
„Cluster” – just a new buzzword or a real value creator?!

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PROACTIVE MANAGEMENT CONSULTING®

Introduction

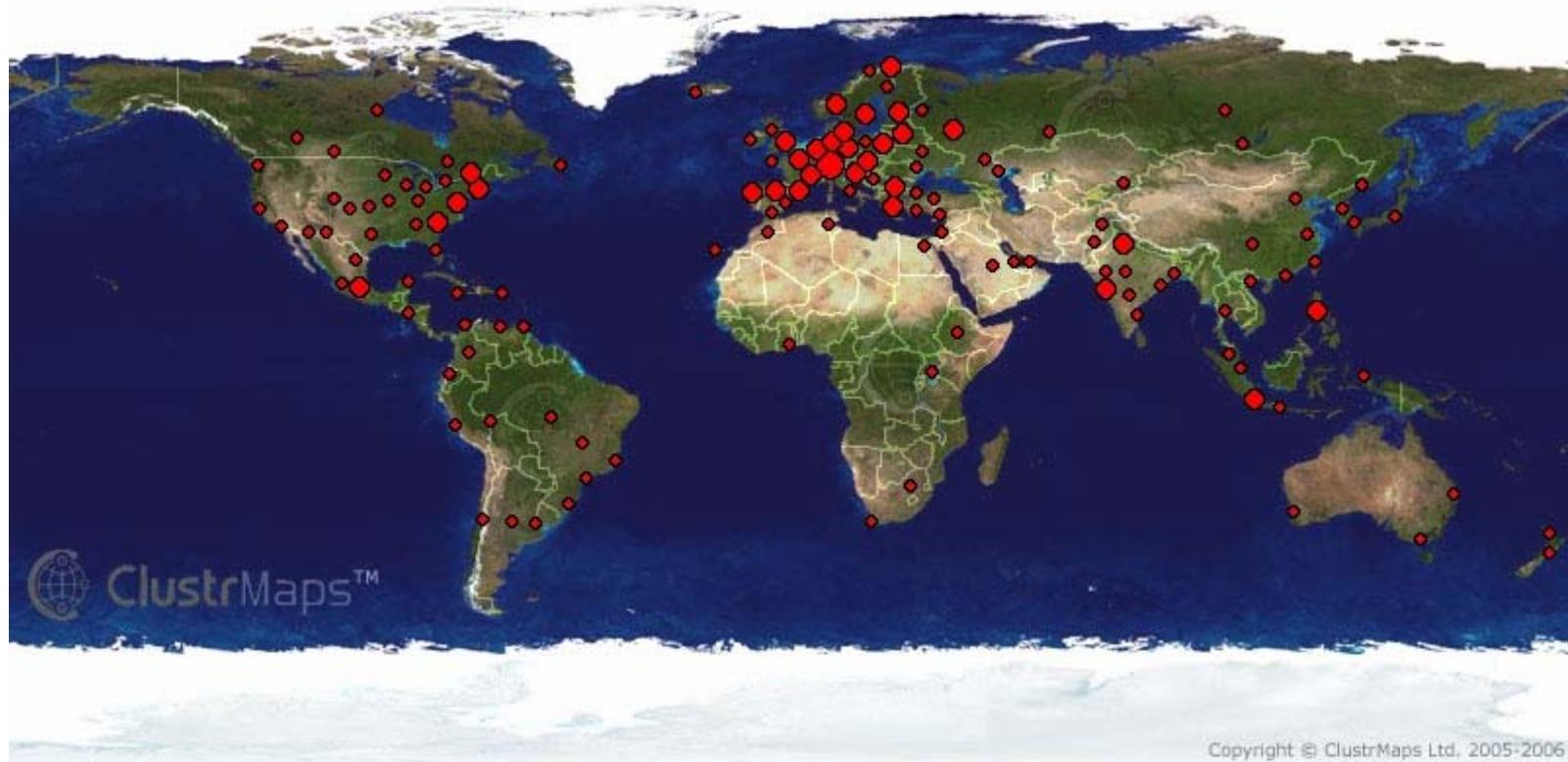
Our company, the **PROACTIVE MANAGEMENT CONSULTING®** is a **strategic consultancy and interim management boutique, focusing – among others - on the R&D&I sector.**

