Industrial cluster excellence

Whitepaper on preconditions, policies and best practices

1

MULTILEVEL BENCHMARKING

ALPlastics: a network of private/public actors actively involved in local development policies in 5 Alpine regions, to create proper conditions for **STRATEGIC INNOVATION** in the **ALPINE PLASTICS CLUSTERS** and strengthen the related economic sector.

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MULTILEVEL BENCHMARKING

Plastic industry SWOT analysis
Cluster management benchmarking
Review of regional cluster policies

1 PLASTIC INDUSTRY SWOT ANALYSIS

INTRODUCTION

This chapter is dedicated to the "analysis/benchmarking of the SMEs/industrial context, analysis of needs and potentials, benchmarking of productivity", and will allow benchmarking the regional industry systems, policies and the cluster management strategies. The goal of this chapter is to provide an overview of industrial needs and potentials in Alpine Space, regarding the polymer industry, through a SWOT analysis.

This chapter is built on two stages. The first one was done in order to have an analysis of the industrial context from the cluster management point of view, and to propose a global SWOT, from this survey. The second one came from a survey, thanks to a questionnaire proposed to 59 companies, in order to have the own industrial point of view. The final result is a merged SWOT analysis with recommendations.

The results from the both SWOT analysis highlight different interesting points, giving a very good overview of polymer industry position in the Alpine Space.

Regarding strengths, the industry is very innovative, with good know-how and technologies, due to high R&D investments, cooperation will and good industrial performance. Their export activities are another positive point.
Furthermore, the good public funding for innovation and the importance of network, are good opportunities to ease innovation activities of companies. However, some weaknesses, which could be treated, raise from the both survey, such as the small size of polymer companies, their lack of resources (human, time, money), or the position of IP in the companies which tends to not share their know-how. Regarding the threat, the lack of workers and especially skilled ones is a big problem, together with the difficulties to get access to funding. The regulation and standards seems to be also an issue for companies, in addition with their competition against other countries and especially low-cost countries, in an economic environment of crisis.

This analysis gives a very interesting overview of the global position of polymer industry in the Alpine space and will allow working on solutions in order to smooth the context for companies. These results also show to clusters which are the points to work out to help their members in their activities.

1 ANALYSIS OF SMES INDUSTRIAL CONTEXT

1.1 METHODOLOGY

1.1.1 GLOBAL METHODOLOGY

1. Objective of the analysis

The goal of this study was to analyze and benchmark the industrial context of each cluster pool, in order to highlight strengths (potential) and weaknesses (needs) in terms of Technology transfer (TT), R&D and Training (development of human resources).

This SWOT analysis, for each country and cluster, allowed us to have an interesting overview of the polymer industry in the Alpine space and give recommendations and best practice examples for clusters and their members. This analysis also helped to bring the adequate solutions through the Open Innovation Platform.

2. Methodology of the analysis

In order to realize this SWOT analysis, we had to collect enough data from each cluster and from cluster members. This study was divided into two steps:

• The first one was focused on cluster managers as to their involvement in their members activities, in order to have a qualitative research. Phone interviews were made with each of the six clusters in order to establish a SWOT per country along with an analysis of other relevant information from secondary sources. The results and analysis of this phase were used to write a quantitative questionnaire and build hypothesis.

• The second step was to get feedbacks from cluster members, with quantitative and qualitative answers, in order to get a good overview of each cluster's membership, and to establish a second SWOT analysis focused on companies. This study was done through an online questionnaire, filled by cluster project manager after direct interviews with company representatives.

The selection of companies was at the initiative of each cluster, with at least 10 companies, and if possible 5 materials converters, 2 raw material manufacturers and 3 equipment manufacturers.

This questionnaire is built around 8 parts, with a mix of closed questions (for quantitative results) and open questions (for qualitative results):

- Company profile
- Market portfolio
- International
- Technological level
- Industrial performance
- Innovation
- Human Resources
- Technology transfer and Open Innovation

The whole questionnaire is available on the Annex 1 (ALPlastics - Questionnaire SMEs).

1.1.2 FIRST ANALYSIS FROM EACH CLUSTERS

This first survey with cluster managers, together with an interesting review of the current environment of the polymer industry, gives a very good SWOT analysis, from clusters' management's point of view:

STRENGTHS

SHARED BY SEVERAL COUNTRIES

- Strong know-how and technological level sometimes with a high degree of specialisation
- High level of qualification and skills of employees in companies
- Some open minded companies, willing to cooperate, a lot already do so (with other companies, with clients, with R & D organisations)
- Innovative companies, aware of their markets, with ideas on how to develop business.

LOCAL STRENGTHS

- Awareness for environmental issues and respect of ecological impact (GERMANY)
- High quality standards (GERMANY)

WEAKNESSES

SHARED BY SEVERAL COUNTRIES

- Small companies: can be economically more fragile and the small size can be a hurdle to develop some projects
- Human Resources:
  - Internal organisation of HR (FR)
  - Difficulty to motivate employees to develop their skills (FR, AT, GER)
- Difficulties in hiring qualified workers (FR, AT)
- Some companies reluctant to cooperate.

LOCAL WEAKNESSES

- Lack of patented know how (ITALY),
- Regional weakness in terms of policies for industrial development and sustain from public sector (ITALY)
- Missing (international) visibility (GERMANY)
- Low local concentration, sites spread over region (GERMANY)
- Depending on few industrial key accounts (GERMANY).

Several countries have a hard time recruiting qualified and motivated employees for different reasons which vary from unemployment rates and the mobility of the work force, to language barriers and education. These are problems that have to be assessed individually in each region but experiences and different solutions can and should be shared.

OPPORTUNITIES	THREATS
SHARED BY SEVERAL COUNTRIES	SHARED BY SEVERAL COUNTRIES
• Improve interregional networking and benefit more from the proximity of high level actors: R&D partners, clients (industrialized regions) • High education standard and level of qualification • Quicker innovation process through cluster cooperation • Potential innovation in terms of technologies improvement, automation, increase products quality • Globalization (buying raw materials, exporting more)	• Competition from low cost countries • Shortage of skilled workers • Generation change: many retirements in view. New generation not so attracted by the Plastics Industry • Shortage of raw materials and energy = increasing production costs
DIFFERENCES	DIFFERENCES
• Actual financial crisis : fight and win out of this situation • Public financing to support innovation (AUSTRIA, FRANCE)	• Actual financial crisis : reduced activity and high debt rates • Regional weakness in terms of policies for industrial development and sustain from public sector (ITALY, AUSTRIA) • Reduction of clients in our area : manufacturing moving away (ITALY) • Legal hurdles/ regulation: i.e. REACH implementation hampers fully integrative recycling process (GERMANY)

There are differences concerning the level of private support and regional policies for industrial development. It has been suggested several times that all the different opportunities in terms of private and public support should be assessed. The current economic situation is perceived differently in each region, while some consider it as a threat (industry losing competitiveness and markets), some see it as an opportunity to open up new markets and a chance to reinforce the local industry.

These results will be used to compare with the analysis of the company survey and in the SWOT analysis per country and for the Alpine space as a whole, in order to build up the final conclusions

1.2 RESULTS AND EXPLOITATION

In the company survey, a total of 59 companies from 6 Alpine plastics clusters have been interviewed. The questionnaire gives a good overview of the innovation strengths and weaknesses of SMEs in the Alpine space.
The study also allows a horizontal comparison across the 6 plastic clusters. However, it has to be borne in mind that each cluster only has 10 sample companies. The size of the sample per cluster does not allow a highly representative result for each cluster. In the following analysis, the reader will find many figures with percentages of companies.
All the data are generated from the sample, and should not be over-generalized to all the member companies from each cluster. Nevertheless, the figures may give cluster managers a preliminary idea of where their sample companies situate compared to other clusters. It is thus interesting to analyse the trends revealed in the questionnaire.

1.2.1 COMPANY SIZE

The sample is composed of 59 companies from the 6 partner clusters in the project, with an average of 10 companies per cluster, except for KC Cluster (11 companies) and Proplast (8 companies). It covers the whole value chain of the plastics industry, from chemist, material converters to equipment providers, etc. The most represented activities in the sample are material converters (27% of the interviewed companies), mold makers (17%) and engineering services (15%).
The interviewed companies also have different sizes, varying from less than 10 employees to more than 250 employees. SMEs (less than 250 employees) are the main target group for this survey, representing 80% of the interviewed companies. The majority falls in the category of 10 to 50 and 50 to 250 employees. In terms of annual turnover, the results are more evenly spread. About 1/4 of the sample companies generate an annual turnover between 2 and 10 million euro and another 1/4 between 10 and 50 million euro. Small companies of less than 2 million euro's annual turnover and big companies of more than 50 million euro's turnover represent around 1/5 of the sample respectively.

Activities

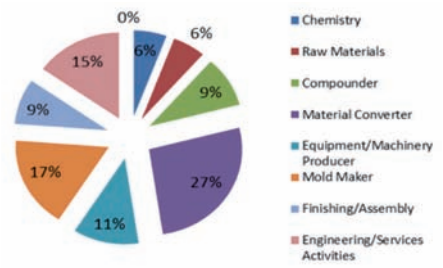


Figure 1. Distribution of companies according to their types of activities

Company size of Alpine space (number of employees)

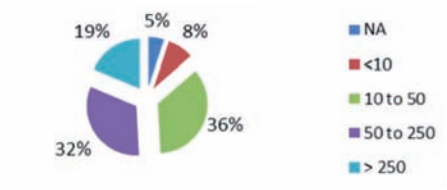


Figure 2. Distribution of companies according to company size (number of employees), Alpine space

What is the size of the company (in term of number of employees)?

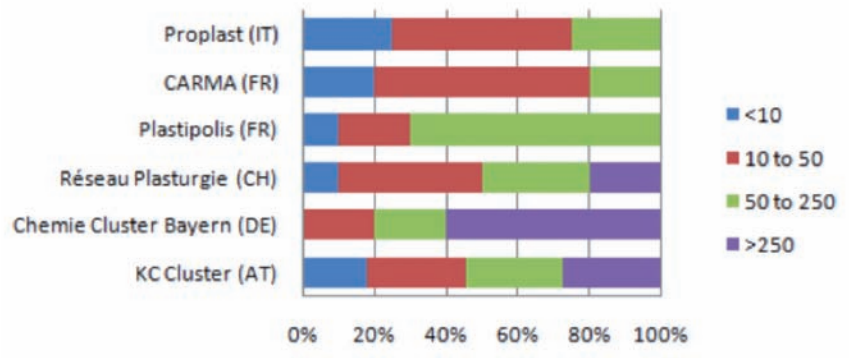


Figure 3. Distribution of sample companies according to company size (number of employees), result by cluster around 10 sample companies per cluster)[1]

It has to be reminded that since each cluster only has 10 sample companies, these percentages do not represent the real composition of companies in the respective cluster.

However, it is important to take into account the size of companies in our analysis. The company size can have significant influence on the company's answers to the questionnaire, especially as to their industrial performance, innovation capacity, and their positions to technology transfer and open innovation.

In this part of the survey, companies are also required to indicate the evolution of their annual turnover.
The result fluctuates largely from one company to another. 5 companies out of 59 are seeing a very high growth rate (up to 40%). 15 companies have a very satisfactory growth rate between 10% to 30%.
Another 15 companies are growing more stably (1% to 9%). 4 companies have had no growth (0%) last year and one is witnessing a major recession in the activity with a -10% growth rate. The rest did not answer the question. In general, a large majority of the companies had a satisfactory growth last year.

1) We have chosen to present the data by cluster in percentages since the number of companies in the sample varies according to cluster. The majority of clusters have 10 companies in the sample, except for the case of KC Cluster (11 companies) and Proplast (8 companies). The same logic applies for the other figures in the report.

1.2.1 MARKET PORTFOLIO

In terms of the application markets, Automotive & Transport is without doubt the main market for the companies in our sample. Around 70% of the interviewed companies have shares in this market. Other important markets are Industrial equipment, Healthcare & Medical, Electric & Electronics and other consumer goods. Only a small percentage of companies have shares in the markets of Furniture, Aerospace, Defense or IT. The companies' main markets are also slightly different from cluster to cluster. The following is a brief summary of the most represented markets of the companies from each cluster.

CLUSTER	MAIN MARKETS
KC Cluster (AT)	Automotive & Transport, Food & Packaging, Other consumer goods, Building & Construction, Healthcare & Medical
Chemie Cluster Bayern (DE)	Automotive & Transport, Building & Construction, Industrial equipment
RéseauPlasturgie (CH)	Electric & Electronics, Industrial equipment, Automotive & Transport, Other consumer goods.
Plastipolis (FR)	Automotive & Transport, Other consumer goods, Electric & Electronics, Healthcare & Medical, Food & Packaging.
CARMA (FR)	Automotive & Transport, Industrial equipment, Defense & Security
Proplast (IT)	Automotive & Transport, Food & Packaging, Healthcare & Medical, Industrial equipment.

Table 1. Main application markets for sample companies in each cluster

When it comes to the level of dependence on main clients, the 59 sample companies for the Alpine space show in general a low to average level of dependence. 44% of the companies have a low level of dependence and 41% an average level. A small percentage (10%) of the interviewed companies are highly dependent on their main clients.

In the questionnaire, we define the different levels of dependence as follows. A company has a high level of dependence on its main clients if less than 10% of its customers represent 80% turnover or 1 of a few customers generates more than 75% of turnover. An average level of dependence is defined as when about 20% of the customers generate 80% or more turnover. A low level of dependence is the case when more than 40% of customers together generate more than 80% turnover. The aim of the question is to understand the companies' level of reliance on their key accounts. Companies with a low level of dependence have a better diversity of their clients and thus may have a better resistance to risks.

Level of dependence with main clients

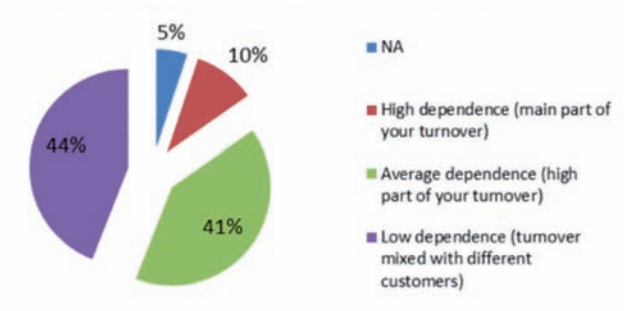


Figure 4. Level of dependence on main clients, for the Alpine space as a whole

The following figure illustrates more clearly the results for each country/region. Companies from Réseau Plasturgie (CH) and Plastipolis (FR) show a relatively high level of dependence on their main clients. In contrast, the level of dependence is much lower in companies of KC Cluster (AT) and Chemie Cluster Bayern (DE).

The companies are also interviewed about their need for more market information. The majority of the interviewed companies think they need to be more informed about their market both nationally and internationally. The areas of interest are different from company to company, but can be summarized in the following points:

- Market information (international market, market entry methods, local culture, market survey both in general and on specific fields, information on niche markets)
- Technology (general trend, latest developments, R&D projects, calls for projects)
- Regulations (evolution of the regulations, specific regulations related to the activities of the company)

Many companies expressed they already received a lot of information from diverse sources, and they expected the information to be more synthetic and more personalized. For example, a member company of Plastipolis manifested that they already had the general information on their markets, but they needed more targeted information about their customers, competitors and other main players in the specific market in order to build the best marketing strategy. Another company reported that they had good qualitative figures but not enough quantitative ones. Studies on niche markets are also a field of interest for several companies. One company expressed that information on the country in general is easier to get, but specialized information on a target region is much rarer.
The companies' feedback also shows that many of them have already built a market watch via different sources: clients, sales force, exhibitions, technology watch, newsletters from professional associations and specialized paper and magazines.

1.2.2 INTERNATIONAL

In this part of the survey, we try to analyze the international activities of the companies in the Alpine space. The survey shows in general a high level of internationalization for the companies from the 6 clusters. Nearly all the 59 interviewed companies have exportation activities. About half of them have more than 50% of their market shares on export (export, license, etc.). Around 1/5 of them are highly oriented to exportation, with over 75% of their turnover realized in foreign markets. Nevertheless, there is still a good percentage of more local companies, with about 40% of the sample companies having less than 25% of their market shares in export.

What are your export market share (export, licence...)?

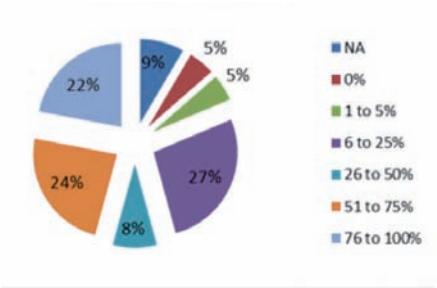


Figure 5. Distribution of companies according to export market shares, Alpine space

The companies' level of export is also different from cluster to cluster. The companies from KC Cluster demonstrate a very high level of internationalization, with the majority of the interviewed companies who have more than 50% export shares. 4 of the 11 companies have over 75% export market share. The samples from Proplast and Réseau Platurgie also show a relatively high level of exportation. On the contrary, sample companies from CARMA appear to be more local, since the majority of the interviewed companies have an export share inferior to 25%. For Plastipolis, the results are more concentrated to the two ends: either highly export-oriented companies (76%-100% export market shares) or much more local companies (6%-25% export market shares).

Main export markets for all the interviewed companies

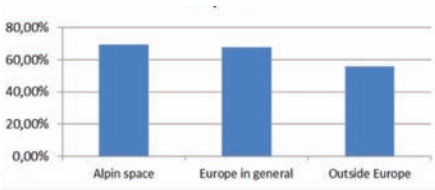


Figure 6. Main export markets for all the interviewed companies in Alpine space

The main export market for the companies of the 6 clusters is in Europe, and especially in the Alpine space itself (France, Switzerland, Germany, Austria and Italy). It is understandable that companies export firstly to European market than to outside Europe, because of different reasons: the geographic proximity, similar regulations, free movement of goods, long-existing business relations, and smaller cultural distance, etc. On the other hand, there is still a good percentage of companies (about half) which are open to Outside Europe.

When we compare the export markets from region to region, the sample from Italy appears to be an exception because only a very small percentage of the companies export to Alpine space. Their main export markets are Europe in General and Outside Europe. For Germany, the market is more oriented to Europe in general than in the Alpine space.

In the questionnaire, we also try to see what kinds of international partners the companies have. Nearly all the responding companies are working with international customers. Around 70% of them have supplier partners at the same time. The main interest of this question is to see the level of international R&D partnership for the companies. Around 30% of the 59 companies in our sample have developed international R&D partnership. The companies interviewed by Plastipolis show the highest level of international R&D partnership across the 6 clusters, followed by KC Cluster and Proplast. Since some clusters might have selected the more innovative companies in their region, the real level of international R&D cooperation for all the Alpine companies in general might not be as high as the results we have in the survey.

What kind of international partners does the company have?

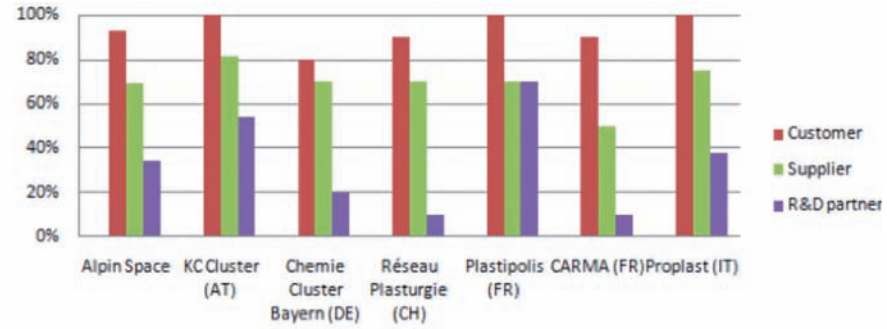


Figure 7. Percentage of companies who work with international partners (according to the type of partners), result of Alpine space and by cluster (based on a sample of around 10 companies per cluster and 59 companies for Alpine space)

Almost all the interviewed companies have expressed their interest to find new international partners. New clients, commercial partners including distributors and local representatives, are the most welcomed. The companies also show a strong interest for technological cooperation, with around half of the companies looking for R&D partners.
Companies are also asked about the main barriers for their international development. 49 companies have replied to this question and the answers can be summarized as the following:

- Small company size, lack of resources: money and international sales force
- Legal barriers, including import regulations, norms
- Currency exchange rate (for Switzerland)
- Difficult access to local distribution networks
- Competition
- Lack of market knowledge, e.g. on the key market actors
- Language.

The most prominent barrier is the lack of resources in the company. This is particularly the case for the SMEs in our sample, since they usually do not have enough capacity and resources to go international. Some companies expressed that they did not have enough qualified international sales staff, let alone a dedicated international sales office. International development is also very costly and represents high economic risks. Some companies reported that they had difficulty in finding competent distributors, since as a small company, they did not have a sufficient image abroad.
For the bigger companies with more than 250 employees, the main barrier is no longer the company size, but mainly legal regulations. Competition in foreign markets is another factor.
The issue of currency exchange rate, especially between CHF and Euro, is brought up by almost all the Swiss companies in the survey. It can be said that the high value of CHF has become a principal obstacle for the exportation for companies in Switzerland.

1.2.3 TECHNOLOGICAL LEVEL

The purpose of this part of the questionnaire is to analyze companies' attitudes towards technology and Intellectual Property (IP).

The companies are asked about what kinds of know-how they possess, protected know-how or internal unprotected know-how. Except some blank answers, almost all the interviewed companies have their own internal unprotected know-how, but only about half of them have used IP protection. The level of protected know-how is higher in the sample of CARMA, and relatively low for Plastipolis. The low percentage shown for Réseau Plasturgie may be because fewer companies have replied to this question.

What type of know-how does the company have?

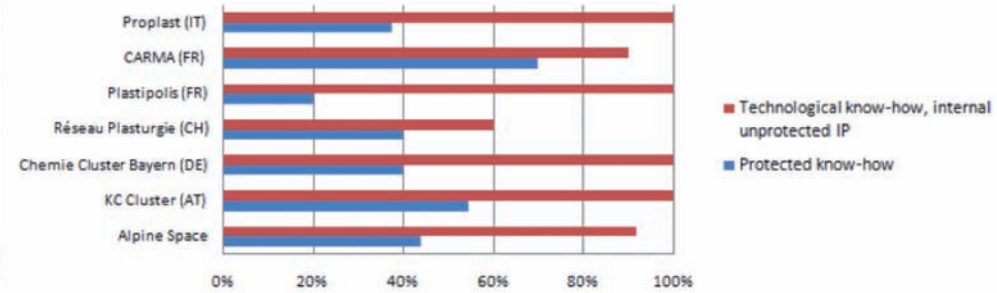
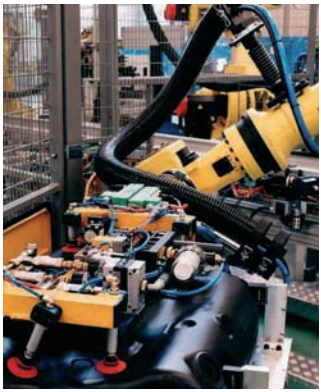


Figure 8. Distribution of companies according to the type of know-how in the company, result for the Alpine space and by cluster.

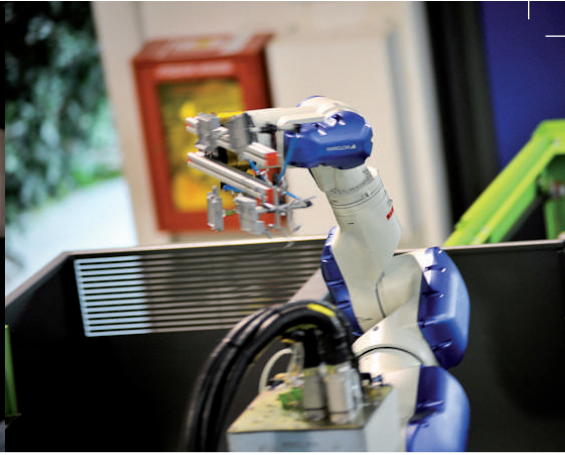
The main way of IP protection used in the companies is through patents. The internal unprotected technological know-how is often related to professional experience on processes and products, which are obtained through years of practice. Some companies try to differentiate from their competitors by special technologies/products and to innovate continuously. Some have developed a culture of confidentiality within their company and with their clients.



Companies' positions towards IP are also very different. The majority recognizes the importance of IP and has implemented or is willing to implement IP protection. Some are more active in IP protection than the others. For example, one company is only commercializing protected products on international markets. Another company only develops technologies which will lead to a patent.

A minority of companies either have no position or do not want to implement IP protection. The reasons for not using IP protection include:

- No need, thanks to the particularity of the company's activity/technology
- The high cost of investing in IP protection and the relatively low return
- Difficulty to apply IP in professional experience. IP is better suited for the conception of products
- As a subcontractor and without the company's own product, it's hard to patent the activity.



The competition strategy for our companies is reflected by their self-positioning in the market. The large majority of the interviewed companies differentiate themselves through technology and through their own services or products. Only around 30% of the 59 companies position themselves by volume & cost. Companies in the sample of Austria and Switzerland demonstrate higher emphasis on volume & cost. In contrast, no company in the sample of Germany has adopted this strategy.

This question is designed as a multiple choice, since it is possible for one company to have more than one way of self-positioning. This is to say that different choices are compatible. A company may be driven by technology and by product differentiation at the same time. It is the combination of the different choices which gives a global idea of the company's positioning strategy.

What is the positioning of the company?

