





# THE HANDBOOK

A GUIDE ON LESSONS LEARNED















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### Abstract

The SEENECO Consortium is fully committed to stimulate mutual learning and raise skills in cluster management through the sharing and exchange of views with experienced cluster organisations in Europe, enabling thus a quick transfer of practical know-how. A mobility scheme for cluster managers allowing them to participate in peer reviews on the quality of cluster management will be developed. This documentpresents information extracted during the participation in the mobility scheme in other CIP countries.

### Preface

During the last decade, activities related to cluster development have experienced a strong growth in Europe and many clusters have been nurtured in a multitude of sectors; yet the challenge today has switched towards the enhancement of the competitiveness and sustainability of these clusters, fostering their change to a world-class statute in terms of qualitative and quantitative performance.

Therefore, enabling and promoting cluster excellence, in particular at the level of cluster organisations is a key issue and part of the efforts undertaken by the Member States and CIP countries to achieve the goals of the recent Europe 2020 Strategy, in particular to the "Innovation Union".

The main project objective of the South-East European Network-of-Excellence of Cluster Organisations 'SEENECO' project is to promote cluster management professionalism in SEE by applying advanced training and benchmarking tools developed under the European Cluster Excellence Initiative (ECEI). SEENECO will bring together a number of key national institutions from SEE countries to allow for further exploitation of the results of ECEI at regional level.

The SEENECO project will focus on enhancing the competitiveness and sustainability of clusters andon fostering their change to world-class stature in terms of qualitative and quantitative performance by enabling and promoting cluster excellence, in particular at the level of cluster organisations.

### Introduction

The road to excellence in cluster management is not a theoretical one, based only on learning through modern teaching methods, but it is also based on lessons learned through direct and personal involvement of cluster managers in a dialogue with experienced peers. Therefore, the project supports the international cluster cooperation by offering SEE cluster organisations the opportunity to network at European and international level, both through the European Cluster Collaboration Platform and through direct interaction between cluster managers in SEE and experienced peers in other CIP countries through working package 5: Fostering Mobility of Cluster & Network Managers at European level.

Within the framework of this working package, SEENECO strives to stimulate mutual learning and raise skills in cluster management through the sharing and exchange of views with experienced cluster organisations in Europe, enabling thus a quick transfer of practical know-how.

This Handbook is the results of a mobility scheme lead by the Bulgarian Ministry of Economy and Energy , in collaboration with all project partners, that allows cluster managersto participate in peer reviews on the quality of cluster management. The ultimate goal is to acquire the necessary knowledge based on previous experiences and best-practises and identify fields that can be improved and/or services that can be further developed at national level. Moreover, the study visits and the exchange of know-how, held on the site of the experienced cluster organisation, will provide the possibility for information regarding the framework of the clusters, their structure and economical embedment, the competences of the members, leading to the identification of complementarities and raising the potential for future development of joint business activities between the cluster members.

Hence, this Handbook represents a collective manual of all outputs on lessons leant, identified complementarities and cooperation opportunities, so that other cluster managers and colleagues can benefit from the experience.

Following the reader will be acquainted with the experience of 16 visiting cluster organizations from Bulgarian, Croatia, Greece, Romania and Serbia on their international visits throughout Europe's knowledgeable and advanced hosting cluster organizations. The Handbook follows a sectorial approach; thereby each experience is placed in the one of the following sectors; agriculture, automotive, energy, entertainment, health, furniture, ICT and metal.

# Agriculture

# Agricultural Equipment Cluster visiting Agro Business Park



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### The Cluster Environment

Agro Business Park (ABP) is a science park with a strong focus on entrepreneurship and innovation within agriculture, food, bioenergy and environmental technologies.

ABP accomplished a considerable number of projects – all with the aim of supporting entrepreneurship and innovation in the sector. This goes for both companies, which

participate in our company network, and especially for the entrepreneurs and the development departments, which make use of Agro Business Park as incubator.

Agro Business Park consists of three organizations:

- Agro Business Park A/S The private limited company founded on the 18th of August 2000, is responsible for day-to-day operations within the Agro Business Park. The most important tasks in this company are search and mediation of knowledge as well as guidance to newly started companies within agriculture, food, bioenergy and environment technology.
- "Ejendomsfonden" for Science Park Foulum- "Ejendomsfonden" is a public based company which owns the buildings and the other physical frames that are essential for the science park, including 15 hectares of land. "Ejendomsfonden" was founded on the 21st of June 1999 by Viborg County, Viborg Municipality, Tjele Municipality and the Ministry of Food, Agriculture and Fisheries.
- Agro Business Innovation A/S is an independent, private capital company which can invest risk capital in new Danish knowledge-based companies and development projects within agriculture, food, bioenergy and environmental technologies.

Through itsAgrobusiness Innovation Department and implementation of innovative solutions in Danish manufacturer's agricultural machinery, ABP is perfectly structured in linking the business sector, university and national and local authorities (triple helix).

### Adding value to the members

An extra effort is provided to the companies, which are members of the Agro Business Park – they are seen as core partners, and deserve special attention in order to ensure availability to the best possibilities to develop and run commercial, knowledge-based business. In addition, Agro Business Innovation can assist with financial development of new, knowledge-based businesses.

At the same time, Agro Business Park must create opportunities so that companies outside the physical space of the science park can benefit from the knowledge and services. This is done through concrete project co-operation, the development of network activities, technology transfer or other situations, where the company in question is of strategic interest for the Agro Business Park.

Furthermore, Agro Business Park's skills and competences must be of interest to external partners in connection with new, innovation related activities within our professional field, particular with respect to internationalisation.

### Things to remember

ABP has an international network which covers a large variety of contacts within Agribusiness and over the past years has been involved in a number of projects in Europe, Latin America and South East Asia. In 2008, the science park was selected by the European Commission as part of the Enterprise Europe Network – the largest

business support network in Europe. Located on the same site as the Agricultural Faculty of Aarhus University, ABP shares access to the technical library, which contains patent and literature databases as well as updated research papers.

### Areas of improvement

Based on the visit AEC identifies the following areas as essential for their development:

- 1. Learn from and use the experience of ABP to expand network of potential partner
- 2. Ensure easier access to EU funds and thus improve the AEC references in cooperation with ABP in joint projects
- 3. Open more space for the globalization and internationalization of AEC business through production cooperation

### Complementarities and future cooperation

Strong focus was put on cooperation between ABP and AEC on projects financed from EU funds and the possibility of production cooperation - as part of that, the companies Samson (manufacturer of slurry tankers) and C.F. Nielsen (world leading manufacturer of Briquetting Solutions) were visited.

Both organizations are planning a joint project application to the one of EU funds to make mutual transfer of knowledge and technology related to the topic of the European platform for optimized N&P nutrient recycling via manure handling and livestock and poultry feeding in agriculture - fostering solutions via research driven cluster cooperation.

# IND-AGRO-POL visiting FEMAC

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### Prehistory

FEMAC, cluster of agricultural machinery was chosen for a visit not only because it is in the business of constructing technical equipment designed to agriculture and related sectors but also it is proven to be one of the best cluster organizations. Having been awarded with the Gold Label for cluster management within the European Cluster Excellence Initiative methodology, FEMAC serves as an example.

### The Cluster Environment

FEMAC is a non-for-profit membership organization. We are independent from the Spanish and European institutions or any other larger structure. FEMAC was set up to enable the cooperation of its members in and around innovation projects for a sustainable agriculture. FEMAC members come from all parts of the innovation value chain of the agricultural machinery sector:

- Agricultural machinery manufacturers (SMEs most of them are micro enterprises): Farm and agricultural equipment; irrigation systems; components;
- Technological and research centers: Universities; private centers technological parks; science centers;
- Engineering and expertise consultants: Mechanical, electronic and robotic; market and strategy expertise; innovation and cluster strategy;
- Others: Trade associations; government agencies; exhibition organizations;
- International members: Moresis International (HK) Ltd [ China ]; Newtrademéxico [ Mexico ];

Whereas, the cluster's philosophy is to pool all the expertise that is needed for technology and service developers to bring their product and research results successfully to the market. The main abilities of FEMAC cluster are to stimulate the internationalization of its members and to increase their export rates.

FEMAC sets its strategy every four years. The first strategy was set-up in 1998. The strategy for the period 2007-2011 was focused on the followings:

- R&D (new and better products);
- Training (internationalization, foreign languages, etc.);
- CE mark;
- Export in the respect of the logo "GO abroad". 60% of the FEMAC efforts were focused on this issue;
- ISO 9001 implementation.

The actual FEMAC strategy (for the period 2012 – 2015) is focused on the followings:

- R&D and Innovation;
- Internationalization especially to make joint business abroad;
- Increasing cooperation inside and outside of the cluster;
- Boosting cross sectoral cooperation with other clusters.

The FEMAC goal is to improve the competitiveness of Catalan manufacturers of agricultural machinery as well as companies involved in their value chain activities in the aim to boosting innovation for a global and sustainable agriculture. FEMAC's origin is based on the bottom-up approach and receives an important national and regional support therefore making it a market orientated type of organization. Structure of financing represents 60% = public funds; 25% = services; 15% = companies fees.

### Adding value to the members

The portfolio of activities offered by the organization could be summarized as:

- Cooperation The cross clusters collaboration is a very important issue.
   Ex: Collaboration between FEMAC cluster and The SOLARTYS cluster (from photovoltaic sector: www.solartys.org).
- Innovation:
- Consultation on project ideas (alternative opportunities for new products, new process and new strategies);
- Search for suitable project partners;

- Assisting and managing the applications for regional, state and EU funding;
- Taking care of the submission of the application for support;
- Networking and workshops.
- Internationalization Internationalization approach in various stages of development of the FEMAC cluster: initial opening new markets for cluster members and then the development of joint business abroad. All the visited companies, members of FEMAC cluster, have the important export rates especially exports in Africa, Asia and Latin America. FEMAC cluster initiated an European Cluster Partnership (within the European project NATUREEF) which represents a new challenge for better natural resource efficiency in Europe. This network involves European clusters from different sectors
- Developing strategies and competencies for increasing international market share;
- Identifying partners and developing cooperative (and commercially valuable relations internationally);
- Managing international activities (Trade Fairs, Commercial Missions, Internationalization Groups);
- Technological transfer:
- Developing and testing innovative models for agricultural technology transfer and application aimed to generate additional farm income in developing countries with a potential for scaling up.

### Success factors and stories

The main ongoing projects of FEMAC cluster are strictly focused on innovation and internationalization:

### TECHNOLOGICAL FESEABILITY STUDY - GPS:

- Objectives of this new technology: Approaching precision agriculture, one of the pillars of sustainable agriculture;
- Scope: the implementation of a Global Positioning System in several agricultural applications to improve efficiency and maximize the performance;
- Period: 1.08 31.12.2013;
- Type: Innovation;

### PHOTOMAQ:

- The objective of this cooperative project is to generate collaborative innovation projects in the fields of photonics, optics and agricultural machinery. With the creation of this type of project, it is intended to accompany a group of companies (8 to 10) and research centers in the process of preparation of hybrid projects I + D innovative solutions that arise from the sector optics and photonics sector for operational problems of agricultural machinery;
- Period: 1.08 31.12.2013;
- Type: Innovation;

### NATUREEF EU - A new challenge for better natural resource:

• A new challenge for better natural resource efficiency in Europe, is the vision of NATUREEF, an European Cluster Partnership, that has been

awarded for the recent European Strategic Cluster Partnership initiative leaded by the Cluster Platform together with the DG Enterprise and IndustryClusters and Support for SMEs , belonging to the European Commission;

Period: 2013 - 2015;

Type: Exploring business opportunities

web: http://www.natureef.eu;

### Things to remember and learn from

The methodology for cluster management developed within the Cluster Management Transfer Programme, by Mr. Enric Pedros and Mrs. Elisabeth Molina from the cluster organization of FEMAC, based on FEMAC experience is extremely valuable. It could be transferred to the IND-AGRO-POL competitiveness pole and adapted to the Romanian conditions, in the aim to improve the competitiveness of IND-AGRO-POL members (companies) on the global market.

Furthermore, the indicators system that allows the measurement of the effectiveness of the cluster direction, developed by the cluster organization of FEMAC, could also be transferred to the IND-AGRO-POL competitiveness pole.

The Catalonian system to support the cluster development by the regional authorities is the major envy. It could be used as a model to create support mechanisms to the Romanian competitiveness poles and cluster organizations by the national and regional authorities.

