

European Cluster Observatory

REPORT

## **Cluster Collaboration and Business Support Tools to Facilitate Entrepreneurship, Cross- sectoral Collaboration and Growth**

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September, 2014

## European Cluster Observatory in Brief

The European Cluster Observatory is a single access point for statistical information, analysis and mapping of clusters and cluster policy in Europe that is foremost aimed at European, national, regional and local policy-makers as well as cluster managers and representatives of SME intermediaries. It is an initiative of the “SMEs: Clusters and Emerging Industries” unit of the European Commission’s Enterprise and Industry Directorate-General that aims at promoting the development of more world-class clusters in Europe, notably with a view to fostering competitiveness and entrepreneurship in emerging industries and facilitating SMEs’ access to clusters and internationalisation activities through clusters.

The ultimate objective is to help Member States and regions in designing smart specialisation and cluster strategies to assist companies in developing new, globally competitive advantages in emerging industries through clusters, and in this way strengthen the role of cluster policies for the rejuvenation of Europe’s industry as part of the Europe 2020 Strategy.

To support evidence-based policy-making and partnering, the European Cluster Observatory provides an EU-wide comparative cluster mapping with sectoral and cross-sectoral statistical analysis of the geographical concentration of economic activities and performance. The European Cluster Observatory provides the following services:

- a **bi-annual “European Cluster Panorama”(cluster mapping)** providing an update and enrichment of the statistical mapping of clusters in Europe, including for ten related sectors (i.e. cross-sectoral) and a correlation analysis with key competitiveness indicators;
- a **“European Cluster Trends” report** analysing cross-sectoral clustering trends, cluster internationalisation and global mega trends of industrial transformations; identifying common interaction spaces; and providing a foresight analysis of industrial and cluster opportunities;
- a **“Regional Eco-system Scoreboard”** setting out strengths and weaknesses of regional and national eco-systems for clusters, and identifying cluster-specific framework conditions for three cross-sectoral collaboration areas;
- a **“European Stress Test for Cluster Policy”**, including a self-assessment tool accompanied by policy guidance for developing cluster policies in support of emerging industries;
- **showcase modern cluster policy practice through advisory support services to six selected model demonstrator regions**, including expert analysis, regional survey & benchmarking report, peer-review meeting, and policy briefings in support of emerging industries. The policy advice builds also upon the policy lessons from related initiatives in the area of emerging industries;
- bring together **Europe’s cluster policy-makers and stakeholders at the European Cluster Conferences** 2014 and 2016 for a high-level cluster policy dialogue and policy learning, and facilitate exchange of information through these webpages, newsletters, videos, etc.

More information about the European Cluster Observatory is available at the EU Cluster Portal at: <http://ec.europa.eu/enterprise/initiatives/cluster/observatory/>.

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## **Introduction**

The report on cluster collaboration and business support tools to facilitate entrepreneurship, cross-sectoral collaboration and growth is mainly addressed to cluster managers interested in providing tailor-made and demand-oriented support services to cluster participants, mainly medium-sized companies. Industrial transformation and the development of emerging industries are key challenges for medium-sized enterprises. The nature of innovations and how they are emerging is continuously changing. Cluster organisations can play a decisive role for the development of new industrial value chains. Cluster participants can capitalise on cluster services in view of remaining competitive in emerging industries or successfully entering new global value chains. Cluster services focussing on cross-sectoral issues can be of even more importance, since innovations mainly happen at the borderline of those industrial sectors.

The report is also relevant for policy-makers and local stakeholders interested in seeing “their” clusters taking over a stronger role in promoting regional structural change and industrial modernisation. Gaining a better understanding of what kind of services and added values cluster organisations can provide to their clients, policy-makers can encourage cluster organisations to become more active and innovative when it comes to implementing new business services and contributing suitable framework conditions cluster organisations can operate in.

The report explains why cluster services are that important for the overall success of regional cluster policies, how the best innovative services can be identified and what are key success factors for implementation. The report reveals many examples of cluster services that can be used or adopted by interested cluster organisations. Of course, these services cannot be copied and pasted on a one-to-one basis, and the report shall not be understood as a recipe book, but the process, starting with a strategy definition and ending with specific business services provided by cluster organisations, is always quite similar and can be taken over by cluster organisations.

The report pays dedicated attention to clusters operating in emerging industries where traditional cluster services alone may not be sufficient anymore. New, innovative cluster services are needed to support small and medium-sized enterprises operating in emerging industries.<sup>1</sup> Encouraging cluster organisations to jointly create such services, especially if they are striving for excellence, is no longer sufficient. Time has changed and cluster organisations have to cope with new innovation challenges. In these days, Cluster services can be a key to succeed.

The report was published in the context of the European Cluster Observatory which aims at promoting the development of more world-class clusters in Europe, notably with a view to fostering competitiveness and entrepreneurship in emerging industries and facilitating SMEs’ access to clusters and internationalisation activities through clusters.

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<sup>1</sup> For further information on emerging industries please see the work that has been done in the context of earlier analysis of the European Cluster Observatory at [www.emergingindustries.eu/](http://www.emergingindustries.eu/).

## **1. Setting the Scene**

European policies have to address the new industrial logic with new global value chains at all levels and the emergence of new industries and transformation of existing industries. The policy framework has to support both, “places” and “issues”, like the promising focus on cross-sectoral value chains that interlink companies of different branches. When new global value chains are developed, new capabilities are becoming increasingly important, namely innovation culture, innovation infrastructure and innovation speed and the ability to integrate complementary knowledge and skills from other areas. Another aspect is the growing importance of cross-border, macro-regional and transnational cooperation.

Clusters are important instruments for the promotion of innovation. They are “industry eco-systems” providing a favourable business environment for experimenting with new business solutions. Thus, they play an important role as catalysts for structural change. In such eco-systems, new winners can emerge (without knowing who they might be and where they might come from) and thus support the development of emerging industries.

Clusters as a concept has been known for a long time that has traditionally been often (mis-)understood as a sectoral concept. Nowadays, the understanding of the concept has changed towards “clusters of related industries” and making better use of the complementarities between them to boost growth. The importance of cluster organisations as key drivers for industrial change is also a more recent phenomenon. Cluster organisations are important facilitators within clusters as they manage networks of companies, universities and research institutions that develop and sell products and services. Over the last years, there has been more and more evidence that cluster management excellence can make a difference. In other words, cluster management excellence matters.

Cluster services, meaning specific, tailor-made services provided by cluster organisations to their respective members (or cluster participants) are important tools for cluster organisations. But what role can cluster organisations play for the development of new industrial value chains and emerging industries, notably through creating a favourable environment for facilitating entrepreneurship and cross-sectoral cluster collaboration? And how specifically can they contribute? What sounds rational in theory seems to be even more difficult in practice.

To answer these questions this report presents cluster collaboration and business support tools that are used by cluster organisations to facilitate entrepreneurship, cross-sectoral collaboration and growth. Examples are collected from the analysis of more than 500 benchmarking exercises and quality audits of cluster organisations conducted by the European Secretariat for Cluster Analysis ([www.cluster-analysis.org](http://www.cluster-analysis.org)) complemented by individual correspondence by the European Cluster Observatory team with about 200 cluster organisations from all over Europe. Results of the analysis demonstrated that it is clear to cluster managers that innovation is most likely to happen at the borderlines between different industries. However, many cluster organisations still struggle with the facilitation of cross-sectoral collaborations across boundaries of industrial sectors. This report provides some inspiration for tools and services that can be used by cluster organisations to facilitate cross-sectoral collaboration, and thereby generate added value for the cluster participants.

There are lots of examples of traditional services such as workshops, business missions, newsletters and databases, etc. But there is a common understanding that such services are no longer sufficient to support competitiveness of enterprises operating in emerging industries. These industries can be characterised by the fact that innovations may emerge in different ways, in new value chains due to industrial transformation processes and new business models. Consequently, cluster services have to address such changing business environments.

The tools and services presented here provide some insights into new approaches for gathering market intelligence, organisation of stakeholder matchmaking, technology transfer, project development, use of innovation vouchers across clusters and strategic cross-cluster collaboration. When having a closer look at cluster organisations which are really excellent, it reveals that they are not only having a bundle of innovative business services in place, but these services are rather a dedicated outcome of a longer strategy process, which has been closely run with the respective cluster participants. Thus, a systematic approach is the key success factor for cluster organisations, which implies a common strategy resulting in a combined use of new innovative business services towards exploiting new opportunities for growth.

