЕ АГЕНЦИИ В БЪЛГАРИЯ
144	17649072 5	КЛЪСТЕР ВИРТУС
145	17649097 4	Клъстер за развитие на неформалното обучение
146	17650984 8	СДРУЖЕНИЕ "КЛЪСТЕР БЪЛГАРСКА ПОРТА"
147	17654637 0	СДРУЖЕНИЕ "ТУРИСТИЧЕСКИ КЛЪСТЕР СВЕТЪТ НА ТРАКИТЕ"
148	17657649 4	ШВЕЙЦАРСКО - БЪЛГАРСКО ДРУЖЕСТВО НА ИНВЕСТИТОРИТЕ - КЛЪСТЕР
149	176614386	СДРУЖЕНИЕ "КЛЪСТЕР ОДЕСОС"
150	17662047 8	СДРУЖЕНИЕ "КЛЪСТЕР ЕВРОПЕЙСКИ ЕКСПЕРТИ"
151	17663645 0	СДРУЖЕНИЕ "СДРУЖЕНИЕ КЛЪСТЕР МИКРО-ХИДРО ТЕХНОЛОГИИ"
152	17666038 7	НАЦИОНАЛЕН КЛЪСТЕР ЗА ИНТЕЛИГЕНТНИ ТРАНСПОРТНИ И ЕНЕРГИЙНИ СИСТЕМИ
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154	17674889 4	БЪЛГАРСКИ ТЕХНОЛОГЧЕН КЛЪСТЕР КОДИА
155	17675925 7	СДРУЖЕНИЕ "КЛЪСТЕР БИО"
156	176847216	СДРУЖЕНИЕ "ИНДУСТРИАЛЕН КЛЪСТЕР СИГУРНОСТ ИКС"
157	176857146	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ПОЛЕПЛОНИНСКО И ПЛОНИНСКО ЗЕМЕДЕЛИЕ-РЕГИОНИ"
158	17686680 0	СДРУЖЕНИЕ "КУЛТУРЕН КЛЪСТЕР БЪЛГАРИЯ"
159	17688932 9	СДРУЖЕНИЕ "КЛЪСТЕР МЕТРОЛОГИЯ, КАЧЕСТВО, СЕРТИФИКАЦИЯ"
160	17690536 3	СДРУЖЕНИЕ "КЛЪСТЕР ЗА ВИСОКОТЕХНОЛОГИЧНА РЕИНДУСТРИАЛИЗАЦИЯ - ПЛОВДИВ"
161	17690542 0	СДРУЖЕНИЕ "КЛЪСТЕР АУТОМОЛ - ПЛОВДИВ"
162	176927616	СДРУЖЕНИЕ "ЛУДОГОРИЕ-ИНДУСТРИАЛЕН КЛЪСТЕР"
163	17693866 2	СДРУЖЕНИЕ "ТРАНСГРАНИЧЕН КЛЪСТЕР ЗА ЗЕЛЕНА ЕНЕРГИЯ КОНСТАНЦА-ДОБРИЧ "
164	176951414	СДРУЖЕНИЕ "КЛЪСТЕР ЧИСТИ ТЕХНОЛОГИИ ЗА МИКРО, МАЛКИ И СРЕДНИ ПРОИЗВОДСТВА"
165	176952155	СДРУЖЕНИЕ "КЛЪСТЕР ЗА РАЗВИТИЕ И ОБУЧЕНИЕ НА ЛЕКАРИ ПО ДЕНТАЛНА МЕДИЦИНА"
166	17696841 7	СДРУЖЕНИЕ "ИНОВАТИВЕН КЛЪСТЕР-ЗД ТЕХНОЛОГИИ"
167	17697237 6	СДРУЖЕНИЕ "БАЛКАНСКИ КЛЪСТЕР ЗА ЗДРАВЕН, УЕЛНЕС И СПА ТУРИЗЪМ"
168	176977081	СДРУЖЕНИЕ "КЛЪСТЕР ЗА СОЦИАЛНО-ИКОНОМИЧЕСКИ АНАЛИЗИ /КСИА/"
169	17700001 0	СДРУЖЕНИЕ "ТРАНСГРАНИЧЕН КЛЪСТЕР ЗА ХРАНИ И ОРГАНИЧНА ПРОДУКЦИЯ БИОСЕЙФ ДОБРУДЖА"
170	17704166 9	СДРУЖЕНИЕ "АГРО КЛЪСТЕР УСТОЙЧИВО РАЗВИТИЕ НА СТРАНДЖА"
171	17705057 9	КЛЪСТЕР-НИШОВ И НЕСЕЗОНЕН ТУРИЗЪМ В БЪЛГАРИЯ
172	177056105	СДРУЖЕНИЕ "МЕБЕЛ ГРУП КЛЪСТЕР"
173	177066163	ЕЛ БИ КЛЪСТЕР

