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improving **SME competitiveness** policies

# CLUSTER ECOSYSTEM ANALYSIS

A CASE STUDY ANALYSIS OF THE CLUSTERING ECOSYSTEM IN HUNGARY

## Hungarian Partner

Project Partner: Prime Minister's Office, DSS EDP

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## INTRODUCTION

ACCELERATE GDT brings together 7 European partners to accelerate the twin green and digital transitions by aligning supports into regional and national cluster policies, which will in turn raise SME competitiveness, build regional resilience, increase shared value, and boost recovery across Europe. The project runs from 1<sup>st</sup> March 2023 to the 31<sup>st</sup> of May 2027.

Clusters are a central feature in the European Commissions' competitiveness and Smart Specialisation strategies (DG Research, 2019). The European Expert Group on clusters found that clusters have a pivotal role in accelerating the twin green and digital transition (GDT), building resilience, and boosting recovery. During the Covid-19 pandemic, clusters demonstrated the capacity to drive change and make European value chains more resilient. Clusters can reach European firms quickly, especially SMEs and improve their innovation potential, technological uptake, skills and internationalisation.

The EU Green Deal's aim is a clean, circular, and climate neutral economy for European industry and society. Clusters can accelerate this transition towards a green economy, by identifying and supporting their members' access to green technologies, innovation, and business solutions, dedicated funding and markets, and thus facilitate the green transition.

Digital solutions and the data-based economy are transforming industry and society, and the COVID-19 crisis has further accelerated this need. The EC (2021, p.14) suggests that the "digital transition requires the uptake of solutions by virtually all businesses. The transformation generates new competitive fields as it brings in new opportunities and new ways to create value." Laggards who do not develop digital components in their business model are certain to fall behind in competitiveness and growth.

## ACCELERATE GDT PROJECT PARTNERS



## GENERAL INFORMATION - HUNGARY

Prime Minister's Office Deputy State Secretary for Economic Development Programmes is the Hungarian Partner in the ACCELERATE GDT consortium.

**Capital:** Budapest

**Size:** 93 026 km<sup>2</sup>

**Population:** 9 599 744 (2023 KSH)

**National GDP:** 178,788,572 USD (2022 Word Bank)

**GDP per capita:** 70,530 USD (2021 Word Bank)

**% of Unemployment:** 4.1 % (2022 KSH)



Hungary is a parliamentary republic consisting of 19 counties. Members of Parliament elect a Prime Minister following a proposal from the President of the Republic. (Parliament votes on the Government's programme at the same time.) The election of the Prime Minister shall be subject to a majority vote of the Members of Parliament. The President of the Republic appoints ministers according to the Prime Minister's recommendations. In addition to this, the Prime Minister chairs cabinet meetings and ensures the implementation of government decisions.

The automotive sector is one of Hungary's core industries and generates almost 21% of total exports. More than 600 companies employing a total of 100,000 people are active in the sector. Four large automotive Original Equipment Manufacturers ("OEMs") have production facilities in the country, as well as electronics (22%), pharmaceuticals & medical technology, and food industry.

Intra-EU trade accounts for 78% of Hungary's exports (Germany 28%, Romania, Slovakia, Austria and Italy all 5%), outside the EU 3% go to the United States and 3% to the United Kingdom.

In terms of imports, 71% come from EU Member States (Germany 24%, Austria 6% and Poland and the Netherlands 5%), while outside the EU 9% come from China and 4% from Republic of Korea.