### Barriers and areas of improvement

The lack of financing support for the Romanian competitiveness poles and cluster organizations through the national and regional authorities is seen as the major barrier. However, some complementarities between FEMAC cluster and IND-AGRO-POL competitiveness pole were established:

- The economic sector in which both of them acting: the construction of agricultural machinery
- The importance of innovation for both clusters
- Cross-sectoral approaches implemented by both clusters.

### Future cooperation and follow-up activities

During the peer-review it was identified that the two cluster organizations could cooperate within the Horizon 2020 and COSME European programmes. Since they are both operating within the same segment a potential collaboration would be a perfect example of internationalization and cross border partnership. In addition bilateral cooperation is also possible between:

- The cluster organizations of FEMAC and IND-AGRO-POL
- The research centers members of FEMAC (ex. IRTA; MAQCENTRE; Research Group on Precision Agriculture - AgroICT and Agrotechnology) and IND-AGRO-POL (ex. INMA)

- The testing laboratories members of FEMAC (ex. Center fof Agricultural Mechanization – Agrària) and IND-AGRO-POL (ex. INMA-DITRMA testing laboratories; INMA-CERT – product certification body)
- The training centers members of FEMAC and IND-AGRO-POL
- The innovation and technical transfer entities members of FEMAC (ex. The Lleida Agri-food Science and Technology Park) and IND-AGRO-POL (ex. The Technological and Business Incubator INMA-ITA)
- The companies members of FEMAC (ex. ASPERFARM, JYMPA, SOLA) and IND-AGRO-POL (Grup ROMET SA, RURIS IMPEX SRL, MAT Craiova SA, VALTEC Tractors SRL, etc.)





# BIPOM visiting FEMAC



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### **Cluster Environment**

Cluster policy was quite different because the FEMAC was established 15 years ago, the BIPOM cluster starts in 2005. Due to the fact that the FEMAC cluster was established by expert analysis including SWAT, Value Chain expertise and benchmarking with Italian cluster Mr. Enric explained that the strategy changed over

the years. SWAT analysis was quite different in year 1997 and in 2003. The propositions in 1997/1998 were R&D, Training courses, CE mark, Export and ISO but the focus was on R&D and export, the other three fields was forgotten. The Catalan Agricultural machinery Cluster FEMAC is now focused on Cooperation, Innovation and Internationalization. The following table roughly explains the finance of FEMAC during past years and projection to horizon 2020.

Funds origins (%)				
	1998	2007	2013	2020
Fee	10	10	15	15
Local	70	10	0	0
Regional	20	20	0	0
National	0	60	70	50
EU	0	0	0	25
Services	/	/	15	10
Multilateral (WB, etc)	/	/	/	expected

The type of cluster is market oriented and the management is private. The origins are quite different for the visiting and hosting cluster organizations because of the different legislation and initiatives from top-down and bottom-up approach and the mixture of those approaches. FEMAC has two employees. Cluster Manager since 1998 is Enric Pedros, when in 2008 Elisabeth Molina joins the cluster as project manager and accountant. The offices of the cluster are in the building of MAQCENTRE, Private Foundation. MAQCENTRE is an Innovation Center of Agricultural Machinery Sector and Industrial Equipment Sector. There are four groups of cluster members as follows: Agricultural machinery manufacturers, Technology and research centers, Engineering and expertise consultants, Others like Trade Associations, Government agencies, Exhibition Organizations. Consultants are in the fields of Mechanical, electronic and robotic engineering, Marketing and Strategic experts and Innovation and Cluster strategy. With 48 members there is strong private public partnership. The cluster leads the association of manufacturers and exporters of agricultural machinery in Catalonia.

### Adding value to the members

The cluster adds value to the members through spectrum of activities that are not in the field of vision of particular members. The education institutions, private like MAQ Centre or regional University, work on essential thing like the lightweight and durable steel for agricultural machines and Agency ACCIO consolidate the procurement. University professors work on computer controlled pig feeding machine. This means start up a new company within cluster. The management of cluster always looks for a new approach to the old problems or anticipates the projects and follows the European initiatives and a proposal of a new project depends on many factors.

Sometimes the approach goes from bottom to top, from the member initiatives and needs.

### Success factors and stories

FEMAC with MAQ centre plays the role of an innovation promoter for very interesting cheap solution in Mexico about shrimp feeder based on bicycle drive. A very good solution for fishponds. In a wind tunnel of own production MAQ centre perform an examination of droplets on a leaves for orchard spraying as a part of soil pollution prevention. The FEMAC cluster is involved in very sophisticated manure and fertilizer dosage. The sensor on a tractor measures the specific value of NOx ingredient and dose the manure. Mathematical models are involved as well the firm EID Electronics.

### Things to remember and learn from

The most interesting thing was the elaboration of development of FEMAC cluster because it starts due to very serious, profound and successful research of the best possible experts in Spain in the year 1995. The selection of cluster manager was also success because a young and very educated man did not change the occupation beside temptations. Manager of the cluster handles differences between governmental ministries and/or agencies Ministry of economy (cluster and manufacturers), Education (university) and Technology (institutes) on regional and national level. Persistent manager who listen all members and experts but work on his own is the essential lesson and could be instantly applied on BIPOM cluster despite obstacles.

The finance of cluster changes but is steady and always from public funds. The issue is that the occasion to become remarkable needs time, years of work and development in steady conditions regarding policy of national economy. The longevity always counts as the important factor of success and it meant sustainability of project and a significance of scientific approach.

Further identified advantage of FEMAC cluster is the close relationship with the European Union and the rich experience in applying for eligible projects.

### Barriers and areas of improvement

The obstacle in BIPOM cluster organization is the lack of human resources to cover new activities. There is a problem to follow the European cluster activities. One project captures whole manpower.

### Future cooperation and follow-up activities

Interesting item was comparison of FEMAC and BIPOM to find complementarities. The experience of FEMAC cluster in strategy, goals and objectives was very important issues for BIPOM cluster. Cluster management regarding BIPOM was the important topic: preserve the office, financing the employees and rejuvenate the human resources and it was promptly answered.

The complementarities are in membership of companies within clusters. FEMAC cluster has only agricultural machinery manufacturers and BIPOM has also seed and

vegetable producers, dairy and other food process industry. The experience in export, obtaining patents, CE mark or ISO standards allow clusters to easy understand each others' problems.

We could encompass the possibilities of both clusters in the field of agricultural process industry as well the export on the third markets. The cooperation could start on cluster management education and export to the third markets. The last but not least thing is approach to EU funds. In fact this could be the first step for Cluster Management Transfer Program. Increase competitiveness through the development of transnational cooperation.

The action plan literally starts with e-mail exchange on all mention topics during the visit with emphasis on education supported by EU funds and export markets mutual approach.

### Automotive

# Electric Vehicles Industrial Cluster visiting CLUSTER DE AUTOMOCIÓN DE ARAGÓN



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### **Prehistory**

The Electric Vehicles Industrial Cluster and the Aragon Automotive Cluster have been in contact for more than a year now. CAAR contacted EVIC in order to explore opportunities for submitting project proposals together. Later on EVIC was included as a partner in a project proposal called Driving VET.

Both organizations have identified several ways for mutual cooperation and a study visit of a representative of EVIC was thought to be extremely useful because it will enhance the cluster's internationalization which generally is an aspect of the cluster's

work that needs improvement. Another common topic between EVIC and CAAR are the competences and education of professionals in the sector.

Moreover, CAAR has already created an extensive strategic plan which is a top priority for EVIC at the moment. A visit was extremely helpful for EVIC to gather information and best practice examples, especially having in mind the fact that the Aragon Automotive cluster is situated in a region where the automotive industrial sector is currently the primary one.

### The Cluster Environment

The Aragon Automotive Cluster —CAAR— is an Innovative Business Consortium (I.B.C.) whose main objective is to increase the degree of competitiveness among the companies through the promotion of co-operation, project development and joint ventures, improving the image and international visibility of its members and, in general, performing all those activities that contribute to the improvement of results and activity development within the members of the Cluster.

The Aragon Automotive Cluster was legally constituted on 26 March 2008. Initially, the Cluster comprised 14 companies and 6 bodies from Aragon. Today, this non-profit organization comprises 28 partners. The idea of forming a Cluster in the automotive sector in Aragon was in the minds of the main players in the Aragon economy: the Chamber of Commerce and Aragon Abroad had noticed a certain concern among companies and the Aragon Institute of Technology (AIT), during a diagnosis of the car component suppliers sector (end of 2006), identified this possibility as a lever to improving sector competitiveness.

In 2007, prior to the formal creation of the Cluster, as an initial step and with the involvement of over 50 companies from the sector, the CAAR Strategic Plan was created - qualified as excellent by the Ministry of Industry - and this allowed for the acquisition of the qualification as an Innovative Business Consortium (I.B.C.).

The cluster provides consultancy to its members and works towards improving the economic situation and stimulating the labor market. Moreover, mediation is a key role for CAAR in terms of improving the dialogue between original equipment manufacturers (OEMs) and suppliers which is extremely important for the prosperity of the automotive industry in the region of Aragon. The cluster has been awarded a bronze label and is planning to apply for a gold label in 2014. There are some informal assessment procedures in the cluster. The strategy is revised and updated every few months and members' opinion is gathered. In addition, the cluster organization actively participates in the assessment of its members, their needs, future plans, etc.

Structure: The cluster has a Management Board, headed by a President – Mr. Benito Tesier (also CEO of Brembo Spain, brakes manufacturer), a Vice President, a Secretary and a Treasurer. It has 9 board members (all representatives of members of the cluster). CAAR also has a Managing Director – Mr. David Romeral, Business Development Director – Mr. Antonio Soriano and Mr. Alvaro Canales, Associate Consultant.

Financing: Support for cluster initiatives is provided both on regional and national level – to the members via the cluster or to the cluster itself (30% of its income is public funding – local and national government). Nevertheless, the support is believed to be done under a top-down approach. Therefore, the funding is as follows: 1/3 from membership fees, 1/3 consultancy services, 1/3 public financing.

Visibility and presence: CAAR is among the most popular organizations related to the automotive industry in the region of Aragon and generally in Spain. They work together with the leading manufacturers of components, universities, trade unions and chambers of commerce. CAAR's team members often participate in interviews for radio shows and newspapers. Although it is a small organization in terms of staff, CAAR has gained extremely good visibility on regional, national and international levels. Together with their members they carry out projects in Europe, Africa and Asia. The cluster's visibility increased enormously after it managed to secure a 20 million Euro subsidy for its members by introducing an Automotive Sector Competitiveness Plan few years ago.

### Adding value to the members

The cluster generally gives its members a glimpse on new opportunities to grow in terms of income and expertise. CAAR provides innovative approach and personalized services depending on their member's needs. One of the cluster's main goals is to use the competition between its members and turn it into competitiveness for each one of them and by that to increase their profit and market potential.

By being members of CAAR the companies have access to information and tools that they wouldn't be able to reach otherwise. Due to the fact that the automotive sector is the leading one in Aragon, there are supposed to be a lot of potential opportunities for companies to profit. However, identifying such opportunities can sometimes be quite a challenge and this is where CAAR steps in.

The Aragon cluster collaborates with similar organizations from other Spanish regions and other countries. They carry out business missions outside of Spain together with their members. For example in the middle of July 2013 they organized a visit to the Peugeot-Citroën Plant located in Poissy, France.

The cluster is currently working on a benchmarking project together with 2 other Spanish clusters – the Basque and the Galician Automotive clusters.

### Success factors and stories

One of the factors which played a key role for CAAR's success is the fact that the organization was established in the right moment and had so to say a 'quick win' (helping its members put 20 million Euro subsidies to use by elaborating individual plans). This helped CAAR enhance its position and visibility among the automotive sector in the region.

Another success factor is the flexibility of the organization and its high adaptation capabilities in the rapidly changing economy. The frequent updating of the cluster's strategy and goals is of key importance. An excellent example of a 'best practice'

would be the fact that CAAR is acting like a mediator between OEMs and suppliers which on EU level has proven to be a problem.

### Things to remember

One of the most interesting topics that were addressed during the visit was the procedures under which the cluster operates – the structure, the communication with its members and within its members and also with the regional government. The existence of Clearly defined permanent working committees: International Expansion Committee, R&D&I Committee; HR Committee; Operational Efficiency committee; informal working groups dedicated to current topics. The actual involvement of all members in the cluster's activities is of key importance to its success and of course their success. Members and cluster management have managed to build excellent communication channels through which the cluster identifies the needs of its members and undertakes actions in that direction by using all available means.