174	177071712	КЛЪСТЕР ИНОВАТИВНИ ЖЕЛЕЗОПЪТНИ СИСТЕМИ
175	177071751	КООПЕРАТИВЕН КЛЪСТЕР
176	177072643	"КЛЪСТЕР ЗА НАЦИОНАЛНА И МЕЖДУНАРОДНА ПОДКРЕПА ЗА РАСТЕЖ"
177	177077327	Клъстер ОПОЛЗОТВОРЯВАНЕ НА ОТПАДЪЦИ ДЗЗД
178	177079520	КЛЪСТЕР "ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ-ОБЛАСТ БЛАГОЕВГРАД"
179	177080889	Бизнес софтуер клъстер
180	177085772	"КЛЪСТЕР ЕЛЕКТРО ТЕХНОЛОГИИ"
181	177086454	Иновативен клъстер "Симулационни модели в медицината"
182	177087410	КЛЪСТЕР НА КАБЕЛНИ ОПЕРАТОРИ СИМ НЕТ
183	177087666	Клъстер Клинтех България
184	177091946	"КЛЪСТЕР ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ БУРГАС"
185	177093160	"КЛЪСТЕР БИМ БЪЛГАРИЯ" ДЗЗД
186	177093865	БАЛКАНСКИ КЛЪСТЕР ЗА ФИЛМОВО И ТЕЛЕВИЗИОННО ПРОИЗВОДСТВО
187	177096402	"КЛЪСТЕР НА МАЛКИТЕ И СРЕДНИ ИЗНОСИТЕЛИ"
188	177098894	СДРУЖЕНИЕ "КЛЪСТЕР ИНОВАТИВНИ РЕШЕНИЯ ЗА ЗДРАВЕ"
189	177099882	"КЛЪСТЕР БИОСИНЕРГИЯ"
190	177100085	Сдружение "ИТО Клъстер Уърк енд Шеър"
191	177101251	СДРУЖЕНИЕ "ЧЕРНОМОРСКИ КЛЪСТЕР ИНОВАЦИИ И РАЗВИТИЕ"
192	177105285	"КЛЪСТЕР ЗА ИНФОРМАЦИОННО ОСИГУРЯВАНЕ НА ЧЕРНОМОРСКИЯ ТУРИСТИЧЕСКИ БИЗНЕС"
193	177106405	КЛЪСТЕР СОФИЯ ГРАД НА ЗНАНИЕТО
194	177106832	Сдружение "АВТЕНТИКА Клъстер"
195	177108961	КЛЪСТЕР ДЕЙТА ИНВЕСТМЪНТ
196	177109764	ДЗЗД "КЛЪСТЕР ТРАКИЯ - ОБРАЗОВАТЕЛНО КВАЛИФИКАЦИОНЕН ХЪБ"
197	177112785	Клъстер Геодинамика