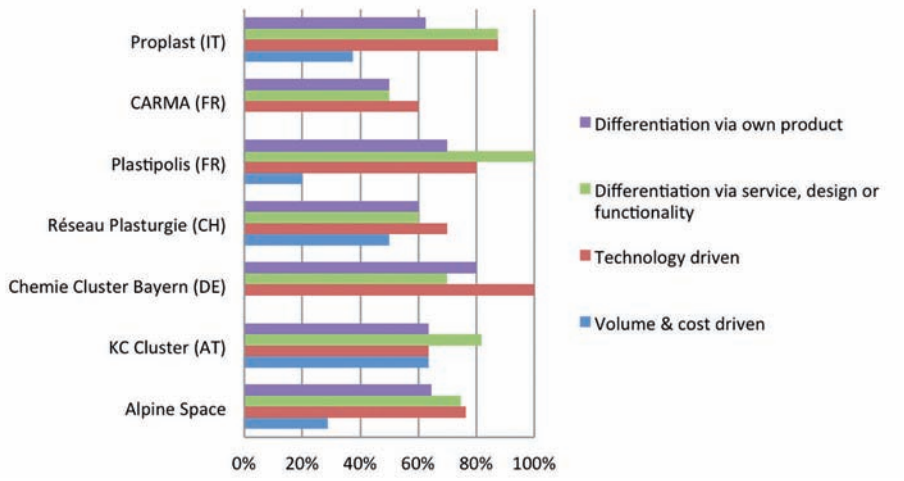


Figure 9. Percentage of companies according to the positioning strategy, for the whole Alpine space and by cluster

1.2.4 INDUSTRIAL PERFORMANCE

In this part of the survey, companies are asked about their industrial performance, including the usage of quality management system, productivity management system and certifications. The result shows a generally high level of industrial performance for companies of the Alpine space. About 80% of the 59 interviewed companies have installed a quality management system. 60% have a productivity management system. The usage of quality management system and productivity management system is also different across the regions. The samples from Chemie Cluster Bayern, CARMA and Proplast show a high usage level of both quality management system and productivity management system. In contrast, fewer companies interviewed in Réseau Plasturgie have applied either of the two systems. Quality management system is highly implemented in companies from KC Cluster. Nevertheless, only a small percentage of the Austrian companies in the sample have built a productivity management system. Plastipolis is situated in the middle among the 6 clusters. 7 out of the 10 interviewed companies in Plastipolis have installed quality management system, and a same amount for productivity management system.

Figure 10. Percentage of companies which have implemented a management system or certification, result for Alpine space

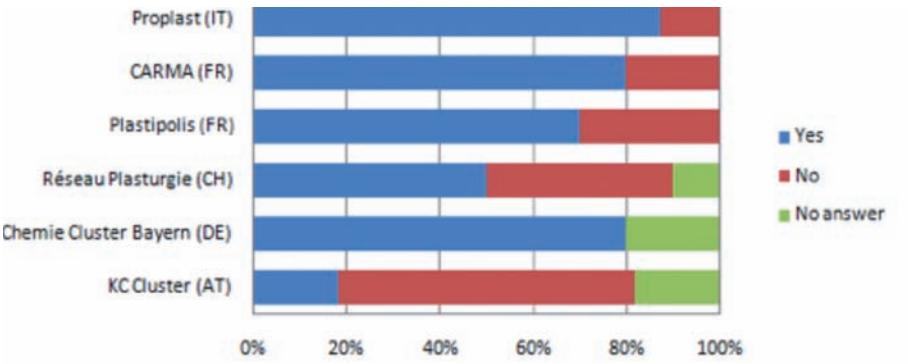
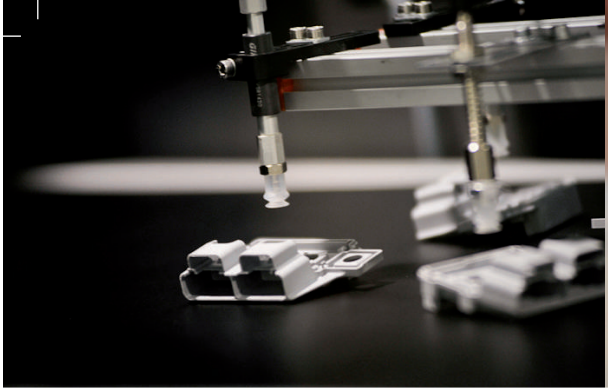


Figure 11. Percentage of companies which have adopted quality management system, result by cluster



Does the company have certifications?

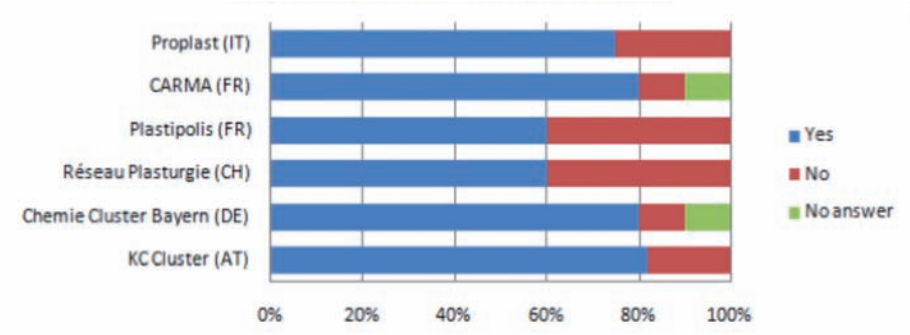


Figure 12. Percentage of companies which have adopted productivity management system, result by cluster (about 10 sample companies per cluster)

The majority (70%) of the 59 interviewed companies expressed that they have obtained certain kinds of certifications. The most frequently seen certification among the companies is ISO 9001. Other kinds of certification include ISO 14001, OHSAS 18001 (occupational health and safety management system) and some companies are working to obtain ISO 26000 (corporate social responsibility). Some companies have also obtained specific certifications related to their application markets, e.g. ISO/TS 16949 (automotive), ISO 13485 (medical), ISO 22000 (food safety) and AQAP (defence). A few companies have not applied for any certifications, but using them as a reference in building their own internal quality management system.

In this part, companies are also asked about their opinions towards regulations (e.g. REACH) and certifications (national, European and international). The majority does not consider regulations as a barrier for their company. They think it is important to have the same rules across countries and regulations can be a reason to innovate. Others report that sometimes regulations can be an obstacle. The bureaucracy is too heavy. The administration work is expensive and time-consuming. Some EU regulations, e.g. REACH, are considered as a barrier by several companies. For other companies, the obstacle may be related to import regulations (e.g. import tariff in Brazil) and special norms (e.g. UL standards for North American market). Other more specific cases listed by the interviewed companies include the accreditation requirement for calls for tenders.

1.2.5 INNOVATION

Innovation is one of the main interests of this study. Indeed, these results will give a global overview of the state of innovation, at Alpine space scale and by country.
Mainly, companies interviewed are involved in innovation. The setting-up of this questionnaire was done in order to evaluate innovative companies. This part will study different points of innovation activities of the companies, from their policy and strategy, to their involvement in projects, as well as their opinions on the funding systems.

The first question was to understand how companies innovate (fig. 13). Indeed, innovation is not only the creation of new innovative products, but also the way to create products, the processes, or the organization of the companies.

Way to innovate

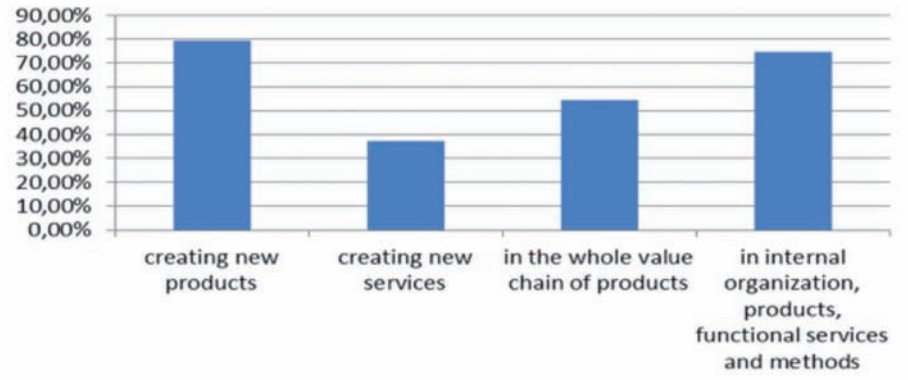


Figure 13. Distribution of companies according to the ways of innovation, result for Alpine space

Alpine companies well understand that, because, regarding results from this question, 80% of the 59 interviewees innovate through their products, and 75% through their internal organization.
Then 55% innovate in the whole value chain of products (from the design to the final products), and less than 40% innovate through new services, maybe due to the profile of companies as most of them are industrial companies.
Regarding each cluster, even if there is a difference between each organization's members, the creation of new products and the innovation in internal organization are the main paths in all the clusters. Regarding the other two ways of innovation, Proplast's sample show an emphasis in the creation of new services, whereas companies from other clusters including Plastipolis, KC Cluster, Réseau Plasturgie, and CARMA, work more on the whole value chain of products. Chemie Cluster Bayern members are well balanced between new services and value chain.

In order to innovate, most of companies are involved in collaborative projects. This question is very interesting because, besides the fact that more than 70% of interviewed companies are involved in regional projects (innovate with your neighbors…), more than 35% work at international level, which is a very encouraging results for European activities.

We can observe that in general, the Alpine companies have strong activities in collaborative projects and especially in regional or national projects. The level may vary across cluster with a slightly higher level observed in KC Cluster and Plastipolis. Their involvement in international projects is usually much less important, except for the sample of Proplast and Plastipolis.

Is the company involved in R&D projects?

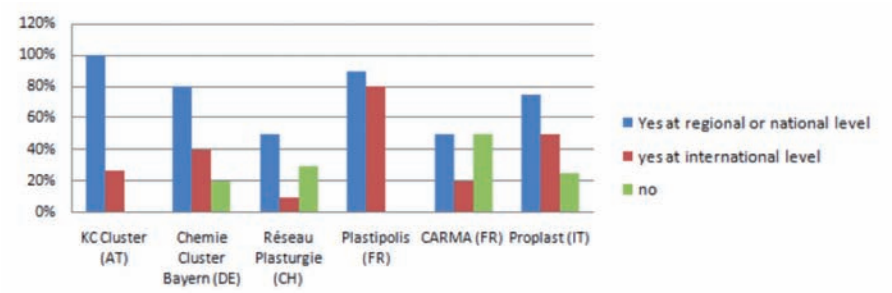


Figure 14. Percentage of companies involved in R&D projects, result by cluster

These innovation activities have to be supported by a significant R&D budget. We can observe that this budget often ranges from 1 to 5% of the company's turnover. However, higher R&D budgets, are more represented than lower ones in the sample, which reveals a real Alpine innovation dynamism.

Share of R&D expences

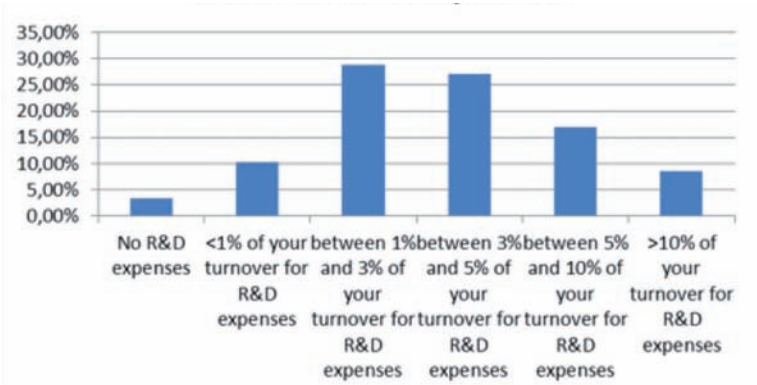


Figure 15. Distribution of companies according to R&D expenses, result for Alpine space

But, the level of expenses on R&D is a bit different across clusters. The survey shows that sample companies from "southern country" clusters appear to have more expenses in R&D than sample companies from "northern country" clusters, maybe due to the size of companies interviewed (small and innovative ones have larger R&D budget than larger companies).

Once again, we need to keep in mind that each cluster only has 10 sample companies. The result may be very different according to the choice of companies (size, activity, etc). All the percentages we show in the figures are only extracts of the sample and are for the purpose of a preliminary horizontal comparison, thus should not be over-generalized to all the companies of each cluster.

What is the company's R&D intensity related to its annual turnover?

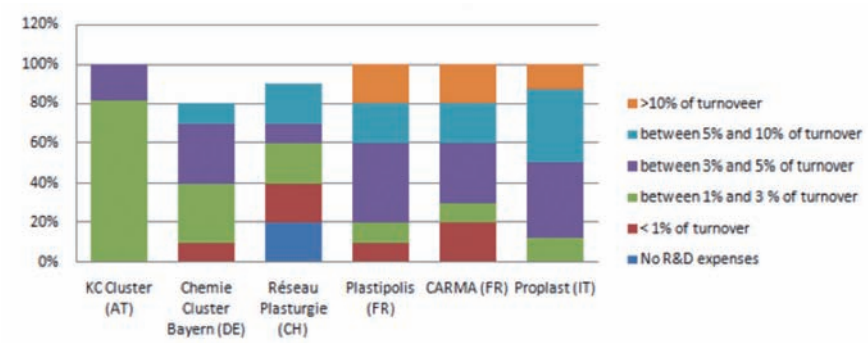


Figure 16. Distribution of companies according to R&D expense, result by cluster

Regarding the barriers to innovation, the 59 companies from the Alpine regions feel that resources are the main one (with more than 60% of answers), especially regarding human resources and funding sources. Then the economical risks represent the second critical point, with more than 40% of answers (due to industrialization). Time and funding are the last main obstacles, with more than 35% of the answers, because of the slow time to development and the lack of the heavy funding system.

In fact all these obstacles converge to the same issue which is the cost of innovation. Indeed, human resources, economical risks, time or funding are linked to the R&D expenses, and how to finance and support the innovation is one of the main issues for companies.
At national scale, we find the same trends, with the main obstacle being the lack of resources, same as in the general analysis, especially human resources and global cost of innovation, then economical risks seem to be the second major obstacle.

What is interesting is funding, which is a significant obstacle for clusters from France and Italy, with 50% of answers, but this factor is less important for other clusters. These results may imply that funding is not sufficient or not totally adapted to companies in France and Italy.

What are the main obstacles to innovation?

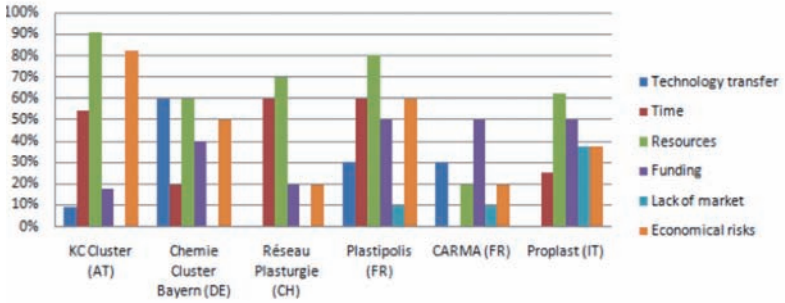


Figure 17. Main obstacles to innovation for the companies, result by cluster

As funding seems to be the main obstacle to innovation, we have to look closer at the funding sources to understand why funding can be a barrier. The answers show a significant part of companies use regional funding for R&D activities (around 60% of 59 answers). Bank and national funding are in the second position (with 45% of the answers). European funding (less than 20% of answers) is on the third place of funding sources, which is a bit surprising if we consider the high level of involvement in international collaborative projects reported by our companies.

But there is a significant difference between clusters: indeed, in KC Cluster, regional funding and bank (and also national funding), are the main funding, as in Italy (except for national funding which is very low in Italy).

For Plastipolis national funding is the main funding used by their members, whereas for Chemie Cluster Bayern, regional and national funding are well balanced.

These results show a real difference between each country, which reflects the funding system of each country: in Austria, Germany and Italy, regions have the main role regarding funding, whereas in France (for Plastipolis specifically), the national state is the first source for funding.

What types of funding are used for the company's innovation activities?

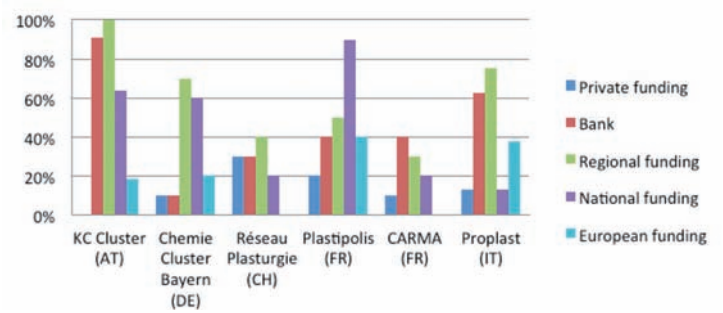


Figure 18. Types of funding used by companies, result by cluster

Even if it is difficult for companies to evaluate private funding (because of their different type, like VC, business angels, banks...), this question regarding public funding is more legitimate, because of the high use of these funding sources (figure 20). And companies answers highlight the fact that public funding seems to not really fit to companies, or not at all (60% of answers are not positive, figure 22).The evidence comes from the "bureaucracy" of the funding systems which adds a heavy workload to companies and slows down the innovation processes. But regarding positive answers to this question, companies like the financial help that public funding offers, which gives opportunities for high risks R&D activities. But public funding has to be simplified as reported by almost all the interviewees.

Does pubblic funding (regional, national or Eropean) fit well with your expectation?

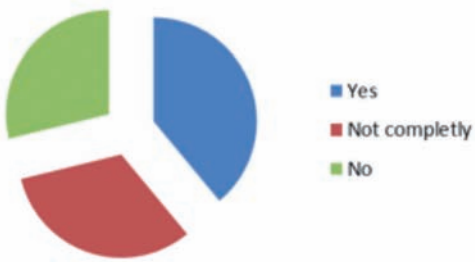


Figure 19. Distribution of companies according to their level of satisfaction for public funding, result for Alpine space

Except for Plastipolis and KC Cluster members, the other interviewees feel that funding does not, or not completely, fit to their expectation (even if the rate of response is a little bit low).
Regarding the open question, some trends by country can be summarized as follows:

- For Austrian answers, funding could be better tailored for SMEs, and need less bureaucratic works, to be easier to use by companies
- For French answers, funding processes are too slow and difficult to achieve, and the type of funding is not completely fitted (e.g. loans). But globally, for Plastipolis members, funding helps them in their innovation activities and reduces their investment in R&D
- For German answers, there is no specific remark except for the bureaucracy of processes
- No specific remark from Swiss answer except for the fact that companies are less helped, not to say not at all, than academias
- For Italian answers, the bureaucracy and the long timescale of funding processes are the main issues raised.

As companies appreciate collaborative projects, they need to find partners for these projects and specifically external partners. Most of them (80% of 59 interviewees) work already with these kinds of partners. There are three types of external partners: 80% of companies have other companies as partners; universities and academic partners represent more than 60% of partnerships; R&D centers, either public or private, represent less than 50% of the partnerships.

Type of external partners

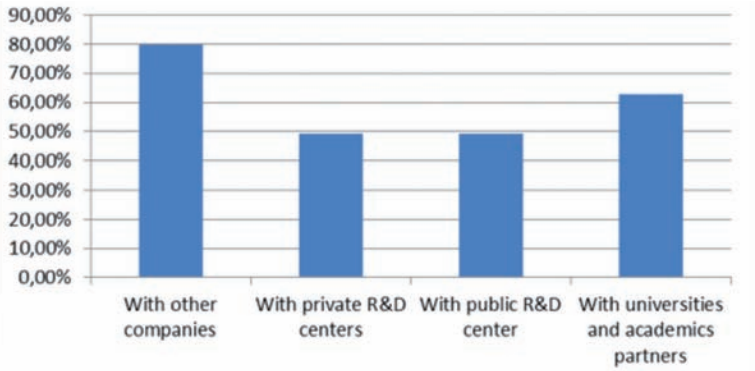


Figure 20. Percentage of companies according to their types of external partners, result for the whole Alpine space

These trends are confirmed at national scale. Indeed, we can see that companies in each cluster have external partners, in order to work on collaborative projects (with at least 50% of companies having external partners for Réseau Plasturgie).

The partners are mainly companies, except for the case of Switzerland, where universities and academic are the main kind of partners instead of companies. Other partners are quite well balanced in other countries except for Italian interviewees, which work a lot with private R&D centers, unlike other countries which have more activities with public entities.

These partnerships seem to work well globally, but it also depends on the project partners. Different issues have been pointed out in our interviewees' comments, such as the worry of sharing information related to IP and internal know-how. The relations with public entities are sometimes complicated because their "time frame" is not the same as for companies. The size of the partners can also be an issue between large groups and SMEs.

When we focus on each cluster, we notice that in Chemie Cluster Bayern, KC Cluster, or Réseau Plasturgie, there is no specific issue in working with external partners. Anyway, it really depends on the projects and the partners. So companies have to well select their partners in order to avoid any possible problems.

Regarding France and Italy, it is of course the same issue, but the difference of time frames between private companies and public entities is several times quoted in the comments.

But the setting-up of good relationships between partners seem to be a good solution to smooth the work with other entities.

1.2.6 HUMAN RESOURCES

Following the last part, a study of human resources in companies will highlight some points, regarding innovation, but also position of companies in front of their employees.

In this figure, we can see that for the majority of the interviewees, only a few employees are involved in the innovation activities (without doubt the R&D team). 20% of 59 companies have at least half of their staff working in these activities, which shows a very good implication of the company in innovation (maybe because they innovate through internal organization).

This figure shows that companies well understand the opportunities offered by the implication of employees in innovation activities.

Who is involved in innovation?

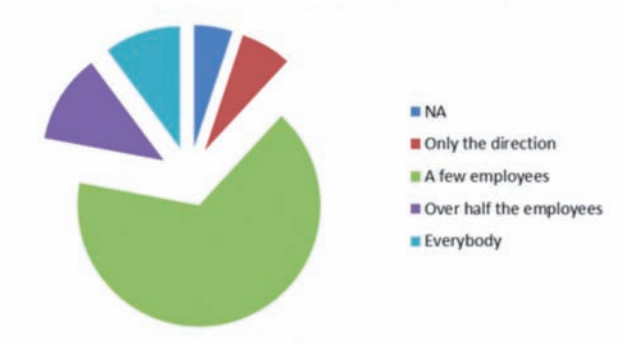


Figure 21. The involvement of employees in the R&D projects, result for the whole Alpine space

The analysis by cluster does not reveal specific trends, even if in Plastipolis and in Chemie Cluster Bayern, the sample companies allocate more employees in innovation activities than the other clusters.

As to the question whether the company has the right competencies for innovation, more than two thirds of the interviewed companies answer that they have at least most of the competences needed for innovation, which shows there is no real lack of human resources for innovation activities (only 10% miss competences for innovation).

From Figure 23, we can see that sample companies from Proplast show a serious issue on competences needed, with more than half of the interviewed companies not having enough competences, but they try to address this problem through training which is not always the case for companies in the other clusters, especially in Austria and France.

Does the company have necessary human competences for innovation?

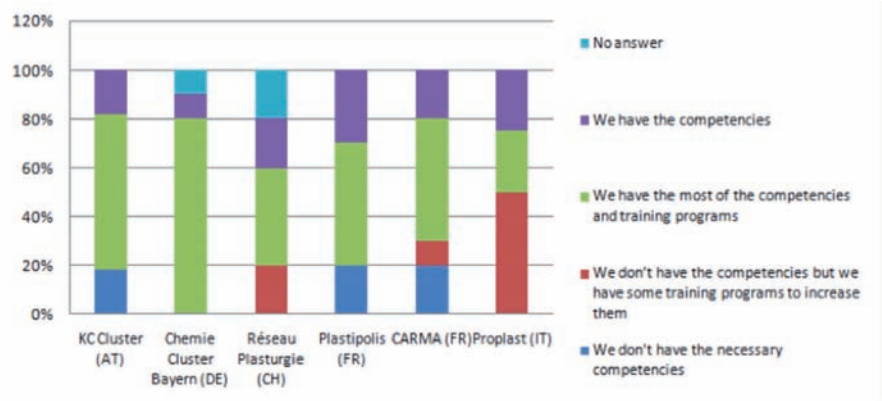


Figure 22. Distribution of companies according to the competence level in the company, result by cluster

But even if companies have most of the needed competencies for their activities, they have problems to find workers and especially skilled workers (more than 45% of the 59 answers). Indeed, the main issues from comments show the difficulties to find not only skilled workers, with high level of knowledge for specific technologies, but also technicians or operators, with good skills in their domain.

The following chart (fig.23) shows the real difficulty to recruit employees and especially skilled ones across all the countries. Except in Proplast and Chemie Cluster Bayern, companies from all the other clusters report difficulties to recruit employees, and not only skilled workers (at least 40% of the 59 companies , and up to 60% for CARMA members).

For Proplast and Chemie Cluster Bayern, they have no problem to find workers, but not enough skilled. If we relate this question to the result in Fig. 22, we can understand why Italy has not enough competencies to innovate since they have serious difficulty in finding skilled workers.

From the comments, KC Cluster looks for skilled workers and trainees. For Germany, there are no specific needs on workforce, but more on adapted training programs to propose to their employees.

In Réseau Plasturgie, companies not only need some specific high-level competences (engineers), but also operators and technicians on processes and maintenance. These different levels of competences are also sought for by Plastipolis members.

For Proplast companies, same as the case for CARMA's members, it is more specific skills which are sought for, such as color specialist or precision machining, and not technicians.

Does the company have problems in recruiting skilled workers?

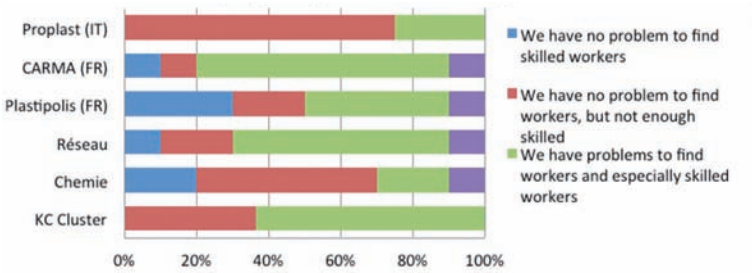
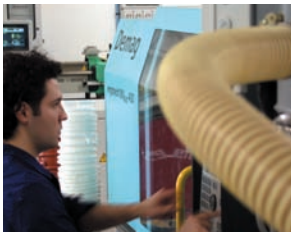


Figure 23. Distribution of companies according to the level of difficulty in recruiting skilled workers, results by cluster

Following the last statement, this chart shows that companies have enough training programs in order to avoid the lack of competences. And in this chart, we can see that employees and the direction well understand the importance of training for their activities and for the interest of their employees. Indeed, less than a quarter of interviewees do not propose training, or they propose but their employees are not interested.