Another important lesson was the information regarding the cluster strategy. EVIC's strategy is currently being elaborated whereas CAAR's strategy has been developed 4 years ago and is regularly updated. EVIC can use CAAR's experience and advice regarding the processes of updating its strategy.

## Barriers and areas of improvement

One of the main obstacles that can occur is the stage of development of the business sector. In the region of Aragon, as already mentioned, the automotive industry is the leading one whereas in Bulgaria the EV industry is just starting to emerge. Unlike traditional clusters EVIC's main goal is to create the industry so to say.

The members of EVIC are very diverse companies (in contrast to CAAR's), which automatically makes on the one hand an opportunity to extend the cluster's activities but on the other hand it puts limitations to the cross-member collaboration opportunities.

Electric mobility is a very specific field and engaging in the cluster's activities needs greater motivation while results cannot be expected in the immediate future. In fact this can be considered as the biggest challenge for EVIC. This process demands performing constant in-depth analyses, modern thinking and management, great understanding of the current market situation and ability to think several years ahead.

However through the visits EVIC can focus on:

- Active communication between members and encouragement of a more proactive approach.
- Defining clear procedures and revising the operational cluster's structure
- Internationalization
- Increasing the number and quality of offered services and applying a business approach in order to secure the cluster's needs.
- Increasing the cluster's visibility

### Complementarities and future cooperation

Despite the differences between both clusters and the business climate in both countries (and because of them) some complementarities were defined. CAAR is devoted generally to the automotive sector, whereas EVIC is focused on the electric mobility. Both organizations can complement one another in their activities depending on the current projects. Internationalization might be an option since



both cluster organizations are aiming to their internationalization improve capabilities, this is a field where CAAR and EVIC can support each other and provide information; working together in international network would be a good starting point. Furthermore, EVIC is elaborating a framework agreement that will be presented to CAAR in September 2013. It will contain a large variety of topics and cooperation opportunities as well as activities planned for the future.Building cross-member а communication channels would be a good start.

# AD KLASTER visiting AUTOMOTIVE CLUSTER SLOVENIA

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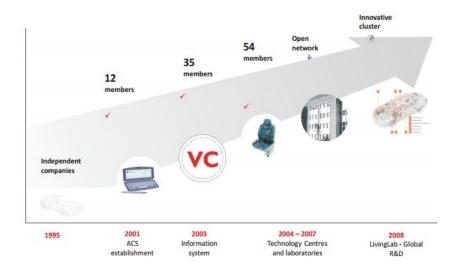
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### The Cluster Environment

In order to increase especially nonmaterial factors of development in automotive suppliers industry the Automotive Cluster of Slovenia was established in 2001.Nowadays, the organization has 63 members, 57 are industrial companies and 6 research and development organizations and institutions. In other words ACS members have 18,600 employees whereas 2.000 registered researchers.

ACS is a business association based on economic interest of its members uniting Slovenian automotive suppliers. Its members' aim is to reinforce the competitiveness and create greater added value. GIZ ACS is the central communication point of the automotive cluster and it is supported by infrastructure. ACS provides support for its members to integrate into the global automotive industry and to improve the range of their products and services. Therefore it accelerates the efficiency of its members



by providing adequate research and development and co-operating with expert development and scientific institutions both in Slovenia and abroad.

ACS operates very successfully within the industry for over 10 years and has an extensive experience in the preparation of development projects

under the EU funds, therefore it was a great opportunity exchange knowledge. Cluster is supported by government and realized few projects to increase development of sector, making it an infant of the bottom up approach.

### Adding value to the members

ACS enhances the development of efficient communication among its members, who produce components, modules and systems for OE customer producing cars, buses, lorries and special vehicles, and for after-sales market. The organization enhances all activities connected with the research and development of new products and services with greater added value. "A Gateway that provides important links between members, supporting synergy with suppliers of machines, tools, manufacturing, design, logistics and other services".

Furthermore, ACS promotes joint members' activities to improve products and operations in R&D, production, quality assurance and to achieve and maintain business excellence.

By keeping members promptly informed of new and existing issues in the automotive industry, ACS monitors the business environment and suggests the appropriate measures to the authorities enabling the members to respond to the constant challenges in the automotive industry. Finally, being part of a cluster organization each member promoted at home and abroad, and is represented when it comes to its interests.

### Success factors and stories

The ACS already started 18 joint developmental and 4 technological projects. There are at least 3companies and 1 R&D organization involved in each of them. The majority of these projects arealready finished, while others are in their advanced stage. The installation of technological zinc-nickel production line in Iskra ISD is an example of a technological project. Another good example is "SIMIT", a project funded by the EU with the main goal the establishment of a development center in the field of automobile industry. The project has 14 partners (Talum , ACH , LTH , Unior , Iskra,etc.). Within the framework of ACS a strategically important project has

Technology centre for materials



Technology centre for mechatronics





Technology centre for crash testes



been carried out: "The polycentric technological center as an international innovation system of Slovenian automotive supplier industry" and it has received funds from the Ministry of Economy through structural funds. The project began as a result of the discovery that the situation of Slovenian automotive suppliers can only be improved by common investments and by cooperation between the economic and academic spheres. The polycentric technological center's basic strategic and developmental orientation is profitable growth of sales and added value, gaining new buyers, promotion and common marketing, innovation processes, qualified suppliers, developmental infrastructure, information structure and basic knowledge.

### Things to remember

The cluster organization organizes members' promotion, educations and conference, and preparation of project applications for public funding schemes under Structural funds. Moreover, ACS has a substantial marketing strategy and presense at most of the key fairs in the world (e.g. Stuttgart, Munich, Japan, Russia, etc.)

In order to acquire the necessary resources for research activities, it is important that the synergetic effects of vertical and horizontal integrations (integrations between companies, knowledge bearers, etc) are fully utilized. ACS success is therefore strongly connected with knowledge and competences management and integration

### Barriers and areas of improvement

- Building an appropriate infrastructure and thus enable proper working conditions, inflow and the development of creative experts from the automotive industry field.
- Lack of conditions for the AD Klaster to become a global actor in the field of new products and technologies as well as for the increase of competitiveness based on specialization and innovative skills.
- Establish an environment for the development of technologically oriented providers of knowledge in the region. Therefore to create knowledge and competences in the field of mobility, security and comfort.
- Experience of working with projects and model of organization and financing.

### Complementarities and future cooperation

Areas identified as opportunities for cooperation between the two cluster organizations:

- Internationalization assistance
- Involvement in the global networks
- Project Management
- Support to the training through project management and school of quality

## Energy

# ROSENC visiting CleanTech Ostergoland Cluster



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### **Prehistory**

The company Aktiebolaget Miljöteknikcentrum i Östergötland AB was formed with the primary purpose, through a non-profit association — Cleantech Östergötland — to bring together, support, generate visibility and coordinate the environmental technology sector in Östergötland. The company is owned 40% each by the municipalities of Linköping and Norrköping and 20% by Linköping University.

Cleantech Östergötland today has about 80 interested parties and companies as members.

### The Cluster Organization

Cleantech Östergötland is a business-oriented collaborative arena for the region's environmental and energy technology actors. The idea is to bring together and promote the region's business and development possibilities by supporting marketing and business and product development, as well as bringing greater visibility to regional expertise and applications. These activities are integrated with Linköping University to stimulate collaboration among researchers, students and regional actors. The top-down approach has been followed in order to create synergies with other public bodies that are believed valuable and beneficial for the organization. Nevertheless, the cluster's services are the primary source of financing.

### Adding value to the members

The CleantechÖstergötlandCluster offers

- Networking activities for the region's environmental technology companies
- Collaboration and co-localization among actors within the same niche
- Collaboration with companies that may complement your company
- Quality assured visitor programs for guests to the region
- Coordination of delegations to export markets
- Opportunities to be part of a world-class environmental technology expo
- Training and development programs
- Annual major environmental technology-related conference

### Things to remember

### Complete resource management:

In both cities Linkoping and Norrkoping, the municipal and industrial waste is thoroughly sorted (9 separate bins) and taken to recycling plants. Then, the waste is separated into organic and anorganic fractions. The anorganic waste fraction is incinerated along with forest biomass to produce electricity, heating and cooling for both cities. A byproduct from the incineration is industrial steam, which is used in agro ethanol production. The urban wastewater is poured into the nearby lakes after being treated in the corresponding plants. The organic waste fraction along with the wastewater sludge is being digested in biogas plants, to produce biogas and fertilizer. The fertilizer is then dispensed on farm fields, thus recycling the dire resource Phosphorous. In turn, the farmers and other important agricultural actors provide the biogas plant with other types of silage and the agro ethanol plant with raw material. Moreover, biodiesel is produced from energy crops and used in urban transportation. In the end, the cities benefit from locally produced electricity, heat, cooling, biogas, bioethanol and biodiesel.

### Outstanding correlation between projects:

None of the above mentioned waste-transformation plants would be economically feasible without the others being fully functional. The profitability of the above

processes comes exclusively from synergy. If we take for example the waste incineration plant, we notice that disposing of the urban waste and the production of electricity, heating and cooling are not feasible as such. The only way to turn red numbers into profit is to also sell industrial steam to a nearby industrial consumer. So we notice that the agro ethanol plant in Norrkoping is a necessary parallel project in order to contribute to the feasibility of the waste incineration plant. But the ethanol plant then needs the biogas plant to be fully functional in order to be profitable, the biogas plant correlates with the waste-water treatment plant, and so on. In the end, this fragile chain is backed-up by the automotive sector which produces bio-fuel vehicles that use the locally produced bio-fuels.

### Precise public support for specific projects

Continuing with the same example, it is clear that all these waste transformation plants can't be built at the same time by a community of about 300.000 citizens. The process has taken well over 15 years, starting with the first piece of the puzzle: the biogas plant. Out of the 15 years of life, the biogas plant has seen red numbers at the end of 13 years, but it has been subsidized constantly, envisioning the synergy in total resource management. Thus, the public support for each type of project has to be perfectly designed in order to maintain the balance between marginal profitability and the need to generate subsidiary/complementary projects that close the resource cycle.

Several steps for starting up and promoting a business before being integrated in the cluster

All of the major projects developed in the region are research-driven. As a result, the university-to-market chain is very well oiled and has a strong support from both the public and the private sector. If the ideas are born and nurtured in universities through student encouraging projects, they are then developed in science parks, start-up hubs, and business incubators and finally integrated in clusters, in order to match the general industrial policy.

### Barriers and areas of improvement

In order to fully implement the above scenario, all the regional partners have to share the same vision both in terms of economic evolution of the biomass sector, but also in terms of roles in the regional cooperation. Every regional actor has to accept the position, competence and input of other actors and adjust their position accordingly. This type of cooperation is only emerging in the region as a consequence of very slow and late, but steady decentralization process. The first step however is to discover the right partners for each change phase and agree on the positions and efforts to be undertaken. The practices observed with the aid of the visited cluster will surely stand as an example for any course of action, especially:

- academic involvement in cluster projects;
- new cooperations at regional level for improving the project success rate;
- the general role of the cluster in the public decision making

### Complementarities

The most noticeable complementarity identified is the focus of the two clusters in terms of position in the general supply chains. While the visiting cluster focus is on production and manufacturing, the visited cluster focus is on research and innovation. The regional infrastructure is developed accordingly, as well as the cluster member companies' focus. We could identify the R&D HQ of a multinational electronics manufacturer in East Sweden and the production facilities located in and industrial area in the West Region of Romania. The company has about 200 researchers in Linkoping Science Park and over 10.000 employees in the production facility in the West Region of Romania. So although both R&D and production are very present in both regions, the focus is clear and the results speak for themselves.

## Cooperation opportunities and follow-up activities

The Vreta (agro-food) Cluster was interested in:

• Energy independent small scale irrigation kit;

The CleanTech Cluster was interested in:

- Production forecast for photovoltaic systems;
- Passive houses made of local traditional materials;

The two cluster representatives have already begun to send each other promotional information on the above-mentioned products and services. One of the most interesting cooperation paths would be the international technology transfer, using the existing set-up in both regions. The idea would be to transfer ideas into production from East Sweden to West Romania, following the existing characteristics of the companies.

The ROSENC Cluster was interested in:

- Business models for promoting new collaboration projects;
- PPP cooperation models;
- Idea-to-production chain.

Therefore, ROSENC Cluster will generate special events at regional level on the critical topics and will invite key speakers from Sweden to share best practices.

# InteligentnaEnergija visiting Oekoenergie-Cluster (OEC)



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### **Prehistory**

Upper Austria is a model region in the fields of renewable energy and energy efficiency. To further improve the opportunities for companies that are active in these sectors, and to strengthen their worldwide leading positions, the regional government of Upper Austria decided in 1999 to create a network of green energy businesses - the Oekoenergie-Cluster (OEC). The economic department of the Upper Austrian government entrusted the OÖ Energiesparverband with managing the business cluster.