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199	177116196	"КЛЪСТЕР ЗА ЗЕЛЕНА ЕНЕРГИЯ И ИНОВАТИВНО ДЪРВОПРЕРАБОТВАНЕ" КЗЕИД
200	177116470	НЕСТОС УУД КЛЪСТЕР
201	177116933	СЕВЕРОЗАПАДЕН ИНДУСТРИАЛЕН КЛЪСТЕР
202	177117106	КИЙ МЮЗИК КЛЪСТЕР
203	177121026	"КЛЪСТЕР ЗДРАВЕ И СТИЛ"
204	177121948	КЛЪСТЕР БЪЛГАРИЯ ЕКСПОРТ
205	177126952	КЛЪСТЕР ЕЛЕКТРОМОБИЛНОСТ
206	177127310	ИНОВАЦИОНЕН КЛЪСТЕР ЗА МОДЕРНА ПЕРСОНАЛИЗАЦИЯ НА ТРАНСПЛАНТАЦИЯТА НА ОРГАНИ, ТЪКАНИ И КЛЕТКИ
207	177127402	"КЛЪСТЕР "ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ - БЛАГОЕВГРАД"
208	177128857	ДЗЗД "ЕКОПРОДУКТ ИНВЕСТ КЛЪСТЕР"
209	177129172	Сдружение с нестопанска цел "ИНОВАТИВЕН КЛЪСТЕР СИМУЛАЦИОННИ МОДЕЛИ В МЕДИЦИНАТА"
210	177130210	КЛЪСТЕР ЗА РАЗВИТИЕ НА ХАРТИЕДЗЗД "КОМУНАЛНА ТЕХТИКА - АЛЕКС"НОТО ПРОИЗВОДСТВО В БЪЛГАРИЯ
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212	177133822	СДРУЖЕНИЕ "КЛЪСТЕР ИНФОРМАТИКА"
213	177148977	СДРУЖЕНИЕ "КЛЪСТЕР МОДНА ИНДУСТРИЯ ТРАКИЯ"
214	177153935	СДРУЖЕНИЕ "КЛЪСТЕР ТРАКИЯ - ОБРАЗОВАТЕЛНО КВАЛИФИКАЦИОНЕН ХЪБ"
215	177156422	Сдружение Клъстер за развитие на сателитни комуникации
216	177166021	КЛЪСТЕР ЗА РАЗВИТИЕ НА ХАРТИЕНОТО ПРОИЗВОДСТВО В БЪЛГАРИЯ
217	177189187	ЕНЕРГИЕН КЛЪСТЕР БЪЛГАРСКА ГАЗОВА МРЕЖА
218	177209451	КЛЪСТЕР ИНОВАЦИИ ЗА РЕСУРСНА ЕФЕКТИВНОСТ
219	177226582	СДРУЖЕНИЕ "КЛЪСТЕР ЧЕРНОМОРСКА ИКОНОМИЧЕСКА ЗОНА"
220	105574587	СДРУЖЕНИЕ "КЛЪСТЪР ЗА АЛТЕРНАТИВНА И ЛОКАЛНА ЕФЕКТИВНОСТ- КАЛЕ"
221	148129073	СДРУЖЕНИЕ "МОРСКИ КЛЪСТЪР БЪЛГАРИЯ"
222	175221469	СДРУЖЕНИЕ "КЛЪСТЪР ЗА ЗДРАВЕН ТУРИЗЪМ"
223	17590014	СДРУЖЕНИЕ "БЪЛГАРСКИ ВИНАРСКИ КЛЪСТЪР"

	6	
224	176128782	СДРУЖЕНИЕ "БЪЛГАРСКИ Е КЛЪСТЪР"
225	176132030	СДРУЖЕНИЕ "КЛЪСТЪР ЗА ИНОВАТИВНИ БИО И ЕКО ТЕХНОЛОГИИ"
226	17620496 0	СДРУЖЕНИЕ "НАЦИОНАЛЕН КЛЪСТЪР ПРЕДПРИЕМАЧЕСТВО В КУЛТУРНИТЕ ИНДУСТРИИ"
227	17624539 8	СДРУЖЕНИЕ "ТУРИСТИЧЕСКИ КЛЪСТЪР - ДУНАВ"
228	17624539 80016	СДРУЖЕНИЕ "ТУРИСТИЧЕСКИ КЛЪСТЪР - ДУНАВ" - КЛОН БЕЛОГРАДЧИК
229	17626804 8	КЛЪСТЪР ЗА ЕНЕРГИЙНО, ЕФЕКТИВНО И ЕКОЛОГИЧНО СТРОИТЕЛСТВО И РЕМОНТ
230	17648687 6	СДРУЖЕНИЕ "КЛЪСТЪР ВИЗИЯ"
231	17648785 7	ТУРИСТИЧЕСКИ КЛЪСТЪР ТРАКИТЕ
232	17648869 9	БЪЛГАРСКИ РЕСТОРАНТЬОРСКИ КЛЪСТЪР
233	17668095 2	СДРУЖЕНИЕ "РЕГИОНАЛЕН КЛЪСТЪР СЕВЕРОИЗТОК"
234	17707471 9	КЛЪСТЪР ЕФЕКТИВНО УПРАВЛЕНИЕ НА БАЗА ДАННИ
235	177079851	Клъстър за развитие на сателитни комуникации
236	17708543 4	ДЗЗД "КЛЪСТЪР "УСТОЙЧИВО РАЗВИТИЕ"
237	17709953 7	КЛЪСТЪР БУЛТЕХНОПЛАСТ
238	177101854	Е-Клъстър
239	177102588	Български Речен Клъстър "Дунав"
240	177121791	КЛЪСТЪР ИНДУСТРИАЛНА ЗОНА МИЗИЯ ЗА ИКОНОМИЧЕСКО РАЗВИТИЕ НА СЕВЕРОЗАПАДНА БЪЛГАРИЯ
241	177121898	КЛЪСТЪР ИКОНОМИЧЕСКА ИНИЦИАТИВА СТРАНДЖА-САКАР ЗА ЮГОИЗТОЧНА БЪЛГАРИЯ
242	177123225	КЛЪСТЪР ТЕХНОЛОГИЧНИ ПАРКОВЕ ЛУДОГОРИЕ ЗА СЕВЕРОИЗТОЧНА БЪЛГАРИЯ
243	177126482	БЪЛГАРСКИ ТЕХНОЛОГИЧЕН КЛЪСТЪР КОДИА