## LANDSCAPE AND BACKGROUND OF CLUSTERS IN (HUNGARY)

Hungary's government was relatively early, the first among Central and Eastern European countries to recognize the potential role of clusters. The promotion of clusters was already part of the first Széchenyi Plan. It is likely thanks to this programme that the foundation of the first cluster in the CEE region was implemented in Hungary. In December 2000, almost 13 years before the Automotive Industry Cluster of Catalonia, 12 founders have launched the Pannon Automotive Cluster, a pioneer in every respect. The founders of the cluster, seated in Győr, included the major automotive manufacturers of the region (Audi Hungária Motor Kft., Magyar Suzuki Rt., Opel Magyarország Autóipari Kft., Rába Járműipari Holding Rt.), Széchenyi István University, two financial institutions, and the Western Transdanubian Regional Development Council, performing the duties of the cluster manager. By 2007, it had 74 cluster members, but in 2008, the former model cluster of the country dissolved. Although the primary actors still maintain their business relationship, the institutionalized form of the collaboration has not been reinvigorated.

However, in the past 20 years, numerous clusters started operating following the path of Pannon Automotive Cluster, with most founded in the period 2007–2010. Although the actors (university base, companies relevant at the industry level, innovative SMEs) necessary for the operation of a cluster are present just like in the case of the Catalan automotive industry, with a few exceptions, the past 15 years have seen no domestic initiatives succeeding in achieving significant results and actual international visibility compared to their respective baselines. The Széchenyi Plan (2001–2002) was the first economic policy document to set the objective of establishing so-called regional clusters based on the collaboration of economic actors. The resources becoming available upon joining the EU in 2004 created opportunities for the wider promotion of clusters.

The cluster phenomenon expanded in the 2007–2013 programming period, during which clusters were promoted through complex, long-term programmes (Pólus Programme, New Széchenyi Plan cluster development programme). It was during this period that the domestic cluster qualification system (accreditation) was launched, along with a three-step cluster development policy conforming to the development level of collaborations and supporting:

- newly started collaborations, the foundation of clusters (regional level – ROP 2007-13);
- developing clusters (regional level – ROP 2007-13);
- accredited innovation clusters (national level – GOP 2007–2013).

The vast majority of clusters active today were launched during this period. Thanks to the prioritized financial support of the period 2007–2013, 210 collaborations have received subsidies, of which 34 clusters have been deemed accredited.

Although the support for the 176 (mostly newly launched) clusters provided a foundation for the expansion of the cluster phenomenon in the country, less than one third (28 %) of these clusters were able to somewhat utilize the subsidies granted for their establishment. The rest carried out no real activities following the financed implementation period of the project. From the perspective of government policy makers, this process has highly devalued clusters, as instead of establishing trust and implementing actual collaborations the newly launched clusters saw the spending of subsidy funds as their main driver.

The period 2014–2020 was a time of consolidation and purity. Instead of support for a large number of newly launched cluster initiatives, the focus was on clusters that had a track record in economics and were open to further development, on having these clusters enter the international market and on further improving the quality of the services they provide to members. This process has resulted in a dramatic decrease in the number of clusters by 2021.

## ANALYSIS OF HUNGARY'S CLUSTER ORGANISATIONS

The State Secretary for Economic Development Programmes registers 26 accredited cluster and 18 non-accredited clusters active. Since the accreditation system will be renewed next year the numbers will be updated. The 26 accredited clusters currently in operation include 1,028 members (the average number of members is 39), of which 944 are considered companies. The total revenue of the member companies amounts to HUF 3,407 billion, of which 61 % has been generated through export activities. Member companies employ almost 69,000 people. Although the employee numbers of the 944 cluster members show that partnerships employing minimum 1 person make up only 0.46 % of the members, their contribution to value-added at the national economy level far exceeds their numbers (2.29 % of total gross value-added in the national economy).

## INDUSTRIAL STRUCTURE

The structure of the Hungarian economy is mostly compatible with other countries at the same level of development. Service sector accounts for slightly less than two-thirds of the GDP. Within the service sector, the private services (trade, tourism, finance and other economic services) are highly developed. Services, especially economic services, represent a sizeable portion of the country's export. The transportation sector (with some companies owned by the state and others by private corporations) offers optimum conditions for transit traffic due to Hungary's favourable geographical location. The state-run service sectors

(health, education, public administration) failed to keep pace with the other service sectors and their fundamental transformation is therefore high on the political agenda.