In Réseau Plasturgie, employees seem to be not really concerned by trainings…(4 of the 10 interviewed companies express that employees do not ask for or use training).



Do you propose training to your employees?

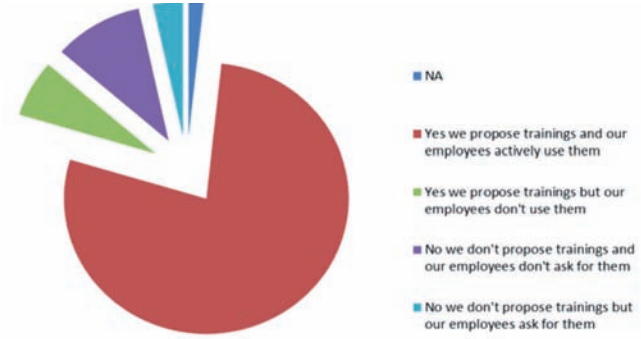


Figure 24. Distribution of companies according to whether they propose training programs, result for Alpine space

1.2.7 TECHNOLOGY TRANSFER AND OPEN INNOVATION

Globally, companies are very interested in Technology Transfer, that's why they are in collaborative projects. Only less than 15% of the 59 interviewed companies are not interested. However, some companies felt it is sometimes difficult to have access to results from projects and so technology transfer could be more efficient if there is more communication on the projects.

Regarding Open Innovation, there are more negative answers, because several interviewees seem to be not familiar with the concept or find the concept not adapted to their activities and to the development of new products (which must be done by the companies themselves). There is also the issue on intellectual property and confidentiality which appears. Open Innovation attract also less interest for some companies because they never tried this system, or because they see difficulties to set it up and consider it as a real danger for their activities.

Nevertheless, some of the companies are really enthusiastic about this system because it looks more similar to the approach of collaborative projects.

Focused at cluster scale, Technology Transfer interests more Companies than Open innovation except in the case of Germany, where opinions for both Technology transfer and open innovation are very positive (10 positive answers for TT and 9 for open innovation).

The sample companies from KC CLuster, Proplast and CARMA are less interested in Open Innovation than sample companies from Chemie Cluster Bayern and Plastipolis. Sample companies from Réseau Plasturgie seem to be less interested both systems (less than half of the interviewees show interest).

The interest on Technology Transfer and Open Innovation is more focused on the creation of new processes and materials than on the creation of new products (75% of the 59 answers). Relatively fewer companies are interested in new products (less than 50% of the 59 answers).

But there are differences between countries. Indeed, Italy and Germany see a real interest for the development of new processes and new materials. French companies are well balanced and see opportunities in each category, but for Austrian companies these two systems have significant interest in the creation of new products. For Swiss companies, it's more on new material creation.

What are the company's area of interest for technology transfert and open innovation?

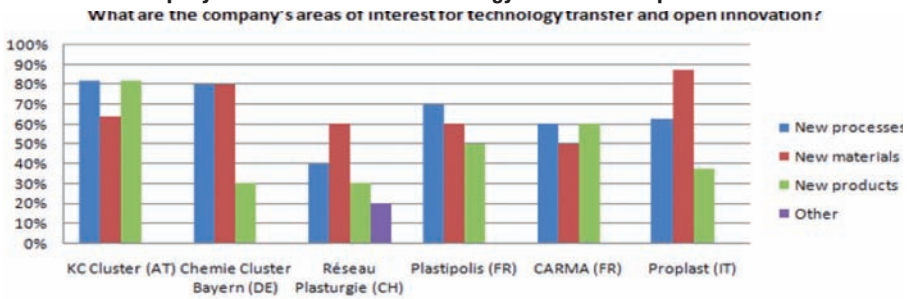


Figure 25. Companies' areas of interest for technology transfer and open innovation, result by cluster

1.3.1.1 KC Cluster (AT)

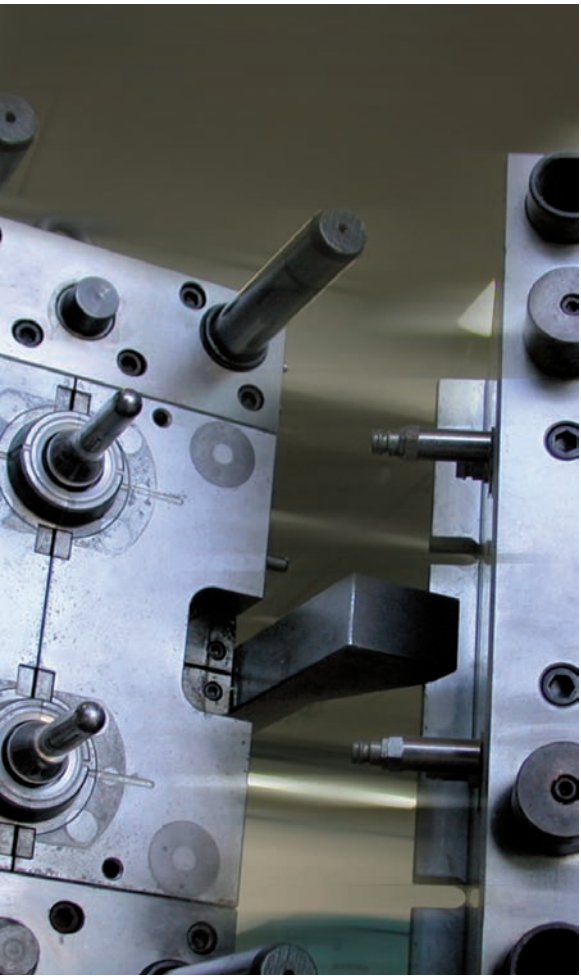
STRENGTHS	WEAKNESSES
• Highly oriented to export, especially to the Alpine space • High level of international cooperation, with customers, suppliers and R&D partners • High involvement in national and regional R&D collaboration • Good level of certifications, and high usage of quality management system • Good usage of external funding, especially bank, regional and national funding • Companies are in general open-minded regarding technology transfer and open innovation.	• Productivity management system is not as widely used compared to some other countries • Low usage of private and European funding • R&D intensity is relatively low compared to some other regions • Relatively lower participation in international R&D partnership • Mainly small companies in the cluster • Lack of internal resources in international expansion and in innovation

OPPORTUNITIES	THREATS
• Efficient and supportive public funding • Possibility for more international R&D cooperation, technology transfer and open innovation • Good national economic situation • Increased cooperation opportunities thanks to the aid from Clusters and improved EU networks	• Legal barriers on the international market • Difficulty in recruiting skilled workers, low unemployment rate in the region • Communication problems in international R&D cooperation projects

Companies interviewed by KC Cluster in Austria appear to have a good performance among the six clusters. The companies out-stand in the field of internationalization, with all the interviewed companies involved in international activities. Legal barriers and lack of internal resources are the main problems in companies' international expansion. The companies are highly involved in R&D cooperation with external partners, even though the level of international partnerships can be improved. In general, companies find there are no problems in working with external partners. The success of the partnership depends a lot on the partners, which corresponds to the answers from other clusters. Communication and trust are considered as a key factor of successful partnerships. Communication problems also hinder the level of international R&D cooperation.

Technology transfer is well welcomed by the companies. As to open innovation, companies have more diverse opinions. Most companies invest between 1% to 3% of the annual turnover in R&D activities, which is not as high as in other clusters such as Plastipolis, Carma and Proplast. Lack of resources and economic risks appear to be the main barriers to innovation.

Companies are well aware of the importance of IP and a good percentage of companies have adopted IP protection methods. As to human resources, most companies have the necessary competences, but there is a serious problem of recruiting skilled workers. This might be related to the very low unemployment rate in the region.



We also try to compare this SWOT based on the survey of companies and the SWOT per cluster realized in the first step of the analysis through interviews with cluster managers. The comparison shows that KC cluster has in general a good comprehension of their members. A large part of the companies are willing to cooperate with external partners, but the fear of sharing company secrets is also evident especially when it comes to the subject of open innovation.

The companies are innovative in the sense that they are actively involved in R&D projects. However the survey shows that the R&D intensity (proportion on annual turnover) of the interviewed companies is not as high as in some other clusters especially Proplast, Plastipolis and Carma. KC cluster managers are also right as to the support from the investment of the state.

The survey with companies shows that public funding (regional and national) is widely used and relatively efficient, although improvement can be made to make the funding process less bureaucratic and easier to use for SMEs. The difficulty in recruiting workers, especially qualified workers has been revealed in both surveys. What contradicts between the two surveys the connection between companies and R&D centres.

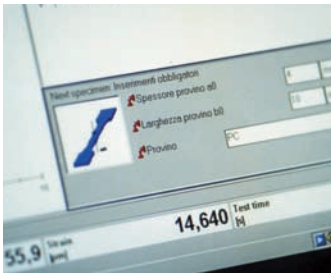
The questionnaire with companies shows a high rate of cooperation between companies and R&D centres/universities, a result which is more positive than what the cluster managers might have expected.

1.3.1.2 Chemie Cluster Bayern (DE)

STRENGTHS	WEAKNESSES
• High industrial performance, wide implementation of quality management system, productivity management system and certifications • Innovative companies. Companies are technology driven. Good level of R&D intensity, high percentage of employees involved in R&D activities. Companies are actively involved in R&D cooperation with external partners • Companies have most of the competences. All the sample companies propose training programs and employees actively use them. • Companies are very positive about technology transfer and open innovation and are keen to find external R&D partners	• Relatively fewer companies have international R&D partners • Technology transfer system is less efficient, and has become an obstacle to innovation • Banks are rarely used for funding • Lack of resources and economic risks hinder innovation

OPPORTUNITIES	THREATS
• The economic development in Eastern Europe and outside Europe provides a good market for German companies • Increased opportunities for R&D projects, technology transfer and open innovation, especially on EU level • Increased cooperation opportunities thanks to the aid from Clusters and improved EU network	• Problems of finding skilled workers • Public funding is not well adapted to companies' needs, too much bureaucracy.

The survey shows a very positive result for German companies in many respects. The pity is we lack some important feedback, especially as to companies' opinions towards IP. With the information we have collected, companies from Chemie Cluster Bayern appear to have very good performance in terms of industrial performance, R&D activities and human resources.



Across all the 6 clusters, companies from Chemie cluster Bayern seem to have the highest level of industrial performance, reflected by the usage of quality management systems, productivity management systems and certifications.

The companies are also doing well in R&D investment: the R&D intensity is relatively high, and a good percentage of employees are involved in R&D activities. Companies are highly involved in R&D cooperation with external partners, although relatively fewer companies have already worked with international R&D partners. The German companies appear to be very open-minded as to technology transfer and open innovation. They are also keen to develop new R&D partnerships. However, the existing technology transfer system seems to be less efficient since a large proportion of companies consider it as an obstacle to innovation.

Regional and national funding is the primary funding source for the companies. However, companies report public funding to be too bureaucratic and not adapted to companies' needs. Few companies use banks as a funding source, in contrast to Austria and Italy. In terms of human resources, although companies still have problems in finding skilled workers, the situation is relatively better than in Austria and Switzerland.

The result generated in this survey corresponds to the survey results with the cluster managers of Chemie Cluster Bayern in the following aspects. The companies have high quality standards and good industrial performance. Companies innovate through cooperation with universities and research institutes. Recruitment of skilled workers is, like in other clusters, a difficulty. Some companies also report legal regulations as a barrier, especially REACH and some import regulations in foreign markets. Apart from these, both surveys show that automotive is the main market for companies, followed by construction.

What is different between the interview with cluster managers and the questionnaire with companies is the level of dependence on key accounts. Cluster managers thought that companies are dependent on key accounts. The survey with companies does not reflect this problem. On the contrary, the majority of the companies reported to have low dependence on main clients.

The interviewed companies also appear to have a good level of international exposure since all are involved in export. If the sample is representative enough, the result might erase cluster managers' worry that companies suffer from missing international visibility.

1.3.1.3 Réseau-plasturgie

STRENGTHS	WEAKNESSES
• High export market shares • Strong professional skills • Access to external support and finance; Availability of funding for innovation (Funding is not a main problem for innovation, unlike in other clusters), Higher usage of private funding than in other clusters • Some companies have good comprehension and awareness of innovation, reflected by a good level of R&D investment.	• A good portion of companies work as subcontractors; relatively high dependence on main clients • Relatively fewer companies have implemented quality management system, productivity system or certifications • Small companies lack resources and time for innovation. Companies have doubts about technology transfer and open innovation. Relatively less are involved in collaborative R&D projects • Public funding is not widely used, an innovation agent is missing.

OPPORTUNITIES	THREATS
• Increased networking with EU countries • ncreased cooperation opportunities thanks to the aid from Clusters.	• Recruitment of workers, especially skilled workers • The high exchange rate for CHF against Euro hinders international activities • General competition from abroad, and competition on cost from Asia.

Réseau-Plasturige has chosen companies with diverse profiles. Some companies might be wholesalers and do not have any industrial activities. This is understandable that these companies do not have R&D investment and might have brought down, to some extent, the result of the sample in terms of innovation and industrial performance. Without overgeneralizing the results to all the SMEs in the cluster, the company survey has revealed both some positive and negative points. The companies from Réseau Plasturgie are highly oriented to export and have generally good professional skills. Some have a good comprehension and awareness of innovation which can be reflected by their R&D intensity. Companies also find no problem in achieving funding for their R&D activities, and private funding is widely used in the region. On the contrary, public funding is less used. What is less positive about the sample of Réseau Plasturgie is that relatively fewer companies are implicated in R&D cooperation with external partners. Companies have doubts towards technology transfer and open innovation.

As to IP protection, the opinion varies. Some have no IP issues, some only protect IP for strategic domains, etc. The problem of recruiting seems to be more serious than in some other clusters, such as Plastipolis and Chemie Cluster Bayern. Many of the companies position themselves as cost & volume driven, which makes them in direct competition with low-cost countries. One specific problem in Switzerland is the currency exchange rate.
The high value of CHF has become a key obstacle for the international expansion of all the interviewed companies.

All the above issues correspond more or less to what have also been evoked in the survey with cluster managers, in terms of innovation, external support and finance, IP protection and threat of currency exchange and international competition, etc.

1.3.1.4 Plastipolis (FR)

STRENGTHS	WEAKNESSES
• Good international activities (high markets export shares, international customers, supplier and R&D partners), especially in Alpine space and Europe • Companies innovate through diverse ways: products, services, value chain and internal organization. • Good involvement in regional, national and international cooperation. Willingness to find international partners • Good R&D investments • Good use of national and European funding (compared to other clusters) • Good involvement of employees in innovation • Good use of training.	• Only SMEs • Low protection of IP • Lack of resources and time for innovation • Lack of competences compare to the other clusters members • High level of dependence with their customers • Economical risks due to innovation.

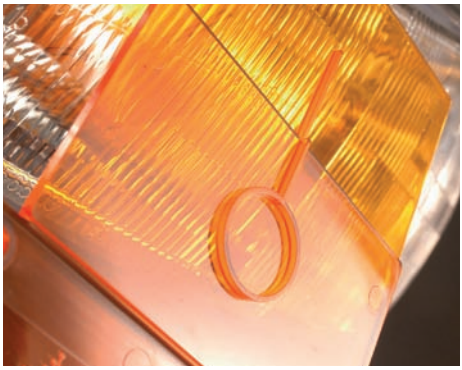
OPPORTUNITIES	THREATS
• Good support from national funding • Good external sources of information on markets • Increased cooperation opportunities thanks to EU networks and globalization • Technology transfer and Open Innovation, since companies are willing to adopt these kinds of cooperation • Increased cooperation opportunities thanks to the aid from Clusters.	• Lack of funding for innovation • Funding processes are too slow • Instability of relationships with project partners • Difference of time scale between public and private R&D partners • Some issues to find skilled workers.

Results for companies from Plastipolis give a good overview of cluster ecosystem, even if there is no example of large group members. Indeed regarding internationalization, companies have significant business activities with a high market share outside France and especially in Alpine space. Plastipolis gathers, compared to other clusters, the highest number of companies who are involved in European projects and who use European funding. Together with KC Cluster, companies from the two clusters show the highest number of international partners.

But their implication in projects is not limited to European projects. Indeed Plastipolis members invest a lot in R&D and are significantly involved in either national or international R&D projects. In these projects, companies have no specific issues with other partners, even if the relationship between partners is really important for the success of the project. One point has to be highlighted; it's the difference of time frames between public entities and companies, which can slow down the project. But the lack of resources, of time, and the economical risks appear to be the main barriers to innovation, as well as the lack of funding and their slow processes. However, in spite of this high implication in innovation, companies do not want to protect their know-how.

Regarding recruitment issue, companies have real difficulties to hire competent workers, but they use training to overcome this difficulty challenges, and has a good idea of the position of their members.

Regarding the cluster management survey, further points seem to converge in the same direction. Indeed in the strong points companies who work a lot in collaborative environment (through projects). They are quite open-minded and keep to seat their national and EU network.



Companies feel well supported thanks to a good national and regional funding system, even though there is still some improvement possible in this system. Companies have also ideas to develop their business, through projects but also thanks to their diverse ways to innovate which are not only limited to technologies.

Nevertheless, the both surveys also highlight the fact that companies are almost SMEs, and have significant difficulties to recruit workers but also to get competencies. Human resources issues are a real problem for their innovation activities. Cluster management well understands all these.

1.3.1.5 CARMA (FR)

STRENGTHS	WEAKNESSES
• Strong know-how, high level of IP protection • High industrial performance, wide implementation of quality, productivity management system and certifications • Good R&D investments • Good use of training • Not too dependent on customers.	• Medium level of international activities • Members are not enough involved in cooperative projects (especially at international level) • Low use of the different funding opportunities • Companies have fewer external R&D partners compared to some other clusters, especially R&D centers and academic partners • Lack of competencies compared to the other clusters members.

OPPORTUNITIES	THREATS
• Good external sources of information on markets • Technology transfer, which is of big interest to the companies • Improved EU networks • Increased cooperation opportunities thanks to the aid from Clusters.	• Lack of funding for innovation • Difficulties to obtain public funding. Funding processes are too slow • Difference of time scale between public and private R&D partners • Not enough involved in European cooperation • Instability of relationship with project partners • Big issues in recruiting skilled workers.

Results for the sample from CARMA gives an interesting result. Without overgeneralizing the result to all CARMA members, this survey shows that the sample companies are less involved in internationalization. Indeed, companies have less international activities than other clusters' members, with few R&D international partners. The sample companies from CARMA are not implicated in collaborative projects in general. It's most probably due to the difficult access to funding and the low funding processes. However, these issues do not stop companies from innovation. In fact, CARMA companies have a very high rate of protected know-how and intensive R&D expenses.

Another issue is the competence for innovation. Regarding results from the other clusters, the sample companies from CARMA show a more significant lack of competences. Even if companies well use training to overcome this barrier, they have a real issue to hire competent skilled workers.

The comparison between the company survey and the cluster management survey shows that CARMA has a good overview of their members. Indeed, company members from CARMA have strong know-how, especially protected know-how. In addition to this know-how, companies have ideas on how to develop their businesses with their high R&D investment, in order to develop business through innovation and to improve their external cooperation and widen their EU network. According to cluster managers, the companies are open minded and well understand the benefits of working in partnerships, although the company survey shows that the companies' involvement in collaborative projects can be improved.

The issue of human resources and recruitment rise from the both surveys. This is a real issue when we see the lack of skills and competencies that companies are facing. On the other hand, the cluster management survey and the company survey may contain some non-overlapping aspects, e.g. the highly industrialized environment with big potential clients that cluster managers reported is not talked about in the companies survey. Globally these both studies highlight the same good points and issues.

1.3..1.6 Proplast (IT)

STRENGTHS	WEAKNESSES
• Good international activities (high markets export shares, international customers, supplier and R&D partners) • High industrial performance, wide implementation of quality, productivity management system and certifications • Good positioning of companies strategy (not on cost and volume) • Good mix way to innovate (not only on product but also on services…) • Good R&D investments • Good use of bank and regional funding • Good use of training • Not too dependent on customers • Good involvement in regional and national cooperation, willingness to find international partners • Open minded towards technology transfer and open innovation.	• Low export rate in Alpine space • Few international R&D partners • Lack of resources for innovation • Lack of necessary human competences for innovation • Relatively low level of patented know-how.

OPPORTUNITIES	THREATS
• Not too difficult to find workers • Opportunities for more R&D projects, technology transfer and open innovation • Improved EU networks • Increased cooperation opportunities thanks to the aid from Clusters.	• Lack of information on markets • Lack of funding for innovation • Bureaucracy and timescale of funding processes: public funding doesn't fit to companies • Instability of relationship with project partners • Difference of time scale between public and private R&D partners • Big issues on competences of workers.

Results for companies from Proplast give a good overview of the cluster ecosystem. Indeed regarding internationalization, companies have significant business activities with a high market share outside Italy, even if they are not very present in Alpine Space. Proplast gathers, just after Plastipolis, the highest number of companies involved in European projects and using European funding, and after Austria and France, the highest numbers of international partners. But their implication in project is not limited to European projects.
Indeed Proplast members invest a lot in R&D, and well use regional funding and bank for their innovation activities. But there are still some issues to find funding, due to the bureaucracy and the long timescale of funding agencies.There is also a real problem with the human competences needed for R&D activities, even though there is no big problem in finding workers. As a matter of fact, companies find workers but not enough skilled, so they have to train them.

The comparison of survey of companies and survey with cluster managers shows that the cluster managers of Proplast have a good idea about their cluster members, especially in terms of technology level, industrial performance, the lack of patented know-how and the problem of public support for innovation. The problem of recruiting skilled workers is less prominent than in other clusters, as is shown in both surveys. One point where the two surveys might contradict is the competencies in companies. Cluster managers think that their companies have the right skills and competencies. However, the survey with companies shows that a big part of the companies do not possess the necessary competences, but they propose certain training programs to improve the situation.

1.3.2 SWOT analysis for Alpine space

STRENGTHS	WEAKNESSES
• Innovative companies with good know-how and technological level • Companies are in general open to cooperate with external partners (companies, R&D centers and universities); actively involved in R&D projects, including international R&D projects • High R&D intensity, especially in France and Italy • Good industrial performance level in terms of quality management system and certifications • Highly oriented to export, open to international collaboration • Most companies propose training programs to employees.	• Small company size, lack of time and resources for both innovation and international development. Economic risks also hinder innovation • As to open innovation, many companies are reticent • High dependence on automotive industry • Opinions towards IP are divided. Some companies see IP protection too costly and not needed.

OPPORTUNITIES	THREATS
• Public support in innovation • Opportunities for TT and OI: increased exchange between actors, new initiatives (technological platforms, portals, networks, collaborative projects, etc) • Increased EU network, access to technology in other countries • Globalization, larger market and sourcing bases.	• Difficulty in recruiting workers, especially skilled workers • Lack of funding is an obstacle to innovation. In general, low level of private funding. Public funding is not completely adapted to companies' needs, because of the bureaucracy and long processes in the public institutions, especially on EU level • Instability in R&D partnership • Legal regulations can be a barrier, e.g. REACH, import regulations in some countries • Competition from other countries, including low-cost countries • Financial crisis, Europe is seriously affected.

Based on the analyses we have done so far on the results of the questionnaire and the SWOT by cluster as has been discussed earlier, we try to build this final SWOT analysis for the Alpine space in general.
The result is in very good coherence to our findings in the first step of the research. In the following part, some recommendations will be proposed and can be a first step to help companies in their activities.

Results from both two steps of the research show that the companies in the Alpine space are innovative and have a good level of know-how and technologies. Companies invest a good part of their annual turnover in R&D activities, especially demonstrated by the companies in France and Italy. Companies are in general open to cooperate with external partners. Most of them are already involved in R&D projects, with a good percentage of the companies working also on international level. Companies also show good industrial performance, especially in terms of quality management system and certifications. Companies possess most of the necessary human resources, and the large majority proposes training programs to their employees. As to their international activities, almost all the interviewed companies have export activities. The market is above all to the other countries in the Alpine space, followed by Europe in general and outside Europe.

A common weakness shared by companies in the Alpine space is the small company size. Companies do not have enough human resources, money and time to innovate. It is why public funding is very important and is a real source of support for companies.

Companies need to integrate an innovation strategy into their global strategy, and use public funding to reduce the lack of resources and the economic risks linked to innovative activities. Although companies show very positive opinions towards technology transfer, the perception for open innovation varies a lot. Some companies reported the worry of sharing company secrets or the doubt if open innovation really works for the company. As to IP protection, although most companies recognize the importance of IP, there are still a minority who think IP is too costly or there is no need for their company.

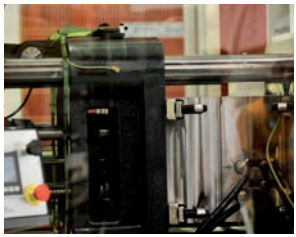
IP protection might be costly, but it is a real competitive advantage to have an IP management system. Indeed, even if companies didn't have patents, their interest in IP, and the creation of an IP management system will allow the companies to ease the drafting of agreement for projects for example, and can bring real asset to the company.

As to opportunities, **good public financing support contributes greatly to the innovation of companies**. This public support might not exist in countries outside the Europe. The increased exchanges on national, European and international level also open up opportunities for cooperation.

Technology transfer and open innovation are more and more accepted by companies. Their importance is now recognized on all levels (company, R&D center, cluster managers, public policy makers, etc). Companies are getting used to collaborative projects with actors in their ecosystem. Cluster managers play an important role in building consortium and technology platforms to promote exchange between actors. Public authorities also support these activities and emphasize the importance of cross-sector innovation. The increasing cooperation on EU level also give companies access to technologies in other countries. The existence of clusters and improved EU networks also make international cooperation more accessible for SMEs.

The most important threat that all the companies reported is the recruitment of workers. Companies find it difficult find workers, especially skilled workers in their territory. This might relate to the fact of low unemployment rate in the region, the generation change and the lack of interest of the young generation in the plastics industry, etc. A good training policy in companies helps to reduce the problem. **A good public support for education and the active promotion of the polymer industry towards younger generations can be a first step to generate more skilled and motivated workers for polymer industry**. Companies find the lack of funding a main difficulty to innovation. Private funding is not commonly used in the Alpine space in general. Public funding is more widely used but some companies complain that the public funding system is sometimes too slow and bureaucratic. Even if public funding does not always fit to companies, this type of funding is a real opportunity for innovation and a real strength for the country. Europe, National state and Region have to continue their path in their funding policy, which creates innovation and thus activities for companies, and allow companies to share their expenses. Companies which are not interested in public funding can look at **private funding and different actors in the polymer industry, such as clusters can promote this industry in front of other sources of funding such as venture capital and banks, in order to help companies to have access to these kinds of help**.