We always seek new, complex and trans-disciplinary challenges, our most important references are the following:

- Strategic consultant of one the first regional university knowledge centre projects (with close to 2 billion HUF budget and president of the Advisory Board since then (2004 -)
- Strategic, business and legal organization of the first university Technology Transfer Office, continuous support (2004 -)
- Organizer of one of the first research clusters, prepared and won the bid for the related research funds with a 2 billion HUF budget, cluster manager since then (2005 -)
- Founder and manager of a cluster that brings together research, healthcare and foreign investors (2006 -)
- Organizer and cluster manager of the first nation-wide cluster fostering IT and business communications related innovations (2007 -)

We do not only start, but accompany our clients' projects as well, with a „we are in the same boat” approach, including success-fee structures

Clusters have by now spread all over the world and the expression is being used more and more often



Where does this popular buzzword originate from?!

„Cluster” is a concept with different meaning in the various sciences and industries

- **Sociology:** ‘cluster’ and ‘cluster marketing’ were originally referred to in statistics (for a given group, e.g. a market segment)
- **Technology:** Silicon Valley: the model region of the 80’s and 90’s inspired the foundation of many economic clusters
- **Informatics:** Microsoft Cluster Server (MSCS) and Windows Computer Cluster Server 2003 – computer groups
- **Similar world centres:** **finance** – London, New York; **media** – Hollywood; **automotive industry** – Southern Germany, Detroit; **telecom** – Stockholm, Finland; **textile- and fashion industry** – Northern Italy (Ketels 2003)
- **Networks and clusters:** the significance of networks, which were mentioned already in the 60’s, came into focus in the 90’s again due to factors such as flexibility, efficiency, internet, the virtual market.

Clusters and networks therefore are related concepts

One of the keywords is *network*. In the physicist's view:

Albert-László Barabási



- „The development of real networks is determined by two basic facts: **growth** and **linkage based on popularity**”.
- Characterizing the structure of the **network behind the web (internet)** he found the most important difference between casual networks and complex, real networks: the majority of the nodes in real networks have only a **few linkages** and beside these numerous small ones, there are a **few important midpoints** with nodes containing an unusually high number of linkages. Such networks are **scale-independent**, because there is no characteristic node, no inner scale (casual networks are unified due to similar nodes). As the network grows, new nodes get linked to it, which prefer nodes with more linkages.
- The linkage between smaller nodes is not enough to ensure the entire connectivity of the network– this is ensured by the rare midpoints (**hubs**) and these prevent real networks from falling apart, so real networks are resistant and have a fault-tolerant capacity.
- Most complex networks in nature are scale-independent – e.g. the network of links between the proteins within a cell, or the network responsible for metabolism. This realization turned the characteristics of such networks into an important question in medicine.

Clusters used in the economy have different depths and definitions, these determine their operation as well

- The group of vertically and/or horizontally linked enterprises within the same field (*OECD local cluster*)
- According to the cluster definition of **Michael Porter** (1998): „geographic concentrations of **interconnected companies**, specialised suppliers, service providers, firms in related industries, and associated organisations (such as universities, standard agencies, trade associations) in a particular field linked by commonalities and complementarities.”
- Clusters are groups of **independent** companies and associated institutions that are: **collaborating and competing**; **geographically** concentrated in one or several regions, even though the cluster may have global extensions; specialised in a particular **field**, linked by common **technologies and skills**; either **science-based or traditional** and can be either **institutionalised** (they have a proper cluster manager) or **non-institutionalised** . (*Enterprise cluster definition of the Enterprise Directorate-General of the European Commission*)

According to **Porter**, it is not distinct enterprises taking part in today's global competition, but it is rather the **clusters that have become the new basis for global competition!**

Therefore, a cluster for the enterprises means...