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List of clusters, registered in the Trade Register

	Legal entity
1	"Текстилен клъстер българска коприна" АД, ЕИК/ПИК 131393944
2	"КЛЪСТЪР" ЕООД, ЕИК/ПИК 123072967
3	"КЛЪСТЪР КОНСУЛТ" ЕООД - в ликвидация, ЕИК/ПИК 160062299
4	"КЛЪСТЪР ХРАНИТЕЛНИ ДОБАВКИ ЗА ДОМАШНИ ЛЮБИМЦИ" ООД, ЕИК/ПИК 202502911
5	"НюМедиа Клъстер" ООД, ЕИК/ПИК 202524498
6	"СТАРС КЛЪСТЪР ЕНТЪРТЕЙНМЪНТ" ООД, ЕИК/ПИК 202575222
7	"ХОБИ КЛЪСТЪР" ЕООД, ЕИК/ПИК 203182923
8	"КЛЪСТЪР ВИЗИЯ" Сдружение, ЕИК/ПИК 176486876
9	"ЧЕРНОМОРСКИ БИЗНЕС КЛЪСТЕР" АД, ЕИК/ПИК 201699911
10	"ХОЛДИНГ ТЕКСТИЛЕН КЛЪСТЕР КОПРИНА" АД, ЕИК/ПИК 202055809
11	"КЛЪСТЕР ЗА ЕКО И БИО-ТУРИЗЪМ" ООД, ЕИК/ПИК 202165401
12	"Ултра Офис Клъстер" ООД, ЕИК/ПИК 202206684
13	"НАЦИОНАЛЕН КУРИЕРСКИ КЛЪСТЕР" ООД, ЕИК/ПИК 202213376
14	"СТРОИТЕЛЕН КЛЪСТЕР МОНТАНА" ООД, ЕИК/ПИК 202357088
15	"РЕСТОРАНТЪОРСКИ КЛЪСТЕР МОНТАНА" ООД, ЕИК/ПИК 202366094
16	"Клъстер Творческо Габрово" ООД, ЕИК/ПИК 202376843
17	"ГЕОИНЖЕНЕРИНГ КЛЪСТЕР" ООД, ЕИК/ПИК 202486186
18	"Бизнес Сървисис Клъстер" ООД, ЕИК/ПИК 202498861
19	"КЛЪСТЕР ПРОМАРКЕТ ПЛЮС" ООД, ЕИК/ПИК 202507673
20	"Клъстер Европул" ООД, ЕИК/ПИК 202508024
21	"ТРАНСПОРТЕН КЛЪСТЕР ПЕРНИК" ООД, ЕИК/ПИК 202510737
22	"КОНСУЛТАНТСКИ КЛЪСТЕР ВЕРИТАС" ООД, ЕИК/ПИК 202518342
23	"КЛЪСТЕР МЪЖКА МОДА" АД, ЕИК/ПИК 202521502
24	"Обединен Счетоводен Клъстер" ООД, ЕИК/ПИК 202522967
25	"ИНОВАТИВЕН ПРОИЗВОДСТВЕН КЛЪСТЕР" АД, ЕИК/ПИК 202523282
26	"Клъстер Колективно Пазаруване" ООД, ЕИК/ПИК 202525109
27	"БИЗНЕС ИНВЕСТИЦИОНЕН КЛЪСТЕР" ООД, ЕИК/ПИК 202527626
28	"ЗАНАЯТЧИЙСКИ КЛЪСТЕР" ООД, ЕИК/ПИК 202528265
29	"КЛЪСТЕР РИЙКЪЛ И ГРИЙН ЕНЕРДЖИ" ООД, ЕИК/ПИК 202528518
30	"ЖАР Клъстер" ООД, ЕИК/ПИК 202528646