The success of R&D projects depends a lot on project partners. This uncertainty can to some extent hinder R&D collaboration. Regulations can be another problem for companies' development, e.g REACH and import regulations in foreign markets. **The globalization is both an opportunity and a threat,** since when it opens up new markets, it also brings our companies in direct competition with foreign companies, including companies from low-cost countries. It's why companies have to continue their innovation activities in order to keep a leg up compared to low cost countries. **Regulations can also be a competitive factor** since they stipulate better performances and help European companies to differentiate from companies from low cost countries which have not the means to REACH standards. It is why companies have to be aware of the different regulations in order to avoid being left behind. The financial crisis seriously affects the European Union, and companies are inevitably influenced. The fact that our companies export above all to countries in the Alpine space increases their exposure to the risk. **It will be thus important to diversify their market portfolio and to reorganize companies' activities.**

2 RESULTS OF THE CLUSTER BENCHMARKING EXERCISE

Cluster management organizations are important institutions to bridge the gap between different industries and to broker contacts between companies, research institutions and universities and other relevant stakeholders. In particular targeted and demand-oriented services offered by the cluster management organization are a key issue and facilitate the intensification and/or stabilization of interaction between cluster participants, reduce the time and costs spent by cluster participants and/or allow cluster members to focus on their core activities. In order to be successful a cluster management organization needs to

- Be fully accepted by strongly committed cluster participants
- Be operated by a professional, experienced staff
- Be sufficiently equipped with financial means
- Have its operations being based on a strategy that was developed in collaboration with the cluster participants.

Therefore, analyzing aspects of cluster management, identifying areas of improvement, and implementing activities for improvement should be under regular consideration.

Benchmarking of the cluster management organization according to the methodology of the European Secretariat for Cluster Analysis (ESCA, www.cluster-analysis.org) offers an efficient way to identify the potential of a cluster and to develop strategic recommendations for its further development within a short time frame. Benchmarking is a comparative analysis of structures, processes, products and services. It compares an entity to peers in the same field of activity and/or to best practices from entities in other areas. The objective of benchmarking is to learn from better performing peers or other entities in order to improve own structures, processes, products and services.

Within the ALPlastics project, the project partners all have conducted such a benchmarking project and have received their individual feedbacks and recommendations. As a main comparable portfolio, a set of 18 cluster organisations from seven countries was used, all with strong relations ships to “polymer technology and processing”, besides an “excellence portfolio” of cluster organisations from all technology areas. The data assessment was conducted during a joint workshop, by this the consortium already could compare and discuss specific characteristics of excellent cluster management among themselves. The participation in the ESCA benchmarking exercise was linked to the award of the “Cluster Management Excellence Label BRONZE – Striving for Cluster Excellence”. Since end 2010 more than 400 cluster organisations in 30 countries worldwide have received this award (status March 2013).

During a second workshop of all partners, selected results and recommendations from the analysis of the benchmarking data were discussed. Furthermore this workshop was used to compare the cluster-specific data with the quality thresholds for cluster which are used for assessing and determining cluster management excellence in the context of awarding the "Cluster Management Excellence Label GOLD – Proven for Cluster Excellence". Two of the project partners already fulfill the required quality standards and are awarded with this quality label, one further partner is planning to become assessed and awarded in near term. Since March 2012, 15 cluster organisations from seven European countries have received this GOLD-label (status March 2013).

Besides being awarded with the according labels which now can be used for various marketing and public relation purposes – internally towards the participants of the cluster, and externally towards funding organisations, public authorities, and the broad public – the participation in the two workshops and the benchmarking activity provided an external reflection of the cluster management work. This resulted in individual feedbacks to certain structural characteristics, services, and aspects of visibility and recognition. Weaknesses could be determined and ideas could be generated in a mutual learning process regarding further improvements of the cluster management.

Looking to the results of the benchmarking activity, some general aspects were identified besides individual issues:

- The status of development of cluster management differs between the ALPlastics consortium partners
- All cluster organisations (except one) lack representing a critical mass of organisations of their specific sector in their local region; aiming for further growth of their cluster partnership in their specific region could be an interesting strategic option for the cluster management
- Cluster management is a complex and dynamic activity which requires a constant learning process for the cluster management team. Aspects regarding a continuously planned and implemented education and training programme for the cluster management team in the majority are less developed or even lacking at all
- Furthermore, an integration and cooperation of the cluster organization and relevant innovation-related organisations from intermediary origin could be improved. Strong links of the cluster organization to such organisations should lead to better access to funding, financing, information, etc. for the cluster participants
- In general, all project partners could increase their activities regarding external communication, in particular presenting a clear picture of success, impact generated, and contribution to wealth and (regional) economic and social development.

In conclusion, including a joint cluster benchmarking activity into the work programme of the ALPlastics project, turned out to be a valuable experience for all consortium partners and lead to mutual learning effects. Applying proven and well accepted methodologies and guidelines regarding excellent cluster management in this context, has been an efficient approach. Last but not least, becoming awarded with the labels of ESCA, offers new opportunities for marketing and branding for the cluster organisations and the ALPlastics project as such.

written by Mr. Helmut Kergel, VDI/VDE

3 VISITING EXPERIENCES EXERCISE AND GOALS

The “visiting experiences” exercise was designed to gather a deeper insight into each participating CL.MB (cluster management body) of the project, to screen transferable competences and knowledge regarding both cluster management on operational level as well as the thematic hot topics of the cluster and the cooperation possibilities on the level of the cluster members, especially addressing the SME sector.

The results have contributed and led to multiple project outputs: identification of future pilot activities, input on the white book, reviewing the cluster benchmark self assessment, detecting transnational innovation opportunities (including technology transfer, trainings and joint R&D).

Eight different “visiting experiences” - reciprocal cluster visits - have been organised during which one or more cluster project partner(s) visited one hosting cluster management body. Duration and agenda of these visits have varied in order to customize and thus optimize the visiting time for the participating partners and drain as much knowledge and opportunities as possible for the entire project consortium and cluster member companies in the Alpine space region.

The main findings of the visiting experiences are summarized and accessible in form of single “reports on visiting experiences”. The visiting experience report contains gain in knowledge and experiences of the visiting project partners. They include findings from mutual learning, in depth insights into the functioning of the hosting cluster, examples of good practice in order to detect teaching cases for the project partners, possibilities for technology transfer and cooperation on cluster member level. The view of the visiting partner naturally reflects the comparison to his/her own references and cluster management experiences, which provides an important external view of the inviting cluster organisation.

To sum it up: on the one hand, the visiting experiences with their output accessible in the reports on visiting experiences brought immediate benefit via mutual learning from similar but still different cluster institutions in the same geographic regions including their success stories and persisting challenges.

On the other hand, the visiting experiences (and reports) created real added value in the short and long term with regard to future co-operations and pilot activities thanks to a deepened reciprocal knowledge and strengthened personal ties.

The visiting experiences (and reports) are an innovative approach to deal with the diversity of clusters and cluster organisations for which it is, hence, difficult to find general statements and universal recommendations.

Putting emphasis on cluster challenges and chances individually and defining key topics and players among the members as well as the personal in-depth contact helps to reach almost immediate outputs, such as teaching cases for the improvement of cluster management and the definition of feasible and reachable cooperation projects among cluster member companies.

What have we learned?

Knowledge about the hosting clusters acquired during the single visits covered as a minimum:

- the structure of the cluster
- it's management, governance and strategy
- the financing model utilised as well as the financial goals for the future
- services provided by cluster organisation
- it's achievements and challenges
- the thematic hot topics of the cluster
- the cooperation possibilities on the level of the cluster members.

Each hosting cluster has identified a number of practical solutions/ initiatives worth presenting as the success stories and the learning tools for the others. These were discussed in detail during the visits.

Figure 1: All Cluster Academy participants

Was the "visiting experiences" exercise a success?

The participating CL.MB were inspired by the experiences of

- Plastipolis with its Primoplast export training programme and Plastipolis Forum
- Proplast with its sophisticated human resource services and technology transfer project initiation approach
- CARMA with its creation of the EcoDesign Center and Materials Innovation & Eco Design – MIEC Show
- Chemie-Cluster Bayern with its Transatlantic Technology Transfer Initiative, International Chemical Network Summit initiation and internationalisation strategy
- Kunststoff Cluster Upper Austria with its sophisticated new members attraction programme, Human Resources Network and Continuous Improvement Process Mechanism
- Réseau Plasturgie with its well known analytical tools development and event management services.

Figure 2: Visit at the company Poloplast, Upper Austria

The CL.MB learned from each other's ideas concerning better SME involvement, development of alternative sources of funding, importance and challenges of being at the crossroads of public and private spheres, new business development, enhancement of skills and competences, balancing the volume of technological, consulting and animation services, way to overcome the risk of competing with the existing service providers on the market, ideas for strengthening stability and growth of the team in order to support the quantity of work, creation of sustainable strategic alliances born from cooperative projects, and dealing with structural changes in the cluster organization.

The possible pilot activities and joint programming actions encountered during these visits:

- systematic data exchange in terms of events or project initiatives and technological trends;
- development of innovative analysis tools;
- exploration of avenues for involvement in partner clusters initiatives;
- strengthening of technological cooperation between the partner clusters' members;
- facilitation of know-how transfer cooperation between F&E institutes and universities.

4 PRECONDITIONS AND POLICY INSTRUMENTS FOR SUCCESSFUL CLUSTER MANAGEMENT

Introduction

This present chapter will give an overview and comparison of the cluster policies adopted in the recent years by several regions (in some case states) across the Alpine territory:

Region	Level (regional or state)	Notes
Piedmont	regional cluster	created in 1997
Rhône Alps	national clusters	created in 2005
Provence Alps Côte d'Azur	regional cluster	created in 1994
Bavaria	regional cluster	created in 2006
Canton Fribourg	regional cluster	created in 2005
Upper Austria	regional cluster	created in 1999

Conclusion of the policy and precondition benchmark study

There is no single indicator system that can be applied to measure the success of a cluster program or of cluster policies, because indicators always depend on the objectives of a specific program or policies. Therefore indicators used will depend on the individual programs and policies and their targets.

There are essential differences between the regions and the cluster participating in the ALPlastics project i.e. difference cluster structures, different political structure, different political influence and assistance, different financial status, different preconditions and basic conditions or no cluster policy at all for one region. Some preconditions are shown with different colors in the different regions while there was the same outcome due to different strategy or policy. Therefore direct comparisons between the participating cluster organizations and regions are not possible and not constructive.

However, the participants are able to present their best practice examples and are able to benefit from the experiences of all others. These best practice examples have to be adapted to our own basic conditions and can be used for each cluster strategy in each region. The results should be used as recommendation and possibilities for policy makers to show solutions and give them ideas for implementation in other regions.

Why should governments support clusters?

The recent publications of VDI VDE say: let's make a perfect cluster policy and cluster programme![2] Indeed in the last decade a lot of debate has been raised on the clusters and cluster development policies. In some countries cluster policies have been introduced only recently, while in other countries they have been implemented since the 1990s.
Several key points can be outlined:

- Clusters are a key element and instrument of modern innovation policy activities
- Clusters and innovation networks – mostly the management organizations - are promising and powerful instruments in promoting research, development and innovation which in turn create growth in the fields of employment, productivity and export
- Many studies around the world prove the positive impacts of cluster activities on R&D investments, innovation and R&D collaboration
- The return and profit on R&D investments are increasing; this economic instrument confirm that clusters offer a favorable and dynamic business environment which significantly increases competitiveness
- In the clusters' favorable ecosystem, innovative enterprises can flourish by interacting with different innovation actors and across sectorial boundaries
- There is no single indicator system that can be applied to measure the success of a cluster program or of cluster policy, because indicators always depend on the objectives of a specific program or policy. Therefore the indicators used will depend on the individual programs and policies and their targets.

What are clusters and cluster policies

Clusters represent an innovation infrastructure consisting of companies, R&D institutions and universities that specialize in a specific industry or knowledge area. The existence of such an infrastructure provides governments with an excellent opportunity to promote economic growth through the support of innovation and R&D activities.

Participation in a cluster can change the behavior of a company towards being more innovative for the benefit of economic growth and job creation. Thus, government support should encourage companies to participate in clusters by offering a set of program and policy instruments.[3]

Cluster organizations should always have a strong regional base and as far as these regions differ in terms of their economic circumstances, knowledge and innovation capacity, it is obvious that the integration of the concepts of world-class clusters and the role of cluster organizations for the smart specialization of regions calls for differentiated cluster policy and program approaches.

Each and every region with a sufficient industrial or innovative potential should develop their own cluster policy supported by appropriate cluster programs, since clusters are powerful tools in promoting.

2) www.fi.dk; Let's make a perfect Cluster Policy Programme, August 2012, The Danish Agency for Science, Technolog y and Innovation, page 8
3) www.fi.dk; Let's make a perfect Cluster Policy Programme, August 2012, The Danish Agency for Science, Technolog y and Innovation, page 12

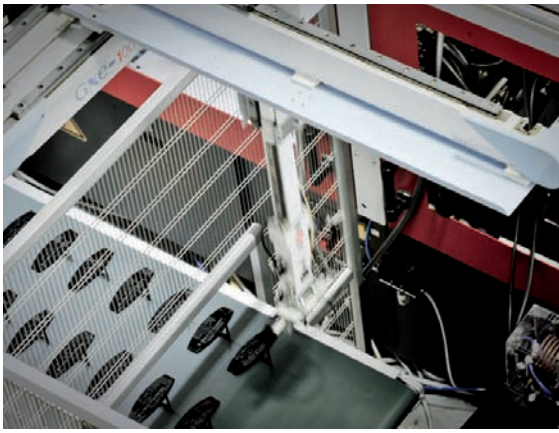
How should governments support clusters?

• Clusters should be developed with the parallel support of a strong and unique infrastructure development that provides a region or a country with a flourishing and prospering ecosystem that meets the needs of enterprises as well as of R&D organizations.

• Cluster policies and programs should ensure and support knowledge exchange and collaboration between clusters with to accelerate the dissemination of new ideas, knowledge and technologies between different sectors.

• A long-term but flexible support of clusters and cluster management organizations with stable principles is required. Furthermore, program requirements and processes should not only be less bureaucratic, but also flexible enough to respond quickly to changing economic and technology environments in which clusters are operating in.

• It is obvious that depending on the development stage of the cluster there should be different opportunities in a program that offer different funding schemes, instruments and approaches to develop further a cluster organization.



• The R&D and business development programs which do not have a specific cluster focus, investment in infrastructure, implementation of regulations that support economic development through the creation of markets for new products and services as well as macroeconomic and fiscal policies for a conductive business environment, should be supported by a cluster program. Cluster organizations should be developed through an integrated cluster development strategy jointly developed and supported by relevant government departments.

• Innovative services and standards of excellence for cluster management can support the development of excellent cluster organizations with a high impact of cluster activities. Quality labeling according to agreed upon standards of ECEI (European Cluster Excellence Initiative) could support cluster managers in the development of new and better cluster services and will create better financing opportunities and improved branding strategies of cluster organizations. Cluster policy makers should recognize the European Cluster Quality Label system in their national cluster programs and policies. Cluster support should develop excellently managed clusters that are internationally competitive and that have an impact on the national economy.

• Cluster policies and cluster programs should support the internationalization of cluster organizations and cluster activities.

• Policy makers and program owners have to be in a continuous dialogue with each actor to develop the program, ensuring synergies with other innovation policy instruments and to support the establishment and development of cluster organizations. Participating in the international exchange of knowledge about cluster policies and cluster benchmarking is a useful learning tool as well.

• Policy makers and cluster policy program owners have to collaborate on the development of key performance indicators, benchmarking exercises, impact assessment tools and the evaluation of cluster policies.[4]

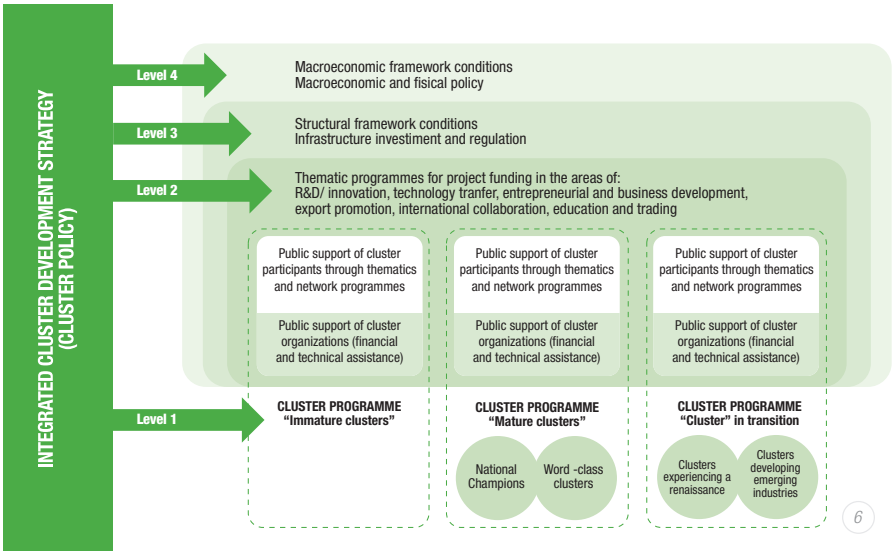
• Monitoring and evaluation of the results and impacts of a program is important and should be done in a smart and purposeful manner. From the very beginning the program should be based on clear targets that can be measured through a purposeful set of indicators that provides information relevant to the implementation processes.[5]

4) www.fi.dk; Let's make a perfect Cluster Policy Programme, August 2012, The Danish Agency for Science, Technology and Innovation, page 10 f.
5) www.fi.dk; Clusters are Individuals, October 2011, The Danish Agency for Science, Technology and Innovation, page 58 f.

Different levels of cluster support: integrated cluster development strategy

Clusters should be developed through an integrated cluster development strategy jointly developed and supported by relevant government departments. The integrated cluster development strategy should consist of four levels

Level 1: "Integrated cluster program"
Level 2: "Non-cluster specific thematic programs for project funding and policies in the areas of R&D/innovation, technology transfer, entrepreneurial and business development, export promotion, international collaboration, education and training"
Level 3: "Development of structural framework conditions"
Level 4: "Macroeconomic framework conditions".



Policy coordination at national level and integration of EU programs and initiatives is essential

The development and implementation of an integrated cluster development strategy is complex and involves various ministries and government agencies from various policy areas and policy levels including economic affairs, regional development, fiscal, research and development, education and training, transport and spatial planning. Coordination has to take place both with regard to the general policy level (framework conditions: macroeconomic policy, infrastructure, thematic policies and regulation) and the specific funding program level (support of cluster through programs).

Cross-border collaboration and international activities are important drivers for economic development. The strategy should therefore also involve EU programs and initiatives such as the Competitiveness and Innovation Framework Program (CIP), Regions of Knowledge (as part of the EU FP7) or projects such as the European Cluster Excellence Initiative (ECEI) and similar activities.[7]

6) www.fi.dk; Let's make a perfect Cluster Policy Programme, August 2012, The Danish Agency for Science, Technolog y and Innovation, page 18 f.
7) www.fi.dk; Let's make a perfect Cluster Policy Programme, August 2012, The Danish Agency for Science, Technolog y and Innovation, page 20

QUESTIONS

REGIONE PIEMONTE

Piedmont

General cluster policy concept

What is the main basis for cluster selection/recognition: geographical (regional/national/international), sectorial (application driven), technological driven.	Clusters are selected and recognized at Regional level. Regional poles were created, starting from the most relevant agglomeration of enterprises and specialization of the regional territory. The cluster is an agglomeration of enterprises (SMEs should be in good %) operating in the same industrial sector (application driven) or in the same technological sector (technology driven). R&D centres and academia are welcomed partners. The governance is private.

Governance in the clusters

What actors are called by public-cluster-policies to participate and govern the cluster? (Enterprises, R&D institutions, chamber of commerce, regional government, national government, etc.)?	The public cluster policies do not specify a precise composition of each cluster. The only specification regards the coordination of the cluster that should be in the hand of "significant number" of enterprises. Each cluster can be created in a different way (consortium, association, temporary association etc). Enterprises with a specific focus on SMES should have the most relevant role. R&D centres and academia are also requested partners. Public authorities are not in the cluster membership.
How do politics or regional government influence the cluster strategies?	Politics and regional government give some priorities in terms of type of activities to be performed. The cluster is evaluated according to those priorities, but the cluster and cluster management team is quite free to give its own priorities and to start additional activities if they are requested by members.
How much is the cluster daily work influenced by the owners of your Cluster?	Cluster members do manage the cluster activities by various kinds of Boards (they can be administration councils, advisory boards or mainly technical boards).

Is there any impact of decision makers, financing agencies, regional/ local authorities or other stakeholders on everyday routine/activities of the cluster management (and to what extent do they have an impact?)	The public authorities do not influence the daily activity, but they influence the overall yearly activity of a cluster. Public authorities influence the cluster activity in terms of given priorities, and funded activities: for instance, the public calls for projects do impact the yearly and daily activities because the cluster has to collect R&D projects, or other applications for SME support services, to evaluate them and present them to the Region.
How does the public-cluster-policy predict the participation of key actors in the development of the cluster strategy?	The cluster policy mainly gives influence to the participation of specific categories of actors: the main focus is given to the participation of SMEs, as there are specific evaluation grids encouraging or requiring the participation of SMEs in R&D projects. Some call for projects/services are fully dedicated to SMEs. Academia is welcomed in R&D project but it is not compulsory to add Academia to projects.
Do the public-cluster-policies describe or address some main/important areas for improvement/ optimization of cluster performance (try to describe 3)?	Yes, main areas of activity in a cluster should be: 1. collection/pre-evaluation of good applied R&D in collective projects 2. increase of members 3. services offered to members (number and quality) The evaluation scheme is under a phase of study and improvement.

Cluster financing

How the public-cluster-policies offer sources of financing/funding of the cluster (for management activities)?	Funding is given for cluster management activities: rate 50% funding per year is at a maximum of 150-200.000 EUR per year per cluster; this is for the first period of 5 years (ending on 1/4/2014) The visibility is only for the initial 5 years, and this is making uncertain the cluster medium term scenarios. Funding is also given for R&D activities for the cluster members (see below)
In what percentage and for how long does the public-cluster-policy finance/fund the cluster? Please describe in detail.	Cluster activities are financed 50% for the duration of the first period (5 years). Discussion is still open for the future (after April 2014)

The public-cluster-policies require a kind of self financing capability of the clusters?	Yes, since the first year of cluster activity: 50% of other funding sources are required. Normally this 50% of cofounding is given by: • Membership fees of members • R&D funded projects • Other funded EU or national projects.
The public-cluster-policies describe new potential sources of income for the clusters, especially in the medium/long term (after 5 initial years)?	There is a general recommendation that the cluster management activities should progress in the way to be less and less dependent from the Regional funding scheme. Also there is a recommendation to make the best use of alternative funding schemes (not regional)

Supported activities

Does your public-cluster-policies support training on the cluster management topic? How?	No, there is no such training
Does the public-cluster-policies encourage R&D PROJECTS at NATIONAL (France, Italy, Austria etc) and EU LEVEL? Describe in detail.	Yes, the cluster policy encourages the international networking and the use of alternative funding schemes. Anyway, there are no specific instruments (funding schemes or similar) to encourage such cooperation.
Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc	Yes indeed, this is probably the major activity of a Piedmontese cluster. A wide funding scheme is set every year. In the last 4 years the following budget has been made available for R&D funding: • 50 Mio 2009 • 27 Mio 2010 • 20 Mio 2011 • 10 Mio 2012. These totals are for the all 12 innovation clusters. In average each Cluster has received about 9 Mio of funding in the 2009-2014 period.
What are the expected goals of public-cluster-policies for INNOVATION and R&D? • applied research • basic research • product development • tech transfer • economic competitiveness • industry/R&D bodies	Expected goals are in the area of: • applied research • feasibility studies • IPR services • design services • exchange of personnel between academy/industry • open innovation • technology intelligence

Are there different scales of R&D projects funding? Who can be the partners? SMEs, large companies, etc.	Yes, there are 2 main scales: • small project (feasibility studies) (up to 200.000 of expenses) • average/large size projects (from 200.000 to 2.400.00 EUR of value) Partners can be: • SMEs (priority) • LE (only if together with SMEs) • R&D centres/universities
More in detail: does public-cluster-policies fund small feasibility studies (up to 200.000 EUR of expenses)? How? What are the beneficiaries?	Yes, max funding is 20.000 euro per partners, funding rate is: • 60% for SE • 50% for ME • 40% for LE • 60% for R&D institutions max 5 partners (max funding is 100.000/project) • call opening: call are opened every 3 months • waiting time: 6 months waiting time for evaluation/approval space for improvement: the amount of EUR 20.000 could be perhaps lifted to EUR 30.000
More in detail: does public-cluster-policies fund bigger R/D projects (above 200.000 of value?) How? What are the beneficiaries?	Yes, max funding is 1.200.000 per project, funding rate is: • 60% for SE • 50% for ME • 40% for LE • 60% for R&D institutions • call opening: call are opened every year • waiting time: 6 months waiting time for evaluation/approval
More in detail: public-cluster-policies support other different types of R&D projects funding? i. e. different funding programs on FP7, MANUNET, ERANET…	Yes, the piedmont Region funds other ERANET programs (this is not specific for clusters, but for all enterprises). In the last years the funding has decreased severely (in terms of % and total amount available).
More in detail: how does the cluster support the different types of R&D projects?	The cluster management should animate the building of R&D projects also at national and international level, especially for the largest projects.