- ... a group of **independent companies** and non-profit institutions, as well as associated economic sectors and institutions, along **the same value chain**, in **one** particular field that is connected to the global value chain, in which
 - the **common products and services** are used relatively often,
 - members rely **on the same base of knowledge and infrastructure**,
 - **similar innovations** can be utilised, which means that
 - members co-operate within the framework of a partnership based on shared interest, in order to reach the critical size, with a synergic effect, while, sustaining their sovereignty, they **compete as well**.
- Goals: handling externalities, cost minimisation within the network, developing innovation, minimisation of transaction costs – utilising „local” advantages as a response to „global” challenges, optimising collective **productivity and efficiency**.
- It is not (only) a supplier relation, far more than a project-based consortium or even a (geographic) location-based strategic alliance. The **confidential and social capital** are its important resources.
- One of the reasons for clustering is complementarity. Completing each other’s missing capabilities, opportunities clusters can have a significant contribution to the growth of the competitiveness of both their members and the whole **region or territory**.

Cluster-types can be divided according to two dimensions

Considering the focus:

- Industry-based, regional – Innovation, linkages within the value chain
- Institution-based – A common organisation offering special services (e.g. purchasing) or supporting economies of scale
- Network-based – Cooperation among existing, typically exclusive networks
- Knowledge-oriented – Open initiative, focusing on the information-flow, experience and knowledge-flow, spontaneous initiatives

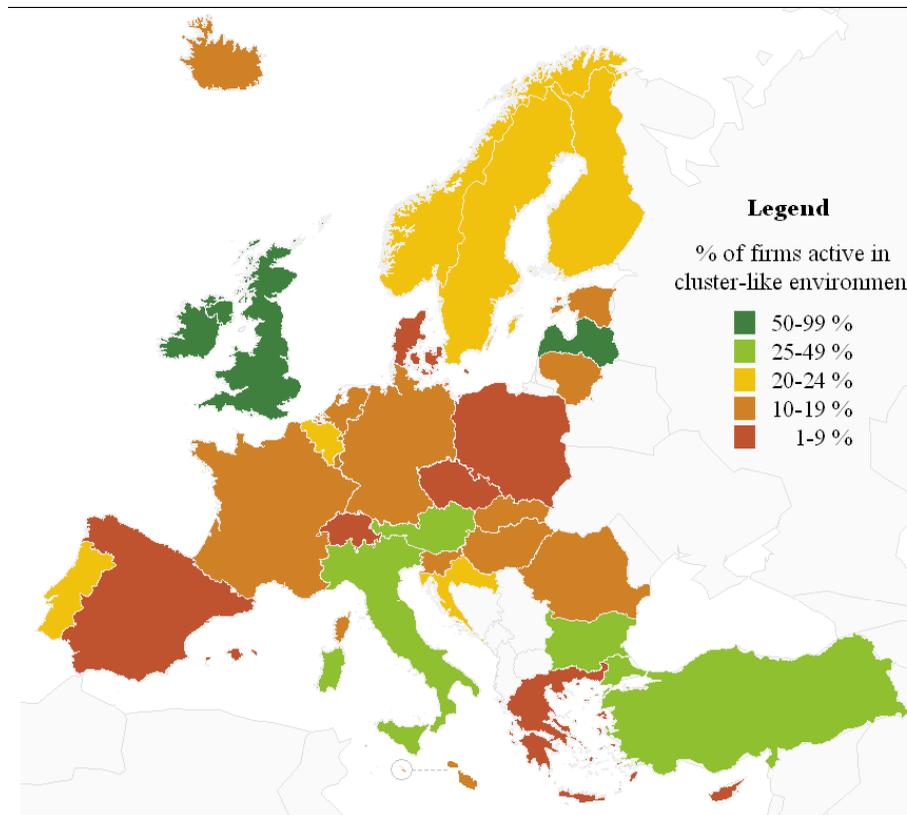
Considering the value chain:

- **horizontal:** companies within the same industry sector, co-located in a particular geographic area, might share an industrial or technological base, operate within a common market and use a common purchasing and/or distribution channel
- **vertical:** includes horizontal cluster participants as well as supply chain members (suppliers, consumers, related services)
- **diagonal:** complementary or symbiotic activities, where each firm adds value to the other, thus creating a value chain

Source: Braun, P. (2005) *The importance of value chains and co-operation as drivers for SMEs growth, performance and competitiveness in the tourism-related industries – Creating value to tourism products through tourism networks and clusters: uncovering destination value chains*. Gwangju, Korea.