This report also complements other guides that have highlighted suitable instruments for a specific focus such as the “The Smart Guide to Service Innovation – How to better capitalise on service innovation for regional structural change and industrial modernisation”<sup>2</sup> and the handbook “TO DO: Development of cultural and creative industries in practices” recently published by the Alexanderson Institute.<sup>3</sup>

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<sup>2</sup> The Smart Guide is available at [http://ec.europa.eu/enterprise/policies/sme/regional-sme-policies/documents/no.4\\_service\\_innovation\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/regional-sme-policies/documents/no.4_service_innovation_en.pdf)

<sup>3</sup> The handbook is available at <http://www.alexandersoninstitutet.se/publicerat/todo/en-GB/>

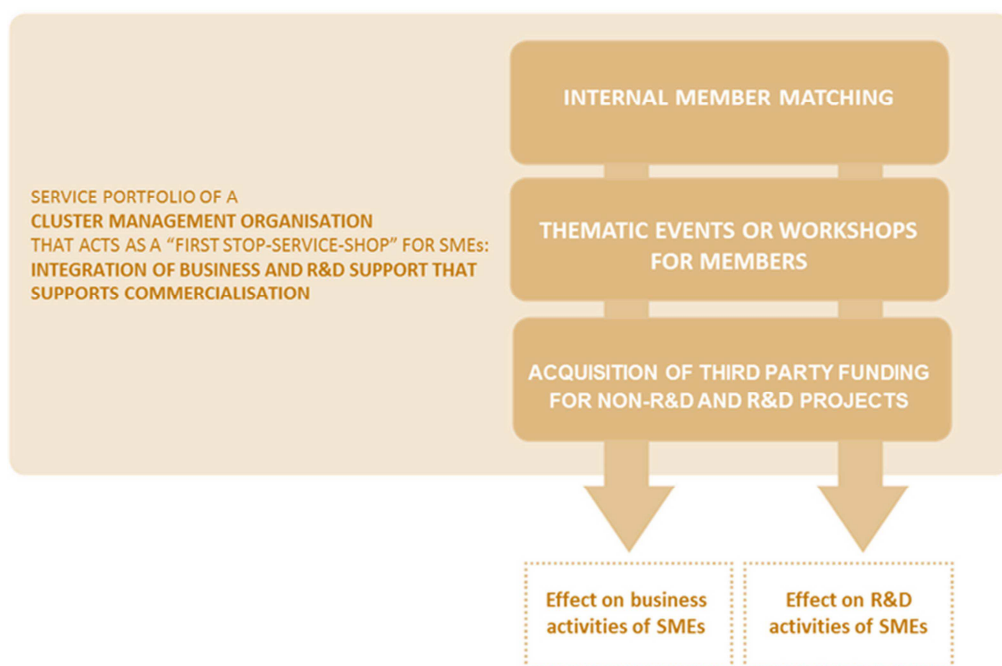
## 2. Strategy Matters!

There is no doubt that services are the key instrument of a cluster organisation to facilitate collaboration among cluster participants. Through their tools and instruments, cluster organisations can trigger a certain behaviour of companies, research institutions, universities and other cluster stakeholders which does not only have an effect on the individual cluster actors, but also on the cluster in its entirety.

Results of the pan-European cluster benchmarking programme “NGPExcellence – Cluster Excellence in the Nordic Countries, Germany and Poland” in 2010/2011 have demonstrated that there is a causal relationship between certain services of a cluster organisation and R&D as well as business activities of SMEs.<sup>4</sup> There are key impact-relevant services that should be offered by any cluster organisation in support of activities of cluster participants. It is not about an “either/or” of services, but about the integrated offer of services to commercialise R&D results and thus to trigger innovation-based economic growth. Cluster management organisations that feature such an integration of services are typically based on a strategy that addresses the support needs of the cluster participants.

Figure 1 shows an integrated portfolio of key impact-relevant services that have an effect on business and R&D activities of SME cluster participants by sequencing services such as internal member matching to bring cluster participants together, organising workshops or thematic events to further discuss ideas that developed from the matchmaking and apply for funding for projects that are the outcome of workshops or thematic events.

Figure 1: Portfolio of key impact-relevant services, source: see footnote 4



<sup>4</sup> Christensen, Thomas Alslev/Lämmer-Gamp, Thomas/Meier zu Köcker, Gerd, 2012: Let’s make a perfect cluster policy and cluster programme. Smart recommendations for policy makers, Berlin/Copenhagen, pp. 32-34

The analysis of the relationship between the intensity of individual services and the overall effect of the cluster management's activities on business and R&D activities of SMEs demonstrated that a high intensity of service provision does not necessarily result in a large effect of the cluster management's activities. Creating effects is therefore not only about the number of services delivered, but in particular about the quality of service provision in terms of the development, content and delivery of services. It is also the combination and interaction of different services that creates the effect of the cluster management's activities on the R&D and business activities of an SME. This refers to the quality or excellence of the cluster management organisation in terms of a professional development and implementation of services that address the needs of the cluster participants.

It goes without saying that there is no standard solution, as such services are primarily geared to practical needs, and thus greatly depending on the network structure and the needs of members. Two important issues are relevant to highlight in this regard:

- **First, cluster managements need to closely monitor technology and business trends in the industrial sectors relevant for the respective cluster.** Such monitoring needs to be based on the understanding of a cluster, not in a narrow sectoral view, but as an eco-system of related industries and competences featuring a broad array of inter-industry interdependencies. Trend monitoring supports the identification of new opportunities for the cluster whose further development can be facilitated by the cluster management by offering services that tap into their potential. In this respect, cluster managers are much more than just a "secretary of the cluster". They wear several hats at the same time: they are scouts who anticipate trends, consultants who question weak business models and change agents who broker strategic decisions in a constructive manner. In this sense, cluster managers are entrepreneurs who recognize opportunities, mobilize resources and create value through services.
- **Second, industry needs to be involved in the development of services.** Excellent cluster organisations communicate constantly with their cluster participants both, through an annual strategy dialogue and day-to-day interaction. They consider them as "clients" who request support for the development of their business. Regular meetings with cluster participants or phone calls to follow-up on their needs are mandatory for the identification of new service requirements.

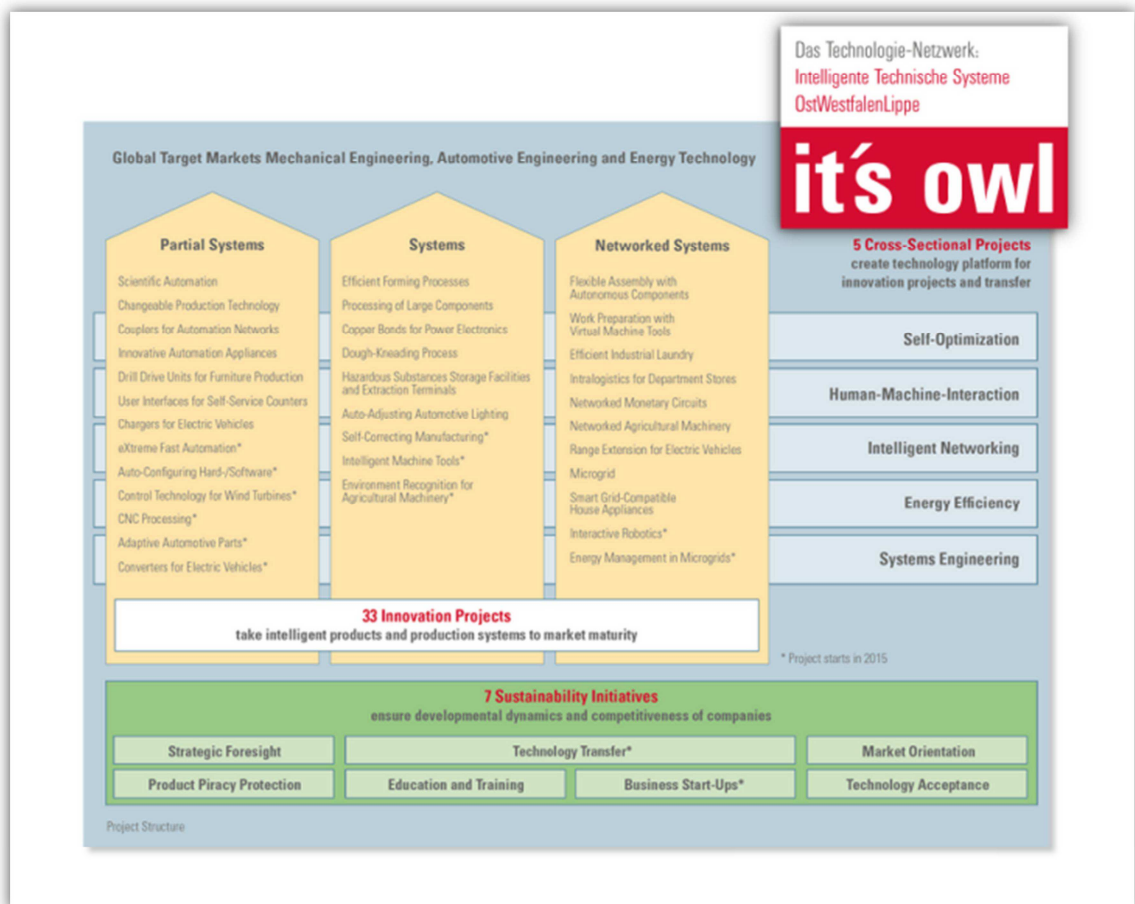
**10 Steps towards a cluster management strategy:**

- ⇒ Communication of the upcoming strategy process among the cluster participants
- ⇒ Selection of stakeholders and cluster actors to be involved
- ⇒ SWOT analysis of strength, weaknesses, opportunities and threats / analysis of the current demand status and future expectations
- ⇒ Creativity workshops and competitions with cluster actors and stakeholders
- ⇒ Additional interviews with selected cluster actors
- ⇒ Deduction of strategic objectives and operational targets
- ⇒ Identification of main action fields and synergies between them
- ⇒ Prioritisation of actions and services
- ⇒ Discussion of approach with cluster actors and stakeholders
- ⇒ Agreement on action plan for development and implementation of support services



In recent years, more and more cluster organisations have realised that there is huge growth potential untapped in cross-sectoral cooperation. They are therefore looking beyond the borders of industrial sectors by integrating different sectors within in an existing or newly emerging value chain. Services offered by these cluster organisations are not driven by chance, but – putting smart specialisation into practice - pursue the common objective of the cluster participants to develop systemic solutions for new markets and technology areas. Their strategies on which the services are based are highly sophisticated and combine R&D projects with technology transfer and market development activities coordinated by a highly professional cluster organisation based on a business model that is owned by all cluster stakeholders.

Figure 2: Integrated service portfolio



To read more about the cluster organisation „it's owl“ and its strategy and service portfolio visit [www.its-owl.com/home/](http://www.its-owl.com/home/)

A very good example of such a sophisticated strategy can be found at the management organisation of the cluster “it’s owl” – Intelligent Technology Systems OstWestfalenLippe. The cluster is regarded as a pioneer for “Industry 4.0”<sup>5</sup> and gathers 174 companies, research institutes and organisations from various industries, such as mechanical engineering, automotive components, agricultural machinery, industrial laundry technology, electronics and ICT. In a joint effort of economy and science they approach the innovation leap from mechatronics towards intelligent technical systems.

