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The Environmental Industries Cluster in Västra Götaland Region (Case B)

A low and sceptic turnout at the end of the first phase

The cluster in Västra Götaland is composed by roughly 120 companies and 20 institutions. The company typology is dual: a few large companies (PM Luft, YIT, Bravida...) branches of large corporations and a majority of SMEs, mainly component suppliers and installation companies. It is particularly important to mention the presence of large customers as Västfastigheter, managers the Region's public buildings.

The attendance to the first cluster meeting, on October 22nd, was relatively low, with only 14 companies and 5 institutions present, despite two rounds of calls, two e-mails and one fax.

Anyway, the profile of the participants was quite representative of the cluster, both by the typology of the companies and by position in the value chain. Top managers of the large companies were present as well as small entrepreneurs.

The whole supply chain was well covered with the presence of:

- The top system supplier, PM Luft (500 MSEK, 375 employees)
- Two sub system suppliers: Kabona AB and Klimat Kontroll
- Several component suppliers, Scandfilter (175 MSEK, 170 employees)
- One installation company
- Three consulting companies: Entreprenad Planering, ÅF...
- Two supporting institutions: SP...
- One large customer: Västfastigheter

There was no real opposition to the initiative, but certainly lots of scepticism.

Some of the engineering and consulting companies were more reluctant, as the only competitive advantage for these companies seems to be the fact to have good contacts with the main customers, which they were not willing to share with others.

This case was prepared by Emiliano Duch on 2004 based on a real experience in the Region of Västra-Götaland (Sweden), as the basis for class discussion rather than to illustrate the effective or ineffective handling of an administrative situation. Some situations, characters and companies have been disguised to preserve confidentiality.
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There was no previous collaboration, just a collection of private interests. No coordination projects or association seem to be developed or recognized. The fact to collaborate or even to think about developing collaborative projects may even scare this traditional sector where people are not used to exchange.

How to motivate the companies to participate actively?

During that first cluster meeting the organizers tried to transmit:

- The “Cluster feeling”, to make them understand they are part of this cluster
- To motivate the companies to join and to launch with us the project

In order to show some “carrot” to make the project more attractive, the presence of clients as Västfastigheter was used to hint of possible future business. The main message transmitted in the meeting was:

“By working with us we will help you to seize the opportunities to create business in Sweden and internationally”.

Everybody was very polite in the coffee that followed the presentation, but once the participants left the Grand Hotel in Borås, the feeling of the organizers was that they were not sure that they could come up with ideas or projects that could motivate the companies to really put their energies behind the cluster initiative.

What could they do in the six weeks they had until the next cluster meeting, scheduled for December 3rd?

Annex: Description of the cluster¹

Introduction: the HVAC sector

The HVAC/R sector regroups the Heating, the Ventilation, the Air Conditioning and the Refrigerating industries. This industry grew substantially in the post-war years and is now comprised in the three major sectors of manufacturing, distribution and contracting.

The HVAC market is estimated at \$87 billion in 2003 (Source: Freedonia). Worldwide demand for HVAC (heating/ ventilation/air conditioning) equipment is projected to increase over four percent per year through 2006.

The developed countries have been the primary basis for the development of the HVAC industry. Some of these markets are today considered as very mature and even saturated for some product segments especially in United States and in Japan. For instance, regarding the air conditioning market, their equipment rates are strongly higher than in Europe. (for the residential sector: 85% in Japan, 65% in US and only 5% in Europe). The average growth for HVAC sector in the next years is expected to reach 6% (Source: Freedomia).

The cluster today

Given the concentration of knowledge and number of entrepreneurs using filtering technologies in the Sjuhärad region, it is fair to say that the HVAC Cluster of Västra Götaland has its geographical centre in the Sjuhärad region. It is, however, important to realize that expertise in this sector exists all over Västra Götaland.

Generally, a cluster working with indoor air contains a number of different sub sectors, such as air system suppliers, sub system suppliers, component suppliers, HVAC consultants and installation companies.

Air System Suppliers: PM Luft...

The air system suppliers are companies, in principle, which are able to produce and supply a complete air handling system. These companies have, in most cases, their own research and development departments with engineers working with, for example, aerodynamics, energy optimization and product development. Some of the companies also have their own test facilities with laboratories where most of the technical features can be tested.