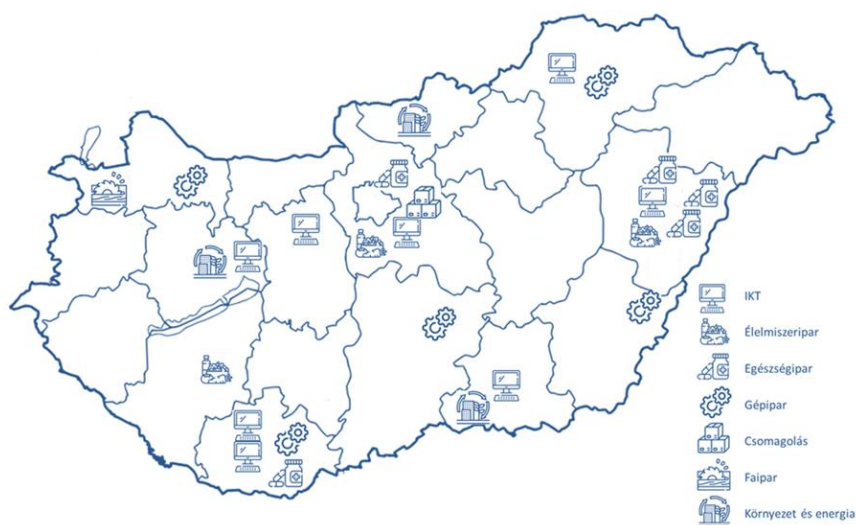
The agricultural sector, for which Hungary has especially favourable climate conditions, represents approximately 3,1% of the country’s GDP. Crop yields decrease from one year to the next, which is not sufficiently compensated by subsidies, capital supplies and investment incentives.

In line with international trends, the industrial sector accounts for around one quarter of the country’s GDP. Recently, primarily export-focused industries have been able to increase their output. These include the automotive industry, telecommunications and computer technology, food and light industries as well as the construction industry.

### DEMOGRAPHIC STRUCTURE

The clusters active in Hungary are quite fragmented by location, most of the clusters started their operation in the less developed areas, and the rest in the capital’s agglomeration.

*Distribution of clusters by sector:*



Cluster industry	Gross added value 2020 (million HUF)	Sector of the national economy	Gross added value 2020 (million HUF)	Ratio (%)
ICT	188,300	Information and communication	2,121,901	8.9
Food industry	67,846	Manufacturing	8,463,932	0.8
Health industry	262,978	Human health and social work activities	1,974,298	13.3

<b>Machinery industry</b>	324,204	Manufacturing	8,463,932	3.8
<b>Packaging</b>	11,310	Administrative and support service activities	1,380,507	0.8
<b>Wood industry</b>	13,322	Manufacturing	8,463,932	0.2
<b>Environment and energy</b>	66,246	Water supply; sewerage; waste management and remediation activities	323,205	20.5
<b>Cluster industry</b>	Employee headcount (2020) persons	Sector of the national economy	Employee headcount (2020) persons	Ratio (%)
<b>ICT</b>	12,388	Information and communication	145,100	8.5
<b>Food industry</b>	6,580	Manufacture of food, beverage, and tobacco products	143,100	4.6
<b>Health industry</b>	11,946	Human health and social work activities	321,700	3.7
<b>Machinery industry</b>	29,267	Machinery industry	375,900	7.8
<b>Packaging</b>	1,262	Administrative and support service activities	137,400	0.9
<b>Wood industry</b>	1,766	Manufacture of wood and paper products, printing	59,200	3.0
<b>Environment and energy</b>	5,622	Electricity, gas, steam and air conditioning supply, water supply, sewerage, waste management and remediation activities	89,400	6.3