At its core, the cluster features more than thirty **cross-sectoral innovation projects** that are combined with so-called “**sustainability initiatives**” to ensure technology transfer among cluster participants and commercialisation of the new products at the global market. The cluster management organisation – a team of 14 management and technology experts – does not only coordinate the different projects, but provides also services such as consulting, marketing and technology transfer to make sure that results from the projects are effectively and efficiently used by the cluster members.

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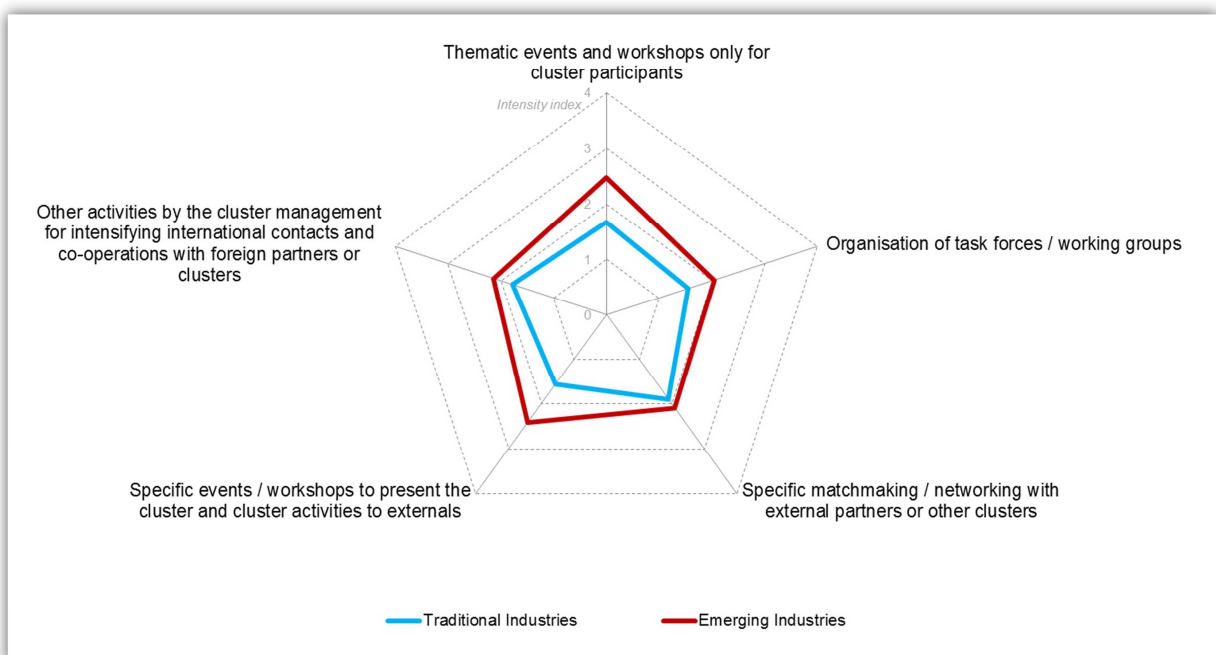
<sup>5</sup> *Industry 4.0: The term "Industry 4.0" being introduced around 2011 refers to the fourth industrial revolution, the digital revolution, towards a highly flexible mass production of strongly customized products making use of new automation technology based on internet technology and new methods of self-configuration and self-optimisation of products and production environments.*

### 3. Toolbox: Business Support Services

It is common sense that innovation is most likely to happen at the borderlines of different industries. Thus, corresponding development of new value chains and emerging industries to generate innovation largely depends on “cross-border collaboration”. To facilitate such collaboration within a cluster or across its boundaries, cluster organisations are well placed as they represent and serve specific groups of SMEs and other innovation actors. As argued above, successful work of a cluster organisation towards strengthening innovation-based business development of SMEs depends on the delivery of specific services. Ideally, these services are not delivered individually, but form part of a strategic tool set.

Comparative analysis of benchmarking data of cluster organisations from traditional industries and the emerging industries that have been identified by the European Cluster Observatory<sup>6</sup> shows that the service portfolio of the latter has a **more intensified focus overall towards the facilitation of collaboration within and beyond the cluster’s boundaries across all relevant service areas of a cluster organisation**. This includes services in the areas of thematic events, task forces and working groups, matchmaking with other clusters and internationalisation (Figure 3).

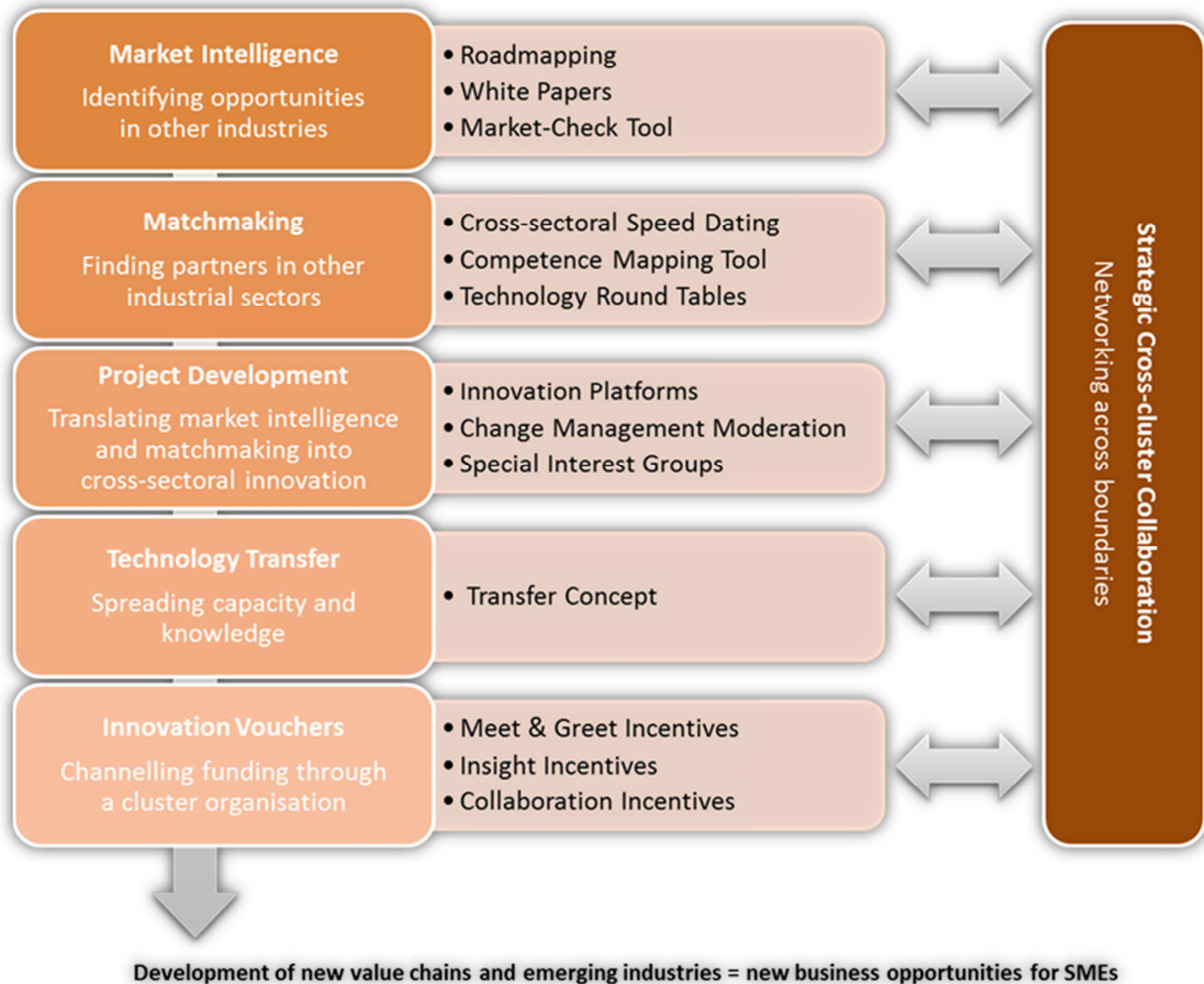
**Figure 3: Intensity of collaboration facilitation by cluster organisations traditional and emerging industries compared**



In this regard further analyses of the survey results have revealed a number of interesting services that are used by cluster organisations to promote cross-sectoral collaboration. A combination of these tools in a particular service portfolio as presented below, appears to be most promising to support the development of new value chains and emerging industries at which end new business opportunities for SMEs are generated (Figure 4):

<sup>6</sup> They include Advanced Packaging, Biopharmaceuticals, Blue Growth Industries, Creative Industries, Digital Industries, Environmental Industries, Experience Industries, Logistical Services, Medical Devices, Mobility Technologies.

Figure 4: Service portfolio for the promotion of cross-sectoral collaboration



Every new value chain or emerging industry starts with the observation that there is an opportunity for the development of a new market (= “market intelligence services”); then partners are needed to develop ideas on how to take advantage of these opportunities (= “matchmaking services”); once ideas are born, they need to be translated into projects (= “project development services”); new knowledge might be worth to be shared with others (= “technology transfer services”) and funding is required (= “innovation vouchers”). Last but not least, it is of outmost importance to reach out to other sectors on a constant basis (= “strategic cross-cluster collaboration”).

The following chapters provide an introduction of examples of such services from leading cluster organisations in Europe. It will become obvious that the question of whether an example fits into this or another service category is not always easy to answer, as tools may have another component such as matchmaking and project development at the same time. The following structure is therefore based on the “main focus” that a tool may have.