31	"УНИТРЕЙД КЛЪСТЕР" ООД, ЕИК/ПИК 202529132
32	"КЛЪСТЕР АРЕА БРАНД" ООД, ЕИК/ПИК 202530316
33	"КЛЪСТЕР ФИНАНСОВА ГРУПА СИС" ООД, ЕИК/ПИК 202530608
34	"Рила Инфо Клъстер" ООД, ЕИК/ПИК 202530946
35	"КЛЪСТЕР ЗА ИНОВАТИВЕН МАРКЕТИНГ" ООД, ЕИК/ПИК 202531172
36	"Клъстер природни ресурси" ООД, ЕИК/ПИК 202531254
37	"КЛЪСТЕР НА КОНСУЛТАНТСКИТЕ КОМПАНИИ" ООД, ЕИК/ПИК 202531432
38	"КЛЪСТЕР БЕСТ ТРАНС СЪРВИС" ООД, ЕИК/ПИК 202532534
39	"Клъстер "Регион Тракия"" ООД, ЕИК/ПИК 202533216
40	"МЕДИЕН КЛЪСТЕР - БЪЛГАРИЯ" ООД, ЕИК/ПИК 202534535
41	"КЛЪСТЕР ЗА УСТОЙЧИВО РАЗВИТИЕ НА БЪЛГАРИЯ" ООД, ЕИК/ПИК 203029393
42	"КЛЪСТЕР ИНТЕРНЕТЪНЪЛ" ЕООД, ЕИК/ПИК 202655348
43	"АДВАНСТ БИЗНЕС КЛЪСТЕР" ЕООД, ЕИК/ПИК 203168514
44	"Клъстер в подкрепа на микро, малките и средни предприятия в България" ООД, ЕИК/ПИК 203965353
45	"НАЦИОНАЛЕН КЛЪСТЕР СВЕТОВЕ" ЕООД, ЕИК/ПИК 203576302
46	"МЮЗИК МЕДИЯ КЛЪСТЕР" ООД, ЕИК/ПИК 204239601
47	"КЛЪСТЕР ПРИЛОЖНИ ИНФОРМАЦИОННИ ТЕХНОЛОГИИ" ООД, ЕИК/ПИК 204243489
48	"КЛЪСТЕР ПОДЕМНА ТЕХНИКА" ООД, ЕИК/ПИК 204244961
49	"КЛЪСТЕР „ФЕСТИВАЛИТЕ В БЪЛГАРИЯ"" ООД, ЕИК/ПИК 204277954
50	"КЛЪСТЕР ЗА ИНОВАЦИОННИ ДЕЙНОСТИ И НАУЧНИ ИЗСЛЕДВАНИЯ" ООД, ЕИК/ПИК 204283590
51	"КЛЪСТЕР СМАРТ ЕНЕРДЖИ" ООД, ЕИК/ПИК 204286661
52	"КЛЪСТЕР ЗА ИНОВАТИВНИ РЕШЕНИЯ ЗА УЕЛНЕС И ЗДРАВЕ" ООД, ЕИК/ПИК 204286799
53	"НАЦИОНАЛЕН КЛЪСТЕР ЗА МОДНИ ОБЛЕКЛА" ООД, ЕИК/ПИК 204310491
54	"КЛЪСТЕР МЕХАТРОНИКА" ООД, ЕИК/ПИК 204363442
55	"КЛЪСТЕР ЗА СИМУЛАЦИОННИ МОДЕЛИ В МЕДИЦИНАТА" ЕООД, ЕИК/ПИК 121714273
56	"ЕКОПРОДУКТ ИНВЕСТ КЛЪСТЕР" ООД, ЕИК/ПИК 204428057
57	"Клъстер" ЕООД, ЕИК/ПИК 204912065
58	"Европейски Индустириален Клъстер" Сдружение, ЕИК/ПИК 204957509
59	"СДРУЖЕНИЕ "КЛЪСТЕР ЗА ДОСТЪПЕН ТУРИЗЪМ"" Сдружение - в несъстоятелност, ЕИК/ПИК 176038872
60	"ЛУДОГОРИЕ - ИНДУСТРИАЛЕН КЛЪСТЕР" Сдружение, ЕИК/ПИК 176927616
61	"Клъстер на малките и средни износители" Сдружение, ЕИК/ПИК 177096402
62	"КЛЪСТЕР ИНФОРМАЦИОННИ И КОМУНИКАЦИОННИ ТЕХНОЛОГИИ БУРГАС" Сдружение, ЕИК/ПИК 177091946
63	"СДРУЖЕНИЕ КЛЪСТЕР ИНФОРМАТИКА" Сдружение, ЕИК/ПИК 177133822
64	"Сдружение Национален клъстер за интелигентни транспортни и енергийни системи" Сдружение, ЕИК/ПИК 176660387
65	"Е-БИЗНЕС КЛЪСТЕР" Сдружение, ЕИК/ПИК 176483378