## TECHNOLOGICAL PROFILE

Hungary ranks 22nd out of the 27 EU Member States in the Digital Economy and Society Index (DESI) 2022. The overall picture shows the need to put more effort to close up to the average EU level considering the human capital, connectivity, integration of digital technology, and digital public services. To do so, Hungary tries to catch up by launching trainings, projects, initiatives and sticking to the strategies, while aiming the exceeding of EU average on digital development by 2030. In the field of human capital the country should do better to enhance the proportion of female specialists, ICT graduates and ICT trainings provided by enterprises. Speaking of strategies The Hungarian National Social Inclusion Strategy 2030 sets the objectives on digital improvements. During hard times, such as the pandemic, the government supported institutions dealing with disadvantaged children with digital equipment, furthermore, teachers and children with smart textbooks and published methodological recommendation for teachers and professionals. Concerning connectivity Hungary is in a good position to reach the desired EU average level by 2030, although there



are some improvements spotted from the past years. On the Integration of digital technology in enterprises' activities, Hungary ranks 25th among EU countries. Despite an increase in several indicators in this domain, most Hungarian enterprises still fail to capitalise on digital technology. The country still performs poorly on the technology adoption indicators. The digitalisation of public services shows a mixed picture in Hungary. While the number of e-Government users increased significantly, even going above the EU average level, online services are still below the EU level. In order to tackle future cybersecurity challenges Hungary has introduced legal measures.

## STATE / REGIONAL SUPPORTS FOR CLUSTERING

State aid rules determine the maximum level of public funding what can be given to any project and are expressed as a percentage of the total costs eligible for support. State aid is designed to regulate competitive market activity. Therefore, the rules do not generally apply

### 2007-2013

As for the spread of the cluster phenomenon, the breakthrough came with the programming period 2007–2013, during which cluster support was implemented through a complex programme based on cluster development levels (Pólus Programme). The period 2007–2010 of the cycle was particularly productive from a cluster foundation standpoint, as many still active clusters have been created during this time with support from the funds of Regional Operational Programmes (ROP) and the Economic Development Operational Programme (EDOP).

**Established in:** 2010

**Responsible Institution / Department:** Pólus Programme Office

**Aims:** Funding opportunities for cluster development were provided through the Pólus Programme in the period 2007–2010 and by the more well-developed successor of the Pólus Programme, the New Széchenyi Plan cluster development programme in the period 2010–13. Financial backing was provided through the Regional Operational Programmes and the Economic Development Operational Programme. It was during this period that the three-step cluster development policy (Figure 2), conforming to the development level of the collaboration, was launched, supporting the following:

- newly started collaborations, the foundation of clusters;
- developing clusters (operational history of a minimum of one year);
- ☐ Accredited Clusters (AC) .

**Finance:** During the 2007–2013 programming period member companies of accredited clusters were granted HUF 215.5 billion in subsidies within the framework of economic development tenders, which makes up 17 % percent of the total development funds allocated to direct economic development. Approximately half of this sum (HUF 117 billion) was spent on projects with R&D goals.

**KPIs:** Cluster management service/Joint technological investment of members/Individual innovation projects of members/Joint R&D&I projects of members/Cluster management service/Joint technological investment of members/Cluster management service, joint investments

## 2014-2020

During the period 2014–2020, instead of support for the large number of newly launched cluster initiatives, the focus was on clusters that had a track record in economics and were open to further development, on having these clusters enter the international market and further improving the quality of the services they provide to members.

**Established in:** 2015 December

**Responsible Institution / Department:** Ministry of National Economy DSS EDP

**Aims:** In December 2015, in accordance with the above, a call for tenders was published entitled EDIOP-1.3.2-15 Support of professional cluster organizations with a high-quality service, remaining open exclusively to clusters with the “Accredited Cluster” title until June, 2017. In June 2017, the scope of eligible applicants was extended to clusters without the “Accredited Cluster” title. However, acceptance criteria such as:

- operational history of a minimum of three years,
- cluster management organisation with a minimum of one employee, performing cluster management services for minimum one year,
- minimum 15 member companies, with at least 12 companies being members for more than a year,

**Finance:** 2 billion HUF for employment/ cluster services/ ICT development/ training/ participation on international expos, events/ international market research/ international cluster management title/ general support