### **3.1 Market Intelligence: Identifying Opportunities in Other Industries**

Market intelligence is key to the successful anticipation of new business opportunities – both in regard to developing new markets for already existing products and services and to developing products and services to be sold on markets that are just emerging due to new needs of society and industry. Market intelligence is about collecting information relevant to such markets. Analysis of this information is crucial for developing a corporate strategy in areas, such as market opportunities, market penetration and market development. Many SMEs do not have the resources to operate business development units for strategic market analysis and development. Cluster organisations can counterbalance this disadvantage by providing SMEs of their cluster with sophisticated market intelligence services.

The following examples of the cluster organisations foodRegio (Germany), Packbridge (Sweden) CLEAN (Denmark), Virtual Dimension Center (Germany) and Chemie Cluster Bayern (Germany) provide inspiration for the development of market intelligence services that support SMEs in tapping into new business opportunities.

#### **3.1.1 From Roadmapping to Cross-sectoral Cross-border Partnership (foodRegio and Packbridge)**

Market intelligence can often be gathered by using data resulting from “**Roadmapping**”. This methodology is a combination of competence mapping (What competences are available within a cluster?) and foresight (What are the future trends? How to respond? What competences are needed?). The outcomes of such a roadmapping – the role of cluster organisations is to moderate and run this process closely together with cluster actors – also have a strong impact on the overall cluster strategy, since it usually sets the relevant future innovation agenda.

The cluster management of the German food cluster foodRegio has conducted internal roadmapping exercises to identify future cross-sectoral cross-border cooperation in new areas related to food production. Following up to the outcomes of the roadmapping activities, a cluster actor mapping process in the region has revealed that appropriate competences in smart packaging (especially with regard to sensor and packaging technology) had been missing. Thus, the cluster management of foodRegio and regional policy-makers have broadened the scope to enter a proper cross-sectoral strategic partnership looking towards its neighbouring countries.

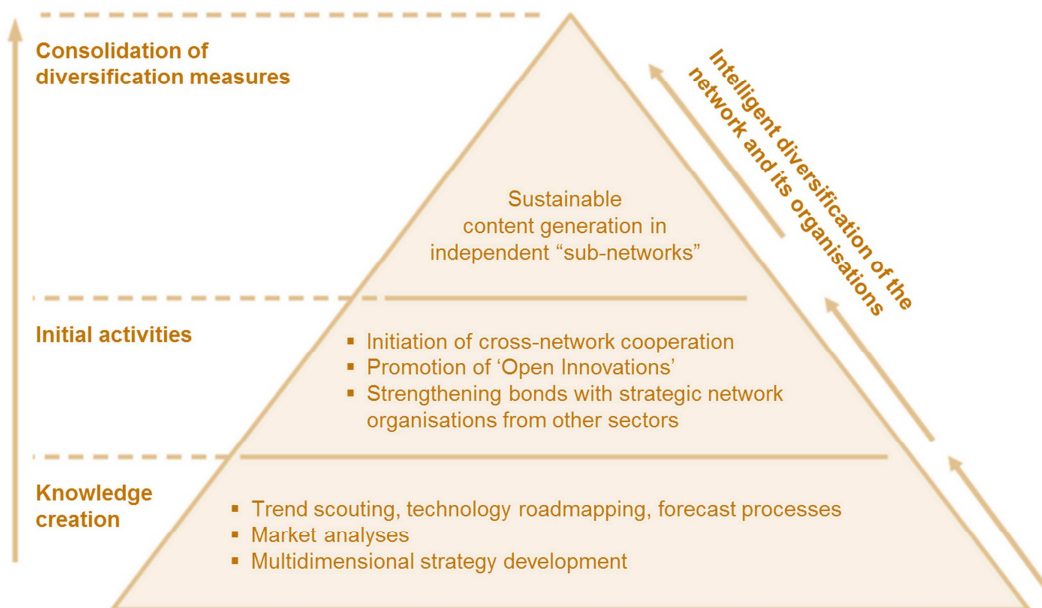
Packbridge, which is an industrial network organisation from Sweden supporting innovation, internationalisation and collaboration across all borders, was identified as the most suitable partner bundling all competences related to developing smart packaging for food, which was missing in foodRegio. In just three years' time, Packbridge had become a hub of the Swedish packaging industry, based in the southernmost part of Sweden, Skåne. Packbridge partners were very much interested to enter into new cross-sectoral cooperation with foodRegio actors, since smart packaging was also identified by them as promising new area, but the food sector was underdeveloped in the respective area. As an outcome of the cooperation with Packbridge, members of foodRegio have built up regional competences in smart packaging. This process was embedded in the regional smart specialisation strategy and also actively supported by public funds. The process was driven by the foodRegio Cluster Management.

The cross-sectoral, cross-border cooperation between both clusters resulted in many tangible innovations and has enabled foodRegio region to build up own competences in smart packaging. The reason for the success of this strategy is that the cooperation is based on a clear innovation agenda, very

specific needs and supported by the regional government. It is very obvious that smart packaging of food will be based on completely different business models and technologies in the future.

**Market intelligence** can be gained by the use of several tools, not only by roadmapping. Trend scouting, foresight analyses or market analyses are all tools that can be used to identify future collaboration spaces. This is definitively a demand-driven approach and corresponding cluster services can be considered as instruments how to best satisfy these needs (Figure 5).

Figure 5: From Roadmapping to cluster-to-cluster collaboration



### 3.1.2 White Papers (Virtual Dimension Center Fellbach)

The Virtual Dimension Center (VDC) is a German cluster organisation based in the city of Fellbach in South Western Germany. Established in 2002, VDC is a network for virtual engineering and supports 100 cluster members and partners with services in the business areas of information processing, matchmaking, marketing, technology management and funding management. The strategic focus of the cluster lies on simulation, visualisation, product lifecycle management (PLM), computer-aided engineering (CAE) and virtual reality (VR) along the entire virtual engineering value chain.

Although virtual reality is not a new technique with computer-simulated environments being used for more than two decades, it is becoming more and more relevant for an increasing number of industries. Yet, virtual reality environments are mainly visual experiences, but recent technological developments have also included sensor or haptic systems. Thus, more and more potential opportunities for application are developing, and consequently more and more opportunities for business development arise.

In order to assist virtual engineering companies with keeping track with new corresponding developments in other industries, the cluster organisations are constantly publishing **white papers** - as a kind of trend report - to provide guidance for new business and research and development opportunities. White papers have yet been published for opportunities in different industries such as textile, medical technologies, commercial vehicles, production, plant engineering, space and aviation and logistics. The white papers provided are prepared by the cluster management in collaboration with cluster members from both, industry and research and development. They are publicly available and provide a quick and easy access to information relevant for developing new business opportunities.

Further information about the White Papers can be found at [www.vdc-fellbach.de/downloads/whitepaper](http://www.vdc-fellbach.de/downloads/whitepaper)

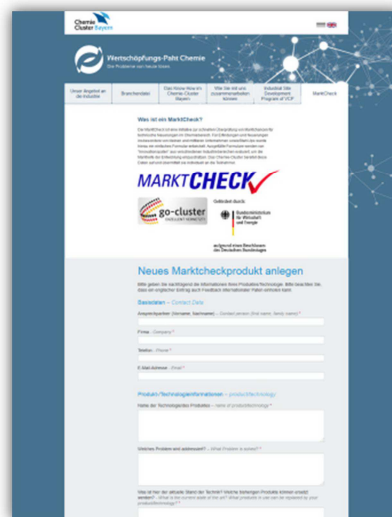
### 3.1.3 „Chemistry meets...“ and Market-Check (Chemie-Cluster Bayern)

Being part of the Bavarian State Government's cluster initiative, Chemie-Cluster Bayern promotes product and process innovations for new, usually international markets. The cluster organisation links companies and research institutions of the Bavarian chemical industry by supporting research and development projects as much as business development and internationalization of the industry. Very much emphasize is placed on the facilitation of cross-industry alliances.

Within its business area "market development", the cluster organisation supports companies with the identification of "hidden markets". The target group include industrial system integrators for whom chemical industry suppliers have already developed solutions in the context of totally different value chains. To tap these hidden markets the cluster management provides comprehensive market intelligence to the cluster which goes far beyond mere market research by providing practical information relevant for product development. The Chemie-Cluster Bayern aims at developing hidden markets in the industry sectors of mobility (focus on space and aviation, ship building and defence), consumer goods (focus on leisure and sport articles and toys) as well as heavy and process industries (focus on extraction and processing of raw materials). By 2017, about six innovation partnerships will be realized in these areas in cooperation with the respective market leaders and industry networks.

As part of the initiative "Chemie trifft..." ("Chemistry meets..."), the cluster organisations collect so-called "**challenge statements**" from the R&D departments of market leaders from different industries. These challenge statements are presented to SMEs and researchers from the clusters which either present an existing product or service as a solution or develop a new solution. Cluster members who can present a solution or an idea are invited for workshops and discussions with the "challenger". Thus, it is much more than market intelligence as it also includes a matchmaking component that facilitates business contacts.

Complimentary to this "user-driven" approach, the cluster organisation also offers a "**market check**" for product and service developers. The market check is an initiative for a fast review of market opportunities for technical innovation in the chemicals sector. Via an online-form, SMEs and start-ups are invited to submit information about their latest developments and innovations to check market potentials. Completed forms are evaluated by "innovation godfathers" of various non-chemical industrial sectors. The cluster management organisation informs the companies within three weeks upon completion of the online questionnaire about the evaluation results. The results have a particular focus on potential markets in industrial sectors that are not yet addressed by the company.



Further information about Chemie Cluster Bayern can be found at [www.chemiecluster-bayern.de](http://www.chemiecluster-bayern.de).  
The Market Check can be accessed at [www.wertschoepfungspakt-chemie.de/marktcheck](http://www.wertschoepfungspakt-chemie.de/marktcheck).