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66	"КЛЪСТЕР ЗА ПОДПОМАГАНЕ И РАЗВИТИЕ НА БЪЛГАРСКИТЕ КОМПАНИИ В ОБЛАСТТА НА ЕНЕРГЕТИКАТА" Сдружение, ЕИК/ПИК 176411197
67	"СДРУЖЕНИЕ "КЛЪСТЕР ЗА РАЗВИТИЕ НА ЕНЕРГИЙНО ЕФЕКТИВНИ РЕШЕНИЯ И АЛТЕРНАТИВНИ ЕНЕРГОИЗТОЧНИЦИ ЗА ДОМАКИНСТВА И СГРАДИ"" Сдружение, ЕИК/ПИК 176487768
68	"СДРУЖЕНИЕ "АУТОМОТИВ КЛЪСТЕР БЪЛГАРИЯ"" Сдружение, ЕИК/ПИК 176410056
69	"БАЛКАНСКИ КЛЪСТЕР ЗА ЗДРАВЕН, УЕЛНЕС И СПА ТУРИЗЪМ" Сдружение, ЕИК/ПИК 176972376
70	"КЛЪСТЕР ЕЛОПЕД" Сдружение, ЕИК/ПИК 176487234
71	"СДРУЖЕНИЕ КЛЪСТЕР ЗА РАЗВИТИЕ НА ЕНЕРГИЙНО ЕФЕКТИВНО ОСВЕТЛЕНИЕ" Сдружение, ЕИК/ПИК 176418633
72	"ИНДУСТРИАЛЕН КЛЪСТЕР СЕЛСКОСТОПАНСКА ТЕХНИКА"" Сдружение, ЕИК/ПИК 117670060
73	"Сдружение КЛЪСТЕР-УЕЛНЕС БГ" Сдружение, ЕИК/ПИК 176485386
74	"СДРУЖЕНИЕ „КЛЪСТЕР ИНОВАТИВНИ РЕШЕНИЯ ЗА ЗДРАВЕ“" Сдружение, ЕИК/ПИК 177098894

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Списък на изследваните клъстери, категоризирани от ИАНМСП

№.	Име на клъстера	Отрасъл	Година на създаване	Седалище	Интернет страница	Брой членове	Видове членове	Етап на развитие	Етап на функциониране
1	Авентика клъстер	НИРД, геномика	2016					начален етап	няма информация
2	Асоциация на създателите на авторско съдържание	Производство на филми и телевизионни предавания	2016	София	https://www.asas.bg.com/home	12	специализирани доставчици на стоки и услуги в сферата на авторските и креативни индустрии и свързаните с тях научни институции, обучаващи организации, неправителствени организации и други структури,	начален етап	действащ
3	Биосинергия	ВЕИ, Енергийна ефективност и енергоспестяване, Биомаса, Устойчиво енергийно развитие, Еко иновации	2011	Пловдив	http://gr.eensyne.rguclust.org.eu	27	фирми, гимназия, университети	начален етап	действащ
4	Бултехнопласт	пътната безопасност	2016	София	http://bultechnoplast.com/	13	юридически лица (десет български предприятия, една чуждестранна компания, една неправителствена организация и едно висше	начален етап	действащ