Lagendijk, A. (1999) *Good practices in Cluster initiatives. Lessons from the 'Core' regions and beyond*. Centre for Urban and Regional Development Studies, University of Newcastle Upon Tyne, Newcastle.

According to the latest Innobarometer survey, most clusters in Europe can be found in the UK, followed by Latvia, and by Ireland



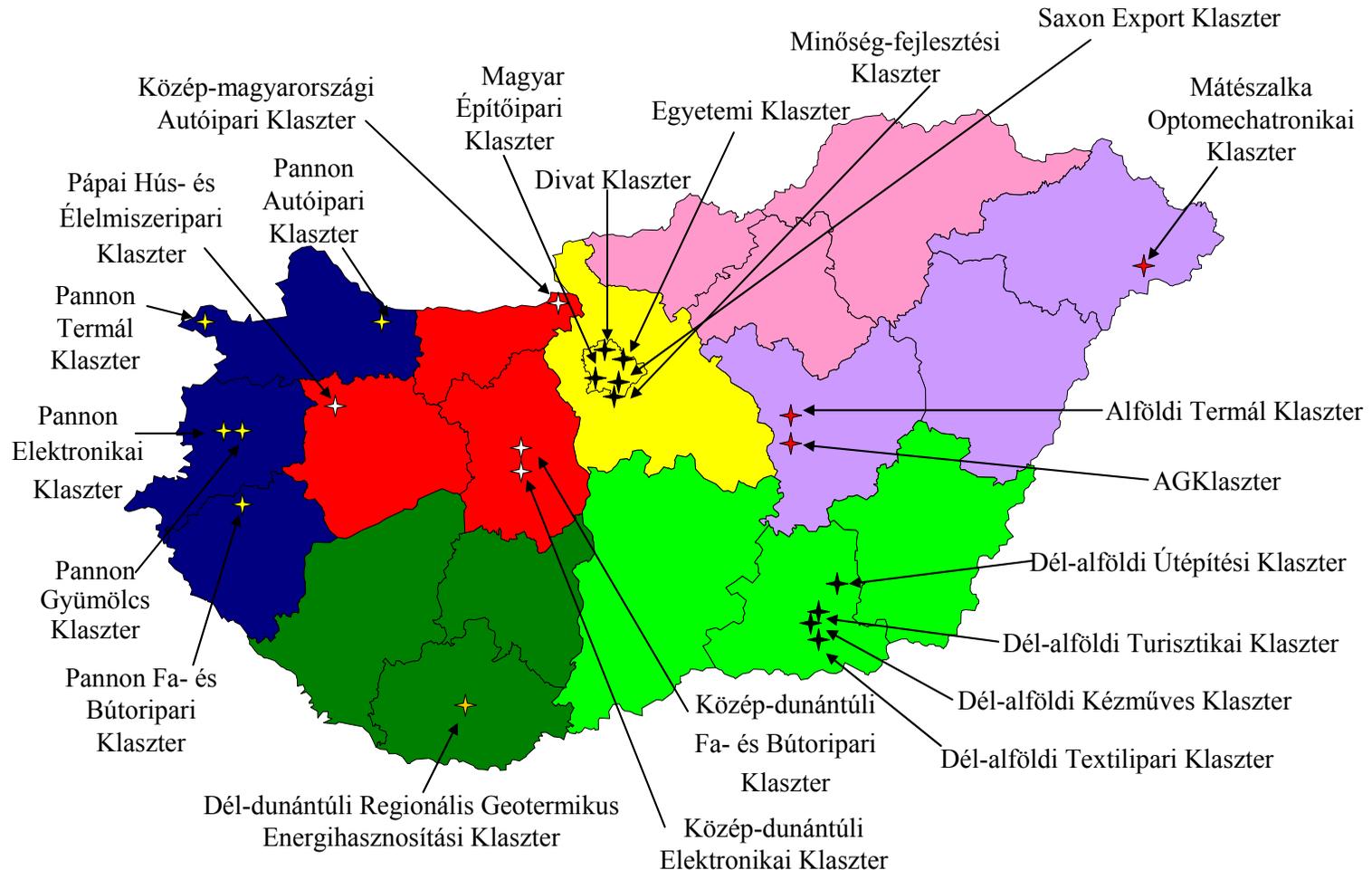
The 2006 European survey considered the 25 member states of that time, the candidates (Bulgaria, Romania, Croatia, Turkey), as well as Norway, Switzerland and Iceland, involving 3 528 enterprises operating within a cluster-like environment.