## 3.2 Matchmaking: Finding Partners in Other Industrial Sectors

Matchmaking is a core element of the service portfolio of every cluster organisation. Regular get-togethers, events or workshops, business missions or networking visits are the typical instruments. This section provides some examples of innovative matchmaking activities that go beyond the standard matchmaking event.

### 3.2.1 “Environmental Technology meets...” – Cross-sectoral Speed Dating (Bavarian Environment Cluster)

*Umweltcluster Bayern* (Bavarian Environment Cluster) is an environmental technology cluster based in the city of Augsburg, but covering the entire German federal state of Bavaria. Main purpose of the Bavarian Environment Cluster is the strengthening and development of the environmental technology in Bavaria through networking, information and the strengthening of cooperation initiatives. The thematic focus is on recycling and waste management, water and wastewater treatment, waste and bio-mass-based energy production as well as on materials flow management.

Taking into account that environmental technology is a cross-cutting technology that is relevant for all industrial sectors of an economy, the cluster management introduced a new format to establish cross-cluster collaboration: “**Environmental technology meets... - Cross-sectoral Speed Dating**”. This matchmaking event aims at enabling cluster members to look beyond their own field and get into contact with members of other clusters in order to develop new ideas, make new contacts and find possibilities for cooperation. Yet, speed dating events have been implemented together with other cluster organisations from Bavaria including the sectors industrial biotechnology, sensor technology, mechatronic and automation, forestry and wood processing and food industry.

Each event – covering four hours during an afternoon – is structured into two elements: two or three brief key note presentations provide an introduction to the key challenges of the sector, which are then followed by two speed-dating sessions for which companies can register in advance with profiles and preferences to make sure that they will meet the right partner. Results of the speed-dating are presented during the event and are further evaluated by the cluster organisation as a follow-up action. Based on the results, individual or group visits of companies are planned to further develop ideas for projects. Furthermore, stakeholders not having been involved in the project, but who might add value



to the project can also be included. The overall aim is to develop from the speed-dating contacts as many cross-sectoral R&D or business development services as possible.

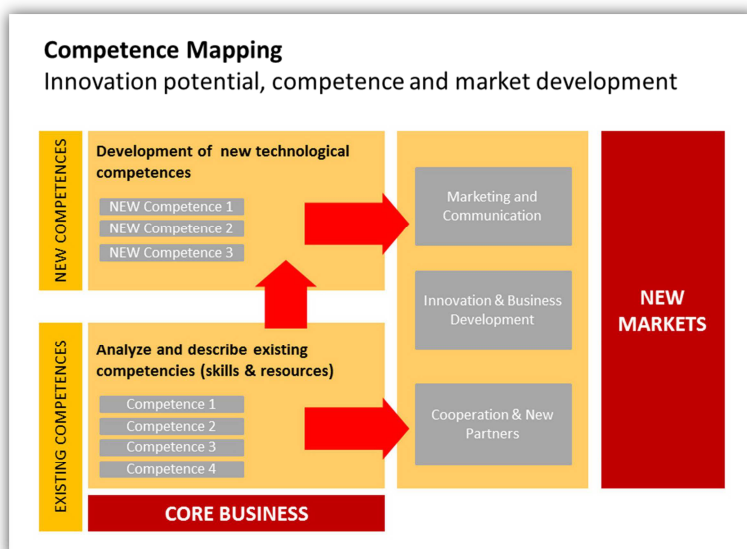
Further information about Environment Cluster Bavaria can be found at [www.umweltcluster.net](http://www.umweltcluster.net).

Further information on the speed dating is available at [www.umweltcluster.net/en/projekte/umwelttechnologie-meets.html](http://www.umweltcluster.net/en/projekte/umwelttechnologie-meets.html).

### 3.2.2 Competence Mapping Tool (Mechatronics Cluster Upper and Lower Austria)

The Mechatronics Cluster (MC) is a network of companies in the mechanical engineering and plant building sector in the Austrian regions of Upper Austria and Lower Austria. The cluster is hosted by the regional development agencies Clusterland Upper Austria Ltd. and ecoplus - Lower Austria's Business Agency Ltd.

In order to identify cross-sector collaboration potentials for the industry represented in the Mechatronics-Cluster in Lower Austria, the cluster management, together with an external innovation management expert, has developed the “**Competence Mapping**” tool, which assists companies and research facilities in searching for and exploring radically new, cross-sectoral business solutions. The need for this tool arose from the experience that many companies define and present themselves in a very product-oriented way instead of being aware of and showing the skills and resources, in other words solutions, they offer.



The aim of the tool is to analyse companies and R&D facilities in order to detect and describe their competencies in a structured way that is easy to understand also for potential customers in other sectors and disciplines. By doing so, it identifies also missing competencies that are required to tap into new markets and to find potential partners with whom the company can team up in order to compensate these competency gaps. Furthermore, by means of patent research it supports the identification of new growth areas for the companies.

The tool, which is rather a process than a tool, consists of different procedural elements. The first step is a self-assessment of the company or the research facility, which is followed by a half-day workshop with the cluster management and other experts to discuss and structure competencies. This is accompanied by the analysis of potential markets for the company or the research facility that have not yet been tapped into. The analysis is conducted by an external service provider. Final step of the process is a second half-day workshop to discuss the insights that developed from both competence and market analysis with regard to new business opportunities.

Yet, this tool has been tested and further developed in 20 companies and 15 research institutions. The tool is also being tested in Sweden, Italy and Romania in the framework of the INTERREG 4C project ClusterIX ([www.clusterix.info](http://www.clusterix.info)) and shall be used for cross-regional match-making in the future. The development of a web-based-tool is planned for the future.

Further information about the Mechatronik Cluster can be found at [www.mechatronik-cluster.at](http://www.mechatronik-cluster.at).

### 3.2.3 Technology Round Tables (Eco World Styria)

The Austrian cleantech cluster ECO WORLD STYRIA supports cross-cluster collaboration through **inter-industrial “Technology Round Tables”**. The idea of these meetings – that are organised frequently by the cluster organisation to discuss new technological opportunities in different industrial sectors – is to bring together customers, researchers and companies to assist the businesses in developing new technologies and services. ECO identifies innovative topics or actual challenges and creates, in cooperation with experts, the content of the round table in the first step. Key-note speakers are invited to these small, but focused round table talks and cluster members participate to discuss their ideas. It is made sure that these ideas and the output are strictly confidential and will only be dealt with in the group until a project is defined. In the last year, more than a dozen “Technology Round Tables” have been organised from which numerous new co-operations were established. For example, a special roof for solar power-modules called “SKIN@energyroof” has been developed by SFL Technologies, based on the discussions of a round table. The pilot project “Landfill Mining Styria” has also started via the initiative of a round table. In summary, the thematic foci of the round table meetings give an answer to strategic priorities that were identified by the cluster organisation together with cluster members. For 2014, the thematic priorities of the “Technology Round Tables” include storage technologies, urban mining, smart cities and energy efficiency.



Meetings can also be organised together with other cluster organisations as it was the case in April 2014, when opportunities in the area of plastic recycling were discussed together with stakeholders from the Austrian automotive cluster “ACstyria”. This round table continued discussions that have been held in the previous years in the context of the workshop series “Automotive Recycling” where more than 140 experts have been attending.

Experts from the automotive and recycling industries plus scientists from Styrian research institutions discussed framework conditions, market opportunities, technologies and aspects of design in combination with life-cycle-assessment. Out of this new network, it is aimed that new R&D and business development projects will be carried out contributing to meet new legal requirements for the recycling rate of cars.

Further information about ECO WORLD STYRIA can be found at [www.eco.at](http://www.eco.at).

### 3.3 Project Development: Translating Market Intelligence and Matchmaking into Cross-sectoral Innovation

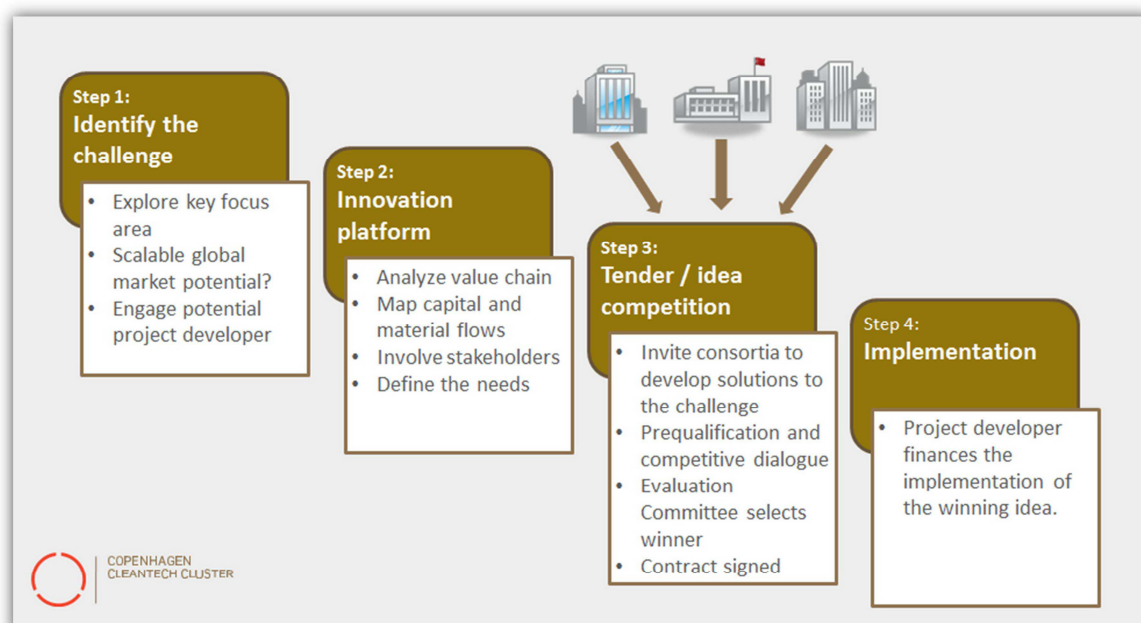
Every cluster manager knows that matchmaking generates a whole lot of ideas and everybody is eager to turn these ideas into projects. Turning ideas into projects is one of the most difficult challenges as it requires a lot of effort to structure them into clear work programmes that pursue a clear and tangible target. Ideas are often further developed and targets are changing in the course of translating ideas into action. The following three examples from Denmark, Slovenia and Austria demonstrate different methods or tools, respectively to generate specific actions from ideas.