Does the public-cluster-policy foresee coordination with other relevant policies? Is there coordination between R&D, training, education, internationalisation, other?	Not really: • TRAINING/EDUCATION: for master courses funded by the Region, there is only a priority given to Master courses that are "officially supported" with a letter written by Clusters • INTERNATIONALISATION is part of the cluster management duty but in fact it is mainly supported by other bodies and funding schemes.
How does the incorporation of the relevant stakeholders for R&D projects (funded by the cluster policy schemes) proceed?	For cooperative R&D project: Large projects: normally a minimum of 3 bodies is needed to build projects. The cluster sometimes helps companies and R&D bodies to merge their needs and build a project. • SMEs: one SME is always necessary, and at least 40% of the budget must go to SMEs • UNIVERSITIES: universities and R&D bodies are welcomed in R&D project but their participation is not compulsory • LARGE ENTERPRISES: their participation is welcomed but not compulsory. The CLUSTER MANAGEMENT BODY cannot participate to the R&D activities as a partner, but can work in R&D activities as a subcontractor.
Who is monitoring the incorporation of the relevant stakeholders for R&D projects?	In a first step it is the project leader/coordinator, then the project is analysed by cluster managers and scientific experts, then the regional offices will check the overall respect of rules given by Cluster policies funding schemes.
How does the public-cluster-policy organise calls for projects? Are there open calls or fixed dates for innovation and applied R&D projects?	Calls are fixed at a specific date, there are NO open calls. For medium and large projects there are public calls (normally once a year). For smaller projects and feasibility studies there is a call fixed every 3 months (unless budget is finished).
How long is the waiting time from deposit of the proposal till reply of funding body? PLEASE INDICATE number of weeks or months in average or min and max	MEDIUM LARGE PROJECTS typical timing is: 6 months after presentation at the Region (8 months after presentation to Cluster management) for large projects this timing is difficult to reduce. FEASIBILITY STUDIES: in this case typical waiting timing is less: 4-5 months after presentation to the region, 6 months after presentation to the cluster management.

Does the public-cluster-policy foresee an EVALUATION body and scheme for R&D projects? How does this work?	Yes, a Scientific Committee organised by the cluster management is in charge of pre evaluation of the R&D projects ideas (correspondence to cluster technological roadmap and added value of the project). Then the project is passed to the Regional authorities: they will organise the real final evaluation by independent experts.
Does the public-cluster-policy foresee an ONGOING MONITORING body and scheme for R&D projects? How does this work?	Yes there is an ongoing monitoring done by cluster and there is a financial and scientific monitoring at the end of the project performed by the Regional authorities. The final scientific monitoring is sometimes performed after a long period after the end of the project.
Please define the success rate for innovations and applied R&D projects (approximate percentage of approved proposals/total submitted proposals); for this success rate, how much important is the pre-screening activity of the Cluster management body?	The success rate depends a lot on the pre-screening performed by the Cluster management. With a good pre-screening the success rate can be about 75%. In other cases (without a good pre-screening activity) it can go down to 40% of presented projects.
Does the public-cluster-policies foresee a specific consulting agency for START-UPS (financing, infrastructure, network, etc.)?	Not specific for clusters, there are a few Start-ups incubators organised by universities.
Does the public-cluster-policies foresee a specific consulting agency for RTD?	Not really, the Cluster should act as a facilitator of RTD project building by networking with all stakeholders.
Does the public-cluster-policies foresee a specific consulting agency for INTERNATIONALISATION?	Not really, even if there are some agencies working on this topic, they are not part of the cluster policy initiatives.

Evaluation

Does the public-cluster-policy foresee an evaluation/monitoring body and scheme for cluster management? How does this work?	There is a kind of evaluation according to some indicators (cluster growth, composition, projects building, quality of projects etc). The evaluation system is mainly based on some quantitative elements and calculation. No standardised benchmarking international methods are used.

QUESTIONS

Rhône Alps

General cluster policy concept

What is the main basis for cluster selection/recognition: geographical (regional/national/international), sectorial (application driven), technological driven.	Clusters are selected and recognized at national level, with a regional area of actions, for “national clusters”, national and international action for “worldwide clusters”. French cluster was defined as a gathering of companies, small to large ones, research and educational centres, on an identify territory, on a specific topic (application and/or technological driven).

Governance in the clusters

What actors are called by public-cluster-policies to participate and govern the cluster? (Enterprises, R&D institutions, chamber of commerce, regional government, national government, etc.)?	The cluster is funded by national government, regional governments, local communities and companies at the same time. The governing body of all the competitiveness clusters in France, including Plastipolis, is an agency of the national government (DGCIS).
How do politics or regional government influence the cluster strategies?	The cluster strategy is its own strategy, defined by the members, The influence of politics and regional government is on a 3 years plan which set the policy of national clusters. There is a national plan and each region proposes a plan for their clusters.
How much is the cluster daily work influenced by the owners of your Cluster?	The cluster has its own strategy based on a 3 years' program, approved by the advisory board. The daily work is influenced by company members, which are also represented in the 3 committees (scientific, international and training).
Is there any impact of decision makers, financing agencies, regional/ local authorities or other stakeholders on everyday routine/activities of the cluster management (and to what extent do they have an impact?)	The financing agencies and public authorities do not intervene in the daily activities directly. They are more implicated in the strategy building, the audit and the funding process. Some of them are members of our committees and influence the planning of our activities. Other stakeholders, especially companies, research centres, and institutional and cluster partners, influence more directly the daily work since we cooperate in different activities.

How does the public-cluster-policy predict the participation of key actors in the development of the cluster strategy?	The General Assembly is in charge of the strategy. The General Assembly itself is made up of experts and members of the cluster.
Do the public-cluster-policies describe or address some main/important areas for improvement/ optimization of cluster performance (try to describe 3)?	1. quality management system 2. customer relation management (CRM) 3. communication

Cluster financing

How the public-cluster-policies offer sources of financing/funding of the cluster (for management activities)?	The cluster receives funding from national, regional and local authorities. Membership fees and the participation in cooperation projects also generate revenue. The proportion of public financing has been decreasing since cluster establishment.
In what percentage and for how long does the public-cluster-policy finance/fund the cluster? Please describe in detail.	The part of public funding is very consistent, the part for self-financing in increasing steadily. The public funding of clusters is very different from a cluster to another. Some are nearly 100% public funded, and other have more than 50% of their funding which are private.
The public-cluster-policies require a kind of self financing capability of the clusters?	The cluster receives funding from national, regional and local authorities. Membership fees and the participation in cooperation projects also generate revenue. The proportion of public financing has been decreasing since cluster establishment. The goal is to raise at least 50% of private funding.
The public-cluster-policies describe new potential sources of income for the clusters, especially in the medium/long term (after 5 initial years)?	The cluster is planning to implement "success fees" on projects submitted by the cluster if funding is achieved.

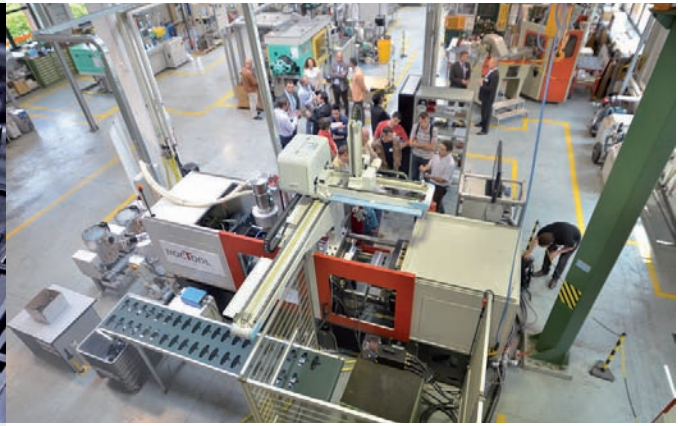
Supported activities

Does your public-cluster-policies support training on the cluster management topic? How?	By organizing workshops with the different clusters where we exchange on best practices and potential improvements.
Does the public-cluster-policies encourage R&D PROJECTS at NATIONAL (France, Italy, Austria etc) and EU LEVEL? Describe in detail.	Yes, there are many on national level (80 projects labelled by Plastipolis) and more than 10 R&D projects on EU level.
Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc	Yes, although regional funding is not the main source of our R&D projects. There is not specific policy regarding the regional budget.
What are the expected goals of public-cluster-policies for INNOVATION and R&D? • applied research • basic research • product development • tech transfer • economic competitiveness • industry/R&D bodies	To support cooperation and technology transfer between industry and academia, to promote cross-sector innovation. More and more the policies guide cluster to an innovation and R&D close to the market, in order to create turnover and jobs in region. But the different types of call allow working on several type of projects, from basic research, to economic competitiveness.
Are there different scales of R&D projects funding? Who can be the partners? SMEs, large companies, etc.	Yes, there are projects more focused on companies, large and SMEs (with more interest on SMEs), that can include also R&D centres and universities. Others are more focused on R&D centres and universities, and are funded by the national research agency, but allow working with companies. The goal of this project funding is really to have collaborative projects, mixing SMEs, large groups, R&D centres, universities.

More in detail: does public-cluster-policies fund small feasibility studies (up to 200.000 EUR of expenses)? How? What are the beneficiaries?	Yes, there is funding for small feasibility studies from the national funding agency OSEO, which can fund a feasibility study in order to set-up a largest R&D project. This kind on funding is not in the frame of the cluster, but the cluster can orientate companies. Only SMEs have access to this kind of funding.
More in detail: does public-cluster-policies fund bigger R/D projects (above 200.000 of value?) How? What are the beneficiaries?	The main funding program for bigger R&D program is the FUI (unique inter-ministry fund), which allow to fund collaborative projects. This funding is bi-annual and is open to a consortium gathering SMEs, large groups and R&D centres or universities.
More in detail: public-cluster-policies support other different types of R&D projects funding? i. e. different funding programs on FP7, MANUNET, ERANET…	Yes, there are OSEO, FUI, ANR on the national level, and on EU level, there are FP7, ERANET, CIP, MANUNET...
More in detail: how does the cluster support the different types of R&D projects?	The cluster supports the project building (from the idea, to the submission of the project), but also the follow-up of the project, up to its end, and try to follow the outputs of the projects few years after the project end.
Does the public-cluster-policy foresee coordination with other relevant policies? Is there coordination between R&D, training, education, internationalisation, other?	Yes, with policies on regional, national and European levels.
How does the incorporation of the relevant stakeholders for R&D projects (funded by the cluster policy schemes) proceed?	Usually, members come to us with project ideas. According to the nature of the project, we help to find partners with the right competencies. In the frame of the workshops, we disseminate the calls for projects. There is no formalized call for partners in a new project.

Who is monitoring the incorporation of the relevant stakeholders for R&D projects?	The cluster management team, and the scientific committee.
How does the public-cluster-policy organise calls for projects? Are there open calls or fixed dates for innovation and applied R&D projects?	There are fixed dates from national and regional funding bodies but not directly from Plastipolis.
How long is the waiting time from deposit of the proposal till reply of funding body? PLEASE INDICATE number of weeks or months in average or min and max.	3 months in average.
Does the public-cluster-policy foresee an EVALUATION body and scheme for R&D projects? How does this work?	Yes, the Scientific Committee in Plastipolis is in charge of monitoring the R&D projects. It evaluates the added value of the project and verifies if the project corresponds to the cluster's technological priorities before labelling the project.
Does the public-cluster-policy foresee an ONGOING MONITORING body and scheme for R&D projects? How does this work?	The operational team of Plastipolis who is responsible of project setting-up and follow-up.
Please define the success rate for innovations and applied R&D projects (approximate percentage of approved proposals/total submitted proposals); for this success rate, how much important is the pre-screening activity of the Cluster management body?	For funding, the success rate is 2/3. Till 2011, for 120 projects submitted, 80 have achieved funding.

Does the public-cluster-policies foresee a specific consulting agency for START-UPS (financing, infrastructure, network, etc.)?	It isn't the clusters' task but incubators exist at regional scale and can help start up to grow.
Does the public-cluster-policies foresee a specific consulting agency for RTD?	There is no specific consulting agency for RTD. Clusters are the contact point which will help companies to find them.
Does the public-cluster-policies foresee a specific consulting agency for INTERNATIONALISATION?	There are some agencies at national (Ubifrance) and regional (ERAI, CCI Internationale…) scale in order to help companies in their internationalisation activities. Cluster often work with these agencies.



Evaluation

Does the public-cluster-policy foresee an evaluation/monitoring body and scheme for cluster management? How does this work?	There is a kind of evaluation, as permanent follow-up, but there is also an evaluation approximately each 3 years on all French Clusters.

QUESTIONS

PROVENCE ALPES CÔTE D'AZUR (PACA)

Provence Alpes Côte d'Azur

General cluster policy concept

What is the main basis for cluster selection/recognition: geographical (regional/national/international), sectorial (application driven), technological driven.	The PRIDES (Regional Cluster) is in the heart of the triple helix interactions at a regional level. It aims to support innovation capacity of regional businesses by promoting cooperation among the cluster's enterprises and between the cluster's enterprises and the research laboratories with the role of fostering value creation within the same sector and/or value chain around a collective development project managed by a coordination structure.

Governance in the clusters

What actors are called by public-cluster-policies to participate and govern the cluster? (Enterprises, R&D institutions, chamber of commerce, regional government, national government, etc.)?	The regional policy maker involved, for the composition and governance of the clusters, all business networks and specialized economic actors, structured around an economic activity or a specific market related to a regional competence and gathered in a legal entity (association for the majority). Companies (small and medium-sized enterprises) are in the heart of the cluster, they represent with the research centres and educational establishments the main clusters participant actors.
How do politics or regional government influence the cluster strategies?	In the frame of the regional innovation policy, regional government design the economic development scheme, which includes the main strategic objectives of cluster policy. With respect to this scheme, cluster strategies follows government orientations in terms of target economic issues. Practically, cluster management team, strategic advisory board or governing board of the cluster set their own strategic goals and operational activities.
How much is the cluster daily work influenced by the owners of your Cluster?	Representatives of companies, universities and labs are part of the Administration Council and the Strategy Board; they are involved in the development of the cluster strategy. From the provision of consulting and technological services to the animation of its network, cluster daily work is based on answering its company's technological needs and cooperation between its actors.

Is there any impact of decision makers, financing agencies, regional/ local authorities or other stakeholders on everyday routine/activities of the cluster management (and to what extent do they have an impact?)	Cluster activities and management are not influenced from the public authorities. Policies impact can impact the cluster in terms of funding and public grants. Cluster management presents to the cluster owner, once a year, the follow up of the operationalization measures in order to be evaluated (the cluster position in relation to main strategic orientation axes, the cluster activity in relation to the main missions, etc…).
How does the public-cluster-policy predict the participation of key actors in the development of the cluster strategy?	Impact from the actors involved in the development of the cluster strategy as the Strategic Advisory Board and the Governing Board. The boards are consisting of industry representatives SME and non-SME, representative of the plastics profession, representatives of universities and schools and representatives of public authorities.
Do the public-cluster-policies describe or address some main/important areas for improvement/ optimization of cluster performance (try to describe 3)?	1. Applied research and R&D projects approved and coordinated by the Cluster Management Body 2. Growth of the number of cluster members 3. Number of dissemination & information activities 4. Volume of the consultancy services to companies. Cluster participates to an evaluation exercise of the regional council (questionnaire) who performed an evaluation report with recommendations for cluster performance.

Cluster financing

How the public-cluster-policies offer sources of financing/funding of the cluster (for management activities)?	Regional Council gives a financial support for network animation activities of the cluster. Cluster gets also a public funding for the implementation of R&D, technology transfer and innovative technology-based actions for its members. Direct support for PRIDES : Region – EU co-funding (ERDF).
In what percentage and for how long does the public-cluster-policy finance/fund the cluster? Please describe in detail.	Cluster activities are financed 50% of the total budget of the cluster. The sustainability of the cluster and its ability to meet the fixed challenges depends critically today on its ability to achieve enough consulting services in a context of decreasing public funding.

The public-cluster-policies require a kind of self financing capability of the clusters?	CARMA gets public funding for its network animation activities. The private funding is mainly generated from the technological services activity invoiced to companies (chargeable services). The membership fees represent a minimum contribution as a cluster financing sources.
The public-cluster-policies describe new potential sources of income for the clusters, especially in the medium/long term (after 5 initial years)?	The different labels that cluster gets as an institutional recognition to its role in economic development, allows to maintain a diversified source of public funding and thus to be less vulnerable to changes in certain financing conditions. The Cluster plan to increase the volume of the consulting activity and technological services provided to companies and the corresponding gross profit.

Supported activities

Does your public-cluster-policies support training on the cluster management topic? How?	No, there is no such training.
Does the public-cluster-policies encourage R&D PROJECTS at NATIONAL (France, Italy, Austria etc) and EU LEVEL? Describe in detail.	In the frame of the national measures to provide financial support for innovation, the Cluster was established as a Technological Resources Centre from the Research Ministry, for its activities of technological support to industrial firms. This label guarantees the quality of the Cluster's services and ability to answer to companies technological needs. Therefore, this enable to attract more companies to its network. CARMA Cluster gets also a public funding for the implementation of R&D, technology transfer and innovative technology-based actions for its members.
Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc	At a regional level, public innovation support focuses on improving SMEs competitiveness via the funding of applied research projects (APRF). Based on cooperation between research centres, university lab and SMEs - that should be member of the cluster - those projects are approved and coordinated by the Cluster Management Body - CMB. This financial measure was essential to strengthen interactions between CARMA's network and to enhance SMEs innovation activities. Lack of efficient regional public support regarding the funding of R&D projects, in particular long administrative procedures (collaborative applied research project).

What are the expected goals of public-cluster-policies for INNOVATION and R&D? • applied research • basic research • product development • tech transfer • economic competitiveness • industry/R&D bodies	The main goal of the Regional Cluster Policy "PRIDES" is strengthening the overall competitiveness of the SMEs belonging to PRIDES by using 5 growth levers: • Innovation (applied research, tech transfer, R&D collaborative projects) • International activity • Information and Communication Technologies • Training and human resources' management • Sustainable development
Are there different scales of R&D projects funding? Who can be the partners? SMEs, large companies, etc.	Yes, there are financial scales and conditions for collaborative R&D project : • Projects don't exceed 1.5 million of total expenses, with a maximum duration of 36 months and worn by : - SMEs (less than 2000 employees and is not majority owned by one or more large groups) - By research laboratories located in the PACA region • According to their interest and their quality, projects exceeding 1.5 million can be funded after been examined by way of derogation. Other financial measures exist at a national level.
More in detail: does public-cluster-policies fund small feasibility studies (up to 200.000 EUR of expenses)? How? What are the beneficiaries?	The small feasibility studies are more supported from national initiatives, the regional cluster policy join these initiatives with a financial contribution. The main beneficiaries are SMEs. Technological & research centres, universities, large companies can be partners of these small projects.
More in detail: does public-cluster-policies fund bigger R/D projects (above 200.000 of value?) How? What are the beneficiaries?	Yes, especially for collaborative R&D projects (described above): • For companies, a co-funding between the Regional council and national funds for Innovation projects in the form of grants for the Region and advance refundable up to 60% of eligible costs (R & D) from national funds. This limit is reduced to 55% for companies with more than 250 employees. • 50% of eligible expenses incurred by public research laboratories in the form of grant. An additional 40% of eligible costs can be provided by ERDF funds.

More in detail: public-cluster-policies support other different types of R&D projects funding? i. e. different funding programs on FP7, MANUNET, ERANET…	Yes, beside the R&D project related to the cluster programme, the Region Council co- funds other R&D projects: Fp7, MANUNET.
More in detail: how does the cluster support the different types of R&D projects?	The cluster management has a key role especially in the frame of the collaborative applied research projects: project building, networking and identification of the partner companies, research labs, universities, large firms, etc…
Does the public-cluster-policy foresee coordination with other relevant policies? Is there coordination between R&D, training, education, internationalisation, other?	Yes, the PRIDES measure can be described as a new type of policy which combines regional policy with national (poles de compétitivité). For instance the measures related to Innovation, International activity, Information and Communication Technologies , Training and human resources' management and Sustainable development.
How does the incorporation of the relevant stakeholders for R&D projects (funded by the cluster policy schemes) proceed?	Through the cooperative projects. The cluster management body selects the relevant actors for the applied research project from its network. The Cluster cannot take part of the project as a partner.
Who is monitoring the incorporation of the relevant stakeholders for R&D projects?	After the first exchange of the project feasibility with the project leader/ entrepreneur and university experts, the Cluster Management Body (engineers in charge of the R&D project) selects the relevant actors. The regional offices will check the overall respect of rules given by Cluster policies funding schemes.
How does the public-cluster-policy organise calls for projects? Are there open calls or fixed dates for innovation and applied R&D projects?	For the regional support of innovation and applied R&D project, there are no open calls or fixed dates. There is no deadline for the submission of projects.
How long is the waiting time from deposit of the proposal till reply of funding body? PLEASE INDICATE number of weeks or months in average or min and max	Depends on programs and authorities. The waiting time for national program funding is shorter then regional one. For cooperative applied research project in the regional level, the average waiting time is from 8 to 12 months.

Does the public-cluster-policy foresee an EVALUATION body and scheme for R&D projects? How does this work?	The regional authorities use to carry out scientific and and/or techno-economic evaluation of applications. Where appropriate, they organize an interview with project leader/ entrepreneur.
Does the public-cluster-policy foresee an ONGOING MONITORING body and scheme for R&D projects? How does this work?	Yes there is an ongoing monitoring scheme for cooperative R&D projects from the regional authorities. The Cluster management body is involved in the procedure.
Please define the success rate for innovations and applied R&D projects (approximate percentage of approved proposals/total submitted proposals); for this success rate, how much important is the pre-screening activity of the Cluster management body?	Applied R&D projects, in which the cluster body team are involved, have a good successful rate starting from 70%.
Does the public-cluster-policies foresee a specific consulting agency for START-UPS (financing, infrastructure, network, etc.)?	Offering complementary services, the Cluster work closely with university research labs and incubator.
Does the public-cluster-policies foresee a specific consulting agency for RTD?	The activity of the cluster is complementary to the consulting agency.
Does the public-cluster-policies foresee a specific consulting agency for INTERNATIONALISATION?	The regional authorities designed a network of regional stakeholders working in the files of internationalisation. It's a part of the regional innovation network managed by the innovation agency in PACA region.

Evaluation

Does the public-cluster-policy foresee an evaluation/monitoring body and scheme for cluster management? How does this work?	In order to benefit from an external analysis of the regional PRIDES policy with respect to both its challenges and operational implementation, an evaluation process had been implemented in 2010 with the following goals: • to point out best practices • to indentify the weaknesses (governance, strategy, projects) • to propose new orientation (strategy, organisation, mutualisation between clusters). Cluster management body gets a report of evaluation and performance recommendation.

QUESTIONS

Bavaria

General cluster policy concept

What is the main basis for cluster selection/recognition: geographical (regional/national/international), sectorial (application driven), technological driven.	The main basis for cluster selection/ recognition can be described as sector and technology driven. Cluster platforms have to become „anchors“ for the companies in the cluster competence fields.

Governance in the clusters

What actors are called by public-cluster-policies to participate and govern the cluster? (Enterprises, R&D institutions, chamber of commerce, regional government, national government, etc.)?	The initiative is designed to provide special benefit for SME and start-up companies – by the network approach, however, also global players and R&D institutions benefit from the cluster work. Main supporters and stakeholders are SMEs and big companies as well as the local industry associations and the network of Bavarian Universities.
How do politics or regional government influence the cluster strategies?	Politics and regional government give some priorities in terms of type of activities to be performed. The cluster is evaluated according to those priorities, but the cluster and cluster management team is quite free to give its own priorities and to start additional activities if they are requested by members.
How much is the cluster daily work influenced by the owners of your Cluster?	Cluster members do manage the cluster activities by various kinds of boards/ working groups (they can be advisory or technical boards/ working groups).
Is there any impact of decision makers, financing agencies, regional/ local authorities or other stakeholders on everyday routine/activities of the cluster management (and to what extent do they have an impact?)	The clusters, as an initiative supported from the public funds, are supervised by a cluster advisory board (cluster committee), including industry and research. The cluster management agencies regularly provide a full-service business plan for approval by the Bavarian Ministry of Economic Affairs in terms of a grant agreement. Cluster management is entitled to decide on funds utilization subject to ex-post monitoring and approval through the Bavarian Ministry of Economic Affairs.

How does the public-cluster-policy predict the participation of key actors in the development of the cluster strategy?	The shareholders/ shareholders assembly, the advisory board as well as innovative companies significantly influence the development of the strategy of the individual cluster.
Do the public-cluster-policies describe or address some main/important areas for improvement/ optimization of cluster performance (try to describe 3)?	Yes, as follows: 1. Number and importance of initiated innovation projects, especially those with joint involvement of SMEs and R&D institutions 2. Share of own budget and of public funding received from other sources (national, EU) 3. Services offered to members (scope and quality).

Cluster financing

How the public-cluster-policies offer sources of financing/funding of the cluster (for management activities)?	Funding of the cluster (for management activities) is regulated by a grant agreement of the federal state government. Cluster management agencies were granted a total of 39 Mio. for the period 2006 - 2011 and 21.6 Mio. for the period 2012 - 2015. Funding is provided exclusively for cluster management (not R&D projects).
In what percentage and for how long does the public-cluster-policy finance/fund the cluster? Please describe in detail.	The development of funding for cluster management agencies is regressive with the operative target to achieve a self-financing rate of at least 50 % by 2015 and even higher afterwards.
The public-cluster-policies require a kind of self financing capability of the clusters?	A self-financing rate of at least 50 % has to be achieved by 2015. Normally this own share is given by: • Public funding programs (project funding limited in time) • Chargeable services • Other private funding sources, e.g. membership fees
The public-cluster-policies describe new potential sources of income for the clusters, especially in the medium/long term (after 5 initial years)?	There is a general recommendation and, to a certain extent, a requirement defined in the grant regulation that the cluster management activities should progress in the way to be less and less dependent from the federal funding scheme. Also there is a recommendation to make the best use of alternative regional, national and international funding schemes.