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5	Българска Асоциация "Труд, здраве, безопасност"	безопасност на труда	2014	София + регионални структури	http://helthands.althands.afetvbg.com/		начален етап	действащ
6	Българска асоциация за метални конструкции	металообработка	2014	София		6	начален етап	действащ
7	Геодинамика	сейсмологични изследвания		Монтана	http://www.geodynamiccluster.com	10	начален етап	действащ
8	Екопродукт Инвест Клъстер ООД	производства от рециклирани материали		Пазарджик	няма собствен сайт		начален етап	действащ
9	Електромобилн ост	електрически велосипеди	2016	София	http://letcbg.com/cluster.html	7	начален етап	действащ
10	Електро технологии	електротехника	2016	София		18	начален етап	действащ
11	Здраве и стил	Хранителни					начален етап	няма

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19	Клъстер за информационно осигуряване на черноморския туристически бизнес	ИКТ	2016	Бургас	http://itb.sc.org/	14	фирми, университети, физически лица	начален етап	действащ
20	Клъстер за развитие на сателитни комуникации	сателитна телекомуникация	2016	София	http://www.clustef-dsc.com/	8 (2 чужди фирми)	предимно бизнес организации	начален етап	действащ
21	Клъстер Информационни и комуникационни технологии - Благоевград	ИКТ	2016	Благоевград			МСП, представители на българския ИКТ бизнес, община Благоевград, Института по математика и информатика при БАН, Института по изкуствен интелект, Украйна, Югозападен Университет "Неофит Рилски"	начален етап	действащ
22	Клъстер на кабелни оператори Сим Нет	далекосъобщения, ИКТ	2016	Враца		16		начален етап	действащ
23	Клъстер на малките и средни износители	машиностроене и ИКТ	2016	София	https://bulgarias.mexoptcluster.wordpress.com/	19	фирми	начален етап	действащ
24	Клъстер	машиностроене	2016	София + Габрово	http://ho	16	фирми, институт, университет	начален етап	действащ

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	Подемна Техника ООД					ists-bulgaria.com/						
25	Клъстер София град на знанието	НИРД, медицина, биотехнологии	2016	София	26	http://knowledge.sofia.eu/bg/	20 търговски дружества (в т.ч. 1 чуждестранно), 1 научна организация, 1 университет и 4 организации подпомагачи бизнеса	начален етап	действащ			
26	Клъстер Тракия Икономическа зона	ИКТ, информационни услуги, анализи		Пловдив	12	http://cluster.bg/	НПО (обучителни центрове) ВУАРР (висше училище за агробизнес и развитие на регионите), фирми, икономическа зона	начален етап; развиващ се	действащ			
27	Клъстер "Микроелектроника и индустриални електронни системи"	Микроелектроника	2013					начален етап	няма го в ТР (ГФО само за 2013)			
28	Кооперативен кльстер	лека промишленост	2016	София + Бургас	17	http://cluster.tpkuunion.com/cluster/tpk/	производствени кооперации, фирма, УНСС	начален етап	действащ			
29	Културен Клъстер България	култура	2014	София	22		юридически и физически лица	начален етап	действащ			
30	Лудогорие Индустриален	разни индустрии		Разград				начален етап	действащ			

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37	Сдружение за знание-интензивно развитие	информационни услуги, ИКТ		Велико Търново София	http://ki-da.bg/	9	фирми, фондация, консултантска компания, университет	начален етап	действащ
38	Северозападен индустриален кълъстер	машиностроене	2016	Белене				начален етап	няма сайт или информация за членове и дейност
39	Симулационни модели в медицината	медицина	2016	София	http://wwwcis.com/		сдружения, Областна администрация, Регионална стопанска камара, фирми	начален етап	няма информация на сайта от ноември 2016
40	Смарт Енерджи ООД	енергетика						начален етап	няма информация
41	Текстилен и конфекционен кълъстер Булкълъст	облекло и текстил		с. Резбарци, Кърджали				начален етап	по проект /2012/, статус на проекта прекратен
42	Черноморски кълъстер "Иновации и развитие"	ИКТ, консултантски услуги						начален етап	няма информация
43	Браншова асоциация полимери	преработка на полимери	1999	София	(http://www.bap-bg.org/)	22	фирми, сътрудничество с министерства и университети, научни институти	развиващи се	действащ
44	Българска асоциация на износителите на вино	винопроизводство	2012	София	няма собствен сайт			развиващи се	действащ
45	Е Бизнес Кълъстер	ИКТ, електронен бизнес		Пловдив	(http://www.atlas.com/)	16	фирми и образователни институции	развиващи се	действащ