The difference between the individual European countries is currently significant

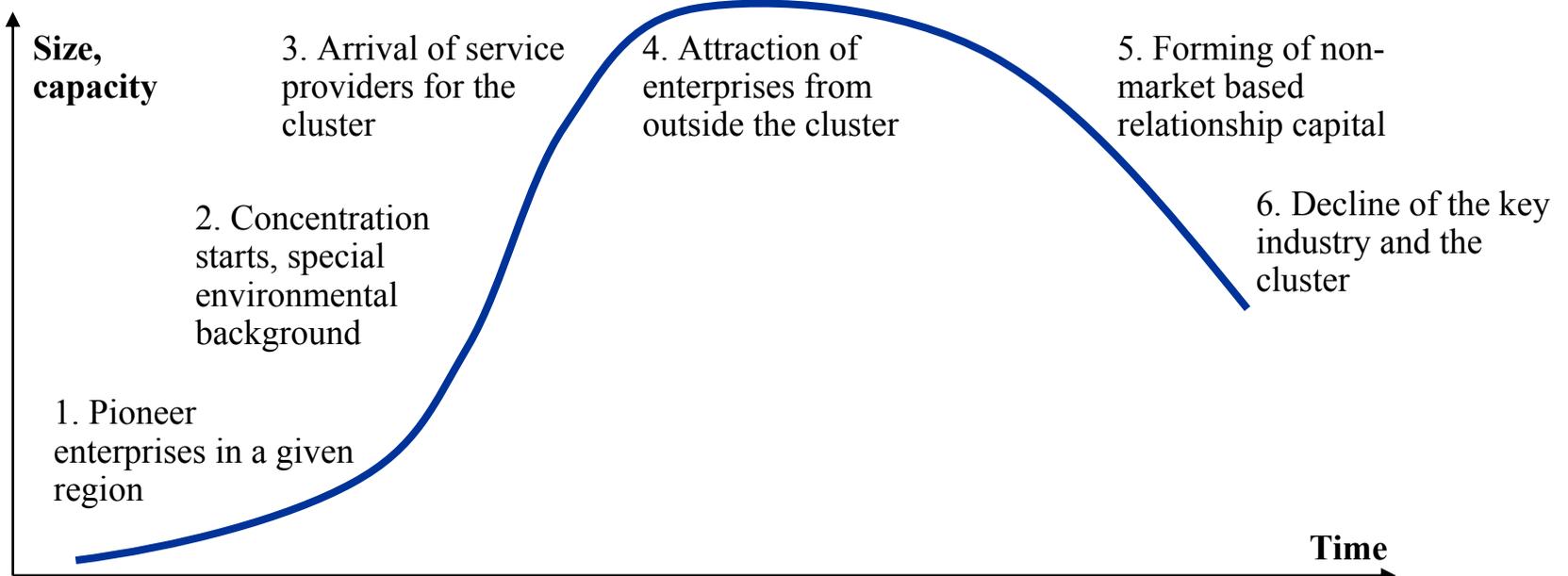
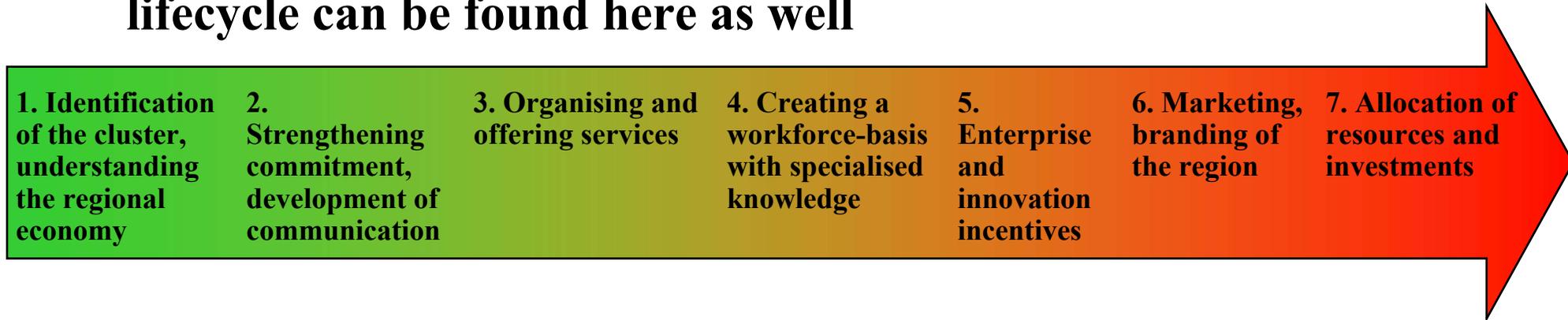
- **An average of every 4th company** (with min. 20 employees) **within the European Union** operates in a cluster-like environment, that is, in tight cooperation with other local enterprises
- The contrast between the old and new member states among the 25 member states of 2004 is spectacular, the latter have clearly not yet realised the importance of clusters: EU 15: 28% against EU 10: 9%
- The **UK** stands out, **84% of the firms** with above 20 employees qualified here as a cluster in the considered industry sectors.
- High proportions also in: Latvia (67%), Ireland (64%)
- The end of the line: Cyprus (3%), Poland and the Czech Republic (4%), Greece, Estonia, Lithuania (9%)
- Considering the individual countries, the highest degree of networking is characteristic of Scandinavia – the majority of cluster member firms take part in more than 2 business networks. The case is similar in Turkey.