Supported activities

Does your public-cluster-policies support training on the cluster management topic? How?	Yes, via regular • strategic and experiences exchange • exchange on know-how about drivers and barriers of cluster management seminars with involvement of policy makers and all cluster agencies' managing directors.
Does the public-cluster-policies encourage R&D PROJECTS at NATIONAL (France, Italy, Austria etc) and EU LEVEL? Describe in detail.	Yes, the cluster policy encourages the international networking and the use of alternative funding schemes.
Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc.	Yes, it encourages R&D projects initiation but doesn't provide any special budget for such projects' implementation. However, there are certain regional funding schemes for R&D topics available. There is a recommendation to make the best use of alternative regional, national and international funding schemes in order to implement particular projects.
What are the expected goals of public-cluster-policies for INNOVATION and R&D? • applied research • basic research • product development • tech transfer • economic competitiveness • industry/R&D bodies	The expected goals of public-cluster policies for innovation and R&D are as follows: • coordination of joint product development activities • realization of pilot projects • management of synergies in research, qualification and marketing • implementation of business development strategies for groups of companies on new, international target markets. The main focus is on intensifying value creation in Bavaria by supporting applied research, market-ready innovation, transfer of existing products into new markets
Are there different scales of R&D projects funding? Who can be the partners? SMEs, large companies, etc.	Not applicable. Funding only for cluster management, not R&D projects.
More in detail: does public-cluster-policies fund small feasibility studies (up to 200.000 EUR of expenses)? How? What are the beneficiaries?	Not applicable. Funding only for cluster management, not R&D projects.

More in detail: does public-cluster-policies fund bigger R/D projects (above 200.000 of value?) How? What are the beneficiaries?	Not applicable. Funding only for cluster management, not R&D projects.
More in detail: public-cluster-policies support other different types of R&D projects funding? i. e. different funding programs on FP7, MANUNET, ERANET…	Not applicable. Funding only for cluster management, not R&D projects.
More in detail: how does the cluster support the different types of R&D projects?	We support project initiation and implementation but do not operate our own project lines (also not on behalf of other organisations).
Does the public-cluster-policy foresee coordination with other relevant policies? Is there coordination between R&D, training, education, internationalisation, other?	Yes, via broad and intensive cooperation with other clusters, innovation agencies, public authorities etc.
How does the incorporation of the relevant stakeholders for R&D projects (funded by the cluster policy schemes) proceed?	Not applicable. Funding only for cluster management, not R&D projects.
Who is monitoring the incorporation of the relevant stakeholders for R&D projects?	Project consortium jointly.
How does the public-cluster-policy organise calls for projects? Are there open calls or fixed dates for innovation and applied R&D projects?	Depending on public calls; the cluster has no own deadlines.
How long is the waiting time from deposit of the proposal till reply of funding body? PLEASE INDICATE number of weeks or months in average or min and max	Not applicable. Funding only for cluster management, not R&D projects.
Does the public-cluster-policy foresee an EVALUATION body and scheme for R&D projects? How does this work?	Not applicable. Funding only for cluster management, not R&D projects.

Does the public-cluster-policy foresee an ONGOING MONITORING body and scheme for R&D projects? How does this work?	Not applicable. Funding only for cluster management, not R&D projects.
Please define the success rate for innovations and applied R&D projects (approximate percentage of approved proposals/total submitted proposals); for this success rate, how much important is the pre-screening activity of the Cluster management body?	Not applicable to funding with respect to Bavarian cluster policy About 70% of the proposals supported by the cluster are approved. The main reason of this relatively high rate is an intensive pre-screening of project conditions. If the project does not seem to be successful, we do not recommend application.
Does the public-cluster-policies foresee a specific consulting agency for START-UPS (financing, infrastructure, network, etc.)?	There is no specific cluster based start-up policy. Yes, through its founders and innovation support infrastructure (business incubators, technology parks, seed-funds) and the federal government's project „Gründer-Agentur“ and “Startup Gründerportal”.
Does the public-cluster-policies foresee a specific consulting agency for RTD?	The Bavarian Research Alliance GmbH is a private company for the support of Bavaria as a centre for science and innovation within the European research area. The Bavarian Research Alliance (BayFOR) is active in four core areas: • EU funding programmes • Bavarian Research Cooperation • International Cooperation • EU Liaison Office in Brussels

Does the public-cluster-policies foresee a specific consulting agency for INTERNATIONALISATION?

There is no single organisation fully covering this topic.
The cluster benefits from:

- Support from Bavarian Ministry of Economic Affairs: access to the network of Bavarian federal representative offices in foreign countries (political support, various support services at the location)
- Embassies of foreign countries as well as the German embassy (political support, support with identification of potential partner organisations)
- Invest in Bavaria (contact to investors interested in starting up a new business or expanding their existing business)
- Bayern International (export-promotion for small and medium-sized Bavarian companies, marketing of Bavaria as a business location)
- Regional management companies/ agencies and regional departments for economic development and inward investments (needs analysis, initiation of contacts).

Evaluation

Does the public-cluster-policy foresee an evaluation/monitoring body and scheme for cluster management?
How does this work?

The cluster is supervised by a cluster committee, including representatives of the Ministry, industry and research. The cluster committee discusses the management reports twice a year.

There have been two ex-post evaluations during the first phase of the cluster policy (2008 and 2010); the second phase will be evaluated in 2014.

The grant agreement includes the following performance indicators, which are regularly evaluated by an external institution:

- share of own budget
- share of public funding received from other sources (national, EU)
- number and importance of initiated innovation projects
- feedback by the cluster members

Evaluation includes an interview with cluster managers, controlling of KPI's, consideration of individual projects and an inquiry of cluster members.

QUESTIONS

Canton Fribourg

General cluster policy concept

What is the main basis for cluster selection/recognition: geographical (regional/national/international), sectorial (application driven), technological driven.	In Switzerland there is no National Cluster policy. There are some clusters created at the regional level. This is the case for the canton of Fribourg. Or clusters were created, starting from the most relevant agglomeration of enterprises and specialization of the regional territory. The cluster is an agglomeration of enterprises operating in the same industrial sector (application driven) or in the same technological sector (technology driven). R&D centres and academia are welcomed partners. The governance is private.

Governance in the clusters

What actors are called by public-cluster-policies to participate and govern the cluster? (Enterprises, R&D institutions, chamber of commerce, regional government, national government, etc.)?	The cluster is a private structure defined as an association.
How do politics or regional government influence the cluster strategies?	Clusters are members of the Science and Technology Center of the Canton of Fribourg (PST-FR). The canton influences the clusters through the PST-FR. The PST-FR finances some back office activities and collaborative projects.
How much is the cluster daily work influenced by the owners of your Cluster?	Less in daily work, more in strategic programs.

Is there any impact of decision makers, financing agencies, regional/ local authorities or other stakeholders on everyday routine/activities of the cluster management (and to what extent do they have an impact?)	As we are member of PST-FR, the regional authorities have an impact on our R&D collaborative projects. However, the daily cluster activity is not affected.
How does the public-cluster-policy predict the participation of key actors in the development of the cluster strategy?	• Board members • Cluster manager • Working group managers • Academic partners.
Do the public-cluster-policies describe or address some main/important areas for improvement/ optimization of cluster performance (try to describe 3)?	If we get additional budget we will improve and increase the training program. Our impact and the R&D projects will keep increasing and our marketing will be more performing.

Cluster financing

How the public-cluster-policies offer sources of financing/funding of the cluster (for management activities)?	At the cluster establishment, 100% of the financing was chargeable services. Now, the cluster is financed by 6% with public funding programs (time limited), 33% by membership fees and 61% by chargeable services.
In what percentage and for how long does the public-cluster-policy finance/fund the cluster? Please describe in detail.	Uniquely based on member fees and chargeable services.
The public-cluster-policies require a kind of self financing capability of the clusters?	At the cluster establishment, 100% of the financing was chargeable services. Now, the cluster is financed by 6% with public funding programs (time limited), 33% by membership fees and 61% by chargeable services.
The public-cluster-policies describe new potential sources of income for the clusters, especially in the medium/long term (after 5 initial years)?	There are some possibilities that the cluster obtain some financing for the period 2014-2015 for its management.

Supported activities

Does your public-cluster-policies support training on the cluster management topic? How?	No
Does the public-cluster-policies encourage R&D PROJECTS at NATIONAL (France, Italy, Austria etc) and EU LEVEL? Describe in detail.	Our partners work on national and EU projects without any implications of our Cluster.
Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc	Yes, we realize R&D collaborative projects with the PST-FR financing.
Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc	What are the expected goals of public-cluster-policies for INNOVATION and R&D? • applied research • basic research • product development • tech transfer • economic competitiveness • industry/R&D bodies One of the most important goals is to improve the productivity and innovation capacity of our members.
Are there different scales of R&D projects funding? Who can be the partners? SMEs, large companies, etc.	No.
More in detail: does public-cluster-policies fund small feasibility studies (up to 200.000 EUR of expenses)? How? What are the beneficiaries?	Feasibility studies and small R&D projects.

More in detail: does public-cluster-policies fund bigger R/D projects (above 200.000 of value?) How? What are the beneficiaries?	Feasibility studies and small R&D projects.
More in detail: public-cluster-policies support other different types of R&D projects funding? i. e. different funding programs on FP7, MANUNET, ERANET…	PST-FR collaborative projects.
More in detail: how does the cluster support the different types of R&D projects?	Not applicable.
Does the public-cluster-policy foresee coordination with other relevant policies? Is there coordination between R&D, training, education, internationalisation, other?	Yes.

How does the incorporation of the relevant stakeholders for R&D projects (funded by the cluster policy schemes) proceed?	Collaborative projects are planned within the cluster innovation group. Once defined, they are proposed to all cluster members. Two or three best projects are then selected by the cluster board and suggested to the « new regional policy committee ». This committee checks the project NRP compatibility. Lastly, the board of the canton of Fribourg Science and Technology Centre (PST-FR) analyzes the project budget and proposed valorisation before making the final decision.
Who is monitoring the incorporation of the relevant stakeholders for R&D projects?	The cluster board is monitoring the project on a scientific level. The PST-FR board is checking the financial follow-up and the valorisation aspects.
How does the public-cluster-policy organise calls for projects? Are there open calls or fixed dates for innovation and applied R&D projects?	Fixed dates for PST-FR collaborative projects.
How long is the waiting time from deposit of the proposal till reply of funding body? PLEASE INDICATE number of weeks or months in average or min and max	2 month for PST-FR collaborative projects.
Does the public-cluster-policy foresee an EVALUATION body and scheme for R&D projects? How does this work?	No.
Does the public-cluster-policy foresee an ONGOING MONITORING body and scheme for R&D projects? How does this work?	No.
Please define the success rate for innovations and applied R&D projects (approximate percentage of approved proposals/total submitted proposals); for this success rate, how much important is the pre-screening activity of the Cluster management body?	50% for PST-FR collaborative projects.

Does the public-cluster-policies foresee a specific consulting agency for START-UPS (financing, infrastructure, network, etc.)?	No.
Does the public-cluster-policies foresee a specific consulting agency for RTD?	No.
Does the public-cluster-policies foresee a specific consulting agency for INTERNATIONALISATION?	No.

Evaluation

Does the public-cluster-policy foresee an evaluation/monitoring body and scheme for cluster management? How does this work?	No.

QUESTIONS

Upper Austria

General cluster policy concept

What is the main basis for cluster selection/recognition: geographical (regional/national/international), sectorial (application driven), technological driven.	Clusters are selected and recognized at Regional level. Regional poles were created, starting from the most relevant agglomeration of enterprises and specialization of the regional territory. The cluster is an agglomeration of enterprises (SMEs should be in good %) operating in the same industrial sector (application driven) or in the same technological sector (technology driven). R&D centres and academia are welcomed partners. The governance is private.

Governance in the clusters

What actors are called by public-cluster-policies to participate and govern the cluster? (Enterprises, R&D institutions, chamber of commerce, regional government, national government, etc.)?	Owners of Clusterland: • 61 % Upper Austrian location and innovation agency • 19,5 % Upper Austrian Chamber of Commerce • 19,5 % Federation of Upper Austrian Industry.
How do politics or regional government influence the cluster strategies?	Less in daily work, strategic programs, financial influence.
How much is the cluster daily work influenced by the owners of your Cluster?	Less in daily work, strategic programs.
Is there any impact of decision makers, financing agencies, regional/ local authorities or other stakeholders on everyday routine/activities of the cluster management (and to what extent do they have an impact?)	Not in daily cluster work, but economic/budget targets, thematically inputs through political programs.

Do the public-cluster-policies describe or address some main/important areas for improvement/ optimization of cluster performance (try to describe 3)?	1. Stable financing 2. Well educated staff 3. Well IT/organizational structure.

Cluster financing

How the public-cluster-policies offer sources of financing/funding of the cluster (for management activities)?	Annual membership fee marketing activities, selling different services to cluster members, regional, national and European projects, financing from Upper Austrian government. Yes it changed since the beginning of the cluster as the financing from Upper Austrian government became less.
In what percentage and for how long does the public-cluster-policy finance/fund the cluster? Please describe in detail.	5 years budget - consistent and conservative planned.
The public-cluster-policies require a kind of self financing capability of the clusters?	Annual membership fee marketing activities, selling different service to cluster members, regional, national and European projects, financing from Upper Austrian government. Yes it changed since the beginning of the cluster as the financing from Upper Austrian government became less
The public-cluster-policies describe new potential sources of income for the clusters, especially in the medium/long term (after 5 initial years)?	Yes - selling more and different additional services i.e. project management, dissemination, special interest groups, platform, etc.

Supported activities

Does your public-cluster-policies support training on the cluster management topic? How?	Yes - strategy programs, target innovation, co-operation and competitiveness in focused industries.
Does the public-cluster-policies encourage R&D PROJECTS at NATIONAL (France, Italy, Austria etc) and EU LEVEL? Describe in detail.	Yes there are several projects on national or international level i.e. ALPlastics, WIINTECH, KnittFRP, F&E_KKTER, CNCB, CMO, etc.

Does the public-cluster-policies encourage R&D projects at REGIONAL (PACA, Rhône Alps, Upper Austria, Piedmont, Bavaria etc) level? Describe in detail: • kind of activity, • specific budget allocated etc	Yes, there are several projects on regional level i.e. cluster co-operation projects. In the last 3 years the following budget has been made available for R&D funding: • EUR 1.9 Mio 2011 • EUR 1.6 Mio 2012 • EUR 1.6 Mio 2013 This totals are for the all innovation clusters Funding 30% of labour costs and external services
What are the expected goals of public-cluster-policies for INNOVATION and R&D? • applied research • basic research • product development • tech transfer • economic competitiveness • industry/R&D bodies	• sustainable increase of competitiveness • bundle of competences • qualification transfer.
Are there different scales of R&D projects funding? Who can be the partners? SMEs, large companies, etc.	Yes - it depends on the program; local (technology or organizational project), national (depends on the size and/or the body of the project participant); international/European (similar to national projects). Partners can be SMEs, LE (only if together with SMEs) and R&D institutes (private/public).
More in detail: does public-cluster-policies fund small feasibility studies (up to 200.000 EUR of expenses)? How? What are the beneficiaries?	Yes, permanent open calls (regional cluster cooperation projects). Max funding is EUR 30.000 per partners for technology projects, funding rate is: 30% for project partners min 3 partners who are cluster-partner. Organizational projects: max funding is EUR 45.000/project; 30% for project partners min 3 partners who are cluster-partner.
More in detail: does public-cluster-policies fund bigger R/D projects (above 200.000 of value)? How? What are the beneficiaries?	There are different national programs with different funding rates for R&D institutes and enterprises, some programs have permanent open calls, some programs have limited open calls.

More in detail: public-cluster-policies support other different types of R&D projects funding? i. e. different funding programs on FP7, MANUNET, ERANET…	Yes - regional funding programs, national funding programs and European/international funding programs.
More in detail: how does the cluster support the different types of R&D projects?	For different projects we offer project management service, dissemination activities, marketing activities, assistance for proposal writing, searching project partner, support at funding search, etc.
Does the public-cluster-policy foresee coordination with other relevant policies? Is there coordination between R&D, training, education, internationalisation, other?	Yes - due to the Upper Austrian Technology and Innovation Company (TMG), Upper Austrian Research and University of Applied Sciences in Upper Austria which form together the innovation Holding Upper Austria => regional level national level => FFG (Austrian Research Promotion Agency) plus several ministries (i.e. economics, innovation, education, etc.)
How does the incorporation of the relevant stakeholders for R&D projects (funded by the cluster policy schemes) proceed?	Cluster co-operation projects: • at least 3 project participants • at least one SME • R&D institutions are welcome as project partners but in the role of external experts • costs eligible for funding: personnel costs, external services, consulting and other costs • funding amounts: 30 % of the costs eligible for funding
Who is monitoring the incorporation of the relevant stakeholders for R&D projects?	(1) project leader/coordinator (2) cluster initiative (3) CATT Innovation Management GmbH (4) regional government
How does the public-cluster-policy organise calls for projects? Are there open calls or fixed dates for innovation and applied R&D projects?	• cluster co-operation projects: open calls • national projects: open calls and fixed dates • international/European projects: fixed calls

How long is the waiting time from deposit of the proposal till reply of funding body? PLEASE INDICATE number of weeks or months in average or min and max.	Cluster co-operation projects: approx. one week from first draft to reply, four to eight weeks from proposal/application to funding agreement. For national projects it depends on the program.
Does the public-cluster-policy foresee an EVALUATION body and scheme for R&D projects? How does this work?	Each program has its own project rules which will be controlled by funding body and additionally by project coordinator (sometimes the cluster initiative).
Does the public-cluster-policy foresee an ONGOING MONITORING body and scheme for R&D projects? How does this work?	Yes, first monitoring (content + financial) done by the cluster, proposal for approval done by sister company CATT, final approval Upper Austrian government.
Please define the success rate for innovations and applied R&D projects (approximate percentage of approved proposals/total submitted proposals); for this success rate, how much important is the pre-screening activity of the Cluster management body?	Approx. 95%.

Does the public-cluster-policies foresee a specific consulting agency for START-UPS (financing, infrastructure, network, etc.)?	Yes, we work very close together with tech2b GmbH - Hightech Incubator.
Does the public-cluster-policies foresee a specific consulting agency for RTD?	Yes, we work very close together with CATT Innovation Management GmbH and Upper Austrian Research GmbH (UAR).
Does the public-cluster-policies foresee a specific consulting agency for INTERNATIONALISATION?	Not really, even if there are some agencies working on this topic, they are not part of the cluster policy initiatives.

Evaluation

Does the public-cluster-policy foresee an evaluation/monitoring body and scheme for cluster management? How does this work?	System of 100 KPI's + regular reports + bi-annual customer satisfaction analysis done by external market research specialists.

SELECTED RESULTS

Examples of green flags (89 %)

• Politics and regional government give some priorities in terms of type of activities to be performed.
The cluster is evaluated according to those priorities, but the cluster and cluster management team is quite free to give its own priorities and to start additional activities if they are requested by members.

• There is a general recommendation that the cluster management activities should progress in the way to be less and less dependent from the Regional funding scheme. Also there is a recommendation to make the best use of alternative funding schemes (not regional)

• The cluster policy encourages the international networking and the use of alternative funding schemes.

• Public-cluster-policy max funding is 20.000 euro per partner, funding rate is: 60% for SE, 50% for ME, 40% for LE, 60% for R&D institutions; max 5 partners (max funding 100.000/project); call opening: call are opened every 3 months; waiting time: 6 months waiting time for evaluation/approval

• There are different national programs with different funding rates for R&D institutes and enterprises, some programs have permanent open calls, some programs have limited open calls.

• System of 100 KPI's + regular reports + bi-annual customer satisfaction analysis done by external market research specialists for evaluation

• The cluster is funded by national government, regional governments, local communities and companies at the same time. The governing body of all the competitiveness clusters in France, is an agency of the national government (DGCIS).

• The financing agencies and public authorities do not intervene in our daily activities directly. They are more implicated in the strategy building, the audit and the funding process. Some of them are members of our committees and influence the planning of our activities. Other stakeholders, especially companies, research centres, and institutional and cluster partners, influence more directly our daily work since we cooperate in different activities.

• The cluster is planning to implement "success fees" on projects submitted by the cluster if funding is achieved.

• Usually, members come to us with project ideas. According to the nature of the project, we help to find partners with the right competencies. In the frame of the workshops, we disseminate the calls for projects. There is no formalized call for partners in a new project.

• There are some agencies at national (Ubifrance) and regional (ERAI, CCI Internationale…) scale in order to help companies in their internationalisation activities. Clusters often work with these agencies.

• The PRIDES (Regional Cluster) is in the heart of the triple helix interactions in the regional level. It aims to support innovation capacity of regional businesses by promoting cooperation among the cluster's enterprises and between the cluster's enterprises and the research laboratories with the role of fostering value creation within the same sector and/or value chain around a collective development project managed by a coordination structure.

• The different labels that cluster gets as an institutional recognition to its role on economic development, allows to maintain a diversified source of public funding and thus to be less vulnerable to changes in certain financing conditions.
The Cluster plans to increase the volume of the activity of consulting and technological services provided to companies and the corresponding gross profit.

• The main goal of the Regional Cluster Policy "PRIDES" is strengthening the overall competitiveness of the SMEs belonging to PRIDES by using 5 growth levers. Innovation (applied research, tech transfer, R&D collaborative projects), International activity, Information and Communication Technologies, Training and human resources' management, Sustainable development.

• CARMA gets public funding for its network animation activities. The private funding is mainly generated from the technological services activity invoiced to companies (chargeable services). The membership fees represent a minimum contribution as a cluster financing sources.

• The cluster management has a key role especially in the frame of the collaborative applied research project: building of projects, networking and identification of the partners companies, research labs, universities, large firms, etc…

• In order to benefit from an external analysis of the regional PRIDES policy with respect to both its challenges and operational implementation, an evaluation process had been implemented in 2010 with the following goals: to point best practices, to indentify the weaknesses (governance, strategy, projects), to propose new orientation (strategy, organisation, mutualisation between clusters); Cluster management body gets a report of evaluation and a performance recommendation.

• The clusters, as an initiative supported from the public funds, are supervised by a cluster advisory board (cluster committee), including, industry and research. The cluster management agencies regularly provide a full-service business plan for approval by the Bavarian Ministry of Economic Affairs in terms of a grant agreement.

• The development of fu nding for cluster management agencies is regressive with the operative target to achieve a self-financing rate of at least 50% by 2015 and even higher afterwards.

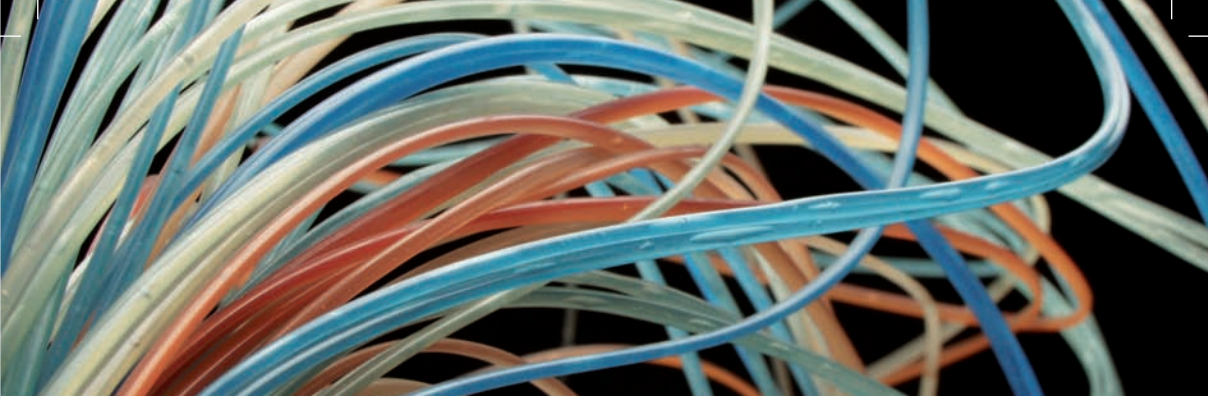
• Funding only for cluster management, not R&D projects

• The cluster is supervised by a cluster committee, including representatives of the Ministry, industry and research. The cluster committee discusses the management reports twice a year. There have been two ex-post evaluations during the first phase of the cluster policy (2008 and 2010); the second phase will be evaluated in 2014. The grant agreement includes the following performance indicators, which are regularly evaluated by an external institution: share of own budget, share of public funding received from other sources (national, EU), number and importance of initiated innovation projects, feedback by the cluster members; evaluation includes an interview with cluster managers, controlling of KPI's, consideration of individual projects and an inquiry of cluster members.

• Advisory board - 3 meetings per year - strategy and evaluation;

• Annual membership fee marketing activities, selling different service to cluster members, regional, national and European projects, financing form Upper Austrian government;

• There are different national programs with different funding rates for R&D institutes and enterprises, some programs have permanent open calls, some programs have limited open calls



Examples of yellow flags (8 %)

- Public Cluster policy don't support training on cluster management or no training is available
- No specific instruments available (funding schemes, etc.) to encourage R&D projects on national/international level
- Decreasing budgets available for R&D funding
- Long waiting time for evaluation/approval of an R&D project funding
- Internationalisation as part of the cluster management but mainly supported by other bodies and funding schemes
- Only fixed calls (no open calls) for regional R&D projects
- Monitoring of R&D projects by cluster only on financial aspects and no scientific monitoring
- No consulting agency for internationalisation available
- No consulting agency for Research Technology and Development (RTD) available
- No international standardised benchmarking methods are used
- The influence of politics and regional government is on a 3 years plan which set the policy of national cluster
- Some cluster have nearly 100% public funding
- Funding for small feasibility study in order to set up a large R&D project (only SMEs have access to this kind of funding)
- Lack of efficient regional public support regarding the funding of R&D projects in particular long administrative procedures (collaborative applied research project)

Examples of red flags (3 %)

- Public funding for cluster management only in the first five initial years
- Public funding for cluster activities (50%) ends within 2014 – discussion is open for the future
- No coordination between R&D, training and education; only "priority" Master courses supported by the cluster with a written letter will be funded by the region
- For cooperative applied research project in the regional level, the average waiting time is from 8 to 12 months.
- The sustainability of the cluster and its ability to meet the fixed challenges depends critically today on its ability to achieve enough consulting services in a context of decreasing public funding.