**KPIs:** number of members/ increase in turnover/Cluster management service/Joint technological investment of members/Individual innovation projects of members/Joint

R&D&I projects of members/Cluster management service/Joint technological investment of members/Cluster management service, joint investments/ International presence

## 2021-2027:

During the period 2021–2027, the main change is in the cluster policy as the first Cluster Strategy was launched in 2023. The aim of the Cluster Strategy is to achieve at least one cooperation with outstanding innovation capacity and international visibility in Hungary's main key sectors, by bringing together key players in the given industry, and to ensure that by 2030, 10% of the total gross value added is generated by economic players operating in these cooperation. Through the certification process detailed in the strategy, the government will support the development and quality assurance of domestic clusters through three stages. Applications for certification will be accepted every six months, with the possibility of renewing and upgrading the title once it has been awarded.

The implementation of the strategy will contribute to increasing Hungary's competitiveness

Established in: 2023

Responsible Institution / Department: Prime Minister's Office DSS EDP

Aims: A review of the milestones in the development of clusters in Hungary shows that all the prerequisites for a collaborative operating model are in place in Hungary. However, in order for our existing clusters to develop and become internationally competitive, the most important task is to involve new actors in the cooperation and to strengthen their activity. The current structure of the cluster qualification system (eligibility criteria, content evaluation, strategy evaluation) is the result of a well-developed process and reflects 8 years (2008–2016) of experiences with the qualification system. Eligibility criteria likely do not require any fundamental change, but rather recalibration in accordance with the objectives of the coming years. What must be reviewed, however, is the number of possible outcomes available to clusters participating in the qualification. It is also important to identify and incentivise organisations where the primary focus of members is not innovation-based collaboration (e.g. those representing traditional sectors, those typically including manufacturing companies, etc.), or where geographical coverage is limited to a smaller area, but the cooperation between the members and embeddedness into the local economy can be considered significant. Furthermore, it is worth embracing collaborations that had shorter operational histories, but show significant development potential based on the specifics of the sector or the composition of the members.

The renewal of the accreditation system will help this aim, by differentiating 3 cluster types:

- Registered Clusters

- Professional Clusters
- Innovation Clusters

The 3 types of cluster will benefit from different kind of supports.

Finance:

6 billion HUF/ 15,5 million EUR – Cluster Manager Operational Support:

- wages/international activities/cooperation inside cluster management/purchasing ICT solutions/development/ operational costs

2 billion HUF/ 5,5 million EUR- Indirect support

- training, consultation, general support of management

Advantage at all SME /R&D calls for all cluster members

KPIs: number of members/ increase in turnover/Cluster management service/Joint technological investment of members/Individual innovation projects of members/Joint R&D&I projects of members/Cluster management service/Joint technological investment of members/Cluster management service, joint investments/ International presence

## CONCLUSIONS – GOALS FOR POLICY LEARNING

This section presents the key experiences, challenges, and opportunities discussed within this case study, it identifies areas which can contribute to the solidification of the Hungarian Cluster Ecosystem so as to ensure that it is strong enough to be able to support SMEs from across all sectors to collaboratively tackle their green and digital transitions.

## MOTIVATION AND CULTURE OF COOPERATION

Increasing the reputation of clusters is one of the most useful tools available to cluster policy actors. Instruments can be assigned to this purpose not only from the governmental side, but also by clusters and members active in clusters. On the governmental side, treating clusters as potent professional partners would have marked impact on external judgements on the value of clusters. Additionally, support must be provided for initiatives launched on the cluster side, in order to ensure greater visibility for the results.