### The Cluster Environment

The main objective of the Oekoenergie-Cluster is to support renewable energy and energy efficiency businesses in the fields of innovation and competitiveness,

contributing to the positive market development in sustainable energy production and use. This is done with the help of The OÖ Energiesparverband which supports the regional government in the development and implementation of regional energy programs and is responsible for the management of the Ökoenergie-Cluster. Therefore, making the OEC an organization developed under the top-down approach. Interestingly, however, the members do not pay membership fees but the funding comes mostly from the regional government and through workshops in technology.

The cluster partners are companies and organizations in Upper Austria which produce technologies in the areas of renewable energy use and energy efficiency, or act as suppliers on different production and service levels. OEC has more than 160 members, representing the whole specter from large to micro enterprises, and follows an export orientated strategy with an export rate higher than 50%. Since the development of the organization in 1999 the staff has increased from 1600 to 8800 employees exporting to 69 countries (starting from 12), making the ability of the cluster organization to stimulate economic development is well proven.

The OEC also contributes to fostering Upper Austria's top position as an exemplary region in the fields of renewable energy and energy efficiency. 34 % of the region's primary energy consumption is produced from renewable energy sources, and the energy demand for new homes has been halved since 2002.

Currently, the OEC is one of the most important energy clusters in Europe. Even though OEC does not have a bronze of gold labels, in 2006, it was declared the best cluster in Europe by the EU Commission and received the "European Cluster Award".

### Adding value to the members

- Information and communication
- Human resource development comprehensive trainings, qualification range, job platform
- Cooperation and technological focus
- Research and development
- Export and internationalization thought conferences, fairs, members from Czech Republic
- Marketing and PR

### Things to remember

- Intensify knowledge exchange inside the cluster organization
- Cluster should be more neutral
- Regional government support
- No membership fees

### Barriers and areas of improvement

Inteligentna Energija should work on hiring a professional cluster manager.

# Complementarities and future cooperation

A complementarity was identified during the visit - technology knowledge. Nevertheless, a meeting is scheduled to discuss the opportunities for mutual project initiated in the Balkan region.

## InteligentnaEnergija visiting Umwelttechnik-Cluster



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### The Cluster Organization

The environmental technology cluster is a new platform for Austrian environmental technology companies to raise international competitiveness and innovation. As of September 2013 the cluster has 160 member companies represented by small and medium-sized enterprises (SMEs). The organization is very well recognized, even though it does not have a bronze/gold label.

Environmental technology cluster is supported by the state of Upper Austria GmbH, making it a follower of the top-down approach. Furthermore, the owners of Umwelttechnik-Cluster are The Upper Austria GmbH, Technology and Marketing mbH, the Economic Chamber, and the Association of Industrialists of Upper Austria. However, only the first two years operations were funded by the regional

government, afterwards it is an 80/20 approach. In other words, currently the environmental technology cluster is self-financing 80% of its budget and 20% come from the regional government. In terms of the ability of the cluster to stimulate economic development, there are around 14,000 employees and a 2.9 billion turnover with a planned growth rate of 6.5%, making it a huge economic development contributor.

The main objectives are:

Strengthen Austrian environmental technology companies

- Stimulate interest in entering the market for companies from other areas
- Represent achievements of the Austrian environmental technology sector
- Saving Spot goals that result from the use of environmental technology show
- Initiate long-term cooperation between the partner companies of the cluster

### Adding value to the members

### Information advantage

The cluster organization offers an information platform for current industry-relevant topics from the field of environmental technology. Therefore each member has access to:

- the website,
- the electronic newsletter.
- the cluster Magazine UC-Journal,
- the environmental and energy technology catalog

In addition, Umwelttechnik-Cluster uses the following philosophy: "Our contacts are your contacts: you get access to state and federal institutions, research and educational institutions, companies from the industry, and media."

### Increased visibility and presence

Partner companies using can use the cluster's media as a marketing and PR platform. Company-specific information can be communicated as dialogue-group specific.

- Inform the industry about new products and place them on the Web and in the newsletter.
- Take advantage of clear reductions in ads, banner ads, booth bookings with cluster events, advertising inserts in conference documents, etc.
- Their successes are transported with reports in specialized media.
- Members get access to the extensive environmental database with information detailed company information.
- Entry in the environmental and energy technology catalog, the corporate directory of the Austrian environmental technology industry is free of charge. In addition, you have to present as a partner the chance a reference project.

### Know-how transfer

The importance of knowledge networking and knowledge management for qualification and training is undisputed. Cluster's comprehensive service allows organizations the necessary knowledge advantage.

- You get hands-on access to new trends, developments and research results from the industry at technical meetings, site visits and technical experts' evenings.
- Cluster events offer a variety of contact options to decision-making and know-how carriers.
- As a partner to take part in all events reduced.
- The available national and international contacts allow access to diverse information and expert knowledge from other regions /countries. Learn from others and benefit from their experience.

### Good ideas need strong partners

One of Umwelttechnik-Cluster's main priorities is to initiate national and international solo and collaborative projects and accompany. Here, the access to funding is particularly pointed. For the realization of innovative project ideas the partner companies are funding the province of Upper Austria.

Umwelttechnik-Cluster provides support to its members in the following areas:

- Consultation with project ideas (alternative funding options, to be observed conditions)
- Search for suitable partners (personal searches, project bidding on cluster media, initiate round tables for project prospective customers)
- Create a funding proposal
- Handle submission
- Project support
- Project meetings can also be held in our premises
- Project-related public relations (cluster media and trade press)

### Individual on-site consultation

The cluster makes regular company visits that take care of active cluster partners directly to their sites. Here are clarified mutual connection points in personal discussions and individual measures initiated depending on needs.

The organization offers:

- Contact individual agencies and related companies added
- Research on new markets and technologies
- Acquisition of project management activities

# Things to remember

- Cross cluster collaboration (more than 300 projects in cooperation with other Austrian cluster organizations)
- Self-financing (80% self-funding and 20% governmental support)
- Dedication
- Top-down approach

## Barriers

- Focus on cross cluster collaboration is missing in Croatia.
- No professional cluster manager

# Future cooperation

Workshops presenting possibilities to members from both sides

# Entertainment

# Gi-Cluster visiting The Digital Hub and Games Ireland



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# Introduction

The goal of this study trip was to visit and learn about the experiences of building up a 160 company international cluster in the domain of digital technologies. The choice of The Digital Hub was made because it shared many of gi-Cluster local market characteristics (small market and related industry, small investment community, difficult economic climate) but also possessed some experiences that were considered particularly attractive, namely the relocation of many international tech companies and the development of webs of support networks to young companies. Given that The Digital Hub facilitates for all digital domains, additional meetings were pursued with other industry players that help shape and drive industry policy and programs. In this context additional meetings were held with the CEO of Games Ireland and a games industry researcher currently updating the Irish Games Industry Report on behalf of GameDevelopers.ie.

# Meetings: The Digital Hub - www.thedigitalhub.com

Location: Dublin, Ireland

Purpose & goal: Study of cluster operations with a particular interest in

- Facilities
- Services offered
- Incentives programs
- Creative industries special initiatives
- Attracting USA & international tech companies

During the whole process of this study trip the opportunity was given to communicate with the following executives of The Digital Hub:

- Edel Flynn, CEO
- Ruth Flynn, Operations Director
- Breandan Goss, Commercial Development Manager

### Takeaways:

### Facilities & Infrastructure:

The Digital Hub currently manages 5, multi-location buildings managed centrally by a very small team (the Digital Hub has 15 employees in total). Their buildings are actually parts of the old Guinness campus (square kilometers) which when the company as part of a larger international organization cut down on some activities, were passed over to the local government to be used to help the local community. All their buildings are actually in between active Guinness buildings.

Attempts in the past to collaborate with third parties have in some cases lacked the flexibility required but there is no clear positioning on that, given that the extreme swings of the economy had introduced to everybody a great degree of uncertainty. In the past they had also engaged with a premier real estate developer in what was going to be the first high-rise building in Dublin (60 floors as opposed to a max of 3) and they were going to have 6 floors for the hub, but the developer went under when the crisis started. In totally they currently manage almost 15,000 sqm of office space in 5 buildings and have potentially another 20,000 available but cannot renovate yet explore due to the financial climate.

Their focus is primarily on startup and small companies with a clear positioning that fast growing companies approaching the 50 person mark should move elsewhere given that their facilities and resources cannot accommodate for this. In this context they often direct major names away from the hub even though they do not like it but because they consider crucial to maintain a certain standard of Quality of Service. This was the case fairly recently with the famous AirBnB. On the other hand they did recently get Etsy. In general, they seem to feel that even though having big names coming in is very important for branding purposes, on the other hand it can create significant challenges affecting the smaller companies which they are there to serve primarily and that requires to maintain a well thought out balance.

### Services offered:

Facilities & infrastructure management is the main service offered by the hub to the industry. Other services offered are part of their obligation towards the local government in exchange to the buildings, and that is to run as many initiatives as possible in support of local education & training (keep in mind that the Digital Hub is located in the less developed part of Dublin). So, they run many educational and training activities. Also, in this context and in an effort to get also the industry engaged they continuously look for innovative services that can be delivered by the cluster members to the local community and the same time benefit also the companies themselves.

Two such examples are the following:

 an online, virtual class that gave access to students of schools in their less developed area, to some of the better schools in Dublin (this pilot proved so successful that the government is rolling it out nationwide), and 2. a recently started collaboration between a local hospital and a cluster software company at the end of which the software company will also have a refined product and an implementation it could advertise.

When asked about other value added services such as business development, raising capital, advisory services etc they said they can offer it or direct to the many industry experts they have around them. For all the value add services just mentioned there is a single person for the 160 members who is also involved many of the operational activites, so it seems that the actual engagement is (if at all) at a very high level and external appropriately qualified experts will take over later.

### **Funding & Incentives programs:**

The Digital hub is 50% state funded and 50% from the renting of the facilities. All other smaller services offered are not really a revenue stream. There are also fair competition issues given that they are state funded so even though there are many more things they could do and expand into, they do not. Such examples are 1/ they have no engagement in the incubator <a href="http://www.ndrc.ie/">http://www.ndrc.ie/</a> setup by academia and industry in their facilities initially to commercialize academic research but now operates as an extremely successful acceleration program for the industry, 2/ they have 20,000 sqm of space that they could renovate but because it will be considered as a state competition against the already suffering real estate developers they cannot do anything at this point and they are waiting., 3/ they are also not involved in securing funding for the companies either by the state or the investment community. The first because it would complicate things and need a lot of people to support and the second because as a relatively small country they believe that the companies know who is investing and they do not need them in the middle. There are plenty of local networking activities and events where companies have the opportunity to hook up with investors. That said if there is someone that needs some help we will happily make introductions.

### Creative industries special initiatives:

they cover the whole digital domain but they do not seem to be specializing in a specific market segment. Instead they rely on those external entities that have the relevant resources, expertise and interests to complement their activities if appropriate. Along the same lines they will also not get involved in any way in the policy making process.

### Attracting USA or other international tech companies:

They do not do anything at all on this front. This is the job of the national agency responsible for attracting international companies and investors, and they work in total sync with them when there is an expression of interest.

While the visit at The Digital Hub at first sight shows significant differences in approach between the Digital Hub and the gi-Cluster one must take into account that the gi-Cluster combines the roles of The Digital Hub plus that of Games Ireland discussed below. It offers a specific industry segment focus, highly specialized value added services and attempts to be a driver behind the national game industry policy.

# Meeting: David Sweeney, CEO – www.Games Ireland.ie

Location: Dublin, Ireland

Purpose & goal: Learning about the Games Ireland activities

With the aim of learning more about the gaming industry specific initiatives in Ireland there was a meeting with David Sweeney, CEO of Games Ireland. Mr. Sweeney is a former musician, turned IP lawyer, turned EU lobbyist. For the past 10-15 he lived in Brussels and the last few years he is back in Dublin but still spending significant time in Brussels. In Brussels he was lobbying on behalf of large media companies and in Dublin he is currently leading the effort of making Ireland a game development powerhouse leveraging his network of contacts. Games Ireland is in effect the "Corporate" representative of the local industry and he works closely with various agencies and associations to build the necessary alliances and momentum to convince the state to support strongly their efforts. Until very recently there was little support by the state to the local gaming industry and was only when the economic crisis arrived and they started looking at comparative to the UK data, that they realized that there was the potential to build up momentum and distinguish themselves from the crowd.

