

**European  
Cluster  
Days**

CLUSTER AS THE DRIVING POWER OF THE EUROPEAN ECONOMY

18 - 19  
March  
2015

**EUROPEAN PARLIAMENT**  
*Strasbourg* 

[www.europeanclusterdays.eu](http://www.europeanclusterdays.eu)



This article is published in the framework of the event organized by France Clusters and its partners “[European Cluster Days: Clusters as the driving power of the european economy](#)”, 18 & 19 March 2015, at the European Parliament (Strasbourg – France).



*Axis 1: Clusters as the driving power of the performance of the European SMEs abroad*

Title

## **How can an international network of food clusters stimulate the food value chain from research to innovation of their SMEs?**

Written by Márta Völgyiné Nadabán and József Prokisch  
Innovative Food Cluster Ltd., Hungary, [marta.nadaban@gmail.com](mailto:marta.nadaban@gmail.com)

### **Abstract**

It is obvious for all of us that economic agglomerations and organizations are working in a continuously changing environment and themselves are changing systems. Their success depends very much how the organization can adapt to the changes: are they acting proactive or reactive (Hayes, 2007)? This fact is even more relevant for clusters which are made of different organizations. Because of the nature of their fast changing environment and upon the literature of the change management it is clear that the clusters must react proactively to the changes.

This article is showing the results of a smaller survey among clusters on cluster management, operation of the cluster and their attitudes to changes. Based on this survey it became clear that successful clusters are those who ensure the competitiveness of their SMEs through (1) wide range of services regarding research, development and innovation and (2) conforming rapidly to the continuously changing environment, eg. by offering special services to the cluster members. Once we draw parallels with the success factors of clusters based on Kamath's GEMS model (Kamath et al 2012) and these results, we can realize the need for more active internationalization activities of clusters. These facts and statements are valid for clusters and agglomerations coming from different sectors, even for the food sector. One of the possible answers can be the offer of new services to stimulate the value chain research and innovation for the European clusters and their SME, eg. in form of creating an international network of clusters in a specific sector.

### **1. The need**

#### **a) Role of change**

We regard the change in this study as continuous adapt to the environment. The environment contains the effects that require the continuous change of the organizations and so the clusters (Kotter 2009). In case of the clusters that work in innovative and competitive environment the miss of flexibility can be the barrier of the development Solvell et al., 2009). Because of the competitiveness, it is extremely important for the organizations to adopt the changes, so **the pressure of the international competition is a catalyst of the changes for the organizations** (Grzesik 2008).

Clusters must be much more open to the external effects and they have to find fast the appropriate answer. The clusters as special organization forms work in always changing environment, but the "pressure for answer" to the change applies at clusters even more intensive (Dobák, 1997).

Only those can be successful in our world, that accepts and knows the typical behavior of the fast changes, the more and more intensive competition and complexity of the environment, and that is



able to adapt to these terms. **The secret for the long lasting success of the organizations and especially the profit-oriented enterprises is to realize the changes on time, evaluate them, state the expected results and plan or work out the necessary steps to the confirmation.** The most important challenge in change for the organization is to learn, **how to change faster to be more competitive than the change of the business environment factors** (Beatty and Ulrich 1991). The managers of the organizations and so the clusters are forced to keep up complex **connection system**, since it is a complicated task to provide the continuity. (Beckhardt and Harris, 1977, and also Beckhard and Gibb, 1983).

## b) Collaborations in clusters

As part of a European project, a research was conducted among organizations, which are member of clusters focusing on the **nature of collaborations in clusters**. The aim of the research was to get information at European level and in different sectors how managers of examined organizations think about the characteristics of the clusters mainly from the point of view of services and details of relationship between members and the cluster itself. Because of the nature of the project the responses came from different countries, mainly from Hungary, which was followed by England (20%), Belgium and Poland (16%) and by France, Spain, the Netherlands and Germany.

It became clear as 74% of the respondents indicated that „their” cluster has a **formalized leadership** only to deal with cluster management, where internal leadership is dominant. The cluster management organization is either undertaken by a cluster member (most typical) or it is established by some of the members (26%). It seems not to be frequent that management is performed by an organization outside of the cluster (7%).