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46	Сдружение Клъстер Заваряване и заваръчни технологии	електротехника	2013	София	net.bg/page.php?id=17	15 (1 чужда организация)	фирми, университети, институти	развиващи се	след 2017 няма инфо по сайта няма собствен сайт и информация за членове; член е на ABC
47	Здравен туризъм – България	стоматология, туризъм						развиващи се	
48	Инвеститори в зарядна инфраструктур а и електрически превозни средства	електротехника		София	няма			развиващи се	работи по проекти
49	Индустриален кълстер Електромобили	електротехника	2009	София	http://www.emic-bg.org/	63	фирми + БАН, университети, институти, фондации	развиващи се	действащ
50	Индустриален кълстер Подземна инфраструктур а	подземна тръбопроводна инфраструктура	2012	София	http://www.ikri.eu/	19	фирми, институти, асоциации, медия	развиващи се	няма актуална инфо по сайта
51	Информация, Знание, Възможности	строителство, ИКТ		Велико Търново, София	http://www.dask-alo.com/inko-bg/	26		развиващи се	няма никаква инфо на сайта

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52	Клъстер за развитие и обучение на лекари по дентална медицина	медицина	2015	София и Плевен	http://na.noacade.my.bg/a/bout-us/	13 (1 чужд)	фирми, амбулатории, университет	развиващи се	действащ / работи по проекти
53	Клийнтех България	чисти технологии	2016	Враца	https://cl.eantech.bg/cluste.r.wordpr.ess.com/	27	фирми, учебни заведения, НПО, Фондация, ТПП, клъстер	развиващи се	действащ
54	Клъстер Айтос	ИКТ	2013	Бургас, Габрово	http://w.www.clust.eritos.or.g/	26	фирми, университет, лаборатория към БАН, общини	развиващи се	действащ
55	Клъстер за образование, обучения и квалификации	образование	2013	Пловдив, София	http://w.www.kook.bg/	13+	фирми, университет, обучителни центрове, физически лица	развиващи се	действащ
56	Клъстер зелена синергия	ВЕИ	2011	Пловдив	(http://gr.eensyne.gyclust.er.eu/	27	фирми, университети, енергийна агенция	развиващи се	действащ
57	Клъстер Мъжка Мода	мода, текстил		Русе	(http://m.ens-fashion-cluster.eu/			развиващи се	марка Ричмарт
58	КРЕЕО - Клъстер за развитие на енергийно	електротехника	2012	София, Враца	http://w.www.creeo.bg/ind.ex.php/b	7	фирми	развиващи се	действащ

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65	Индустириален клъстер Средногорие	Добивна промишленост, машиностроене, електроника	2005	София		https://srednogo.rie.eu/	37	фирми, университети, обучителен център, вестници, общини	развит	действащ
66	Сдружение "Български клъстер телекомуникации"	телекомуникации	2008	София		http://www.btccluster.org/bg/contenent/about-us	17	фирми, университет	развит	действащ
67	Аутомол-Пловдив АФЕУ	автосервизна дейност		Пловдив		http://www.auto.mol.bg/		фирма	некатегоризиран	работи фирмата
68	Асоциация на фирмите за електронни услуги	консултантски услуги							некатегоризиран	няма информация
69	Иновационни дейности и научни изследвания	ИКТ				http://bgcluster.com/	7		некатегоризиран	има сайт, последна инфо 2017, няма офис за контакт
70	Кий Мюзик Клъстер	звукзапис, разпространение на музика						сдружение	некатегоризиран	няма информация
71	Клъстер Здравен институт	медицински услуги							некатегоризиран	няма информация
72	Клъстер на българските социално отговорни	износ				http://csreporters.com/			некатегоризиран	създаден по проект, няма офис контакт, сайтът не е актуализиран