They have recently launched a pilot Incubation program within the premises of the Pulse College, Pulse College keeping a quarter of the space for its own student teams while the rest is available to all aspiring game development teams. This is 100% industry run and supported with no subsidies yet but they are looking into various sources of finance so that they can jump-start the creation of new companies, prototypes, teams etc.

# Meeting: Jamie McCormick - Games Industry Researcher

Location: Dublin, Ireland

Purpose & goal:

- Learning about national policy and strategies
- Reviewing some of Sweeny's business services for cluster members
- Discussing ISA membership / participation

Findings & next steps:

MrMcCormic is an experienced game development professional but also Games Industry Researcher. MrMcCormic is currently putting together a report about the Irish gaming industry history and how certain events and greater trends have, are and will influence the market dynamics. Over a 3 hour session we went over much of the info presented in the following 2 online locations: <a href="http://embed.verite.co/timeline/?source=0ArhNrkLPIrKjdHphN2hXWm12TDQ2eEVnc2dSRExta1E&fozt=AbrilFatface-Average&maptype=toner-">http://embed.verite.co/timeline/?source=0ArhNrkLPIrKjdHphN2hXWm12TDQ2eEVnc2dSRExta1E&fozt=AbrilFatface-Average&maptype=toner-</a>

lines&lang=en&height=1000

and

http://www.gamedevelopers.ie/features/viewfeature.php?article=5652

This is a report update of an earlier report/study done by a group of academic gaming industry researchers about the Irish Gaming Industry. A commonality with our industry is that few companies still represent the most significant percentage of the employment positions. While this number of bigger players is difficult to change for a number of reasons, they have seen however a major boom in the number of small companies and startups. The goal of the updated report is to set the point of reference for all their future planning activity.

### About The Digital Hub - www.thedigitalhub.com



The Digital Hub is a vibrant cluster of digital content and technology enterprises, located on a state-of-the-art campus in the heart of Dublin City. Set up by the Irish government in 2003, The Digital Hub fosters innovation, technological development and creativity supportive, entrepreneurial environment. Our resident digital media and technology businesses enjoy excellent infrastructure and support, as well as ample opportunities for collaboration, networking and knowledge-sharing.

The Digital Hub is a hothouse for new ideas, energetic entrepreneurs and technological innovation. Our digital growth is not confined to within the walls of the campus; the local community inspires us and benefits from a partnership

of learning and development. From our location in one of Dublin's most established areas, the Liberties in Dublin 8, we engage with local groups, students and artists on a variety of learning and community projects.

# The Digital Hub and the Irish Government

The Digital Hub is an initiative managed by the Digital Hub Development Agency, an Irish state agency set up in 2003. It's the job of the Digital Hub Development Agency to run The Digital Hub and to roll out its enterprise and social development strategy. The Digital Hub Development Act sets out the objectives of the initiative <a href="http://www.irishstatutebook.ie/2003/en/act/pub/0023/index.html">http://www.irishstatutebook.ie/2003/en/act/pub/0023/index.html</a>

For details about our Board members, visit the <u>Board Members</u> section. To read our annual reports and other publications, go to the <u>Publications</u> section.

### About Games Ireland - www.gamesireland.ie

Established in 2010 and formally incorporated in 2011, Games Ireland represents companies in Ireland involved in the creation, development, publishing and distribution of video games. It is an advocacy group which unifies the Irish games sector and drives sustainable growth in the industry at a crucial time for this country.

Games Ireland is especially focused on representing Ireland's growing indigenous industry providing structural support and promoting a conducive environment for funding and investment. Current membership includes international stakeholders such as Activision, Blizzard, Big Fish Games and Riot Games together with local pioneers Havok and Demonware.

### Recent news:

Pilot Games Co-Shared Space established by Games Ireland

# Health

# Cluster for Medical Tourism visiting BAVARIA



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# **Prehistory**

In Bavaria, Germany the provision of health services is a core element of competitiveness of the Bavarian economy and BHA was initiated and set up by the Bavarian Ministry of Health to support Bavarian healthcare providers exporting their services on the market of health services in Europe and to strengthen international health economy. Bavaria is world recognised destination for top quality healthcare

which has already developed some good practice models for attracting international patients to receive health services in its healthcare establishment, which could be also transferred to Bulgaria.

Furthermore, collaboration between BHA members and the members of the Cluster for Medical Tourism can support innovation technology transfer and training of health professionals to improve quality of healthcare and competitiveness of the health services in Bulgaria.

The risk of competition between the members of the two clusters is low, because the profile of the health services sector in Bulgaria is different than in Bavaria. However, synergies could be established in terms of promoting healthcare market of safe and quality services provided by both cluster members.

#### The Cluster Environment

The BAVARIA – International Health Association (BHA) has developed a membership base of 50 members in the first year after the foundation in October 2012. The three strategic fields (patients, health professionals & projects and international cooperation) have proven to be a solid foundation for the future work of the association. As the second year of the Association approaches there will be a need to further professionalize the cooperation within the association as well as with external partners.

BAVARIA was set up in a top-down manner with the objective to promote and develop the international cooperation in the fields of medicine, health and healthcare industry in Bavaria, and thereby the global marketing of Bayern as a health destination. The Branch Association serves as a network for promoting, coordinating and integrating the activities of all organizations engaged in this field in Bavaria, as well as their international partners. BAVARIA - collaborates closely with the government initiative "BAVARIA - A better state of health" of the Bavarian State Ministry for Environment and Health.

The approach in Bavaria is different from that in Bulgaria, where the Cluster for Medical Tourism (CMT) was initiated bottom-up by founding members to develop competitive integrated healthcare services, which could effectively attract international patients to receive treatment in Bulgaria. The CMT are committed to improve quality of healthcare services and to improve qualification of their medical professionals to existing European and global standards. The cluster was a tool for advocating for healthcare economy to be prioritized as a driving sector for competitiveness of the Bulgarian economy in view of Europe 2020 strategy.

Moreover, BAVARIA is organized as a non-profit organization according to German non-profit law. The organization is managed by an Executive Board consisting of the Präsidium and the general Board Members. The financing of the Association is based primarily by membership fees and through specific educational workshops and/or seminars and specific services provided to the members and non-members through an associated service organization. The association is co-promoted at various

congresses and fairs via the campaign BAVARIA – "A better state of health" under the support of the Bavarian State Ministry of Health. The members of the BHA e.V. consist of natural members and institutional members from hospitals and healthcare sector including companies, R&D organizations and educational institutions.

BHA plans to both set up its own quality management system for self-review as well as provide its members with advice on how to develop and communicate their own industry specific quality assurance systems.

## Adding value to the members

The BHA association offers its members a cooperation and information platform for all fields related to international healthcare and health economy. It provides networking at Bavarian, German and international level and offers cooperative advertising for the health destination Bavaria. In addition, it provides consultation for its members and acts as intermediary for international contacts for cooperation and projects, supports continuing training, as well as congresses and fairs are being organized for all three strategic fields.

With the newly founded business association BAVARIA – International Health Association (BHA) an operative platform will be available for the international health economy in Bavaria. This platform will amongst others help to support the cooperation agreements (MOUs) of the State of Bavaria with its partners. A special focus is the optimization of treatment of international patients, the promotion of professional and continuous training of physicians and medical personnel and the implementation of worldwide cooperation and healthcare projects.

### Success factors and stories

Internationalization is a key aspect of the BAVARIA and it actually focuses on all activities with a cross-border perspective in the field of healthcare. The aim is to form both networks for sharing of best practices among similar clusters and developing new markets for growth in the healthcare sector. Therefore cross-cluster collaboration with other European and Non-European clusters is highly welcome for mutual benefit.

The BAVARIA – International Health Association has quickly started to get engaged in cooperation activities with various countries worldwide that are also promoting their health economy as well as with countries that are potential recipients of healthcare services and products from the Bavarian health sector. The first cooperation agreement based on a Letter of Intent was signed in April 2014 with the Korean Health Industry Development Institute in South Korea. Nonetheless there are work-in progress activities to found an EU Macro regional health network in the form of a EU Health Destination & Cluster Network of currently 8-10 EU regions or member states that could successfully cooperate in the field of healthcare in Europe.

# Things to remember

- 1. An important factor for success is the government support in marketing in other words the introduction of "BAVARIA A better state of health", a brand imposed by the government to promote the country as a health destination to the world.
- 2. Innovative hospital concepts were developed in Bavaria to attract international patients, such as:
  - Co-location of a hospital in a hotel building, which allows patient relatives to be close to the patients and provide the opportunity for access to other services
  - Co-location of a hospital in the airport building, which allow quick transportation of patients and provision of care Munich Airport Clinic
- 3. Good practice for attracting and treating international patients in Augsburg Clinic:
  - Developed a strong capacity for attracting and treating international patients
     an international department was established.
  - A "VIP sector" for treatment of patients that provides full range of services in addition to the core medical service for the patients, foreign language speaking staff, a helicopter port is built on the roof of the hospital; excellent hotel facilities.
  - There is a well-established system for accommodating foreign medical specialist for few months in the hospital departments for exchange of innovative medical technologies or training.
- 4. The market for international patients is predominantly managed by companies the so called "facilitators'. Facilitators are considered being part of the chain for providing an integrated holistic service. In Bulgaria, facilitators work is not strongly developed. One CMT member is a facilitator agent and it has to obey the ethical rules of the Cluster.

## Barriers and areas of improvement

- CMT is a relatively new organization and the only source of funding of its
  activities at the moment is through the membership fees of its members; The
  management staff of CMT works on a voluntary basis (unpaid); The cluster is
  preparing to apply for project under various programs to support its work;
- Medical tourism is not yet supported by the state as a national priority, for the
  first time and with CMT active advocacy it will possibly become a priority in the
  Operation Programme 'Competitiveness' for the implementation of the
  European Structural Funds in Bulgaria 2014-2020
- One of the key preconditions for successful marketing of the cluster and its members on the European and world market of health services is the government support

### Future cooperation

 Sharing of best practices in Medical Tourism -> Management of International patients

- Training of medical specialists and exchange of medical staff (short term placement in hosting organization (healthcare establishment) to acquire new medical expertise and technologies
- Developing joint standards for National Contact Points Concepts
- Ethical recruitment of staff in Bavaria due to lack of staff recruiting Bulgarian nurses and physicians for a period of few years. After this period the professionals are obliged to return to the home hospital or health system and apply good practices learned abroad
- Cluster collaboration for joint marketing of quality health care services
- E-Health implementation
- Collaboration in European projects , e.g. European Health Destinations and Clusters Network

# Follow up activities

- Visit of the CEO of BHA in Bulgaria on 10 December 2013. Signing a Letter of Intent for collaboration between the BHA and CMT and starting common activities.
- The Cooperation between BHA and CMT to be suggested as a priority under the Bulgarian Bavarian Intergovernmental Standing Commission.
- Initiating a European Health Destinations and Clusters' Network the Network
  can bring benefits to its member-clusters in exchange of good practices, but also
  help them to pursue more successfully strategic priorities at national and
  European level. Moreover, the Network could facilitate the choice of European
  citizens to find safe and quality care in Europe under the Directive on patients'
  rights 2011/24/EU.
- Follow up meeting with Ministry of Economy and Ministry of Health In Bulgaria, with DG SANCO and DG ENTR in the European Commission, with interested MEPs in the European Parliament to raise awareness about Clusters' activities and on the issue of medical tourism, e.g. European Health Destinations and Clusters' Network.
- Involve Bulgarian authorities to support the organization of Health Tourism EXPO 2014 or 2015 in Bulgaria.

# **Furniture**

# Pro Wood Regional Wood Cluster visiting Cluster Wood and Technics



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### **Prehistory**

During an international cluster conference in 2012 we had the occasion to meet the representatives of the Cluster Wood & Technics and while talking, we discovered that there are many similarities between the two regions. Taking into consideration the fact that the wood cluster from Bolzano is an older and good working one, on the other hand, the similarities between the regions, we decided to do this study tour to a cluster from whom we could learn, in order to obtain better results from the PRO WOOD regional wood cluster. We considered that visiting a cluster with similar profile we could use the information to build up a more complex cluster development strategy.

### The Cluster Environment

The TIS innovation park creates relationships. It connects business people: with business people, researchers and experts - and is the professional when it comes to solving problems: intelligently, efficiently and lastingly.