The first Hungarian cluster appeared in 2000, some 20 were operating in 2004, today their number is three-digit and increasing

Centres of Hungarian clusters



The development of a cluster needs the completion of a process with several steps, and of course the organizational lifecycle can be found here as well



Opinions regarding the present situation of clusters differs

- ***Cooperation within the cluster*** – 26% of European cluster member firms does not take *actively* part in any business network, 23% takes part in more, the majority (50%) is active in one network. The new member states (2004) are less active: 30% is not, and only 30% is active in more than one network.
- ***Competitiveness*** – 42% believes participation in a cluster promotes relationships that enhance European competitiveness, 51% do not think so. The majority sees cooperation among clusters rather as an opportunity, than a threat, however, competition can be observed inside and outside the cluster.
- ***Government linkages*** – The best situation regarding collaboration and support: Ireland, Spain, Finland, Turkey. Lowest amount of such collaboration: Latvia, Slovakia

Clusters expect the increase of state-origin support everywhere:

- Tax benefits and lower administrative charges to cut costs
- Tax decrease for R&D costs
- Promoting international relations
- Contact with public institutions and universities
- Contact with other firms

Multinational companies, as opposed to the public belief, also need clusters containing SMEs

- Cluster forming initiatives in Western Europe start out from SMEs, thus it is characterised by building from bottom-up. Firms operating cluster-like attain a profitability increase of 2 - 4 %, and the proportion of SME survival is much higher than of individually operating enterprises.
- A cluster is not only an opportunity for economic development, but a possible way of strengthening social systems, **local communities**, self-organisation as well. Enterprises have recognised that staying on feet in a strong global competition is only possible with a **local background**, relying on their business partners.
- The **need of a cluster-based economic policy** is being mentioned more and more often, so that SMEs would be able to gain strength – this means concrete support as well („GOP”, „NKTH”)
- Information- and communication-flow, **joint appearance**, education, international appearance, PR and marketing, common database may be an advantage.

What does a cluster mean from a legal perspective?

- It is worth starting out from the various, worldwide determining key ideas – such as the EU, OECD, Porter, etc.:
 - Universal characteristics