Cluster manager organizations naturally provide different **services** for their members. Based on the answers 18 different services were analyzed and put in one of the following 6 categories.

- Project generation
- Information service activities
- Common marketing, business development
- Common investment
- Common services
- Development of human resource

**Most frequent provided and used services fell into the categories of project generation, information service activities and common marketing, business development.** The availability of common investment, common service, development of human service and other possibilities were judged quite low. The list seemed to be quite complete since no one indicated other services provided and applied. One third of the respondents would like to use **further services** like bid writing support, contact with government, **market analysis and market research activity**, development of a common image, **exploration and introduction of market opportunities and applied best practices.**

Results show that most important **motives** for the cooperation as part of clusters are organizational motives and **international reasons**. Several other reasons were also mentioned, like the network extends our knowledge about the economy and financial opportunities in other regions and **stronger international networks.**



### c) Success factors of clusters

Kamath (Kamath et al, 2012) published the GEMS model on cluster formation and success: they realized a series of variables beyond those contained in Porter's Diamond model (Porter, 2006). The role of the business and socio-political environment, presence of infrastructure and related industries, a culture of innovation and entrepreneurship and agglomeration economies were defined as cluster success factors.

The role for the environment in cluster development is highlighted by the importance of the availability of favorable socio-political climate and public policy which is critical for the infrastructural factors also. The importance of the Park-Related Factor indicates eg. *“the role of **“networks of practice”** (networks that link firms and the people within them to others who work on similar work and knowledge practices but who may never be known to them) and **“communities of practice”** (tightly-knit groups of people who work on similar work and knowledge practices but working together on the same and similar tasks); ..., marketing networks, technical knowledge, and standards.”* (Kamath et al, 2012). It is also clear from the GEMS model **that international market demand and international linkages and supply chains are as important as local market demand and linkages** in terms of the Demand and Co-opetition Factor. They realized the importance of the **international dimension** based on their research. *“This means that both cluster management authorities and corporate managers need to play close attention to facilitating and building international sources of demand and international linkages”* (Kamath et al, 2012).

### d) Theory of networks from the point of view of business clusters

All the people and organizations are member of a local and outraged community. These form together the network; inside them are outrageous nodes and of course, some isolated node too. These nodes (clusters) can be featured by the intensity of the connections between the individual parts (members). Although we declare network theory, cluster has similar meaning here as in case of other sciences: it means node, taper. Barabási in his book writes that the real importance of the network is to help the organizations to adapt to the fast changing market circumstances. We can control the whole system if we can find the control points and the key people that can provide information. The most important task is to involve them into the system.

As we can see above it is very important to make difference between the clusters itself and the central cluster manager / cluster management company. Based on the network theory terminology, the cluster manager is in handshaking distance from each member of the cluster.

### e) Conclusion of the background

As we can find in the specialized literature, the international connection system of the organizations and clusters are just as important as their local network, since the pressure of the international competition acts like catalyst of the changes to the organizations. Besides the most important success criteria is to keep up such connection system that helps them to know the surrounding narrower and wider environment and to realize on time the changes, and they could react faster than the environment and competitors can change.

As the result of the primary research, the organizations that work in clusters have the need for new services provided by their cluster, which focuses only on business: **exploration and introduction of market opportunities and they want to be part of a stronger international network.**



If we transfer the point of view of the network theory to the field of business clusters, than we can get the result, that for the business success we do not have to connect the members of the clusters to reach each other with the least step, but we have to **connect the cluster managers and cluster manager organizations in each node of the whole network.**

## 2. The answer

As the result conclusion we can of course pop up the question, how to satisfy to all of these challenges? Is it worth it? If yes, how is it possible to connect the cluster manager organizations to satisfy the needs of the cluster members?

The Pharmapolis Innovative Food Cluster was set up in 2009 and it is led by the Innovative Food Cluster Ltd (IEK) owned mostly by the University of Debrecen and the Chamber of Commerce and Industry and the Chamber of Agriculture and has nowadays more than 75 members and a wide international partnership aiming to set up a market driven open innovation space for SMEs in Hungary.