The cluster wood & technics supports South Tyrol businesses in the wood and timber trade and aims to improve their economic performance while increasing theirscope of innovation. Their vision of a Cluster represents intense crosslinking of economy andscience: supporting the companies when developing new products, services orwhen implementing new technologies. Thus it contributes to increasing advantages of competition and secures employments in rural areas. "We believe that in small and mid-sized companies innovation is done through cooperation. "Cluster" stands for network and therefor it builds the quintessence ofour work."

Both clusters were established through a business incubator, a bottom-up initiative developing the professional association. While in Bolzano clusters have a financial support from the government, the cluster organizations in Romania are self-supporting. The internal organizational structures are similar in both cases. One of Pro Wood Cluster's goals is to popularize the concept of cluster and the possibility of economic development among the government in order to obtain financing. The members in the Pro Wood are mostly SME's, a university, local authorities and consultant company. The number and type of organizations members of the Cluster Wood & Technique are greater and higher.

### Adding value to the members

The cluster pays great attention on common marketing, market research, development, training, presenting new technologies, strengthening the trust among members.

Support and services offered by the cluster wood and techniques

- Management of research and development projects
- Setting up and monitor projects groups
- Providing technical support for product and process innovation as well as material analyses incl. support on technical standards

- Know-How transfer of expertise to South Tyrol companies through technologythemed visits and attendance at trade fairs
- Coordination of national and international projects
- Write publications and organize events focusing on timber and wood

### Success factors and stories

The main success factor identified and from which every organization must learn is trust. In addition, effectiveness would be easier using a well-developed qualification system as in the case of TIS.

### Things to remember

The main fact is that preserving the company on the market means producing high-quality products using new technologies. Another thing would be, to develop a common product together with all the members, creating through this a common brand. Also it must be mentioned, the idea of such initiatives that have the aim of developing the local entities.

Currently, Pro Wood Cluster works on popularizing the concept of cluster and helping members to understand what the idea of cooperating inside a cluster means. It does efforts in order to help the members to see how the cluster works, to learn new things, new technologies, to develop their way of thinking in order to be more efficient and obtain better results in the future.

## Barriers and areas of improvement

One and maybe the most important barrier regionally and also on national level is the fact that until now there is no source of financing for cluster development and management in Romania. Each cluster must be self-supporting which does not provide long-term stability.

In order to improve, Pro Wood Cluster must organize events (trainings, conferences, team-buildings), which may help in strengthening the relationship between the members of the cluster organization, to make them be more reliable and trustful. On the other hand the cluster must get more implied in the qualification system and involved in the educational system.

# Complementarities and future cooperation



The cooperation opportunities identified during the tour were the joint-projects possibilities or in other word the two clusters would like to submit one or more common projects. The staff of the two clusters keeps themselves up-to-date with all the activities of each other in order to manage to create a cooperation possibility between their members, especially companies and the professional-educational institutions.

# Croatian Interiors visiting IMOS



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### The Cluster Environment

IMOS brings together manufacturers of furniture and their service for marketing, testing furniture and the penetration of the domestic and foreign markets. Privacy clusters based on the profits of its members, but through conversations detected that in some companies there is a lack of design and development of new products that could be competitive in the EU market. The cluster is comprised of 92 members of which all furniture manufactures and in 2012 exports reached 160 million dollars' worth of furniture. Interestingly IMOS was established through a bottom-up approach.

### Success factors and stories

IMOS is a cluster that works because it is completely turned to producers and their needs by identifying and solving problems in the furniture industry in the area where it is located. In Croatia there is no wooden cluster which we could compare with IMOS just because the IMOS is completely at the service of companies that have set up.

Here are the activities of the IMOS that would be useful ifapplied in Croatia

- Firmly connecting member in cooperation with the production of particular products
- Joint appearances at fairs and presentations large exhibitor area, strong marketing
- There is room for fairs property cluster
- Construction of the shopping center an initiative states with a capacity for each of the states of about 500 m2 of retail space

### **Lessons Learned**

- 1. Looking at a much smaller scale of production in Croatia, the need for manufacturers to connect to the principle of cooperation was identified. Example from IMOS: a large factory produces structures for sofas, invests in the development, employing experts, and attests mechanisms. How is the amount of the mechanisms that can produce large, these same mechanisms are being marketed as furniture parts at very reasonable prices that buy smaller manufacturers of upholstered furniture. In this way, smaller producers get a secure system with a five or ten -year warranty at a good price, a big factory produces sufficient mechanisms that can have a good price and the possibility of investment in development.
- 2. The old rule of success is unity, and contemporary furniture fairs and large exhibition space. What IMOSmembers can safely, taking into account the financial strength they have in common is the presentation, rent and arranging a large exhibition space that guarantees the safety of customer deliveries, says the warranty required quantities and the like.
- 3. The need for home trade organization that specialize in them are of a target audience, greatly felt in the furniture industry. Colleagues from IMOS have their own exhibition space in which, once or twice a year have a common fair, and if necessary, several times a year specialized and home fairs. For this purpose, one of the members is the company that organizes trade shows and PR agencies to ensure that

each event was done in the service of Occupational manufacturers and their interests.

4. We are particularly impressed by the large retail center that is under construction and which stipulates that each member has its own showroom of about 500 m2. The center is a hotel and a number of facilities that will raise its value and be of service to visitors. In Croatia and in the region there are very few places where one could see and buy furniture; thereforethere is a great need for it. The Center opens a number of new jobs, professions and business opportunities supporting trade, service and service.

### Barriers and areas of improvement

To accomplish at least partially the seen in IMOS, Croatia needs:

- Raising awareness of the need for the manufacturer of cooperation and mutual cooperation in production processes
- Increased awareness of the institutions of the actual functions and tasks of the cluster
- Involvement of institutions in actions taken at the level of clusters, which serve as a member producer
- Informing and educating employees in the institutions of the real meaning of the term "cluster" to the same treated properly and directed the incentives right

## Post visit opportunities and actions

Due to circumstances in which there are Croatian manufacturers, but also due to underdeveloped awareness of the importance of clusters in Croatia, Croatian Interior is able to partially work on just one activity: the development of new products from the design phase to the prototype stage. In recent years, a very successful cooperation was formed with School of design from Zagreb. We saw off the third generation of students who have graduated and with our help, their ideas were turned into products. In this way, Croatian producers get ready prototypes and continue to further cooperation with young designers. This area we have identified as possible for future cooperation: development of new products - Implementation of design, where it will be carriers Croatian Interior Design and IMOS – production in Turkey.

### The plan is:

- Joint application to funds research and development of new products
- Presentation of Turkish manufacturers of furniture parts (materials) in Croatia
- Presentation of Croatian manufacturers of wooden-eco furniture in Turkey
- A joint initiative on the development of eco-furniture with eco design
- The organization of visits of Students School of design from Zagreb to modern
   Turkish factories

# Information and Communications Technology

# ICONIC CLUSTER visiting CLUSTER 55 LUND



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# **Prehistory**

Employment is one of the important indicators for the structure of the ICT sector in the Øresund Region. The sector employs around 100.000 employees in more than

10.000 ICT firms so despite a relatively small population of 3.7 million inhabitants ICT plays a great role for the economy and employment rate of the Region.

A very important factor in the development of the ICT sector is the number of startup firms, which are an important factor in the renewal of the ICT industry. The Øresund Region has historically had a high rate of start-ups within ICT i.e. 1.500 in 2007, contributing to a dynamic eco-system and in part explaining the attractiveness of the region for large ICT companies.

### The Cluster Environment

To be and remain competitive on a global level when coming from a small region it is important to work together. Cluster 55°is located in a globally strong region, the Öresund region,one of the fastest growing IT region in Europe and one of the most innovative regions. At Cluster 55° the mission is to make sure this position is maintained and even excelled.

Cluster 55° has more than 10 years of experience in cluster management, based on the former cluster Øresund IT, founded in 1999. The organization specializes within internationalization, match-making and fundraising. As part of Lund University, the cluster is actting as a bridge between businesses and academia and operates as an open arena for innovations within IT and its cross areas.

It is much appreciated that they are not using very much formal informational system inside the Cluster. They are assessed by a special director form Lund University. The number of companies from the cluster is a great indicator of their value and appreciation.

## Adding value to the members

Being part of cluster organization such as Cluster 55°, members are offered a network of international researchers within several ICT related areas, business contacts, offering information about trends and market. The Cluster is facilitating an important international networking environment. Members have access to more than 10 000 international contacts within ICT sector and the over-sea offices in e.g. HongKong, Brussels and Brazil. In addition, Cluster 55° provides the opportunity for EU co-financingthrough participation in one of the numerous EU projects.

### Success factors and stories

Cluster 55° has realized great success by working as a project partner in multiple projects that are of value for the European ICT industry. The organization has valuable and fertile experience applying and implementing projects.

Cluster 55° Business Roaming Agreement is a service for cluster members of any affiliated Organisation in the network. The idea behind the network is to increase the collaboration between clusters and to help their members in globalisation. The goal is to visualise the cross-border connections between business service entities and make them all accessible for small & medium sized enterprises globally.



**Business Roaming Agreement** 

Cluster 55° Business Trips is a way for companies to get introduced with new business cultures, as well as establish new contacts, find business partners and do business. The idea behind the concept is that for SME's it may be necessary to expand your business internationally, but this can be difficult to do without the right network or the finances to pay for it. The Business trips works as a latter for companies in getting contacts at international markets and at international companies.

Cluster 55° is one of the driving forces behind the The EMMIA Policy Learning Platform, representing a way for the mobile and mobility industry in Europe to create the best environment for the industry to expand and develop. The project aims to create policy advice for leading policy makers on both European, National and regional level in the European Union.

### Things to remember/ Areas of improvement

Strengthening the business-educational bond through closer cooperation with local universities. In the last year AD Klaster had only few contacts with the university from the cluster. In the future, it will be beneficial to build a special place for students in the field of IT where they would be involved in different creativity programs.

Networking is extremely valuable, therefore focus is needed in organizing business trips in other hot areas for ITC with the aim to facilitate the contacts with suppliers, client, and venture capital and provoke technology transfer.

## Complementarities and future cooperation

During the fruitful visit and discussion, we have identified common interest in helping companies to invest in growing IT talents and to promote IT skills as a solution for better employment. Therefore, Cluster 55 was invited to Bucharest in November as speakers on a business events designated to promote clusters, venture funding and internationalization of businesses.

- ICONIC will join in BRA.
- ICONIC will help Cluster 55's projects in Romania.
- ICONIC will participate in brokerage events organized by Cluster 55

# Mi-Cluster visiting DSP Valley



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# The Ecosystem

DSP Valley is a cluster of excellence in DSP & Embedded Systems Design with a new direction towards smart electronics (i.e. smart home, smart health, smart vehicles, ect.). DSP Valley was chosen as a cluster for this study visit due to its common sector

and structure (microelectronics & embedded systems) with mi-Cluster, but in a far more mature innovation ecosystem.

This region for innovation & high-tech entrepreneurship is considered one of the top in Europe and consists of the leading KULeuven University at the core, surrounded by 4 clusters (nano-microelectronics, mechatronics, Clean Tech, Life Sciences), incubators, industry and science parks, one of the top University Technology Transfer Offices in the world (KULeuven Research & Development) and the famous IMEC (the world-leading research institute in nano-microelectronics).

The ecosystem has a total of over 8.000 researchers, 300 tech companies and an R&D budget of € 664 million. Furthermore concerning DSP Valley's industrial partners, it includes global industry leaders such as Philips, NXP Semiconductors, Dialog Semiconductors and Analog Devices. On top of that, the study visit was combined with the annual DSP Valley B2B matchmaking event, an event that promotes networking and synergies between industry members from all over Europe, and was interesting to our cluster organization concerning its operational structure in order to host a similar event in Greece. It was also an event that was attractive for the mi-Cluster industrial partners to seek future collaborations with the DSP Valley industrial partners.

# The Cluster Organization

DSP Valley is an independent cluster of excellence in smart systems focusing on the design of hardware and embedded software technology for (digital) signal processing systems and System-on-Chip (SoC). The DSP Valley group exceeds 100 members: universities, research institutes and companies, from small start-ups over SMEs to large international groups with a local R&D activity.

DSP Valley offers its members a networking platform that allows them to explore each other's expertise and that stimulates innovation by exploiting complementarities. Its activities include regional and international inter cluster B2B forums, Academia-to-Business forum, shared group booth at international exhibitions, custom matchmaking events, technical seminars, bi-monthly newsletter and brokerage services for participation in European ICT programs

With its extensive offer of high quality activities DSP Valley is one of the top clusters in Europe in the area of embedded technology. Its activities include for example regional and international inter cluster B2B forums, Academia-to-Business forum, shared group booth at international exhibitions, custom matchmaking events, technical seminars, bi-monthly newsletter and brokerage services for participation in European ICT programmes.