#### 3.3.1 Innovation Platforms and Competitive Dialogue (CLEAN Denmark)

The Copenhagen Cleantech Cluster – now following its merger with another Danish cluster known as CLEAN – Connecting Danish Cleantech – has developed an innovation model that explicitly addresses systemic innovation. The innovation model is a method for solving large environmental challenges, which remain unresolved due to their complex nature. The rationale behind is to gather actors from across the value chain, providing them with the business incentive, and thus encouraging them to play an active part in developing innovative green solutions.

The process of identifying these challenges, as well as finding and implementing a viable solution consists of a number of stages. The objective behind the CLEAN innovation model is that by following a series of steps, it will lead to the implementation of concrete solutions to the problems identified while at the same time, it will foster innovation, uncover new business opportunities and strengthen Danish competencies. Each of the stages in the CLEAN innovation model is described below.

Figure 6: CLEAN innovation model



### **Phase 1: The screening phase - identifying a problem owner and potential**

The entire process starts with a problem owner - often a public authority - with a challenge that needs to be addressed. Often the problem owner does not know all aspects of the challenge due to its complexity, or has no exact idea on how a possible solution may look like. However, the problem owner is willing to buy a solution, if it is suitable for dealing with the challenge. The willingness to reach out and implement the right solution means that the problem owner is committed to invest time, knowledge and resources in the entire process. The perspective of a problem owner purchasing a future solution - if it addresses the challenge - is an essential incentive for the companies to take part in the process. Thus, a possible challenge is put forth, CLEAN conducts a preliminary screening. Knowledge about the problem is gathered in collaboration with relevant individuals, companies and institutions in order to assess the needs and potential of an innovation platform based upon a preliminary understanding of the challenge. The screening includes an assessment of the potential and financial basis for the establishment of an innovation platform, and it has to comply with the following criteria:

- Is there a global market potential for a solution?
- Does Denmark possess the relevant competencies in this area?
- Are we talking about a complex challenge that the market has not been able to solve and which seems to require cross-cutting collaboration/triple helix partnerships?
- Is the "problem owner" who needs a new, innovative solution willing to finance and engage in an innovation process?

Based on the screening, the board of CLEAN decides whether the challenge qualifies as innovation platform, which will then further analyse the challenge. If the challenge does not comply with the above stated criteria, the process ends here.

### **Phase 2: The Innovation Platform**

If the criteria are met, CLEAN establishes an innovation platform. The platform consists of relevant CLEAN member companies and other enterprises, relevant public authorities, knowledge institutions and experts all of who analyse and concretize the challenge under the guidance of an independent secretariat and chairman. The innovation platform analyses the challenge more thoroughly to see if the challenge may be divided into several sub-problems and whether the problem(s) can be made subject to a tender. At the end of an approx. six-month period, the innovation platform reports back to the CLEAN board, who decides if the challenge should be made subject to a proper tender process.

This stage is particularly critical, as the outcome of the innovation platform will decide on the subsequent activities. This phase can end with a) the process moving on to the next stage as the challenge has been concretized and is made subject to a tender, or b) the process is stopped as the problem is not deemed apt for a tender process (e.g. new legislation or a new market situation may create incentives that will address the problem).

### **Phase 3: Tender process and competitive dialogue**

CLEAN will - with legal assistance - turn the concretized problem into a prequalification tender material and publish it. Apart from an overall description of the problem to be solved, the prequalification material describes which prerequisites and competencies CLEAN deems necessary in order to deal with the challenge. Before the prequalification tender is launched, the CLEAN secretariat will disseminate information about the forthcoming tender, in addition to facilitate meetings and to bring together relevant players, thereby enhancing the chance that those relevant players will join forces and establish a consortium with competencies to face the challenge. This is done by means of information meetings, networks and communication channels that CLEAN has access to.

Having received offers from different bidders, CLEAN will select the three offers which seem best equipped to solve the challenge followed by a competitive dialogue.

The competitive dialogue is a procedure whereby the problem owner can reflect upon and specify in greater detail the contents of the problem, as well as their requirements for a future solution. The competitive dialogue thus grants the problem owner a setting to discuss this with the prequalified consortia, which in return are offered an opportunity to enter into a closer dialogue with the problem owner in order to qualify and focus their proposal for a solution. The competitive dialogue is facilitated by the CLEAN secretariat assisted by lawyers and experts in the relevant fields. This process lasts a couple of months. All questions and answers put forward in the process are available for all the prequalified consortia. The result of this competitive dialogue is a clearer picture of the problem and the availability of possible solutions both, for the problem owner and the potential bidders.

On the basis of the competitive dialogue, the CLEAN secretariat elaborates and publicizes the final tender documents, specifying the concrete challenge as well as the type of solution sought after. Finally, the consortia will each submit their proposals for a solution, and a review committee with representatives from the problem owner, the CLEAN and selected experts pick the proposal that addresses the challenge in the best possible way. As recognition of the efforts put into the process, the losing consortia will receive remuneration.

#### **Phase 4: Implementation**

This stage is the final stage in the CLEAN innovation model. At this stage, the implementation of the winning proposal takes place. A contract is concluded between the problem owner and the winner of the tender, who will be responsible for implementing the solution. At this point, the CLEAN is no longer involved in the project and it is up to the ordering party and the winning consortia to carry out the final steps in the process.

All the way, it is a voluntary process and there is no guarantee that the winning solution will be implemented in the end. The winner will win the prize associated with the tender and eventually a new market for the solution. But the problem owner is still free to assess whether the specified solution actually meets the requirements and should be implemented in full scale or not. Likewise the consortia are free to withdraw from the process if they, for some reason, wish to do so.

Currently, there are four concrete projects in different stages following this model. The topics are:

- Big Data Digital Infrastructure (“Tender” stage, “Implementation” expected by end 2014)
- Building and Construction Waste (“Innovation Platform” finished, launch of “Tender” expected by end 2014)
- Waste Plastics (“Innovation Platform” finished, launch of “Tender” expected by August 2014)
- Sensor technology and e-coli detection in water infrastructure (“Identify the Challenge”, screening of technologies)

Further information about Copenhagen Cleantech Cluster and Clean – Connecting Danish Clean Tech can be found at [www.cleancluster.dk](http://www.cleancluster.dk).

### 3.3.2 Change Management Moderation with Stakeholders (Slovenia)

Automotive Cluster Slovenia (ACS) is one of the leading Automotive supply clusters in Eastern Europe. ACS is based on economic interest of its members uniting Slovenian automotive suppliers. Its members' aim is to reinforce the competitiveness and create greater added value. Continuous monitoring of upcoming trends provided by the ACS management identified bio-based materials as a great opportunity to benefit from the transformative power of new bio-based value chains. However, the framework condition within Slovenia to support bio-based industries as well as the research infrastructure allowed room for improvements. Thus, a triple helix approach that covered the university-industry-government linkages was needed to drive regional innovation forces towards a bio-based Slovenian industry.

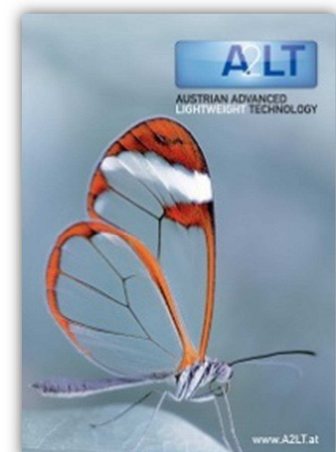
ACS management, in close cooperation with its members, Centers of Excellence (e.g. PoliMaT) and policy-makers, developed a systematic approach (Poly4Eml) on how to improve regional framework conditions and building a critical mass for the emergence of new regional biopolymer-based industries. Poly4Eml, as a systematic approach, ensures cluster services for policy-makers, clusters from other sectors, SMEs, key enabling actors and service providers to support the transformation of existing and creation of new bio-based value chains. Services for academia and industry were designed and implemented to identify future trends and new value chains for bio-based materials (trend scouting and joint roadmapping exercises). For policy-makers services, like peer reviews on regional cluster and innovation policies and policy learning workshops were designed to support them in finding strategies for improving framework conditions and support programmes. Benchmarking exercises were offered for cluster organisations in related industries to improve cluster management capacities. Slovenian SMEs should benefit from new support schemes, like innovation vouchers to become more active in the bio-based materials sector.

Particularly the broad spectrum of services targeting all actors of the triple helix combined with new services and instruments makes this example a good practice, how cluster organisations can **coordinate and moderate regional transformation processes** on policy, industry and academic level. In addition, giving this approach a brand (poly4Eml) contributes to an international visibility of such a systematic approach driven by a cluster organisation.

### 3.3.3 Special Interest Groups (Clusterland Upper Austria)

Clusterland Upper Austria is hosting various cluster organisations in the industries of automotive, plastics, wood, medical technology, mechatronic, ICT and environmental technology. From the very beginning, cluster managers have realised that there is a huge potential for cross-sectoral collaboration and innovation.

A key instrument to facilitate cross-sectoral collaboration between the different clusters are **Special Interest Groups**. This instrument is a key element of the service portfolio of each cluster and is frequently used, even in cooperation with clusters from other regions. The Special Interest Groups could be seen as thematically-focused sub-networks within the cluster in which interested companies and R&D institutions participate. The focus of such initiatives is to create joint business/project opportunities by involving all partners providing necessary technologies, joint marketing and public relations for a certain topic, and lobbying for specific topics in order to be able to jointly further develop the particular topic.



Special interest groups are long-term initiatives that meet regularly and follow a working plan that was agreed upon by the members at the beginning. Activities include identification of challenges (e.g. by technology roadmapping), R&D project development, technology transfer, competence development, market development and marketing. Each special interest group has permanent members financing the work of the group through fees.

There are various cross-cluster special interest groups including for example:

- Wood Plastics Composites, established in 2010 as a cooperation of the plastics and wood clusters ([www.wpc-plattform.at](http://www.wpc-plattform.at))
- Smart Plastics, established in 2011 as a cooperation between the automotive, plastics and mechatronic clusters ([www.smart-plastics.com](http://www.smart-plastics.com))
- Austrian Advanced Lightweight Technologies (A2LT), established in 2013 as a cooperation between the automotive, plastics and mechatronic clusters of Clusterland Upper Austria and the Automotive Cluster of Styria ([www.a2lt.at](http://www.a2lt.at))

Under preparation are special interest groups on additive manufacturing for medical devices (collaboration of the plastics, mechatronics and medical technology cluster) and Smart Manufacturing – Industry 4.0 (collaboration of the mechatronics and ICT cluster).

Further information about the Special Interest Groups of Clusterland Upper Austria can be either found at the websites mentioned above or at [www.clusterland.at](http://www.clusterland.at).

### 3.4 Technology Transfer: Spreading Capacity and Knowledge - Technology Transfer in Four Stages

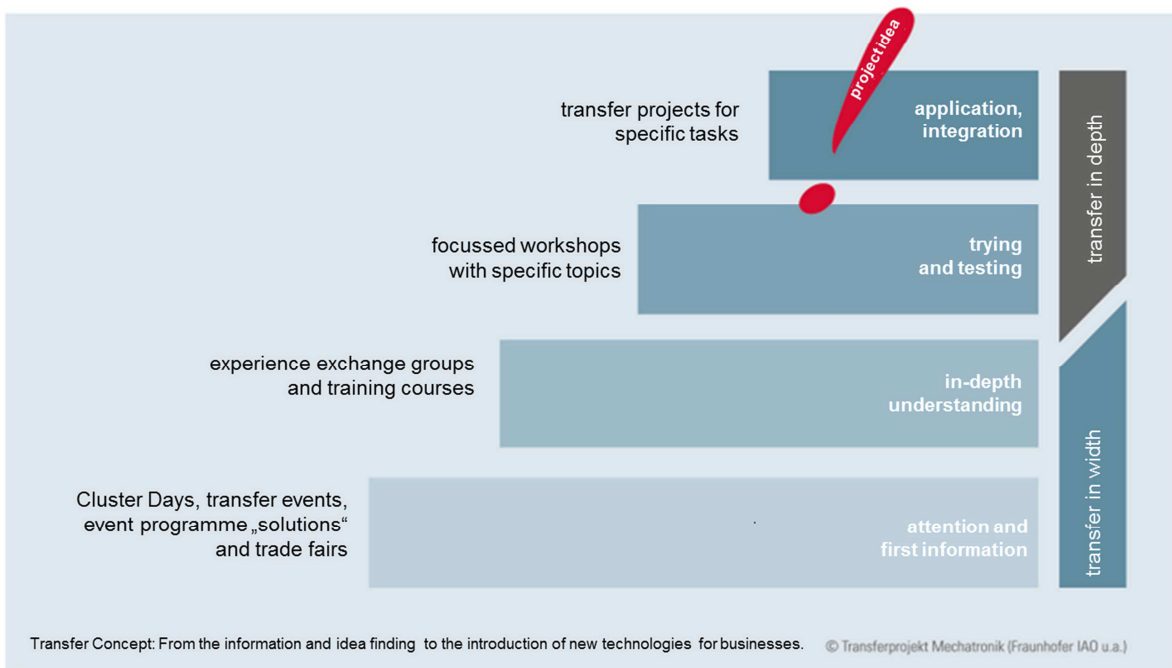
The incorporation of results from a project upon its completion or even during its implementation in company routines is often a challenge, in particular for SMEs. Therefore, technology transfer is a key issue for cluster organisations. How this can be implemented in a smart and structured approach is demonstrated by the following example:

„it's owl – Intelligent Technical Systems Ostwestfalen-Lippe” is a German cluster financially supported under the Leading-Edge Cluster Programme of the Federal Ministry of Education and Research. Being one of fifteen clusters receiving support from this programme *it's owl* is an alliance of 174 companies, universities, research institutions and other stakeholders. Implementing nearly 50 R&D projects that aim at the development of intelligent technical systems, the cluster is a key driver of advanced manufacturing in Germany. Cross-sectoral projects are developing new technologies for self-optimization, human-machine interaction, intelligent networking, energy efficiency and systems engineering. Including various industrial sectors - such as mechanical engineering, automotive components supplier, agricultural machinery, industrial laundry technology, electronics and ICT - the cluster is an example of cross-sectoral cluster working at the development of an emerging industry.

Projects are not limited to R&D; a strong focus is also set on technology transfer. The core of the Leading-Edge Cluster is made up of family-run businesses and a wide range of medium-sized enterprises. Often, these companies are extremely interested in the technologies produced in the cluster, even though they are not involved in implementing their own innovation projects.

The technology transfer sustainability initiative is dedicated to allowing these companies access to the methods, processes and tools that have been developed. The aim is to train interested companies in how to apply this knowledge and to support cooperation with regional research institutes. The two main technology transfer tools are knowledge sharing groups and focused transfer projects. The cluster management aims at developing and implementing some 120 technology transfer projects.

Figure 7: Transfer concept





This is accomplished by designing transfer events at which interested manufacturing firms are introduced to the technology platform, and ideas for transfer projects are identified. Knowledge-sharing groups on cross-sectional project topics allow for continuous exchange between research and business sectors. This is all supplemented by workshops providing companies with a deeper understanding of the use and effects of various technologies. Concepts for transfer projects are developed during individual consultations with companies. After testing, the programmes are implemented and continuously developed in cooperation from the partners listed above.

The project increases the companies' awareness of the benefits offered by the Leading-Edge Cluster technology platform and lays the groundwork for dissemination. Transfer projects to introduce technology are developed as needed for implementation in the second phase of funding. This allows companies to increase their competitiveness and market success by optimizing their products and production processes. The results of the project are carried over to sustainable transfer tools and further education programmes. In addition to this, engineering firms in the OWL network disseminate the technology platform outside the cluster.

Technology transfer in the Leading-Edge Cluster it's OWL follows a four-stage model:

- Stage 1: In the first stage, it's OWL cluster shows, trade fair appearances and targeted information events are held to draw the attention of interested companies to the Leading-Edge Cluster and its work.
- Stage 2: Once interest has been generated, more in-depth information is provided to interested companies, for example in specialist workshops and working groups. The aim is to discuss specialist topics and technical aspects of the cluster in an easily comprehensible manner.
- Stage 3: In goal-oriented workshops, generally held on a company's premises, potential transfer partners learn how to transform their requirements into a concrete task definition.
- Stage 4: The next step is to develop tailored concepts for focused transfer projects during individual consultations with companies. After a successful application, the project is implemented.

Further information about it's owl – Intelligent Technical Systems Ostwestfalen-Lippe can be found at [www.its-owl.com](http://www.its-owl.com).

### 3.5 Innovation Vouchers: Channelling funding through a Cluster Organisation - an EU Cross-cluster Collaboration Example

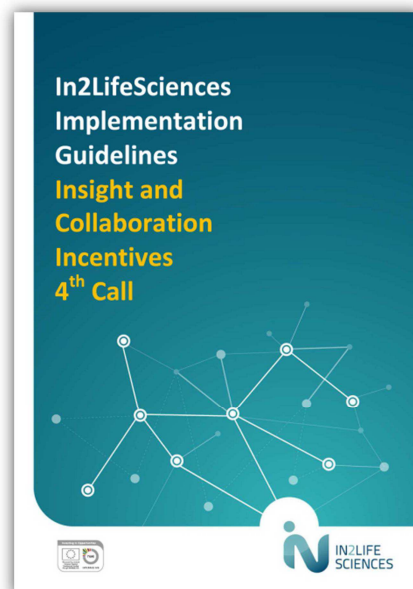
Of course there are lots of funding programmes from government agencies that can be used by a cluster organisation or cluster participants to get initiatives and programmes running. But yet, there are only a few examples of cluster organisations that have set up their own programmes in order to reach their strategic objectives. The example of the innovation voucher scheme of the Danish cluster organisation BioPeople is an excellent example not only of how to make use of EU Structural Funds to generate financial means for such a programme, but also for implementing such a scheme in a pan-European endeavour together with partners from Belgium, France, Germany and the Netherlands.

Innovation vouchers are promising instruments to facilitate cross-industry collaboration.<sup>7</sup> The idea of innovation vouchers is to – as it is put by a UK programme – “encourage businesses to look outside their network for new knowledge”.<sup>8</sup> There is no doubt that such schemes create the intended results in terms of developing new products, services and processes through cooperation among companies or companies and research institutions/universities that have not cooperated until then.<sup>9</sup>

The Danish cluster organisation BioPeople has been successfully working with innovation vouchers for many years. Small financial incentives between EUR 500 and 7,000 for different purposes such as encouraging meetings with new international partners, cross-disciplinary collaboration or finding new innovative product or service providers supported by an online database through active brokerage of profiles between cluster managers have helped SMEs to generate further growth.

Innovation voucher schemes are an important instrument for the cluster organisation to facilitate innovation across industrial sectors. Until now, BioPeople has implemented four schemes successfully and is about to launch a new one. Currently, they are involved in a cross-country innovation voucher scheme that was developed together with clusters and business development entities from Belgium, France, Germany and the Netherlands. The scheme is part of the IN2LifeSciences project that is financed under the INTERREG 4B programme for North-West-Europe.

IN2LifeSciences - a transnational project - gives SMEs in the health sector (biotechnology, pharmaceuticals, medical technology and nutrition for human and animal health) in eight leading life sciences regions in North-West Europe easy access to a wide range of public and private experts and facilities. IN2LifeSciences is the follow-up of the successful FASILIS project in which 67 international life sciences cooperations have been initiated, some with impressive spin-offs. IN2LifeSciences enables



<sup>7</sup> For instance, three out of the four innovation voucher projects under the European Creative Industries Alliance, focused on stimulating cross-sectoral linkages between creative industries firms (as service providers) and firms from other industries (as direct beneficiaries of the support services provided through vouchers). See [www.eciapplatform.eu/projectcategory/vouchers](http://www.eciapplatform.eu/projectcategory/vouchers)

<sup>8</sup> See Technology Innovation Board, *Innovation Voucher Scheme*, [www.innovateuk.org/-/innovation-vouchers](http://www.innovateuk.org/-/innovation-vouchers)

<sup>9</sup> E.g. Cornet, Maarten/Vroomen, Björn/van der Steeg, Marc, 2006: *Do innovation vouchers help SMEs to cross the bridge towards science?*, CPB discussion paper, CPB Netherlands Bureau for Economic Policy Analysis, The Hague and Technopolis Group: *Policy instruments for regional innovation - innovation vouchers*, Brussels.

SMEs to work with providers of expertise and equipment beyond those currently available at the regional level. Key to the project are innovation bottlenecks within SMEs, whether these are technological, financial or related to marketing a new product or service in a foreign market. IN2LifeSciences will help to connect SMEs to a relevant expert or provider in the IN2LifeSciences network.

To stimulate actual contact and cooperation there are three types of **call-based incentives** available for SMEs in the eight IN2LifeSciences regions that are looking for innovation support:

- Meet & Greet incentives: up to EUR 500 for SMEs to travel and meet relevant organisations in other regions. Applications for these incentives should be submitted and approved before the meet & greet activity takes place!
- Insight incentives of EUR 4,000 to exchange staff, receive training or contract experts to gather insight (on markets, technology, IPR, etc.)
- Collaboration incentives of EUR 7,000 for an actual collaboration on an innovative new product or service

Further information about BioPeople can be found at [www.biopeople.dk](http://www.biopeople.dk).  
For further details on the IN2LifeScience project please see [www.in2lifesciences.eu](http://www.in2lifesciences.eu).

## 3.6 Strategic Cross-cluster Collaboration: Networking across Boundaries

Strategic collaboration with other clusters, either in the same industry or cross-sectoral, has grown in importance in recent years. Confronted with increasing competitive pressure from overseas, industry has realised that new value chains have to be created that yield new products, services and processes. The development of new value chains calls for the collaboration and integration of different innovation actors across different industrial sectors. Clusters provide a fertile environment for the development of new value chains, as they are often the birthplace of key enabling technologies and new business models. Clusters and networks can act as "springboards" for bringing companies and knowledge institutions from different sectors and countries together to jointly develop innovative solutions. They may also help SMEs to find easier access to global value chains and engage in long-term cooperation with strategic partners from other countries. Reinforcing cross-sectoral cooperation at global level is a challenge that cluster organisations and networks can better address in partnerships with others than alone. There are more and more examples of cluster organisations that lift their cooperation to a higher institutional level by creating formal strategic cluster partnerships.

### 3.6.1 Strategic Networks – the International Cleantech Network (ICN)

An example of a global strategic cluster partnership is the International Cleantech Network (ICN), an alliance of 16 cluster organisations from Africa, Asia, Europe and North America. Being initiated and managed through the Danish cluster "Clean – Connecting Danish Cleantech", other European cluster organisations such as Renewable Energy Hamburg, OREEC – Oslo Renewable Energy and Environment Cluster, Cleantech Delta of Rotterdam, the French Tennerdis Energy Cluster, ACLIMA – the Cluster Association of Environmental Industries in the Basque Autonomous Community, the Lombardy Energy Cluster and Eco World Styria benefit from a huge network that is based on a joint strategy.



The purpose of creating this international collaborative platform between cleantech clusters is to enhance knowledge-sharing between businesses, knowledge institutions and local authorities, and to improve collaboration between the regions in which the clusters are located in order to give them competitive edge in the battle for new technologies, talent and markets share. A particular focus is on supporting companies that are member in one of the ICN clusters by finding partners for R&D projects or business, providing market insights and assistance for internationalisation, providing information about funding sources in each region and using relations in other ICN clusters to open doors to potential partners.

To learn more about the International Cleantech Network please visit  
[www.internationalcleantechnetwork.com](http://www.internationalcleantechnetwork.com).

### **3.6.2 Regional Meta Clusters – MultiCluster Mazovia**

Strategic cluster collaboration is not limited to the international level; there are also examples on regional level such as the Polish MultiCluster Mazovia. The cluster was established in 2011 based on a co-operation agreement of clusters from the Mazovia region in Central Poland. The participating clusters cover a broad array of industries including ICT (Mazovia Cluster ICT, Alternatywny Klaster.INFO, Digital Knowledge Cluster, E-Innovative Cluster), health (Bona Vita Cluster), services (Central Business Intelligence Cluster), creative industries (Creative Communication Cluster), energy (Mazovian Energy Cluster) and photonics (Optoklaster).



Purpose of MultiCluster Mazovia is to strengthen the organizational, financial and scientific potential of the existing clusters, clusters initiatives and independent enterprises in the Mazovia Voivodeship. The new supra-cluster aims to initialize and implement joint innovative projects in Mazovia, Poland and the European Union and to create an environment enabling enterprises to function and develop competitiveness and innovativeness as well as to encourage collaborative networking and innovativeness of the cluster and its members.

Yet, given its young age MultiCluster concentrates its activities on cross-cluster SME matchmaking and business development as well as on internationalisation of SMEs through trade fair visits and trade missions. MultiCluster also facilitates best practice exchange regarding cluster management among its members and lobbying of SME interests towards regional authorities. Development and joint implementation of R&D projects across cluster borders are planned for the near future.

To learn more about MultiCluster please visit [www.multicluster.pl](http://www.multicluster.pl).

### **3.6.3 European Strategic Cluster Partnerships**

Another example of powerful cross-cluster partnerships is represented by the European Strategic Cluster Partnerships (ESCP) supported by the European Commission. These partnerships of cluster organisations contribute to the emergence of new value chains that bring together, in an innovative way, companies from different sectors and better support SMEs in global competition. In addition, they may also offer innovative solutions to better address societal challenges at large scale, such as global warming and resource efficiency. The rationale behind the European Strategic Cluster Partnerships is that these challenges are too big to be shouldered by individual clusters or networks alone.

Cluster partners in an ESCP develop and implement a joint strategy promoting cross-sectoral cooperation and facilitating SME internationalisation in new “rising star” areas, notably in fields that also contribute to societal challenges such as global warming and better resource efficiency. The partnership members have developed a long term agenda for cooperation across sectoral boundaries and with other partners from other countries. The partnership is based on a partnership agreement with a detailed roadmap for implementation, including IPR arrangements and a joint branding and marketing strategy as well as a common logo.

*Example of a European Strategic Cluster Partnership*

**Food Innovation Partnership 3P4I - Better Packaging and Contents for Longer Food Life**

3P4I—the Photonics Packaging Partnership for Food Innovation promotes the collaboration between its clusters. Its aim is to identify and develop innovative technological solutions to problems that limit food shelf life by improving both packaging and contents.

The 3P4I consortium plans to define current and future challenges in food packaging and develop innovative solutions. Prototype solutions will be commercialized and brought to the market.

Part of the programme are best practice examples for cross-sectoral collaborations. Results of the activities will be supplied to the cluster members over the consortium network and the Cluster Collaboration Platform.

Participating cluster organisations are SECPHO – Southern European Cluster in Photonics and Optics (Spain), Optitec – Pôle photonique & imagerie (France), FoodRegio (Germany), Food-Processing Initiative (Germany) and Packaging Cluster (Spain).

So far, 13 European Strategic Cluster Partnerships have been set up, including:

- European LightingCluster Alliance - ELCA
- European Aerospace Cluster Partnership - EACP
- ICT4Future
- European Sports Clusters Partnership
- EuropeanSemiconductor Cluster Consortium - ESCC
- Food, Health & Wellbeing
- Textile 2020
- Energy in Water
- Mind the Gap – Health and Wellbeing for the Elderly
- International Cleantech Network - ICN
- Photonics & Packaging for Innovation - 3P4I
- Personalized Healthcare
- Natural Resource Efficient Europe - Natureef

Further information about the European Strategic Cluster Partnerships can be found at [www.clustercollaboration.eu/escps](http://www.clustercollaboration.eu/escps).

**For further information, please consult the European Cluster Observatory Website:**

[http://ec.europa.eu/enterprise/initiatives/cluster/observatory/index\\_en.htm](http://ec.europa.eu/enterprise/initiatives/cluster/observatory/index_en.htm)



*This work is part of a service contract for the Enterprise and Industry Directorate-General of the European Commission. It is financed under the Competitiveness and Innovation Framework programme (CIP) which aims to encourage the competitiveness of European enterprises. The views expressed in this document, as well as the information included in it, do not necessarily reflect the opinion or position of the European Commission and in no way*