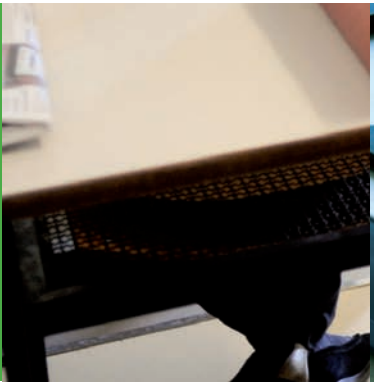
5

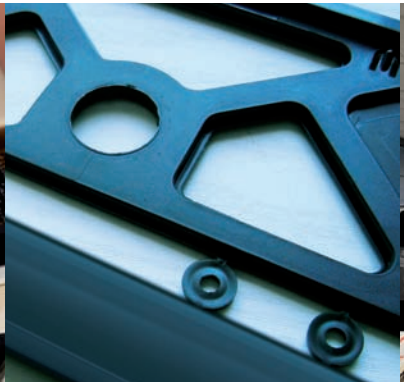
SHORT OVERVIEW ABOUT THE REGIONS INVOLVED

Alpine regions in ALPlastics project

Summary:

- The chapter gives you an overview about the ALPlastics participating regions in the Alpine Space with focus of economic profile and policy.





Author(s)

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REGIONE PIEMONTE

POLITICAL PROFILE OF THE REGION

Piemonte
Una Regione ricca di opportunità/A Region Full of Opportunities

Regional Policy: where we are

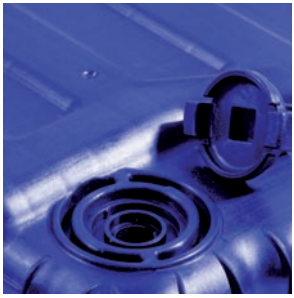
From a policy point of view, Regione Piemonte in 2008, first in Italy, build up its industrial and competitiveness policy around a specific measure, named Innovation Clusters, co-financed by ERDF through the Regional Operational Programme 2007-2013, as a complementary intervention to other additional instruments such as industrial districts and technology platforms.

Whereas industrial districts are characterized by a technology-driven approach and are strongly linked to a specific local area, innovation clusters are designed to operate on a whole regional context and are characterized by an application-driven approach. Innovation clusters are focused on SMEs and support small-medium size R&D projects and high value-added innovative services. Furthermore, technology platforms (Aerospace, Agro-food, Biotech, Automotive, etc.) fund big-size R&D projects through an expression of interest approach (involving a series of major players).

The **main objective of the Innovation clusters** is to support the construction of new production chains and new technological/business opportunities, rather than reinforcing existing capacities in the regional area (refocusing of the industrial competences). For that reason, the measures also provide SMEs with several innovative services dedicated to supporting the above mentioned activities (i.e. introduction of new products/services on the market, design, technology intelligence services, etc.).

12 thematic areas have been identified for the creation of Innovation clusters:

1. Textile,
2. Agro-food industry,
3. Biotech and Biomedicine,
4. Sustainable Chemistry,
5. New materials,
6. Digital creativity and multimedia,
7. Sustainable architecture and Hydrogen,
8. Short chain photovoltaic, bio fuels, biomass,
9. Mini hydro and biomass from breeding farm,
10. Equipment, systems and components for renewable,
11. Information and Communication technology and
12. Mechatronics and advanced production systems.



Up to now the total budget is 120 Millions and funds assigned to the innovation clusters are both for the managing authorities and for the firms participating to the cluster. The managing authorities receive funds to "create" the clusters and to make them run, while the firms receive co-funding for activities related to:

A) (Partnership) projects: R&D projects, product/process innovation projects, user driven projects and preliminary feasibility studies

B) Innovative services (for SMEs only) on open innovation, IPR management, technology intelligence, due diligence and intangibles evaluation, proof of concept, financial and corporate consulting and financial networking mobility between firms and universities/large enterprises, design, innovative start-ups support and introduction of new products/services on the market.

Beside this measure, during the last years, regional policies have been targeted toward the support of the competitiveness and innovation of the industrial and research sectors, with the aim to manage the territorial energetic development, supporting and promoting the energy chain by:

- The "Occupational plan" on 2010 with the aim to facilitate employment for SMEs, de-taxation measures and to simplify credit access.
- The "Competitiveness plan" 2011-2015 aimed to develop smart and clean technology into traditional industrial sectors (Energies, Automotive and Manufacturing)
- The "Internationalisation plan" 2012 a 3 years plan finalised to increase the SMEs international competitiveness through : MULTIVOUCHER for internationalisation services, Integrated chain projects, equity partnership and equity joint venture
- The "Energy plan" 2012-2020 aimed to set up measures and actions to comply with national Burden sharing programme, finalised to meet the Europe 2020 targets.


ECONOMIC PROFILE OF THE REGION

Piemonte is a large region situated in the North-West of Italy, is made of 8 Provinces, counting some 4.5 million inhabitants. Each Province stands out for peculiar industrial clusters, making the Region one of the most vibrant economies of the country.

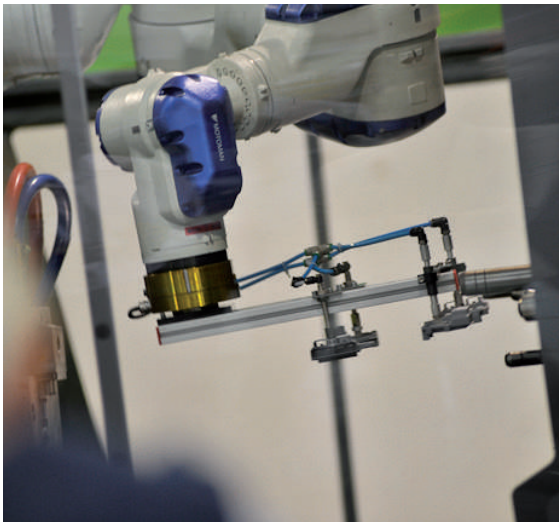
As a matter of facts, out of 6 million businesses based in Italy, more than 467.000 are located in the Piemonte Region. Nearly 90% of local businesses have less than 50 employees and this makes our industrial system extremely flexible in adapting to international economic challenges.

The Regional GDP is 123.4 billion EUR, representing the 8% of the domestic economy. The Region boasts a strong inclination to foreign trade: with its 38.5 billion EUR of exports, Regione Piemonte ranks 4th in Italy.

The overall amount of R&D investments in Piemonte is 2.2 billion Euro (1.8% of the Regional GDP), ranking 3rd in Italy, after Lombary and Lazio. Besides, Piemonte has the highest percentage in Italy for private investments on the total: 76.8%. R&D is strongly supported by a dynamic network of more than 200 Research Centres of international standing and several scientific and technology parks. Last but not least of the key factors of development of Piemonte Region is the emphasis given to training and education, with its two leading university institutions: the University of Torino and the Politecnico of Torino.

The main features of our entrepreneurial system are:

- entrepreneurial system based on SMEs and clusters
- good performances on international markets
- high level of investment in R&D
- emphasis given to training



Thanks to its geographical position, Piemonte is a main gateway to the European market and one of the Italy's most industrialized regions. It can offer to the international markets a wide range of capabilities and a unique ensemble of manufacturing variety.

This is an area of excellence with approximately 400,000 enterprises (out of 5 million all over Italy) organized in clusters, in most sectors covering the complete production cycle. The best example is provided by the automotive industry, other clusters concern ICT, mechanics, aerospace, agriculture and food, textiles, clothing, jewellery, eco-industry, and publishing.

The following 4 sectors: agro food machinery, textile, household manufacturing, and mechatronics represent the 52% of SMEs in the territory and 46% of the labour. The industrial sector in Piemonte is characterised by a dynamic environment for investments, high quality production and well structured production chain but with a low level of internationalisation, with a low propensity to market innovation and outsourcing solutions due to the small enterprises size and demand collapse.
At the same time, the historical vocation for product innovation and receptivity of the whole territory makes Piemonte a promising and competitive area, even if the sustainability of the regional economy depends more and more on the capacity to integrate traditional activities into a broader service system.

RHÔNE ALPS

POLITICAL PROFILE OF THE REGION

The regional economic policy is based on the Stratégie Régional de Développement Economique et d'innovation (SRDEI 2011, 2015), the Regional Strategy of Economic Development and Innovation, voted on February 2011 for 5 years.

In the frame of this strategy, the region aims to focus its action on three structuring strategic axes:

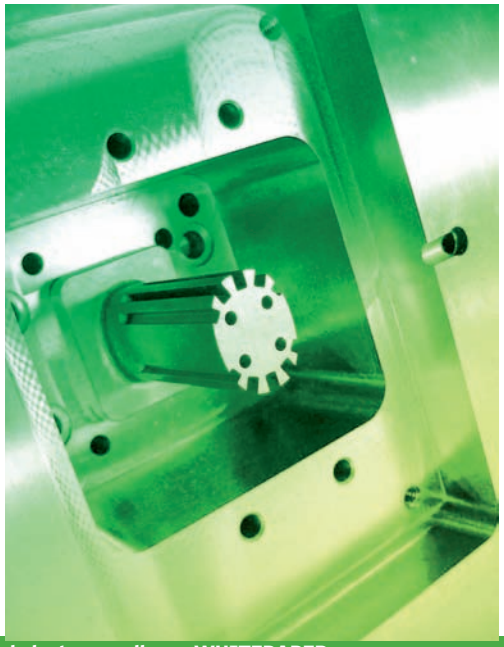
- Support the industrial development and consolidation
- Develop local activities: artisans, commerce, social and solidarity-based economy
- Impulse a solidarity-based economy and create network between territories, in their economic development strategy

Region Rhône-Alpes is presently updating the Regional Innovation Strategy in the framework of structural funds 2014-2020 and will define by the end of 2013 a Regional Innovation Strategy of Smart Specialization, as expected by European Commission.
In addition of these economic measures, the ambition of Rhone Alps region is to keep continue the support of the economic development of territories, thanks to the two contracts: Rhone Alps sustainable development contracts (Contrats de Développement Durable Rhône Alps, CDDRA) and function of urban area and centrality contracts (Contrats de Fonction d Agglomeration et de CentralitÈ, CFAC), through their economy and employment sections

The evolution of the policy of territorial employment education contract (Contrats Territoriaux Emploi Formation, CTEF), shows the regional will to contribute in a more integrated approach between economy, employment and education among territories.

The economy and employment section of the CDDRA and CFAC set up the different levers of the SRDEI, relying on projects and strategies of each territory:

- Anticipate and preserve employment
- Reinforce the support to the company creation
- Galvanize and develop the local economy
- Support and develop SMEs in industrial sectors
- Promote Rhone Alps assets across the world
- Reinforce the position of SMEs in the competitiveness clusters
- Support companies in innovation



ECONOMIC PROFILE OF THE REGION

Rhône Alps is among the largest regions of the European Union, not only in terms of area but also in terms of population and the creation of wealth.
Indeed, with a GDP of 180 billion Euros in 2007 (2nd place nationally), RhÙne Alps produces 9.8% of the wealth of France and 6,113,000 inhabitants or 9,8% of France s total population, the region benefits from powerful assets, such as:

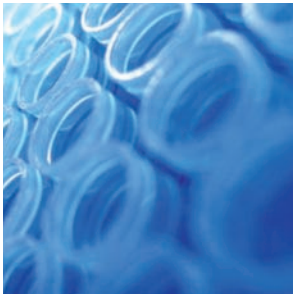
- A strategic position at an European crossroad
- The proximity of significant markets
- A remarkable living environment with a young and active population
- The high educational level of its inhabitants
- Strong potential for research and innovation

Rhône Alps has so a dynamic economy, with:

- 26 clusters in RhÙne-Alpes
- 6th highest GDP in Europe
- 2nd French region for export and foreign investments
- 350,000 companies including 4,650 foreign firms
- The lowest unemployment rate in France: 6.2% (France = 7.2%)

The region has a strong competitive edge in high-tech industries that are often accompanied by advanced research and development activities in sectors such as health, biotechnology, nanotechnology, chemistry, environment, energy, software and digital technology, materials, athletic/outdoor equipment, technical textiles, polymer engineering, etc.

The region s many assets only add to its attractiveness as an investment location: innovation clusters with an international focus, talent pools, and networks of innovative professionals, the vitality of the region s markets, its strategic location and its excellent infrastructures providing excellent access for companies to develop their European markets.


PROVENCE ALPS CÔTE D'AZUR (PACA)

POLITICAL PROFILE OF THE REGION

Regional policy focus:

Provence Alps Côte-d'Azur region has placed innovation at the heart of its economic development policy. Indeed, the diagnostic of the regional economic system (2006) relived the central place of innovation within the economic dynamic and regional strategy. In this context, policy aims to make PACA a socially responsible, a responsive, an international, an enterprising region and a region that learns and innovates.

The region faces the challenge of translating its potential into new products and services, alias economic development. In fact, the technology transfer capacity and the production of patents still stay weak. Further, companies growth constitutes a major defy. The number of middle-sized companies is still too limited. The availability of seed capital, the weak companies' capital structure and the lack of management expertise are the main issues hampering regional firms' growth capacity. International key performance indicators of the regional innovation system are bad in PACA.

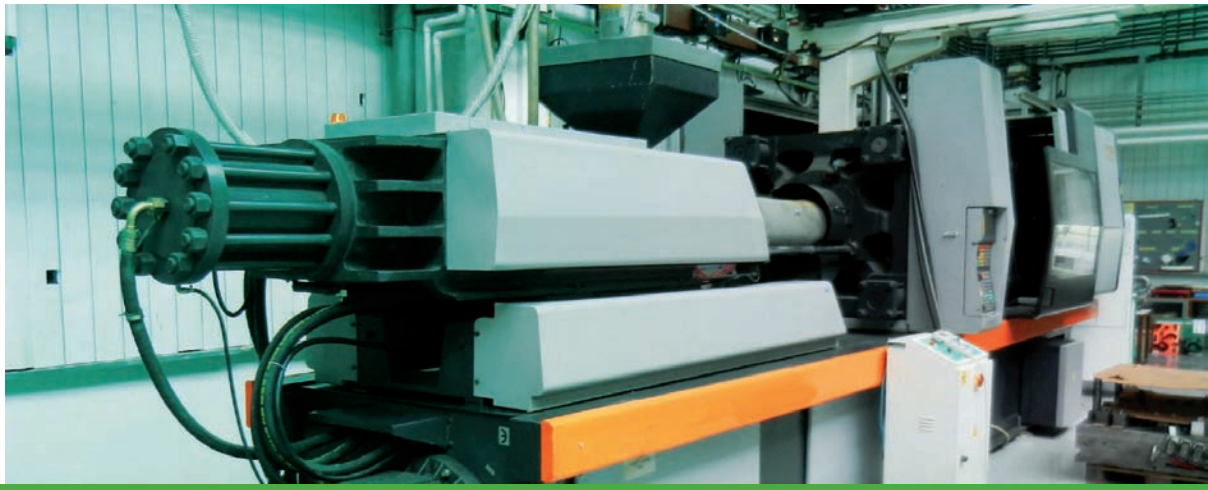
Regional economic policy:

Innovation is the priority of the economic policy of PACA Region; The Region made three strategic plans that take into account innovation: one about economic development (2006), the second about innovation strategy (2009) and the third about international development (2011).

The innovation policy approach is systemic oriented policy based on the development of a network-based economy and the main priorities of this policy are:

- Support, strengthen and foster cooperation between companies, but also between companies and research.
- Reinforce and improve the cooperation between institutional players, such as to obtain a better organization and articulation of the support and services provided, as well as to ameliorate interface with the private sector.
- Encourage and support the international development and visibility of the innovation stakeholders and clusters.
- Anticipate economic changes.

The PACA region invests many resources in the development and support of the networks of innovation.



Title of the measure or initiative:

PRIDES - PRIDES - Regional Clusters of Innovation and Economic Development

Objectives:

- Support networking with stakeholders in the region,
- Encourage traditional SMEs to acquire new technologies and to engage in innovation,
- Develop innovating firms and to identify potential innovation projects by means of collaboration between the private sector and research organizations,
- Organize events focusing on innovation.

Policy area: Innovation policy

Main instruments and structure:
Create a single entry point for support for innovation (by the PRIDES) and for networking between research laboratories and small and medium-sized enterprises in the region.

Main beneficiaries/target group:
Firms (small and medium-sized enterprises), research centers and educational establishments

PRIDES an effective policy measure:

This initiative supports the development of a network-based economy, by urging businesses (SMEs and micro businesses) to change from logic of individual development to cooperative network logic. It provides incentives for different stakeholders in the region to collaborate and network and to develop a common vision and projects.
The objectives of collaboration between regional stakeholders are to focus on technologies oriented towards markets with sustainable growth potential and to join forces in order to create employment. This measure can be described as a new type of policy which combines regional planning, innovation and industry.

ECONOMIC PROFILE OF THE REGION

With a unique geo-strategic position in the arch of the Mediterranean, PACA is the third region in France in terms of GDP (138 billion EUR) and the 17th in Europe.

Despite its high productivity (26th in Europe), the region records one of the highest unemployment rates in France (about 11%).

PACA economy is a rather mosaic one with a number of different economic sectors ranging from the Aeronautic industry and microelectronics to agriculture. However, the service sector is the strongest one, accounting for 80% of regional firms.

Highly attractive for foreign capital, PACA hosts 1100 foreign controlled companies, which entails a strong economic dependency: 33% of companies settled in PACA have their headquarters located abroad.

Another peculiarity of PACA economic profile is provided by the extremely significant level of Very Small Enterprises (94% of total companies), while less that 1% of companies employ more than 500 people.

Two of the largest metropolitan centers in France are situated in PACA, Marseilles/ Aix-en-Provence (1.3 million of inhabitants) and Nice (0.9 million of inhabitants), bipolarizing the local economic activities.

PACA, with its 6 Universities, a wide number of laboratories (INSERM, CNRS, INRIA, INRA, CEA, etc) and 15 000 researchers (distributes 50% in the private and 50% in the public sector) is the 3rd region in France for R&D staff and the 4th in terms of public- private expenditure (2247 million EUR in 2004).

Wealt in PACA

Key statistics*

- Regional GDP: 138 ¤
- 3rd ranking nationally
- GDP per job:73.8 K¤ - 2nd ranking nationally
- Growth: + 1.9% between 2007 and 2009 - 3 times greater than national growth
- 15th regional ranking out of the 271 regions in the EU - in value
- Regional added value: 124.5 billion euros of which 71.1% in the service sector

Cultural economy in PACA

Key statistics*

- Nearly 60.000 jobs, 10.000 in the public sector
- 3rd largest region for worker in the field of culture, 2nd for sponsorship
- The 3 mayor sectors:
  - · crafts, 1th ranking nationally (17.000 craftsman)
  - · performance and street art (11.000 jobs),
  - · heritage (7.000)
- 2nd ranking nationally for the number of performers
- 2nd for number of part-time performers
- 2nd area nationally for cinema/audiovisual film-making and hosting foreign films
- 2nd area nationally for production of images and sound
- 2,97 billion euros in receipts from history tourism

** Source: Panorama de l'economie culturelle MDER - 2000*

PRIDES: Facts & Figures

- 29 officially approved PRIDES clusters between 2006 and 2009 (7 "Industry", 9 "Clean-tech/green tech", 7 "services", 6 "Culture"),
- 4430 members (90% are enterprises),
- 90% SMEs (under 250 employees) account for 45% of jobs,
- 170 000 distinct regional jobs,
- 11 competitiveness cluster,
- 506 collaborative R&D projects (2009-2011)
- 50% micro businesses with under 11 employees,
- 90% of establishments are members of an only one PRIDES.

BAVARIA

POLITICAL PROFILE OF THE REGION

Groundbreaking Bavaria

The Bavarian government reinvested 4.2 billion Euros from privatization into the modernization of economy, state and society. This took place under two economic initiatives in the fields of high-tech centers and cluster networks. In doing so, Bavaria has systematically boosted its competences in future technology areas such as information and communication technology (ICT), life sciences, new materials, mechatronics, energy and environmental technology as well as nanotechnology. General goals of the economic policy cover

1. Promoting new businesses
2. Further internationalization of science and economy
3. Increasing the quality of our educational system

Regional economic policy:

The Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology defines its initiatives into the four blocks:

" Future oriented initiative
" Landmark initiative
" SME initiative
" Others

As far as the Future-oriented initiative is concerned:

With a new strategy called "Aufschwung Bayern" (Bavarian breakup"), the Bavarian government gives new, strong and trend-setting incentives for yet higher innovation and investment dynamics. It specially focuses on regional technology development initiatives, new materials and raw materials supply, information technology and security, as well as energy and mobility.

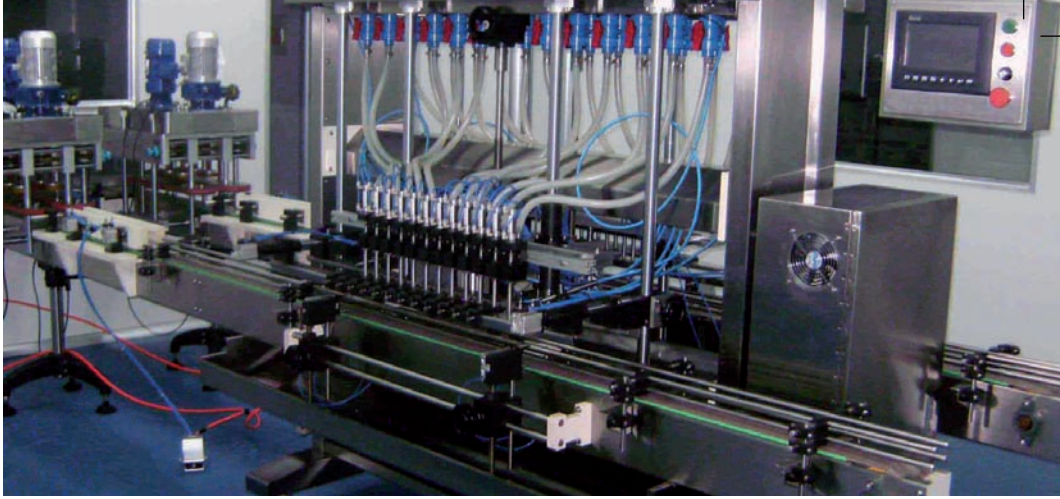
In order to foster the development of innovative products Made in Bavaria , a broad portfolio of public-private support mechanisms has been established, among which the Bavarian Research Alliance (BayFOR) and the Bavarian Cluster Initiative (Cluster-Offensive Bayern) play a special role. Being part of the so-called House of Research , BayFOR is a cross-sectional service provider to support and coordinate joint R&D projects of companies and universities with a European background. Together, these players create a modern quadruple helix approach of politics, cluster members, the network of Bavarian Universities (as a major shareholder of BayFOR) and an overall social commitment to the region of Bavaria.

Electromobility, Energy Innovative and Digital Bavaria round up the profile of the Future-oriented initiative block.

As far as the SME initiative is concerned:

SME initiative combines measures focused on setting up business, ensuring the availability of qualified workforce and companies succession, establishment of innovation support schemes.

Private and public investments in Bavaria are characterized through investing a larger proportion of the gross domestic product in research and development than actors in many other states. This puts Bavaria in a leading international position.



The Free State of Bavaria invests in an efficient educational system as the basis for economic success and an innovative society worth living. Education and training are the highest line items of Bavaria s state expenditures. Bavaria's many universities are training the next generation of highly-qualified academics for a wide range of sectors and companies. The dual apprenticeship system consisting of both practical experiences in a company and school-based training also provides more staff for the future.

Title of the measure or initiative - Bavaria Cluster Offensive

Objectives:
The Cluster Strategy Bavaria, an initiative of the Bavarian federal state government, aims at expanding and strengthening statewide networks between companies, universities, research institutes, but also between service providers and financiers in 19 key sectors and technology areas. The initiative is to strengthen competitiveness of Bavaria and further boost its existing benefits as a business location.

Policy area:
Regional economic policy

Main beneficiaries/target group:
The beneficiaries of the measure are big companies, SMEs and R&D institutions in 19 key (automotive, railway technology, logistics, aerospace, new materials, chemistry, nano-, bio-, medical, energy, environmental, sensor technologies, forestry and wood, food, ICT, power electronics, mechatronics and automation, financial services and media) and related sectors and technology areas, whereas SMEs are considered the main beneficiaries.

Achievements or failures:
The cluster strategy has achieved a major broad impact in Bavaria's economy: in the meantime, some 6,000 companies, the overwhelming majority of which being medium-sized enterprises, regularly participate in the clusters' activities. In addition, the individual cluster teams have held more than 1,500 events since the start of the initiative. Through over 500 single projects under implementation, the cluster combines several SMEs, global players and research institutions to one strong and efficient network. Bavarian technology clusters secure fast transfer of knowledge and help to make research available so that everyone can benefit.

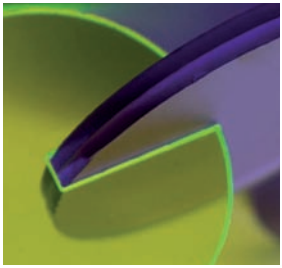
ECONOMIC PROFILE OF THE REGION

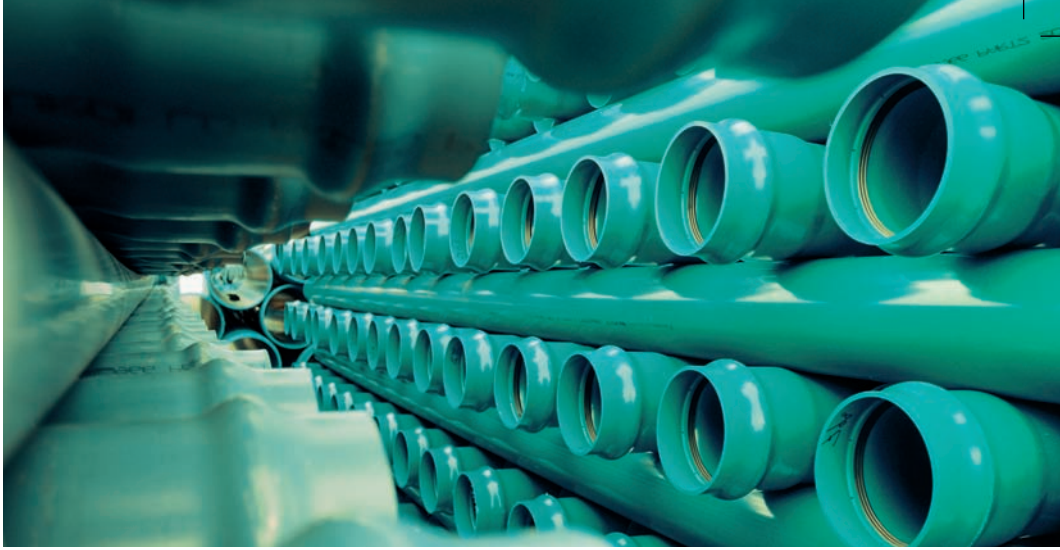
Bavaria is the largest of the German Federal States. As a region, it ranks second in terms of population and has a GDP well above the EU average. Bavaria s gross domestic product of EUR 446 billion puts it ahead of 19 of the 27 EU member states. The economic output per resident is also far above the German and European average (2011), at EUR 35,545.