The cluster is governed by a Board that consists of the Managing Director of the cluster plus seven members that represent the large industry members, SMEs and Academia, making it an organization that follows a bottom-up approach. Finance derives from National/Regional funds, membership fees and participation in European funded projects. The Initial model was 30% national funding, 30% regional

funding, and 40% membership fees. Due to cut in public funding, the cluster changed strategy to recruit new members, increase revenue in fees. Also doubled revenue from EU funded projects. No structural funding. No revenue from services.

DSP Valley recently changed its strategy from a cluster of excellence in DSP & Embedded Systems Design to a new strategic segmentation in smart electronics (i.e. smart home, smart health, smart vehicles, ect.). This strategy change boosted the growth of the cluster by attracting new members and strengthened the total value chain.

DSP Valley is headquartered in Leuven, Belgium and has a branch office in Eindhoven, The Netherlands.

### Success factors and stories

Success factors include mainly the surrounding highly innovative ecosystem and the close collaboration with research institutes and the University. Another success factor is the coexistence of small, medium and large companies and the presence of global industry leaders such as NXP Semiconductors and Philips and the world leading nano-microelectronics institute IMEC. DSP Valley participates in the European Semiconductor Cluster Forum and several European projects such as Silicon Europe. It also collaborates with several other clusters in the region.

### Things to remember

Enhanced collaboration between Industry and research centers/academic institutes —this is a key factor for cluster development and sustainability and also a key factor for regional development.

Strategic Segmentation – the shift from a general thematic area such as a nano/microelectronics cluster to a more applied and strategic area such as smart electronics (i.e. smart home, smart health etc.) acts as a catalyst to both attract new members and strengthen the total value chain and competitive advantage of the cluster itself.

Membership Fees – this is a must in order to achieve cluster sustainability. It also creates a more mature and demanding relationship between the cluster facilitator and its' members as it increases the levels of expectation, customer loyalty and professionalism. This measure really promotes accountability and the strive for excellence.

Enhanced Value added services – the operation of a Patent Office and Seed Fund really offer the type of services that create wealth to the cluster members and the cluster ecosystem.

B2B Matchmaking Event – this is an event that can be applied for mi-Cluster. It is a true added value service to the cluster members, as it addresses basic industry needs that include networking, international business development, creating corporate awareness, creating new collaborations and at the end, possible increase in sales and

revenue. On the other hand, it is an event that showcases and promotes the cluster to international partners/customers.

# Barriers and areas of improvement

Enhanced collaboration between Industry and research centers/academic institutes – this is more of a collaboration culture issue and is difficult to achieve, when traditionally the two entities have been working separately. A lot of work needs to be done in order to establish trust and to convince the research community to focus more on the applied research needs of the local industry. Finally there needs to be a win-win definition for the "rules of engagement".

Strategic Segmentation – cluster members are usually resistant to a change of direction and strategy and needs careful work and preparation in defining the right strategic segmentation and then convincing the cluster members (change management) that this is the right direction that will secure growth and sustainability.

Membership Fees – in a cluster that has been used to receiving free services, it is very difficult to change their mentality and convince them to pay fees.

Enhanced Value added services – the operation of a Patent Office and Seed Fund need a lot of know-how in order to be successful.

B2B Matchmaking Event – mi-Cluster does not have the large corporation – global leaders that can attract international companies to participate in a B2B event in Greece.

### Lessons learned

Mi-Cluster needs to diversify its revenue model by initiating a membership fee and offering more added value services to its cluster members. In addition, the visiting cluster organization should analyze further strategic segmentation(s) and application areas.

# Complementarities and future cooperation

Both DSP Valley and mi-Cluster are nano/microelectronics and embedded systems clusters. The cluster organizations already cooperate by participating in the European Semiconductor Cluster Forum (ESCF) and an ESCP initiative (DG Enterprise). Further C2C complementarities include further exploring C2C opportunities between the 2 clusters (i.e. European projects, seeking collaboration with non-European clusters) as well as exchanging know-how and best practices.



DSP Valley and mi-Cluster will continue to cooperate in already established common European Cluster Initiatives and will communicate and seek new opportunities in EU cluster projects. The cluster organizations will exchange information concerning events hosted at either of the clusters and will seek a mutual B2B matchmaking event in the near future in order to bring the 2 cluster closer together and create value for both sides.

# Vojvodina ICT Cluster visiting Cluster 55



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Website <a href="http://cluster55.org/">http://cluster55.org/</a>

# **Prehistory**

Cluster 55° is an interesting case of a cluster initiative from many aspects. It is an old, established initiative, which can tell us a lot about long-term performance. It is active in the same sector as Vojvodina ICT cluster. It is also a cross-border organization which is unusual for cluster collaboration. All these factors make it a particularly interesting to visit.

One of the most important reasons for choosing to visit this particular cluster organization is that Cluster 55° have more than 12 years of experience in cluster management, based on the former cluster Øresund IT, which was founded in 1999; and as well because of the fact that they have built up a regional and international network and experience that they were ready to share with us at no cost basis.

Furthermore, Cluster 55° specializes within internationalization, match-making, fundraising, and being a part of Lund University acts as a bridge between businesses and academia, all of that being the focus of development Vojvodina ICT cluster strives to through its activities.

In short, Cluster 55°, as a leading ICT cluster in Europe, has developed into a fully operative cluster organization and is now acting as a role model not only for other new cluster initiatives in Øresund region, but also to all new clusters in the rest of Europe, like our Vojvodina ICT cluster.

Whatever we need to learn, they have already been there!

### The Cluster Environment

Cluster 55° (Øresund IT) was mainly initiated by a bottom-up approach. The majority of the clusters of the same technological domain have emerged according to the same approach. Around 10 % can be considered as policy driven (top-down exogen). Vojvodina ICT cluster is a bottom-up approach, too.

In the beginnings, Øresund IT was embedded in the Øresund Science Region (ØSR), a Swedish-Danish cross border organization with the aim to increase the cooperation between universities, the public sphere and the business community on both sides of Øresund.

At the time of its emergence, the Øresund IT was completely financed from the public sources, which is not common for ICT clusters, which usually tend to have a higher share of private financing when emerged than clusters form other technological areas. The financial structure of the Øresund IT has changed over a period of time. In 2009 a higher share of private financing has been gained (33% private financing in 2009), and today the financing of Cluster 55° (Øresund IT) is considered to be sustainably secured. National funds, EU funding and regional funding made it possible to lower the membership fee for the companies to the amount of 290 EUR/year for basic membership (costs per members are considered to be comparable low).

# Attracting competence:

The Øresund region consists of the two independent job markets of southern Sweden and Eastern Denmark. However, until bridge between these two became a reality in 2000, it was not truly considered to be one united job market. With the publication of Mobility Guide in spring 2006, Øresund IT was the first to compile all information and contacts on all the recruiting and mobility opportunities in the Øresund region, which provided the possibility of getting more insight into the

opportunities that the region provides. In order to attract qualified employees for the mobile industry from the rest of the world, Øresund IT initiated projects in cooperation with Microsoft and Sony Ericson.

### Regional research:

Research about the region and research in the region are both very important because, strengthening the Øresund region as a knowledge base for ICT provides researchers with opportunities for funding and new contacts for expanding their field. A characteristic of the Cluster 55° is that most of the R&D is conducted within firms rather than in public institutions. This means that access to R&D skills within the firm is of the utmost importance as far as their competitiveness is concerned. The total number of R&D staff was around 43.000 at the Øresund Region in 2009. The ICT sector accounted for 13.000+ of these. This means that more than 30% of the R&D staff in the region was employed in the ICT sector. In comparison, there were about 700 public ICT researchers in the region in 2009.

# Making companies reach their full potential:

Cluster 55° has helped creating business opportunities across national borders as well as forming new partnerships. Throughout the years, they hosted over 200 local and international events to support the integration and growth in the region, and continuously provided match-making possibilities by setting up meetings with companies one on one, as well as by establishing networks and round table discussions.

### Øresund region today:

3.7 million inhabitants; 10,000+ IT businesses; 100,000+ employees; 700 public researchers; 13,000,00 private researchers; 8,000 IT students; 165,000.00 total students; 7 science parks; 22,4 billion EUR in turnover.

### Adding value to members

Congruence of objectives and added values of Cluster 55°: According to its self-assessment, Cluster 55° generates the highest added values for its members in the same areas that are considered to be of high priorities; the congruence between objectives and added value is appropriate since the priorities between both differ.

By becoming a member of Cluster 55°, companies get access to the region's best international network. Cluster 55° strengthens the ICT sector in the Öresund region by offering SMEs, start-ups and research institutions regional and international contacts; a network of potential clients, cooperation and project partners.

### All members of Cluster 55° get:

- Free participation in the quarterly pitching-events held in their region
- Access to more than 10 000 international contacts within ICT
- Access to Cluster 55°'s over-sea offices in e.g. HongKong, Brussels and Brazil

- EU co-financing opportunities through participation in one of their numerous EU projects
- A network of international researchers within several ICT related areas
- Cross-sector cooperation with other industries e.g. life science, logistics, food and environment

Acquisition of project funds, access to public funding

Cluster 55° has already initiated a significant series of projects (R&D projects and others), in which many cluster members are involved, and also informs its members regularly about current funding opportunities. Altogether, its range is much broader than in other clusters, and it is considered that management of Cluster55° has set a new standard in this sub-dimension.

Support of entrepreneurs and Start-ups

In the field of offering a range of actions by cluster organization regarding the support of start-up companies, Cluster 55° is only partly active, offering several different supporting measures for the benefits of entrepreneurs.

The number of start-up firms is a very important factor in the development of the ICT sector as it pertains to the renewal of the ICT industry. An analysis of start-up firms can also tell something about the direction in which the ICT industry is moving as well as where new types of business can be found, though there are factors other than the actual trends within the industry that affect the number of start-up firms such as general business conditions, changes in local demand, etc.

### Success factors and stories

In 2009 Cluster 55 (then named Øresund IT) participated in a benchmark analysis conducted by professor Gerhard Meier zur Köcker. The benchmark clearly showed that Cluster 55 outperforms most other cluster organizations within ICT when it comes to matchmaking, building of network etc. This has of course to do with the fact that they are one of the oldest cluster organizations in Europe, founded in 1999, which means that they have gathered knowledge about cluster work during the past 12 years.

On a European level the ICT cluster of Île-de-France is a superior number one measured on employment followed by Cologne, Lazio, Madrid, Lombardy and London. This fact points to the importance of being part of a densely populated region and the resources this enables. The Øresund Region is ranked 12 among the researched regions in Europe. The ICT cluster in the Øresund Region is larger than the better known clusters in Barcelona and Cambridge as well than the neighboring clusters in Helsinki, Oslo, Hamburg and Berlin.

Success stories are all the projects Cluster 55° participated in, but also the increasing number of their members, which is the most important indicator of Cluster 55° successfulness.

Women Innovate Mobile

Helena Wiedling from Cluster 55° was recently appointed mentor at the New York based accelerator Women Innovate Mobile (WIM). WIM focuses on launching and accelerating the growth of women-founded companies in mobile technology. Through its network of mobile experts, mentors and investors, WIM provides women entrepreneurs with the tools, feedback and connections needed to launch and scale their mobile ventures.

## Cluster 55° in Balkan region

At the official proclamation, held in July 2013 in Skopje, an agreement was signed that allows for IT companies in Macedonia and the Balkans a better and more open access to international markets. The signing of this agreement provides regional companies with a centralized and easier integration with the international market. This agreement represents a significant advancement in the process of side-by-side parallel development rate of the IT industry in Macedonia and the region with the dynamic growth of international companies in the same industry. The contract model allows companies instant access to information and contacts from all IT organizations worldwide, a higher level of cooperation, free exchange of ideas, experiences and business

# Things to remember

Among the most interesting issue was the exploring of specific conditions for the development of regional cross-border collaborations, as the Öresund region is a cross-border region and the Cluster 55° is a cross-border cluster. Various barriers for further integration across borders are identified, but the primary barriers are institutional, linguistic and legal issues.

Although cross-border cluster exists, conditions for their development are tough compared to nationally based clusters. Primarily legislative and institutional barriers limit the exploitation of the benefits and advantages of agglomeration. Hurdles also exist in form of traditional national ways of thinking, for example, companies primarily collaborate with research institutes in their own country.