Sub System Suppliers: Kabona, IMU Honeywell

The sub system suppliers are companies that produce a part of a complete air handling system. It is not unusual that a company, which in one project is an air system supplier, acts as a sub system supplier to somebody else in another

¹ Source: Competitiveness

project. This movement between sectors or change of roles is dependent on which scope of supply the company has for the actual project.

Component Suppliers: Bevent Rasch, ...

The component suppliers may supply things such as filters, ducts, grids, hoods and many other types of equipment.

HVAC Consultants: Entreprenad Planering, ÅF, ...

The VVS or Energy consultants are, in most cases, the companies, which design the air handling systems. They are the ones with the specific knowledge of which rules are applicable for a particular type of building, which technologies are available for achieving a certain function and also which providers could possibly be used for components or systems.

Installation companies

These companies, at least the bigger installation companies, play very different roles from one project to another. In one project they are pure installers, receiving a complete description, containing a complete set of drawings and their task is to provide the installation. In another project they may have a complete system responsibility for the air handling system, hence, they would be responsible for the design of the system, the purchase of components, systems and subsystems, and finally for the installation of the system.

Service companies

These actors are not currently the most numerous of the cluster but the trends seem to show that they will ultimately comprise a key part of the value chain in the future of the SIAQ² sector. Very few specialized companies exist in this area. Usually, the installation companies that follow the process begin installing the air systems supply service and carry out maintenance.

Construction companies: Skanska, ...

Construction companies play an essential role in the cluster. Indeed, they are the intermediary customers and their influence on the nature of the products that will be used for the buildings are important.

The collaboration between these companies, the consulting companies and the final customers is one of the most strategic parts of the decision process concerning the kind of different elements that are going to be used in the buildings. Usually, the building companies are very large groups that are at least national and more often global ones. For example, Skanska is a very important player on the Swedish market – it was the 4th European group in Construction in 2000 with a turnover of 12,8 M€ (77% abroad) for 63 000 employees.

² Sustainable Indoor Air Quality

Customers: Akademiska Hus, Västfastigheter, ...

Customer groups, the construction companies and the region itself, can all have a great influence over the air handling systems used in their buildings. They may, however, be separated into different groups, depending on the type of building they are responsible for.

Scientific Institutions: Chalmers (CMB Foundation), SP, ...

These institutions are mostly part of the universities in the region. In this particular case there exists one major technical university and a few smaller ones.

Knowledge Transfer Institutions: Högskolan Borås,

Technological institutes make the intermediary between pure scientific research and education of known technologies. These institutions often have advanced test facilities, where they can perform high technology tests for enterprises; thus, increasing these enterprises knowledge in advanced technologies.

Training Institutions: SIFU

The training of engineers, installers and other personnel, (needed in the air handling sector) is carried out at different levels by schools; both practical and theoretical universities, but also by companies or institutions that are developing training programs for the professionals of the sector

Public Administration

In this cluster around air handling systems the region is a part of the cluster environment in at least two different ways. Firstly, the Västra Götaland Region is a big owner of public buildings, e.g. the region owns all the hospitals, and therefore the region is a large customer. Secondly the region has a societal responsibility towards the environment and obligations to ensure that taken environmental initiatives and goals are fulfilled.

Professional Associations: Svensk Ventilation; Eurovent, ...

Two major professional organizations exist within the air handling sector; one national and one international.

Professional Events

A number of interesting events concerning the sector exist. At the national level, we may note the Nordbygg exhibition in Stockholm, which is one of the builders' sector's leading meeting place in the Nordic region. The HVAC sector is obviously an important one for this exhibition.

At the European level, the IKK exhibition organized every year in Hanover or Nuremberg.

Control Institutions

Boverket makes the regulations for buildings in general. This also applies for the performance of the ventilation systems. The control instrument is called OVK (Obligatorisk Ventilations Kontroll) or Compulsory Ventilation Control.

Certifying Entities

A certification called P-marking applies to the entire internal climate and not only the air climate. This system has previously been used in public building, (e.g. a school and a hospital) in the Borås area. So far, however, it has not been widely used in other kinds of buildings. The certifying entity for the P marking system is SP that is located in Borås.