These instruments include measures to be used for situational analysis concerning the cluster ecosystem, and for the management of any deficiencies identified as factors hindering development:

- A culture of cooperation has not developed or has not been widely accepted as a fundamental value of entrepreneurship.
- Cluster-related knowledge has not been integrated into corporate education materials.
- Many economic actors, particularly SMEs are unaware of clusters as a concept and do not understand its significance and inherent potential.
- The ratio of companies collaborating as part of domestic clusters falls behind the averages of developed European nations and international trends in the area of cooperation.
- Need to develop expertise in cluster organisation and cluster management.
- The operation of clusters must become self-sufficient through the broad range of quality services they provide.

The government aims to help this specific objective by preparing the next generation, increasing awareness of clusters, promoting the products and services they produce, improving knowledge sharing between clusters, distinctiveness, recognition of deliverables produced by clusters, improving the business competency of the cluster management organisation.

## BUSINESS COOPERATION

One of the major aims of the strategy is to promote business cooperation in different sectors. These instruments include measures to be used for situational analysis concerning the cluster ecosystem, and for the management of any deficiencies identified as factors hindering development:

- The process of clustering is not associated with innovative technological trends like digitalisation or the circular economy;
- The amount and extent of collaborations between economic actors and cluster members are insufficient;
- No interdisciplinary forms of collaboration between sectors or cross-border international collaborations have developed;
- In addition to the individual development of market actors, high quality innovation and business cooperation implemented through collaborations must be promoted. This requires preferential treatment for such developments with regard to access to development funds.
- The international emergence of clusters and their ability to participate remains low—there are many clusters active in Hungary, often overlapping in terms of industry, geography.

Increasing the international competitiveness and visibility of domestic clusters requires that collaborations and joint action between clusters are enhanced with regard to the given platforms, and that clusters operating in parallel are merged

## COOPERATION FOR INNOVATION

The third action contains steps in order to reach higher innovation capacity. These instruments include measures to be used for situational analysis concerning the cluster ecosystem, and for the management of any deficiencies identified as factors hindering development:

- Hungarian SMEs typically show low innovativeness;
- Low willingness to cooperate between the stakeholders of the research and development ecosystem. It is necessary to increase the efficiency of technology transfer processes;
- Innovations are not adequately utilised within the market;
- The process of clustering is not associated with innovative technological trends like digitalisation or the circular economy;
- Financing issues arising with regard to participation in international projects—lack of subsidies for financing projects and promoting liquidity;
- Low level of exploitation of advantages provided by the international qualification—partially because of the reasons raised under the previous two Clauses, partially because of the lack of other capacities among clusters—; clusters granted international qualification by ESCA are unable to adequately exploit the advantages of the qualification, thereby the value created by the qualification never reaches the members.

## FINAL THOUGHTS

All in all, all prerequisites necessary for a collaboration-based operating model are present in Hungary. Hungary has clusters that are operating in a fragmented, often parallel manner, but key economic actors—SMEs, large companies, knowledge dissemination organisations, municipalities, chambers, etc.—have already recognized the potential in collaboration and see the operation of clusters valuable at the level of the national economy.

However, including new members in the collaborations and maintaining high levels of activity among them are essential for ensuring that existing clusters develop and become competitive internationally. The motivations of individual economic actors depend on a variety of factors, but preliminary studies have shown that in all cases, the strongest motivating factor is utilisation in business. In order to achieve this goal, it is essential that the above-described limiting factors are eliminated and the following paths are set up:

- wider promotion of the culture of cooperation;
- recognition of the work carried out by the cluster management body;
- promotion of collaborations for business and innovation;
- establishment of a supportive regulatory environment.

The following SWOT analysis illustrates the key factors of the situational analysis, including the opportunities arising from the intervention and the threats resulting from a failure to implement them:

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>existing and well-functioning clusters</li> <li>joint activities based on a high level of trust</li> <li>a platform that guarantees quality in the implementation of R&amp;D&amp;I projects</li> <li>high level of participation in R&amp;D&amp;I projects implemented within the framework of a cooperation</li> <li>common services and common products within the cluster</li> <li>nationwide coverage, cluster accessible in all regional centres</li> <li>clusters in potential break-out sectors (e.g. medical equipment manufacturing, wood industry, machinery industry, pharmaceutical industry, tourism...)</li> </ul>	<ul style="list-style-type: none"> <li>lack of a culture of cooperation</li> <li>ignorance of the business advantages of cooperation</li> <li>lack of international visibility due to a fragmented structure</li> <li>the qualification system for clusters is outdated</li> <li>no interdisciplinary forms of collaboration between sectors or cross-border international collaborations have developed</li> <li>limited sources of funding to incentivise cooperation</li> <li>companies' ignorance of the advantages inherent to clusters</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>educational materials on entrepreneurship covering the development of the culture of cooperation</li> <li>communication campaigns increasing awareness and reputation of clusters as forms of collaboration</li> <li>launching motivational programmes to encourage clustering, thereby introducing new economic actors to the operation of the network</li> <li>internationalisation of SMEs by taking advantage of economy-of-scale benefits</li> <li>introducing SMEs to direct EU innovation projects</li> <li>ensuring efficient cooperation between the corporate and research sectors increases the probability of the market embracing the results</li> </ul>	<ul style="list-style-type: none"> <li>Hungary is at a competitive disadvantage in the competition between stakeholders organised along global value chains</li> <li>losing the economic benefits of collaborations</li> <li>lack of knowledge and technology transfer between SMEs, large companies, and research organisations</li> <li>due to a lack of appropriate incentives, economic actors do not start cooperating and no clusters with significant economic power are created to act as drivers of innovation in the major leading sectors of Hungary</li> <li>clusters lagging behind international trends and being unable to catch up, domestic clusters losing their competitiveness</li> </ul>

The vision and target system of the cluster strategy have been developed with regard to the exploitation of the values, potentials explored in previous chapters and the elimination of deficiencies, limiting factors. Also, with regard to our joint work with the clusters, the proposals outlined by them and developed in cooperation have also been considered.

During the development of the cluster strategy for the period 2022–2030, creating a system of objectives and instruments for the strategy with the involvement of the widest possible range of stakeholders was particularly emphasised, thereby clusters themselves were given

the opportunity to formulate, refine ideas for objectives and points of intervention. The strongest impact and the best results can be achieved by harmonising the interests of the national economy and the individual goals of clusters.

Areas crucial for the national cluster strategy:

- promotion of the business-purpose collaborations, competitiveness of companies,
- enhancement of domestic R&D collaborations between companies, encouragement of innovation capacities,
- promotion of the visibility and internationalisation of clusters, therefore
- ensuring the sustainable operation of clusters.

It is advisable to focus the strategy on the 35–40 clusters able to generate the greatest impact in the areas above. Identifying and selecting these clusters is best achieved through the cluster qualification system, provided that it is implemented in a different manner than the current system, with multiple evaluation categories, and including not only leading innovation clusters, but also collaborations capable of development, generating high added value, having significant potential, but in an early stage of network development.

Based on the evaluation of the strengths, weaknesses, opportunities, and threats identified as part of the situation analysis and the processing of proposals by active clusters, the vision of Hungary's cluster strategy can be summarised as follows:

- companies and policy makers recognize the micro- and macroeconomic significance of clusters and, by 2030, establish a business environment in which the development of various forms of collaboration (particularly clusters) between companies, educational and academic institutions is not hindered, but rather promoted, in terms of motivation and culture, by the financing and other factors that impact the exploitation of the competitiveness and innovation potential of collaborations;
- based on this development, at least one collaboration with an excellent innovation capacity and providing international visibility will be realised in each of the major leading sectors (S3) of Hungary, galvanising the key actors of the given industry;
- by 2030, all this will result in economic actors participating in collaborations making up 10 % of total gross value added.

Setting the objectives described above and providing the assets required to accomplish them will allow the Hungarian cluster ecosystem to significantly advance, both in quantitative and qualitative terms, to become internationalised and move to the forefront of Europe by having domestic clusters grow into equal partners of their Central and Western European peers.

## FOR FURTHER INFORMATION

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