To be and remain competitive on a global level when coming from a small region, it is important to work together. Cluster 55° is located in a globally strong region, as the Öresund region is the fastest growing IT region in Europe and one of the most innovative regions. At Cluster 55° their mission is to make sure they maintain this position, and that is exactly what Vojvodina ICT Cluster intends to do during the following years.

Cluster 55° Business Roaming Agreement - a service for cluster members of any affiliated Organization in the network. The idea behind the network is to increase the collaboration between clusters and to help their members in globalization. The goal is to visualize the cross-border connections between business service entities and make them all accessible for small & medium sized enterprises globally.

The Business Roaming Agreement is free of charge for all participants and Vojvodina ICT Cluster is a member.

Each partner will provide its office(s) and in exchange its member companies will get access to the locations of all other members in the Business Roaming Agreement. The Business Roaming Agreement is an exchange program where companies can use the knowledge, networks and locations provided by other cluster companies.

When becoming a member of the network each organization accepts to, reciprocally, provide support for each other's members and offer a baseline of free service and possibility for attendance of local events during this time. These are the minimal requirements for participating companies, but further commitments are, of course, very welcomed.

#### Lessons Learned

The most challenging part of the clusters work is to measure or explain reason clusters exist, and why its members should remain there or new ones join. Often the work that cluster does, is not easy to measure or explain, not even to the cluster members. The long-term experience of Cluster 55° in this field is one of the most valuable lessons learnt from this visit in a way that it has opened a new perspective of looking at this problem. So it's not only the matter of how the cluster is going to justify its existence and expenditures to its members, it's more about finding a way not to explain anything but to offer a variety of possibilities to the members to be included in all kind of activities organized by a cluster, and suitable to their most urgent needs. Knowing all cluster members on a deep level and in all details is the utmost requirement for those working in and for the cluster. That is something that should be continuously improved in Vojvodina ICT Cluster.

The fact that networking is the most important tool for all kind of cluster activities has been emphasized not only once by the representatives of Cluster 55° and that is something that Vojvodina ICT Cluster is striving to improve, which is not easy considering lack of employees. Some ideas occurred during this visit in a way that additional help for activities considering for example contacts management, could be found on a temporarily level - by engaging student volunteers during short periods of time, especially in times of intensified activities when organizing some events like conferences, and that is something that could be easily done in Vojvodina ICT cluster. One useful tip from Cluster 55°: when working on projects, they have a kind of rule to cooperate only with people they like, and after numerous projects they participated, it proved completely right. They choose project and people that they like - if there is no mutual liking they choose not to work with the people.

In Cluster 55° they realized that the longer one cluster exists the harder it is to get funding through projects, and that is especially the case with ICT clusters. Even though it is very short-sighted view of the clusters, it is the reality. In regards to that, in Cluster 55° they are trying to find a solution in a way that they are trying to connect with different industries, different fields of work, in order to get the financing easier and for the mutual benefit of all.

For example, they worked with maritime industry to connect IT companies and maritime. They choose maritime as this is traditional, very close branch and it is very challenging to try to work together. That was precisely the reason cluster chose to work with them and they are in the process of finding some avenues, working to make this happen.

Their suggestion for a combined project was to see how we ourselves could think of some industry, for example, hospitals and call on the general director of the Novi Sad Hospital, for example, to find what problems they have and see if there would be possible for the IT people to find solution to some or all of these problems.

One of the suggestions was that we bring together different people - representatives of our companies as well as representatives of various companies, government services, perhaps even include students. This could be in the form of workshop where there would be possible to start talking about various issues and find solutions together.

Something that we do differently: In Cluster 55° they don't offer courses, they just give information to the members about event that could be of interest to them. In Vojvodina ICT cluster, we try to find out the needs of our companies and organize specialized (SCRUM, ISTQB FL, ITIL) and some soft skill courses in a way that members pay less than others who can also participate.

### Barriers

Any kind of change in an established organization is not easy to implement, because changes need time, as well as human and financial resources, and the fact is that Vojvodina ICT Cluster lacks all three of them. On the other hand, in order to make improvement and achieve goals already set through strategy and planning, changes are necessary and can't be postponed any longer. All the suggestions given by representatives of Cluster 55° were based on a long-term experience and should be at least considered to be implemented in a short or longer period of time, despite the obstacles like an insufficient number of employees and a lack of financial support.

### **Identified Complementarities**

Both clusters originate from a small region. Even though Cluster 55° is a fully operative cluster organization with more than 12 years of experience, and originates from the European fastest growing region in IT sector, it is financed mostly from National funds, EU funding and regional funding, with a third of its financing coming from the private sector.

The situation in Vojvodina ICT Cluster is quite similar to the above mentioned, because some 25% of the funding comes from the members' fees, and the rest is covered mainly through EU projects and a small amount comes from national and regional funding.

# Future cooperation and follow-up activities

Continuing the cooperation established through the Business Roaming Agreement by means of increasing the collaboration between clusters and at the same time trying to help cluster members in globalization.

Inviting Cluster 55° representatives to DanubelT conference that Vojvodina ICT Cluster will organize in May 2014.

Cluster 55° has successfully completed the same kind of projects in Sweden, Spain and FYR of Macedonia, concerning organization of specialized courses for those who could later be employed by the companies that expressed their needs for those profiles of employees. At the moment, Cluster 55° is looking for new partners for this kind of a project, and Vojvodina ICT Cluster is one of the possible candidates. After examining details of the projects they have already implemented, the co-operation on a new project proposal should start in January 2014

# Metal

# Vojvodina Metal Cluster visiting SwissMem



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# **Prehistory**

The Swiss Association of Machinery Manufacturers (VSM) was founded in 1883 when times were starting to improve again after several years of crisis. At the time, the Association had 47 member companies which employed some 9500 "workers". Although the main focus in those days was on questions relating to customs and trade policy (primarily the dismantling of high protective tariffs), the Association's purpose was defined as being "to safeguard and promote the general interests of the Swiss engineering industry" - a sufficiently broad focus for it to remain relevant up to the present day.

With the progressive electrification of the country, the industry began to develop rapidly. In parallel with this growth, the VSM's sphere of activity steadily broadened. The Agreement in the Engineering Industry (VMI) was subsequently repeatedly renewed and the circle of partner associations expanded. Today, the VMI is one of Switzerland's most important collective agreements and covers some 130,000 employees. It regulates general working conditions and employee participation in businesses and lays down important principles for basic and ongoing training. As an industry-specific agreement negotiated on a pragmatic basis between the social partners, the VMI brings important advantages for both sides. The VMI repeatedly emerges as a trendsetting instrument and a forum for fleshing out innovative ideas: for example, 1998 saw the introduction of annual working hours as a benchmark, along with a "long-term account" in which individual employees could save up overtime credits.

Since the beginning of July 1999, the ASM/VSM associations have been amalgamated under single management, while nonetheless maintaining their legal independence. Since 1 October 1999, they are operating under the name of Swissmem.

# A quick look

SwissMem is one of the most respected associations in the metal sector in Europe and is part of all European professional sector organizations. Their results and activities are in correlation with aims and goals of Vojvodina Metal Cluster. The decision was taken the organization is an excellent example that one can learn from, follow, and collaborate with.

Potential future cooperation may have two directions. One is the know-how transfer between the two associations and another is the cooperation between VMC company members (joint production, investments, preparing VMC members for Swiss market etc.)

### The Cluster Environment

Swissmem unites Switzerland's mechanical and electrical engineering industries as well as related technology-oriented sectors. Swissmem is an independent voice that represents the interests of Swiss industry in political and public debates. The organization effectively advocates the interests and concerns of its member companies and provides efficient services tailored to their needs. Swissmem is committed to open competition, innovation and entrepreneurial freedom coupled with social responsibility. In addition, Swissmem works with the industry's key authorities, organizations and institutions, at both national and international level. Nevertheless, the organization follows a bottom-up approach empowering it with strong negotiation weigh and stable long-term perspectives. The members are the actual owners and founders of association.

SWM has an Assembly composed of all members, the Executive Committee which consists of 13 companies and a Board of Directors composed of 39 companies.

Swismem(SWM) has about 1000 members, employing 130,000 workers, while the entire industry employs 300,000 workers. SWM overall members' structure is: 90% of micro and small enterprises, 8% of medium and 2% of large companies. SWM employs 80 full-time employees. The number of members who access the association annually is about 20 to 35, and the number of members that leave the membership is between 15 and 20, and so the annual increase in the number of members is present. It should be noted that companies inSwissmemrepresent 10% of the GDP of Switzerland.

More than 90% of the association incomes come from the membership fees. A membership fee is solved so that each member pays a fixed annual fee of 500 CHF and also 0.12% of total annual revenue. Part of the funding is achieved through the services they provide, especially training and education. But the flow of services in relation to the fee is not so important, because for most services association providesfree fees for members.

# Adding value to the members

SWM offers a number of practical services to help their members to improve their competitiveness and successfully face the new challenges:

- Free legal and technical advice of experienced professionals
- Access to specialist professional networks and information
- Excellent training at reduced prices
- Respectability and strong political position in the country
- Marketing activities and exchange of information
- Organization of trade fairs
- Development of statistics and analysis of the sector
- Information service for the export of war materials and dual-use goods, as well as information on offset transactions
- Organization of meetings with representatives from universities and research institutes
- Organization of cross-company management courses and in-house seminars by the Swissmem Executive Training School

### An eye catcher

Most interesting issue is Swissmem's presence in the education of a new workforce. They create and direct the country education system of sector professional staff. This way Swissmem provides quality workforce for its members and a good chance for the young and unemployed.

In addition, Swissmem's relation and collaboration with governmental bodies is staggering. SwissMem is one of the strongest organizations in Switzerland. They are part of decision making bodies, by developing programs and books for schools (vocational education). They are part of Vocational training program in secondary schools in the country, they provide them with operational practices in the companies and theoretical education. Practices in the companies last 3 to 4 days and according to their statistics, 70 to 80% of graduates continue their work in the same

firms. They also participate in the design and development of all sectorial laws so they are able to affect the creation of an adequate environment for the development of new businesses in the sector.

Moreover, SWM has strong voice in the parliament. Four times a year for sessions of parliament, SWM organizes formal dinner at which it invites members of the Parliament, members of the Board (39), and members of the SWM. During the dinner they make short brakes when they show presentations on a variety of current sector topics for further discussion during the dinner. Guests sit at round tables and each table has the other subject.

In addition, few of the services that the organization provides to the members are quite special and caught our attention:

- Information service for the export of war materials and dual-use goods, as well
  as information on offset transactions— In order to provide this the organization
  has engaged six lawyers that deals with labor relations of employees and
  representing the interests of employers. In this sector, two lawyers deal
  specifically with commercial law (sales contract and all matters relating to
  exports, intellectual property, etc.).
- Based on questionnaires conducted every three months and completed by 300 always the same companies, they research the sector and thus monitor the situation in the sector. This service is completely free and 8 of these lawyers are full time employees of the Swissmem, and they are always available for members.)
- An initiative to secure young talent www.tecmania.ch -half of the employees works in the SWM sector of education. There are two sub-sectors: department of vocational education and school of management. 21 employees work in the first and 13 in the second. If necessary, they have on their disposal another 80 of external trainers. There is an annual outcome of 2000 learners that result from their trainings in the school of management. Most notable were the training programs of leadership, project management, research and development and training programs for coaches. The second sub-VET (Vocational Technical Education) is implemented in partnership with the government, the confederation, cantons and other industry associations. Based on SWM guidance, education of students who pass through the program is implemented (70 to 80% of children (high school age) are determined for this system of education). Roughly 70% of students who receive training in the companies continue to work in the same. SWM writes programs and produces guides that are used in education. Every five years the analysis of policies is carried out and their harmonization with new technologies that are in line with the current needs of the companies. And in ten years, there are fundamental reforms (analysis of previous and future scenario of the work). Seminars are generally free of charge unless they are dislocated and then the fee covers the basic costs, the average is 50 to 70CHF, the most expensive so far was 250CHF, when engaging experts in the field of special education.)

# Complementarities and future cooperation

Even though both vision and goals are completely the same for the two organizations, Swissmem had walked a long way and VMC has a lot to catch up. Nevertheless, potential cooperation is possible in two directions. One is the know-



how transfer between the two associations and another is the cooperation between VMC company members (joint production, investments, preparing VMC members for Swiss market etc.) In other words to organize a B2B event between VCM and SWM members which will include the preparation of companies to export to the Swiss market (for those who have the desired quality in order to find partners and support for export and for those who don't have the desired quality and standards in order to reach that level of export and networking abroad).