**Integration/
Network**

Cooperation

Competition

**Consists of independent
legal entities**

C O N F I D E N C E

- Special, but mostly wide-spread characteristics

**Horizontal/
Vertical**

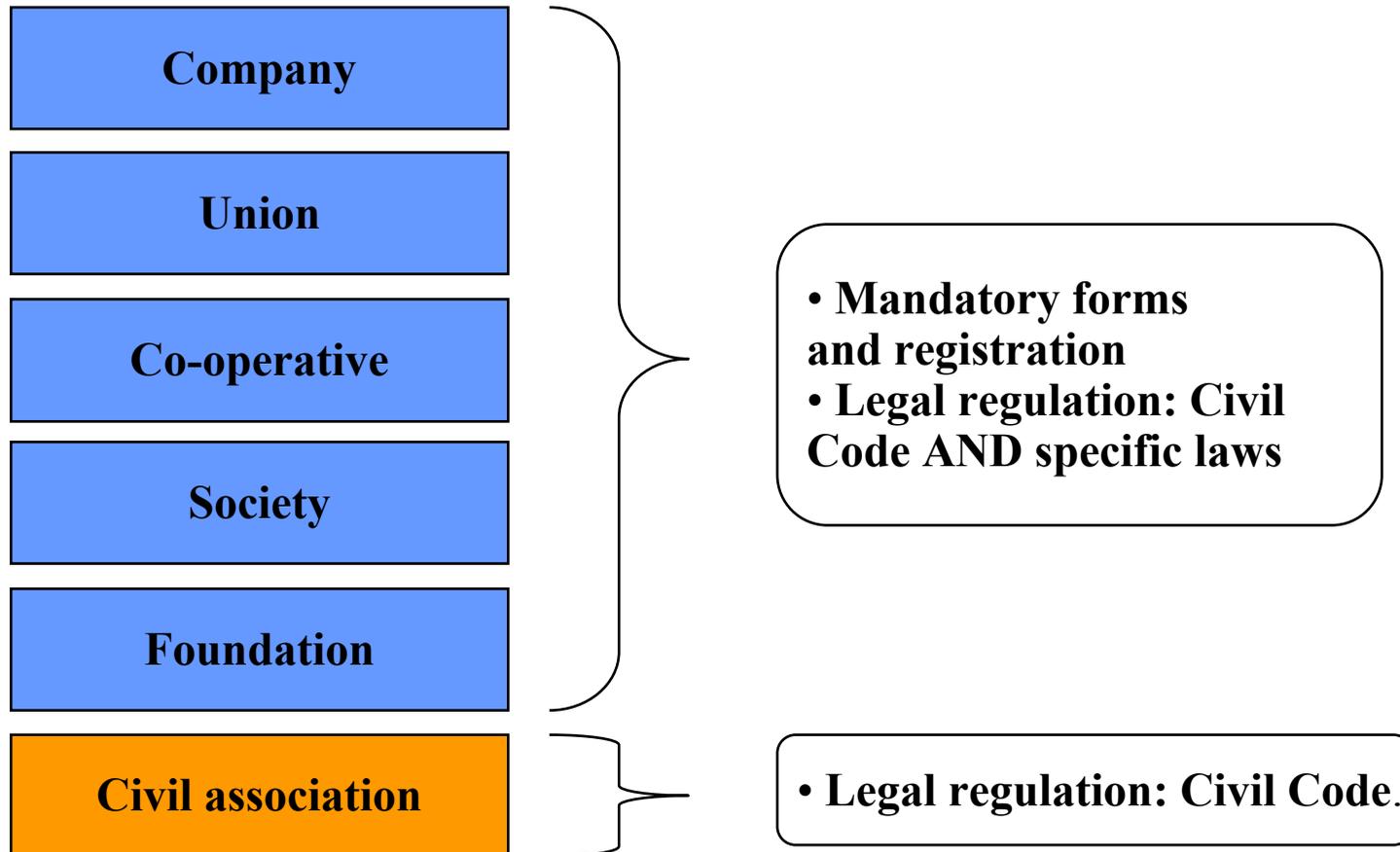
**Not a
legal entity**

**Regional proximity
of members**

The form of the partnership may be contractual...

- Based on the **principle of contracting freedom** of the Hungarian Civil Code;
- It is **not named in the Civil Code**, but it is mostly named by the contracting parties as collaboration agreement;
- In the contract, the parties agree to cooperate **on the long-term**, in order to attain a defined **goal**, with defined **rights** and **obligations**, in a defined **field**.
- It is important to pay special attention and to precisely define the elements of the contents of a **collaboration agreement, which is not typical**, with increased caution, concept definitions and explanations due to its atypical nature.
- I believe a negative definition is needed as well, e.g. „the cluster does not belong to any kind of corporations described in the Civil Code or the Companies Act.”

... however, a corporate form is possible as well!



The formation of a corporation results a more bounded organization and operation defined in details by mandatory laws, while a collaboration agreement provides a larger freedom for the parties but does not result separate legal entity!

The solution in most cases for Hungarian clusters is a collaboration agreement with a professional cluster manager

- In this case parties have the **highest level of contractual freedom.**
- The rights and obligations of the parties are **determined in the contract** according to their will.
- There is only contractual liability and no corporate liability. **The liability of the cluster manager is the greatest** among the contracting parties!
- The **state registration occurs at the time of winning a tender or a subsidy**

The best solution takes into consideration the specific goals and circumstances!

From realizing their importance and actually creating the first ones, the government developed a new view on clusters which today are considered as one of the main motors of economic development.

The USA is the model: by the mid-90s about 380 leading clusters employed 57% of the workforce in the USA, and gave 78% of the export.

Hungary:

- Clusters in Hungary first appeared in the regional economic development programme of the Széchenyi Plan, one of the first examples was **the Pannon Car Industry Cluster (PANAC), founded in 2000 and supported by the Ministry of Economy**, followed by the supported foundation of other clusters in more developed regions within the country, specialised in tourism and the wood-working industry.
- The first funding call for applications, by the **National Research and Technology Office in 2005**, provided opportunity for **clusters in the field of research**.
- In **2006**, cluster development was **supported** within the framework of the „GVOP” (EU funds)...
- The funding opportunities between **2007-2013** are planned to **support clusters as one of the main motors of economic development**

The funding opportunities promoting a cluster-oriented economic development, available for EU members, have an important role in accelerating the process that started 5-10 years later here than in the developed Western world.

Based on the action plans 1.100 billion HUF available for economic development in 2007-2013, the winning clusters may contract about 72 billion already by the end of 2008

- Funding opportunities for economic development within the framework of the „GOP” (Economic Development Operative Programme), the „ROP” (Regional Operative Programmes) and the „KMROP” (Middle-Hungary Regional Operative Programme) make a total of about 1.100 billion HUF available.
- According to the action plans, contracts for the 200 billion HUF support may be signed by the end of 2008.
- **Clusters may apply for 36%** of this fund amounting 72 billion.
- However, only accredited clusters taking part in the Innovation Pole Programme may apply for 40% of the available fund for clusters amounting 29 billion.
- According to the action plans, **call for applications is about to start.**
- Funding intensity is 25% to 80%, depending on the region and the assisted activity.

The action plans reveal that about 30 billion HUF support will only be available for accredited clusters!

Due to their outstanding importance in the Development Pole Programme, the 15,2 billion HUF funding in 2008 is available only for accredited Pole Innovation clusters based on the action plans

- The **Pole Programme** intends to increase the competitiveness of Hungary by specialising in high value-adding, export-oriented activities integrated in the EU economy
- Thus the Programme builds on two main pillars: enterprise development and horizontal economic development
- **Flagship Programmes** are adjusted, integrated interventions that comprehend a number of operative programmes with the intent to fulfil an underlined objective. One of them are the **Development Poles**
- The seven **Development Poles are towns with planned projects focuses like:** Budapest-Innopolis, Debrecen-Pharmapolis Knowledge Centre, Győr-Autopolis, Miskolc-Technopolis, Pécs-Pole of Life Quality , Szeged-Biopolis, Székesfehérvár+Veszprém-Infopolis
- In case of **enterprise-supporting funds**, clusters and **cluster-initiatives are competing**, while in case of **horizontal economic development funding**, local governments compete in the first year and **local governments in partnership with cluster initiatives** later

Summary: Clusters may become the driving force of the Hungarian economy and innovation

- Networks are becoming more and more important – new cooperation forms
- A worldwide new and high-impact phenomenon
- Common interest of the state, SMEs, and multi-national companies
- Still in early development stage – with high potential to get leveraged
- Pioneer status in really implementing it (not just to fulfil expectations)
- Business, legal and cultural aspects have to be taken into consideration
- „Cluster governance” a key issue, requiring multi-disciplinary knowledge and experience
- Besides cooperation sovereignty – including competition – remains similarly important and needs to be ensured even legally
- Here and now: a gateway to significant available EU funds

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