After conducting the above mentioned research and literature review and having the first results, the IEK, the cluster management company decided in November 2014 to facilitate the setting up of the European Food Cluster Association (EFCA) among the food cluster managing organizations order to create a favorable environment for and stimulate the food value chain research and innovation for the European food clusters and their SMEs.

Based on the operational model it shall be a network of clusters at European level in a specific sector: food. The EFCA differs from the existing EU level schemes, like (a) from the technology platforms which aims to develop research agendas, (b) from the chamber of commerce's where no sectoral focus is dominant, and (c) from the chambers of agriculture's which is focusing on the whole food value chain from the soil to the table.

The EFCA is organized by their members in a bottom up approach, like a European level innovation association.

The EFCA has the following **direct goals**:

1. Supporting the SMEs to use their results of innovation in commercialization
2. Attracting talent and capital for SMEs through capacity building activities
3. Supporting the internalization and growth of SMEs
4. Supporting the global presence of the European SMEs outside of Europe

The main **activity areas** of EFCA will focus on:

- # increasing visibility of the global European food sector based on the cluster activities and creating research and innovation co-operations outside Europe through online and offline communication and special support schemes, like ambassador activities;
- # capacity building activities, like exchange programs for knowledge, people and technologies and testing and application of new results in order to attract talent and capital;
- # contributing to the relevant European legislation regarding novel foods, new health claims, human studies for food testing and food safety;
- # creating and operating an "open space" innovation system to contribute to the utilization of the new ideas, finding better solutions for actual problems through cross-sectoral fertilization.



Since November 2014 the first meeting of the EFCA was held in Debrecen where the funding documents, rules of operation and the actions were discussed. The EFCA is already on the web available.

In January and February 2015 more than 50 food clusters were contacted with the approach described above. Based on the first responses, several clusters declared already their willingness to join to EFCA. The first results and concrete activities can be reported during summer 2015.

### 3. Sources:

Ansoff és McDonnell (1990) Ansoff, I. H. and McDonnell, E. J.: *Implanting Strategic Management*, Englewood Cliffs, NJ, Prentice –Hall

Barabási A-L (2003) A-L Barabasi: *Linked – Hungarian translation (2003)*, Magyar Könyvklub, Budapest

Beatty and Ulrich (1991) Beatty R W and Ulrich D, *Re-engineering the Mature Organization*, *Organizational Dynamics*, Volume 20, Issue 1, Summer 1991, Pages 16–30

Beckhardt és Gibb (1983) BECKHARD, R. and GIBB DYER, J., W., 1983. *Managing continuity in the family-owned business*. *Organizational dynamics*, **12**, pp. 5-12.

Beckhardt és Harris (1977) RICHARD, BECKHARD, REUBEN, T. HARRIS, 1977. *Organizational transitions: managing complex change*. 1 edn. USA: Addison-Wesley.

Dobák (1997) Dobák M és munkatársai: *Szervezeti formák és vezetés*, Közgazdasági és Jogi Könyvkiadó, Budapest, 1997, ISBN 963 224 171 1

Grzesik (2008) Grzesik, W: *Advanced Machining Processes of Metallic Materials: Theory, Modelling and Applications*, Elsevier, 2008, ISBN: 978-0-08-044534-244534-2

Hayes (2007) Hayes J: *The theory and practice of change management*, Palgrave Mcmillan, New York, ISBN13: 978-1-4039-9298-7

Kamath et al (2012) KAMATH, S., AGRAWAL, J. and CHASE, K., 2012. *Explaining Geographic Cluster Success—The GEMS Model*. *The American Journal of Economics and Sociology*, **71**(1), pp. 184-214.

Kotter (2009) Kotter J.P: *Tettvagy, változásmenedzsment stratégiai vezetőknek*, HVG, 2009, ISBN 978-963-9686-92-2

Porter (2006) Michael E. Porter: *Competitive strategy – Hungarian translation Versenystratégia*, Akadémiai Kiadó rt, Budapest, 2006

Sölvel et al (2009) Sölvell Ö. – Ketels Ch. – Lindqvist G.: *EU Cluster Mapping and Strengthening Clusters in Europe*, European Commission, Enterprise and Industry (2009), Luxemburg, ISBN 978-92-79-12034-3