As a globally active market, Bavaria is home not only to global players such as Adidas, Allianz, Audi, BMW, EADS, MAN and Siemens, but also to a strong basis of small and medium-sized businesses in industry, trades and the service sector.

Bavaria enjoys an outstanding position in many fields:

- Bavaria holds top positions nationally and internationally in almost all new technologies
- The Free State is the number one location in Germany for insurance and number two for banking
- Bavaria is number one in Germany for tourism
- The two trade fair centers in Munich and Nuremberg are of great international significance
- Bavaria offers optimum provision in the fields of transportation, telecommunications and energy
- High standards in education and further training and intensive promotion of research and technology have contributed to Bavaria achieving top values in international comparisons when it comes to spending on research and development, at 3 per cent of gross domestic product.





The Free State of Bavaria has a differentiated network of internationally-renowned universities, non-university research institutions, company facilities and associations, which has evolved over time.

Bavaria's university landscape is an efficient and varied pillar of research and development and provides stimulus for innovation. Nine state universities (including the elite LMU Munich and Technical University Munich), 24 universities of applied sciences, and large numbers of private institutes educate the next generation and open up interesting opportunities for cooperation for innovative companies from every sector.

Renowned research and scientific institutions such as the Max Planck Society, the German Aerospace Center, the Fraunhofer-Gesellschaft and Institutes, as well as the Helmholtz and Leibniz Associations, are driving forces in their sectors worldwide and attract scientists from a wide range of different fields of interest.[12]

1) Invest in Bavaria http://www.invest-in-bavaria.com/en/advantage-bavaria/economic-data.html
2) Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology http://www.stmwivt.bayern.de/initiativen/

CANTON FRIBOURG

POLITICAL PROFILE OF THE REGION

Federal Department of Foreign Affairs, General Secretariat GS-FDFA, Switzerland in its diversity.

Switzerland is a nation composed of several ethnic groups with four national languages (German 64%, French 20%, Italian 6%, Rumantsch 0.5%). It has been a state since 1848. Switzerland is a federal state organized in three political levels, the municipalities (2551 in 2011), the cantons (20 full and 6 half-cantons) and the Federal government. The cantons and the municipalities are largely autonomous. Every canton has its own constitution, laws, parliament and courts. Both the cantons and municipalities have full responsibility for certain policy areas. For example, the cantons are in charge of education and the police, while the municipalities are in charge of welfare services. This decentralised division of power and the attempt to solve issues at the lowest possible level – known as the subsidiary principle – are the cornerstones of the Swiss Confederation and ensure that the government remains as close as possible to the people.

Switzerland – a research nation

Every year, Switzerland invests about 16 billion Swiss francs – or 3 per cent of its gross domestic product (GDP) – into research. A great deal of research is also carried out abroad. In fact, Swiss firms spend more on research abroad than on research within Switzerland. Most research is conducted in growth industries such as biotechnology, pharmaceuticals, chemicals, environmental and medical technology, as well as in information and communications technology.

University-based research tends to specialize in the natural sciences, chiefly chemistry, physics and medicine, as well as in micro- and nanotechnology. The Federal Institutes of Technology in Zurich and Lausanne have earned international renown for their scientific research. Switzerland is also the home of another European leading research institute: The Paul Scherrer Institute (PSI) in the canton of Aargau. Switzerland is also the home of two major European research centers: CERN in Geneva and IBM in Rüschlikon.

The Swiss National Science Foundation, created in 1952, promotes and sponsor scientific research. The SNSF backs researchers in a range of different fields. It divides its support into four major divisions: Humanities and Social Sciences; Mathematics, Natural and Engineering Sciences; Biology and Medicine, plus the National Research Programs division, which sponsors interdisciplinary studies on subjects of national interest.

The Commission for Technology and Innovation (CTI) is the Swiss Confederation's agency for the promotion of innovation. For over 60 years, it has encouraged the transfer of knowledge and technology between the private sector and higher education institutions. The CTI supports the development and use of new technologies. It helps dynamic companies and researchers at higher education institutions to work together on research and development projects. CTI services range from action programs in the field of micro- and nanotechnologies to assistance with the creation of high-tech companies. CTI services are particularly designed to satisfy the needs of small and medium-sized enterprises[3].

Regional policy

The Swiss Confederation supports the mountain regions, rural areas and the cross-border regions through the New Regional Policy (NRP) in order to help controlling structural changes. The NRP must allow the improvement of the framework conditions for the economic activities, to promote innovation, to generate added value and to improve competitiveness in the eligible regions. Therefore, the NRP provides a contribution to the creation of jobs and safeguard to the existing ones in these regions. This also indirectly contributes to decentralized occupation of the territory as well as reducing regional disparities.

The promotion of cross-border, cross-regional and inter-regional cooperation in the scope of the European territorial cooperation (CTE/ European territorial cooperation) is also part of the NRP. The implementation of the NRP is managed at a federal level from the Federal Office for Spatial Development (ARE) of the State Secretariat for Economic Affairs (SECO).[4]

Cluster policy[5]

The Federal Council hasn't decided to set up any national policy for clusters. A top-down approach would be similar to an industrial policy and would be discriminatory at an economic policy and innovation level. Other sectorial policies do exist with the aim to strengthen Swiss economic activities with a special focus on issues covered by a cluster policy. These efforts are made in several domains such as research and training, professional training, innovation promotion and policy in favor of SMEs, but also measures that have the goal to promote our country abroad or those applied in the scope of the NPR. Regional development policies have been set within the framework of the NPR.

ECONOMIC PROFILE OF THE REGION

"Switzerland is a prosperous and modern market economy with low unemployment, a highly skilled labor force, and a per capita GDP among the highest in the world. Switzerland's economy benefits from a highly developed service sector, led by financial services, and a manufacturing industry that specializes in high-technology, knowledge-based production. Its economic and political stability, transparent legal system, exceptional infrastructure, efficient capital markets, and low corporate tax rates also make Switzerland one of the world's most competitive economies. The Swiss have brought their economic practices largely into conformity with the EU's, to enhance their international competitiveness, but some trade protectionism remains, particularly for its small agricultural sector. The fate of the Swiss economy is tightly linked to that of its neighbors in the euro zone, which purchases half of all Swiss exports. The global financial crisis of 2008 and resulting economic downturn in 2009 stalled export demand and put Switzerland in a recession. The Swiss National Bank (SNB) during this period effectively implemented a zero-interest rate policy to boost the economy as well as prevent appreciation of the franc, and Switzerland's economy recovered in 2010 with 3.0% growth".[6]

Figures

Inhabitants 2011	***7.954.692***	***Plastic Industry in Switzerland***			
Area km2	*41.285*	*Economic Data 2011*	*kCHF*	*Companies*	*Collaborators*
Maximum distances km	*N-S 220 W-E 348*	*Raw Material Suppliers*	*2.970.796*	*65*	*835*
Labor force 2012 est. million	*4.91*	*Retail*	*1.167.865*	*144*	*2412*
Labor force – by occupation 2011	*Agriculture 4% Industry 24% Service 72%*	*Processor*	*10.206.974*	*447*	*28.163*
Unemployment rate March 2013	*3.2%*	*Machines and peripheries*	*813.500*	*60*	*1.540*
GDP (purchasing power parity) 2012	*$ 362.4 billion*	*Service businesses*	*44.628*	*35*	*231*
Real growth rate 2012	*0:8%*	*Mold maker*	*211.671*	*54*	*987*
GDP per capita 2012	*$ 45.300*	*Businesses use*	*43.618*	*14*	*989*
Exports 2012 est.	*$ 298,3 billion*	*Remaining*	*69.253*	*31*	*264*
Exports - commodities	*Machinery, chemicals, metal, wathces, agricultural products*	*Total*	*15.528.305*	*850*	*34.530*
Exports – partners 2011	*Germany 20.2% US 10.3% France 7.1% UK 4.8% China 4.3%*	*Export of half and finish plastic products (in Mio CHF)*	*3.050.000*		
Patent application 2010	*2.263*				

3) State Secretariat for Education Research and Innovation (SERI): http://www.sbfi.admin.ch/themen/01367/index.html?lang=en
4) RegioSuisse: http://www.regiosuisse.ch/politique-regionale-ch/politique-regionale-intro?set_language=fr
5) Rapport du Conseil fédéral en éxécution du postulat Rey, Les clusters dans la promotion économique, Mars 2010
6) Index Mundi: http://www.indexmundi.com/switzerland/economy_profile.html
7) KS : http://www.kunststoff-schweiz.ch/

UPPER AUSTRIA

POLITICAL PROFILE OF THE REGION

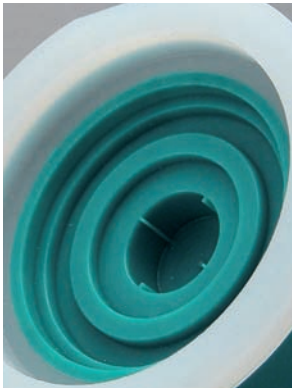
The Strategic Economic and Research Program "Innovative Upper Austria 2010plus"
The formation of clusters and networks between enterprises and R&D institutions has in all regions proven to be an effective means of enhancing regional competitiveness. The aim is thereby to enhance the current economic and technological potential with the help of co-operations between enterprises and institutions and high-quality branch-specific innovation services. In Upper Austria nine cluster initiatives (in the fields of automobiles, plastics, furniture and wood construction, foods, eco-energy, health technology, mechatronics, IT and environmental technology) and four thematic networks between different branches (in the areas of human resources, logistics, design & media and energy efficiency) have been created.

Their further development is a primary concern for the years ahead, whereby it is intended to continue to promote the internationalization of the location Upper Austria by networking with other cluster initiatives at a European level.

The innovation services of the Upper Austrian cluster initiatives should be further developed with the aim of enhancing the competitiveness and innovative energy of Upper Austrian enterprises according to their slogan "innovation through co-operation". Services should have precise purposes, be efficient and be available on a long-term basis.

Strategic guiding principles

1. Networks enhance, accelerate and internationalize innovation activities. For that reason the collaboration in the form of networks will continue to be an important strategic focus of the State of Upper Austria.
2. Cluster initiatives are firmly established in the state. The next step is to further develop the innovation services of the clusters and to promote their networking with other cluster initiatives at a European level. The clusters must be periodically evaluated and, if necessary, reconsidered and possibly terminated.
3. The economic productivity of Upper Austrian enterprises has to be further enhanced by thematic networks between different branches.
4. In their efforts to break into new markets, small and medium-sized businesses should be supported by networking with large, internationally experienced firms and by international co-operations.


Further development of the Upper Austrian clusters and networks

As a result of the current economic development the importance of collaboration and cooperation between firms and between businesses and research institutions will continue to increase. Therefore Upper Austrian cluster initiatives should undergo further development, and, most important, their offers of services should be expanded. Besides, their increased networking with other cluster initiatives and networks at a European level should be promoted.

The cluster initiatives should be converted into genuine „competence centers for cooperative efforts" in the individual fields. Clusters and networks should be perceived as leaders in respect to the innovation-related success criteria in the individual topic areas. The enhancement of cluster activities should also entail a greater focus upon educational measures; that means an intensification of training, advanced professional education and further education in the individual branches.

Direct subsidies for innovative cooperation projects within the framework of the Upper Austrian cluster and network initiatives should continue to be provided for enterprises which take part in innovative cooperation projects in the coming years. In that way the R&D quotas will be directly elevated. Besides, the innovative potential of Upper Austrian businesses will be enhanced by the increased R&D activity in the enterprises, leading to an improvement in their international competitiveness. Especially for small and medium-sized enterprises direct subsidies for co-operations is an effective means of attaining an improved position on the market and promoting R&D projects at a national and a European level. Direct subsidies contribute to the dynamisation of economic structures; when they are provided, long-term developmental partnerships arise.

Dynamic Upper Austria

Upper Austria is THE nation s leading federal province with regard to industry, exports and technology. Roughly a quarter of Austrian industrial production and exports come from the region. Upper Austria is thus the no.1 among the country s nine federal provinces and numbers among Europe s most modern and competitive industrial regions.

Upper Austria is situated in the heart of Europe and with an area of 12,000 km≤ and 1.4 inhabitants, is Austria s third largest federal province. Upper Austria s central position in Europe, immediate proximity to Germany and the Czech Republic and highly developed transport infrastructure with a combination of roads, railways and waterways, make it a top Central European location. Indeed, as a result of its ideal geographic position and excellent transport networks, Upper Austria is a preferred logistics centre. Leading national and international trading and transport companies, as well as suppliers of logistical services, are all found in the triangle formed by the city of Linz and the towns of Wels and Steyr along the north-south and west-east routes across Europe.

UPPER AUSTRIA IN FIGURES 2009

Upper Austria	National %	Ranking[1]
Inhabitants		
1.408.670	17.1	3.
Area		
12.000 km²	14	3.
Employed persons		
595.966	17.7	2.
Industrial workers		
99.692	24.9	1.
Exports[2]		
€ 23.4 Mrd.	27.5	1.

Upper Austria	Austria	Ranking[1]
Unemployment rate		
4.9 %	7.2 %	1.
Patent applications		
588 (26 % of Austria)	2.298	1.
Patent registrations		
322 (29.2 % of Austria)	1.104	1.

1) Among Austria's nine federal provinces
2) Export statistics for 2008

Upper Austria is the nation s leading export region with over a quarter of Austrian foreign trade. Upper Austrian companies already obtain 60 percent of their sales revenues in international markets and the Upper Austria export sector is particularly strong in the production area (machinery, mechanical equipment, engines, iron and steel and automotive industry components). This fact underlines the major significance of Upper Austria as a production location.

Upper Austria as a plastics industry location

The Upper Austrian plastics branch is a highly promising economic sector, possessing both traditions and international standing. Some 220 companies with a workforce of 34,000 have sale revenues in excess of EUR 6.7 billion. In order to secure ideal conditions for plastics companies in Upper Austria all the important players such as the Upper Austrian government, the Upper Austrian Technology and Marketing Company, the Johannes Kepler University Linz, the Upper Austrian University for Applied Sciences, the Plastics Cluster, the Plastics Technology Transfer Centre, as well as respected international companies including Borealis and Greiner Bio-One work closely together. Moreover, the location conditions for the plastics branch have been further optimized by means of coordinated investments in research infrastructure and educational possibilities in line with the wishes of business and industry. The Upper Austrian Innovation Network incorporates research, educational and innovative institutions.

Annex 1: **ALPlastics** | Questionnaire SMEs

Dear partners and partecipants,

Tank you for visit ALPlastics questionnaire.

This questionnaire will allow us to propose a mapping on Alpine space regarding the polymer industry, in order to understand how to enhance the activity of this area and its polymer industry.

This will serve as a SWOT analysis of the SME's regardingTechnology Tranfert, Human Resources Competences and R&D needs capabilities.

This questionnaire is anonymous and information collected will be used for purpose of the project only.

You might be contacted again by the ALPlastics team in order to get additional information or keep you posted (newsletter, events...).

Your contriboutin will be very helpful to set the competences mapping which is the final goal of the project.

This are 41 questions in this survey

Company Profil

1 [Co.1]

Name of the company

Please write your answer here:

2 [Co.2]

Country

Please choose only one of the following:

- ○ Austria
- ○ France
- ○ Germany
- ○ Italy
- ○ Switzerland

3 [Co.3]

Region

Please write your answer here:

Region in affiliation country of the company, e.g. Rhônes Alpes, Piedmont, Bavaria ...

4 [Co.4]

Company size (number of employees)

Please choose **only one** of the following:

- ○ <10
- ○ 10 to 50
- ○ 50 to 250
- ○ >250

5 [Co.5]

Annual Turnover (in million of euros)

Please choose **only one** of the following:

- ○ <10
- ○ 10 to 50
- ○ 50 to 250
- ○ >250

6 [Co.6]

Evolution of turnover: Percentage of growth

Please write your answer here:

Average annual growth (% growth/year) of the last 2 years. A rough estimate is acceptable.

7 [Co.7]

Type of activities

Please choose all that apply:

- ○ Chemistry
- ○ Raw Materials
- ○ Compounder
- ○ Material Converter
- ○ Equipment/Machinery Producer
- ○ Mold Maker
- ○ Finish/Assembly
- ○ Engineering/Service Activities
- ○ Other:

For this question, check each box for each company activities, it's possible to have several answers

Market portfolio

8 [Ma.1]

Market shares

Please choose the appropiate respons for each item:

	0%	1 to 5%	6 to 25%	26 to 50%	51 to 75%	76 to 100%
Automotive & Trasportation	○	○	○	○	○	○
Electric & Electronics	○	○	○	○	○	○
Furniture	○	○	○	○	○	○
Other consumer goods	○	○	○	○	○	○
Food industry & Packaging	○	○	○	○	○	○
Building and Construction	○	○	○	○	○	○
Aerospace	○	○	○	○	○	○
Defence & Security	○	○	○	○	○	○
Healtcare & Medical	○	○	○	○	○	○
Industrial equipment	○	○	○	○	○	○
IT	○	○	○	○	○	○

For this question, check each box for each company market, it's possible to have several answers

9 [Ma.2]

Comment your answer and add alternative market if needed

Please write answer here:

10 [Ma.3]

Level of dependence with main clients

Please choose **only one** of the following:

- ○ High dependence (main part of your turover)
- ○ Average dependence (main part of your turnover)
- ○ Low dependance (turnover mixed with different customers)

For this question, the way to differentiate the answer is respectively:

- less than 10% customer have 80% turnover or 1 of few customers generating more than 75% of turnover
- about 20% of customer generate 80% or more than 75% of turnover
- more than 40% of customers generate more 80% turnover

The goal is to understand if the company has mainly one big customer, wich represent a big part of its turnover or if it work several customer, wich represent a well balance part of its turnover

11 [Ma.4]

Do you need to be more informed about your market nationally and internationally?

Please choose **only one** of the following:

- ○ Yes
- ○ No

Make a comment on your choice here:

The goal in this question is to get the real feeling of the company about the information available on its markets:
what kind of information is needed, what lack does it find in the available information, where the company wants to find this information

12 [Inter.1]

What are your export market share (export, license...)?

Please choose **only one** of the following:

- ○ 0%
- ○ 1 to 5%
- ○ 6 to 25%
- ○ 26 to 50%
- ○ 51 to 75%
- ○ 76 to 100%

It's the percentage of the global turnover

13 [Inter.2]

To what markets do you export

Please choose **only one** of the following:

- ○ Alpine space (Austria, France, Germany, Italy, Switzeland)
- ○ Europe in general
- ○ Outside Europe

Mark if yes

14 [Inter.3]

What kind of international partners and explain why (and who if yes)?

Please choose **all** that apply:

- ○ None
- ○ Customer
- ○ Supplier
- ○ R&D Partner
- ○ Other: _____

15 [Inter.4]

Do you want to find new international partner and explain why (and who if yes)?

Please choose **all** that apply:

- ○ Yes
- ○ No

Make a comment on your choice here:

In this question, the company can explain who and why, but also how the company will do that, if a help is needed...

16 [Inter.5]

What are the main barrier to your international expansion?

Please write your answer here:

17 [Tec.1]

What type of know-how do you have in your company? (mark if yes)

Please choose all that apply and provide a comment:

- ○ Protected know-how (is it patented or licensed and how many)
- ○ Technological know-how, internal unprotected IP (describe your know-how)

The goal is to understand if the company has specific know-how. We don't need to know this know-how, but only to know they exist (expecially for the unprotected know how)

18 [Tec.2]

Which of the following best describe your positioning?

Please choose the appropiate response for each item:

	Yes	No
Volume & cost driven	○	○
Technology driven	○	○
Differentiation via the service	○	○
The design or the functionality	○	○
Differentation via own product	○	○

19 [Tec.3]

What is the position of your company about IP (do you have something to add about IP issues in your company?)

Please write your answer here:

The goal is to understand the position of the company on IP management,
if they are against IP system (licenze, patent) and they have bad or good experience with IP

Industrial Performance

20 [Indu.1]

Do you use quality management system?

Please choose **only one** of the following:

- ○ Yes
- ○ No

e.g. specific quality system (health care, food ...), Total Quality Management (TQM)...

21 [Indu.2]

Do you use productivity management system?

Please choose **only one** of the following:

- ○ Yes
- ○ No

e.g. lean management, total productive maintenance (TPM), 5S system, Kanban

22 [Indu.3]

Do you have certificatio? (quality, management system...).
If yes precise which certifications

Please choose **only one** of the following:

- ○ Yes
- ○ No

Make a comment on your choice here:

e.g. ISO, BRC

23 [Indu.4]

Do you see regulation as barriers for your company?

Please write your answer here:

The goal is to understand if regulations (e.g. REACH) or certification (national, European or international) fit well to the company, why they apply it or why not, and how they represent barriers for the company. Get all the feeling of the company on these topics.

Industrial Performance

24 [Inno.1]

In which way do you innovate?

Please choose the appropiate response for each item:

	Yes	No
Creating new products	○	○
Creating new service	○	○
In the whole value chain of products in internationa organization, products, functional service and methods	○	○

25 [Inno.2]

Are you involved in collaborative R&D project and why?

Please choose all that apply and provide a comment:

Yes at regional or national level	
Yes at international level	
No	

26 [Innno.9]

R&D intensity (share of turnover spent on research and development or innovation (%))

Please choose all that apply and provide a comment:

- ○ No R&D expenses
- ○ <1% of your turnover for R&D expenses
- ○ Between 1% and 3% of your turnover for R&D expenses
- ○ Between 3% and 5% of your turnover for R&D expenses
- ○ Between 3% and 10% of your turnover for R&D expenses
- ○ > 10% of your turnover for R&D expenses

27 [Innno.3]

What are the main obstacle to innovation?

Please choose all that apply and provide a comment:

○ Technology tranfer	
○ Time	
○ Resources	
○ Funding	
○ Lack of market	
○ Ecomomical risks	
○ Other	

28 [Innno.4]

What type of funding are using and what is your level of satisfaction for each one?

Please choose the appropiate response for each item:

	Yes	No	Low level of satisfaction	Medium level of satisfaction	High level of satisfaction
○ Private funding (business angel, venture capitalists...)	○	○	○	○	○
○ Bank	○	○	○	○	○
○ Regional funding	○	○	○	○	○
○ National funding	○	○	○	○	○
○ European funding	○	○	○	○	○

29 [Innno.5]

Does public funding (regional, national, European) fit well with your expectation? If not or not completely, explain what do you need

○ Yes

○ No

○ Not completely

Make a comment on your choice here:

The goal is to understand what the company expects from the public funding, if it prefers to get access to specific funding rather than another, if it prefer national or European funding

30 [Innno.6]

Have you already developed projects with external partners?

Please choose **only one** of the following:

- ○ Yes
- ○ No

31 [Innno.7]

Which kind of external partners do you work with?

Please choose the appropiate response for each item:

	Yes	No
With other companies	○	○
With private R&D centers	○	○
With public R&D centers	○	○
With universities and academics partners	○	○

32 [Innno.8]

Is it easy to work with partners or what are the obstacles?

Please write answer here:

The goal is to understand if the company has good collaborative experience,
what they learn from this experience, what they will do again and avoid for next collaboration

Human resources

34 [HR.2]

Who is involved in collaboration?

Please choose **only one** of the following:

- ○ We don't have the necessary competences
- ○ We don't have the competences but we have some training programs to increase them
- ○ We don't have the most of the competences and training programs
- ○ We have the competences

35 [HR.3]

What about recruiting skilled workers?

Please choose **only one** of the following:

- ○ We have no problem to find skilled workers
- ○ We have no problem to find workers, but not enough skilled
- ○ We have problem to find workers and especially skilled workers

36 [HR.4]

Do you propose training to your employees?

Please choose **only one** of the following:

- ○ Yes we propose training and our employees actively use them
- ○ Yes we propose training but our employees don't use them
- ○ No we don't propose training and our employees don't ask for them
- ○ No we don't propose training but our employees ask for them

37 [HR.5]

Which competences are you missing and looking for in your country?

Please write your answer here:

It can be technical but also management competences

Opinion on Technology transfer and Open innovation

"Technology Transfer is the process of skill trasferring, knowledge, technologies, methods of manifacturing, among SMEs and R&D centers or universities to ensure that scientific and technological developments are accessible to a wider range of users who can them further develop and exploit the technology into new products, processes, application, internal inventions not being used in a firm's business should be taken outside the company".

"In the Open innovation a company can use ideas coming from outside the company. The central idea behind open innovation is that in a world of widely distributed knowledge, companies cannot afford to rely entirely on their own research, but should instead buy or license processes or invenctions (i.e. partners) from other companies. In addiction, internal invenctions not being used in a firm's business should be taken outside the company"

38 [TT.1]

Are you intersted in technology tranfer?

Please write your answer here:

Do not hesitate to give a short description of technology transfer if the company is not comfortable with term.

The goal is to get information about motivation of the company to use TT and also to understand how they use TT, why, and what are their experience with it.

39 [TT.2]

Are you intersted in open innovation?

Please write your answer here:

Do not hesitate to give a short description of open innovation is the company if not comfortable with term.

The goal is to get information about motivation of the company to use OI and also to understand how they use OI, why, and what are their experience with it.

40 [TT.3]

On which topics you would be interest for Technology Transfert or Open innovation?

Please choose **all** that apply:

- ○ New processes (new converting processes)
- ○ New materials
- ○ New products
- ○ Other:

41 [TT.4]

Once there are international technology seminars or events, would you partecipate?

Please choose **only one** of the following:

- ○ Yes
- ○ Yes but only if they are in my language
- ○ Yes but only if they are in my country
- ○ No

Make a comment on your choice here: