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Central Baltic Innovation Tools for Practise 2009-2011

Challenges for organizations in the Central Baltic Sea region countries include shortage of labor force and developing the competitiveness of the region by more efficient utilization of human capital.

One stage in this project for its partners has been to involve their co-operation companies, by interviewing their central actors in order to explore, which factors and modes of operations the organizations in question consider as being the most central in explaining their competitiveness and innovative capability.

The aim of this report is to present the key findings from the analysis of the interview summaries and to give suggestions to the participating educational institutions and the co-operation companies: ***How to secure competitiveness and innovativeness in your organization?***

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Part 1: Summary of the survey by region

Itä-Uusimaa: companies

The type of companies include industrial ones; producing and selling energy efficient ventilation machines, selling and installing geothermal heating systems and planning and building tele-networks. Other companies are more service oriented; a One-Stop-Shop media service producer and a One-Stop-Shop roadside service point.

Competitiveness

Regarding the questions about competitiveness, all five companies mention service, customer service, quality service, customer orientation, integrated service or service concept as one of their competitive factors or advantages. This is of course no surprise in today's business climate, where you cannot survive without quality and service. But how is it seen by the customers? Do the companies conduct customer satisfaction surveys or do they have repeat customers that they can identify?

The answers do not state that clearly, but some indication you can find in the other answers. Flexibility and ability to convert, top know-how, marketing expertise, positive attitude, ability to cater many customers, need of customer, energy efficient, satisfied customers, fast to react, product brand, regular customers, credibility, company brand and positive image are all statements related to customer service and product and process quality.

Price, cost effectiveness, two of the traditional competitive advantages, are mentioned by the three industrial companies and are connected with high quality products, i.e. a price/performance indication.

Another area of competitiveness is linked with human capital and the companies mentioned top know-how, organization, recruitment process, belief in its business and products, freedom of activity, substance, competencies, motivation, personality of the entrepreneur, innovations inside the company and innovativeness. All involve the organization and its people and how they view their work and involvement.

Specific advantages mentioned include being the only company in Finland with a class 'A' product, being the biggest and oldest company in Finland (in its sector), conveniently different, multi-service store and working in remote areas. These are all seen as something that sets them apart from other companies competing

with them. It is good, if you can identify something specific, giving you an edge over competition.

There are in addition to the above, two statements to be mentioned in this context. One company uses social contacts and societal activities, like sports clubs, in order to gain a positive image, and says it is a company with social responsibility. Social contacts and networking is a good way to maintain and enhance customer contacts and to build a base of possible new customers and is used world-wide. Social responsibility is something else. When a company states that, it means it is engaged in society in a way that is recognized widely by the different power structures in society and also recognized by fellow citizens. Most often it involves charities, support for the common good, education, environment, research, arts and so on. When used properly, it is a powerful competitive advantage, which you have to nurture all the time.

Another company states that it has competitive advantages in all the mentioned areas, i.e. quality/reliability, service and support, product range, brand name, product innovation, other innovations and low price. This is of course the best possible position in a competitive situation, but one would like to have more concrete answers on each of the different aspects. As it is, one would assume that all the service (in this specific line of business) in the region and well beyond would be bought from this one company. On the other hand that might not be the case.

Innovativeness

Service concept and One-Stop-Shop are two terms that illustrate how the companies view their innovativeness. Turn key is associated with the service concept and can therefore be compared with One-Stop-Shop. It means the customer gets everything from one place, one supplier. This is the optimal situation for the customer, and is clearly an innovative way to conduct business, provided that price and quality is right.

Another, more usual area where innovativeness is found, is in product development and new production technologies. All three industrial companies have a focus on one or more in: productizing, more novelty products, using new technology into production processes, developing and using own technology and using customer need recognition in order to develop necessary technological innovations.

The two service oriented companies have a similar approach in store planning and functional of the premises and having a role of a development agency, where all activity is based on ideas. In their case it is a question of flow throughout the organization. Professionalism, experience and intuition form the basis for making the right decisions and it involves a great deal of risk-taking.

For the media company it is all or nothing, if the ideas are accepted or not. For the road-side service point it is equally a question of whether the customer stops or continues to the next service point. In both cases it is also a question of the partners they have and how attractive the whole bundle is.

Innovation: organization and personnel

Regarding the organization and persons involved in developing innovations, there seems to be a wide variety of implementations, ranging from managing directors and technical directors to the entrepreneur himself and listening to all personnel. One company is moving towards an innovation team and another uses facilitators and makes virtual organizations, which then take the ideas further into an innovation process. Most of the persons interviewed see themselves as idea generators, change agents, mentors or someone who has the role of speeding up the innovation process, if there is one.

Barriers to innovation

The companies in Itä-Uusimaa seem to have identified two main barriers to innovation. One is lack of market or customers, combined with too much competition in certain areas. This is a major problem that only can be solved by reaching further, outside the region or by revamping the product line or service concept. The other main barrier is personnel, in mainly three different categories. First, there is lack of professionally skilled employees, lack of specific and deep knowledge. Secondly, there is change resistance among the employees or there are differences in the organization in terms of actors, experience, point of view, models of activity and even the way of doing business, when the goal is that all should work together. The third category is the rigidity of collective labor agreements.

Value of cooperation

The value of cooperation seems to range from cooperation when needed and good & OK to cooperation is the beginning of everything. It is somewhat surprising to find both extremes represented. One would expect everyone to embrace cooperation as a must in today's business environment. Another alarming statement is that nobody is seriously engaged, but value of cooperation is seen as very good when it comes to joint development projects.

Actors and organizations as partners

Most companies list suppliers of both products and financing, as their main partners. Other partner organizations include big companies, retailers, universities and providers of specific services like, scientific support, testing. Other groups are associations and tourism companies. Sometimes partners or suppliers are integrated into the company, by buying the supplier. There has also been bad experience with some actors and that could influence the attitude towards cooperation.

Other

Other comments regarded climate change, risk-taking readiness and looking forward, many new development projects and the process of making an innovation into a new product.

Itä-Uusimaa: educational institutions

Itä-Uusimaa is represented by two traditional regional vocational, secondary level educational institutions, one of them being a commercial college.

Competitiveness

The regional focus is the basis for both schools and much of the curriculum covers the traditional aspects of secondary education. One of them has just started as a new educational entity a year ago and applies traditional teaching methods, where quality, reliability, service and support and specifically student service is seen as a competitive advantage. It is a well known organization in the region and has enough students to fill its classes.

The other educational institution, the commercial college on the other hand, is operating in many sectors. The students speak different languages and teaching is given in three languages and most of the staff is multilingual as well. In addition to the two official languages, Finnish and Swedish, the school has a great number of foreign students, who prefer English as the teaching language. Other competitive factors include the legal ownership as a liability company. It gives a lot of flexibility, which is seen as a major competitive advantage. Also quality and reliability are seen as competitive factors, especially when small companies in the region turn to them when looking for education. Service and support are equally important factors. Regarding specific competitive advantages they have a curriculum in Library administration in Swedish, as the

only educational institution in Finland. They also have very good IT-skills and give IT-education in all three languages. As big providers of international project services, both administration and initiation of projects, they support small, regional companies. They focus mainly on Russia and the Baltic states and to a certain degree on the Nordic countries.

Innovativeness

The school that just started as a new entity has a new organization and focuses on developing its new structures and uses the present curriculums as a basis. In the future there will be more room for creativity and quality management.

The other school has focused on and implemented flexibility, cultural skills and tries to be quick to grab new possibilities. The aim is to start using the international students with their language skills and support the regional small companies in their international projects. The plan is to make a cooperative, give the students tools and show them the reality of making business and money. They already have a simulated, electronic training company, which they use as a first step into the real world. One part of innovativeness at this school is their strive to stay close to the business community and help them by providing education and solutions.

Innovation: organization and personnel

Teachers encourage the students to come up with their own ideas and try them out. Some of the innovations have come about as a result of the working environment at the school, where everybody is encouraged to try out new thing, free of fear of failing. Looking around, one foot in the real world and one in the school world helps the personnel and school management to develop education in an innovative way, makes the schools attractive for businesses to work with and focusing on certain areas, like the Baltic Sea Region, makes the best use of scarce resources.

Barriers to innovation

Some of the barriers are actually part of the Finnish school system, state regulations and the teacher wage system. Lack of time is also seen as a barrier and that problem is hard to solve. Both schools say there is a shortage on vocational, skilled, Swedish speaking teachers. The teaching load is too big and results in minimal time for other things, like development and innovation. Yet another barrier, maybe the biggest of them all, is in the heads of the staff. To get acceptance for new things is not easy.

Value of cooperation and Actors and organizations as partners

Cooperation is mandatory by law for educational institutions in Finland, at least if you want any kind of additional funding. You have to do things together and you do it on several levels. Cooperation is done with, 1) regional institutions like County Government and the City of Porvoo, town of Loviisa, 2) companies locally and regionally, 3) other educational institutions both nationally and internationally, i.e. in Finland, Russia, in the Baltic states and in Nordic countries. Very few of the development projects would have been possible without a big network of cooperation.

Other

In educational institutions a very important aspect is a positive atmosphere. There cooperation and a multicultural environment, freedom to try out new ways of working, without the fear of making mistakes, results in that the work is done in a more innovative way.

Päijät-Häme: companies

Three of the five companies are service oriented with outdoor activities as a major part. One is mainly a ski resort, one organizes leisure time activities and one coordinates and markets events in Päijät-Häme Region. The two other companies use wood as their material. One makes customized wooden furniture and fixtures and the other makes wooden light-fixtures.

Competitiveness

All companies have one competitive factor in common, their brand. The two producers of wooden products both have uniqueness as a competitive factor. They have specialized in a niche, where customized hand work, arts & craft, pieces of art, Finnish Design are trademarks. They can also get a fairly high price for their products, which are produced by skilled handicraft workers and stand for highest quality.

Quality is also mentioned as competitive factors and advantages by the service oriented companies. Paired with good physical facilities, location and accessibility, variety in service offerings, and good service and support, they must outperform competition any time.

One interesting point is that both the ski resort and the company that coordinates and markets events mention price as a competitive advantage. As their businesses are quite different from each other, the reasons for price competitiveness must also be different. The ski resort mentions that they use mostly rental personnel, in order to optimize their workload. By doing so, they never have too many at any one time and no extra costs to carry and so they are able to carry over the benefit onto the customer, resulting in lower prices. Many of these persons have worked at the resort for years, so they are skilled and know the processes. The events coordinator on the other hand functions as an 'umbrella' for event organizers and through their unique 'innovation sessions' they help the organizers. But, as there is 'no competition', one asks why the price is perceived as 'low'. Because it is a project, that is financed with project money and consequently participation under the 'umbrella' doesn't cost the event organizer that much!

Innovativeness

The two producers of wooden products and the have again the same approach, this time to innovativeness. All working with the products do all the steps, be it designing, producing and selling or just doing all production steps with high quality as the leading theme. Both mention networking as an integral and necessary part of their innovativeness.

For the ski resort and the organizer of leisure time activities one common innovative aspect of their business is that everybody who works there is a kind of 'jack of all trades' and 'master of them all'. This results in efficiency, as everyone can do everything. Both have accommodation and catering as an integral part of their business. The event coordinator doesn't need this kind of personnel, they are the umbrella and the participating event organizers have to find the right kind and amount of personnel.

The service concept is also mentioned as an area of innovation, by all three service providers. They all have many new projects under consideration and all add to the innovative aspects of their business. Cooperation with the golf resort nearby and a new market opening with mansion, not far away, are just two new ventures the ski resort has.

Innovation: organization and personnel

Regarding how the companies organize and further innovations seems to be different for each partner company. Starting with 'all innovate' and 'trash-can parliament' you have the other end in 'my father is the innovator'. The wood companies both operate with teams, which is natural, as all people participate in the production processes, but one of them has actually a team of individual entrepreneurs, which is quite unique. Then we have of course the 'innovation sessions' that are used by the event organizer. Personal networks are seen as valuable in innovation as well as the notion of coincidences. Something happens or you meet somebody by chance and that puts in motion something else and suddenly you see something new developing, an innovation maybe.

Barriers to innovation

The barriers to innovation in the Päijät-Häme companies include financial ones, commitment of others, fears regarding the project continuation, no own collection of products to sell and better sub-contractors for certain pieces of the product.

Value of cooperation

Good subcontractor networks are important, but you have a challenge in activating those subcontractors. One cannot do everything by oneself, so networking and cooperation is essential. It is the core. Cooperation is done with designers, architects and interior architects, because they provide the work for us.

Actors and organizations as partners

All the companies have a range of partners that support, or one could say, make it possible for them to get the work done. The ski resort and the organizer of leisure activities are fully dependent on the personnel of the rental companies and other partners. Without this kind of partnerships, there would not any profitable businesses. They also use facilities owned by other organizations.

The two companies producing wood products also rely on their networks of material suppliers and subcontractors, on other woodwork & carpentry firms and on professional associations that promote the use of wooden products. Cooperation with various educational institutions is also important.

Other

Thinking like an entrepreneur, having the right attitude to work and being with the customers, helps the companies becoming and staying more competitive and innovative.

Päijät-Häme: educational institutions

The three educational institutions in this region, a circus school, one teaching tourism and hospitality and one teaching design complement the partner companies described earlier.

Competitiveness

Specific areas of competitive factors and advantages include quality of education, reliability, variety, service and support, specialization and profiling, brand and reputation. They all can be grouped under the term, Service Offering, and are the basis when talking about service management. In addition one school mentions practical education as their competitive advantage. Basic education, real life projects, technique and basic skills and customized studies are also seen as competitive factors.

Other factors mentioned include, location and reasonable living costs, size, multi-field/ multi-faculty projects and well organized matriculation.

Innovativeness

All three schools point to different areas of innovativeness.

1) Concentration on circus essentials, which in turn leads to a good atmosphere, where circus orientation is the main thing. 2) Customization of studies combined with virtual studies, media learning (second life) and project teaching. One example is the project Ditti, Design in Tourism, designing customer spaces, from A-Z. 3) Product innovations in design and technology, improving product, even in small details. These innovations drive in turn marketing innovations.

Innovation: organization and personnel

Again, all have different modes of working together on innovations. Teacher teams, innovation centre helping with patents and protection of design, research/development teams, innovation teams and then, 'propeller-heads', who come up with all kinds of new ideas.

Barriers to innovation

The circus school finds that the great proportion of general studies = the curriculum doesn't allow enough and continuous time for practicing the circus/professional studies. The students have to practice in the evenings and odd hours. The curriculum seems to cause problems also at other schools. Money, shortage of staff and working in two regions seem to cause a lot of problems. Projects that are 'stolen' by other educational institutions are another problem area.

Value of cooperation

Networking and cooperation is seen as necessary and essential and is the basis for everything.

Actors and organizations as partners

The circus school has of course many special partners, like hair dressers, make up artists, costume designers, video makers, theaters, and music students. The others cooperate both formally and informally with other universities and schools, with businesses and the leading edge companies.

Other

"We educate for the need and service of society & market – experts & professionals, who can give visual and tangible form to items, messages and services", said one former principal about design education at their school.

Södermanland: companies

The companies in Södermanland represent quite a wide variety of businesses. One solves moisture problems in aircraft, another provides advertising services, a third one offers quality service in maid service, window cleaning and in special services. Yet another does car washing and cleaning and is an off spring from a Young Enterprise education program.

Competitiveness

It seems that each of the companies have their own kind of competitive factors and advantages. A market share of 90 % in dehumidification systems world wide, with a patent until 2012; high level of expertise, creativity and flexibility combined with a good working place and being a good corporate citizen, brand and price, especially in municipal offerings; quality, flexibility and foresight, plus ISO 9000/14000 certified processes; brand, young, hot and fun, the only one in the community who picks the car up and returns it.

Innovativeness

When you can patent something, it is certainly an innovation, even though it is a 'practical innovation'. When the patent expires, all the incremental developments keep you ahead of competition. Creating an internet-based research tool for conducting satisfaction surveying of customers can give you valuable information for future innovations and can in itself be seen as an innovation in the way business is done. Logistics, tools used and using ideas generated by the employees are mentioned as innovative ways to improve company competitiveness.

Innovation: organization and personnel

Continuous development and improvement of products enhances knowledge and produces new innovations. Open communication makes all this easier. Concentrating proposal handling to one person improves the way business is done.

Barriers to innovation

In developing systems for airplanes, you have to follow certain rules, and that is certainly a barrier to innovation. If you are understaffed or the personnel is fully working at customer premises, then you most certainly lack selling power, which

results in fewer new customers. Also working from home, with no office, can be demanding.

Value of cooperation

Networks are more important than technology when working with aircraft systems. When working with subcontractors and suppliers, you have to make sure they deliver what they promise. Word- of- mouth is essential, especially if you don't have selling staff.

Actors and organizations as partners

For the company providing systems for aircraft, all airlines and aircraft makers like Boeing and others are partners. In addition to this, all large companies that supply systems and parts to the aircraft makers are partners and often customers.

Läänemaa: Haapsalu companies

- A. Sanatorium treatment and accommodation, services
- B. Production of furniture and details in birch wood
- C. Construction of heating systems (heat pumps) and food prod. disinfection lines
- D. Preventive treatment services, catering and accommodation, services
- E. Conference accommodation and catering, hall rental

Competitiveness

Service quality, better quality, quality of products, quality and reliability, high quality, excellent quality are some of the terms mentioned by the above companies as being competitive factors and advantages. This is all good and when you add stability and consistency and wide product range, you have a wide range of the ingredients of a successful service offering.

Adding more personnel and knowledge oriented terms like highly qualified personnel, experienced employees, and brand, you cover most definitions of service concepts or offerings.

More specific competitive factors include, local mud baths, proper health services, thalasso or sea therapy, only of its kind, no competition on quality, own manufacturing, local produce, own catering, only fresh ingredients and can handle also large construction projects, and location. All of these indicate that the companies know their competitive factors and hopefully use them as advantages in their marketing efforts. Price/ quality ratio is also mentioned and shows that they know their competitors well.

Innovativeness

New service development where all employees are included, addition of new products and services, like mud treatment and sea water pool are examples of innovations regarding the service offerings. Technical and product innovations include adaptation, updating and the addition of entirely new heat pump products and even new production process phases, like painting and varnishing products. Using IT to put all administration online is another way of being innovative.

Innovation: organization and personnel

Only in the business of constructing heat pump systems they identify specific personnel dealing with innovations.

Barriers to innovation

Resistance and/or opposition from both employees and clients regarding changes the ways treatments are done or provided is an interesting but not uncommon barrier. Introducing new methods is always risk taking and some times hard to implement.

Having work done outside of the company, like laboratory or scientific work, can involve many problems and also become an obstacle to innovation. Getting funding and monetary problems together with big risks in taking on new projects can become barriers that are hard to come around.

Value of cooperation and actors and organizations as partners

Cooperation is seen as very important, be it with subcontractors, local professional associations, all service providers or when participating in various projects.

The specific involvement in Estonian Spa Association means that you can have some influence on how legislation could be enhanced or altered. Cooperation is done both formally and informally.

Other

Training development, ISO certification or applying good housekeeping rules is of great importance in boosting competitiveness.

Läänemaa: Haapsalu educational institutions

The educational institutions interviewed in Haapsalu included:

A vocational training centre that provides both vocational youth and adult education and offers in-service training, two gymnasiums offering upper secondary education, a university branch offering studying and development, research work and professional higher education

Competitiveness

Competitive factors and advantages can be described in many ways and for the educational institutions in Haapsalu a wide variety were mentioned. Quality &

reliability were again the most common together with service and support. Organizational and human resource related factors include, people empathy, readiness to work together, emphasis on learning, in-service training, personal approach, cooperation, class teachers combined with specialty teachers, openness, individual curriculum and experienced teachers. Other areas of competitiveness are readiness for special needs students and wheelchair bound students, good traditions, physical and social environment, international teaching, location, extracurricular activities and evening groups, sporting traditions, strong student government and starting ISO certification process.

Innovativeness

Innovativeness is described in many ways like; adding specialty classes along general education, sending staff on long-term and systematic training sessions, use of IT by equipping every classroom with a computer, addition of SMART boards and data projectors and the opportunity to use computers, implementation of E-school, information exchange and continuous knowledge acquisition by teachers. All this is done in order to create an excellent learning environment.

Innovation: organization and personnel

People involved in innovations include directors, specialty teachers IT-manager and all staff. No one is specifically appointed for managing innovations, but the interviewees see themselves as people who ignite others, driving forces, inspiration sources or being part of a team.

Barriers to innovation

Mentality, bias & lack of motivation, people resistance, old-fashion habits, everything new is difficult, over confidence and over satisfaction are mentioned as barriers to innovation. Money is also one reason.

Value of cooperation and actors and organizations as partners

Cooperation is generally seen as very good or excellent in Haapsalu and the western regions, where there is a network of cooperation. This varies a little bit between the educational institutions, but cooperation is often seen as the basis for everything. Also the cooperation with city governments has improved. One

of the gymnasiums mentions specific cooperation with other schools, which secures a student flow from basic education into secondary education. In the case of the vocational training centre case it concluded a memorandum of cooperation between four schools some years ago.

Saaremaa: companies and educational institutions

The companies and educational institutions in Saaremaa

An agricultural cooperative, raising livestock combined with crops growing, a meat processing factory, a company having fishery production, a sea freight company.

There is also a handcraft society that retains and promotes national crafts and folk traditions. It also promotes development of modern craft and tries to raise consciousness about working rural people and promote local culture at the same time.

Still another company is producing rubber gaskets and membranes for the European car industry and one that builds boats.

Two educational institutions are represented in the analysis, one is a university branch offering educational activities, development and applied research. The other is a vocational school, that gives initial vocational training, further training and retraining.

As the answers are not related to each specific company or educational institution, the analysis will be done as one group.

Competitiveness

Competitive factors mentioned include; know-how and a specific niche product; quality related factors like internal quality of work, leadership, quality team, and other factors like international cooperation, collaboration with enterprises, Saaremaa as destination and attractive living environment; Traditional embroidery and its quality, traditional crafts training, cooperation in tourism and fair pay for the work; strong partner from Europe, German quality, Estonian cost, efficient use of equipment, production flexibility; complete solution with partners, holistic approach, maximum customer service; long-term production and market experience, Saaremaa origin: the team, technology and recipe; being part of a prestigious university with the best information about technologies is a guarantee of quality and competence, specialty curriculum matching the region's needs; competitive team, cooperation with professional associations, introduction of new technology and new buildings.

Regarding the specific competitive advantages, they include; good reputation based on quality and reliable service; quality and price ratio; introduction of new technology; security of supply, regularity and trust; special niche market with

small quantities; know-how and long experience; good reputation; improvement of learning and teaching environment; network of service and maintenance; flexible and continuous development; new products; process innovation – computer managing work;

Innovativeness

Innovativeness can be described in terms of;

- innovation is a continuous process
- innovation is to foresee future needs
- innovation is bringing out good new products, flavors that people like
- innovation is to produce in a less costly way/ to ensure a better quality
- technical innovation, service concept – self-service
- particular improvement of something
- innovation is making things easier and more quickly
- innovation is the search for new solutions, niches
- innovation is team work
- innovations are production processes
- ideas come from customers, employees, partners, consultants etc.

Innovation: organization and personnel

Many ways of organizing innovations can be found in the answers.

- informal teamwork
- research & development department
- informal process
- development and project managers

The interviewees see their role in the context of innovation as one to find new opportunities and solutions, to see the wider picture, to ensure a successful implementation, to look into the future, to organize, to find bottlenecks, to communicate with to outside world.

Barriers to innovation

Among the barriers to innovation money, time and lack of resources are mentioned many times. Other specific statements are regarding barriers are:

- low market price
- computer fear
- animal welfare assurance

- lack of human resources
- technical barriers, energy fluctuations
- inelasticity
- lack of human touch
- difficult to coordinate, many parties involved
- copyright protection
- no full-time staff
- worker's resistance to change
- lack of flexibility in national system
- legislative restrictions and 'black holes'

Value of cooperation

This question can be answered in many different ways and here are some of them:

- impossible to cope without cooperation
- cooperation is extremely important
- cooperation is growing stronger
- cooperation is real value, ensuring advantage and sustainability
- very important to cooperate with consultants, plants and subcontractors

Actors and organizations as partners

The type of actors and partners are described as follows:

- suppliers, buyers, information middlemen, professional associations and institutions
- the parent university and other universities, the ERASMUS partner's network, professional associations, cluster of boat builders, maritime academy, round table entrepreneurs
- trade chains
- formal relationship with public sector companies
- parent company and its factories
- official relationship with Handicraft Union
- general educational institutions
- cooperation with consultants, factories and subcontractors
- cooperation with clients and suppliers
- exchanging experiences in round table discussions, teaching enhancement workshops
- social cooperation - joint parties, celebrations, new ideas, working groups

Lääne-Viru: companies

The companies in Lääne-Viru region operate in the following areas; one produces pastries, one offers accommodation and catering at a local manor, another works with transportation, wood handling and financial services, one does advertising work and one is a construction material company.

Competitiveness

All of the companies mention quality/ reliability or both or that they aim at these. Good level of service is also on the list. Low price is on the list for three of the five companies. Three of the companies mention brand as a competitive advantage. More specific competitive factors or advantages include, distinction, efficient team, close to the client, special buns production, original place or products (like adventure in nature school, party games in the manor house and making paper from mushrooms), mapping of clients ways and critical success factors, ISO 14001 environmental standard and Enterprise Estonia quality program, use of internet, special atmosphere.

Some companies mention competitive disadvantages like, problems with machinery, staff is not valued enough and staff is not trained enough.

Innovativeness

Innovativeness can be seen in many different ways, like: slicing bread, tiny portions of bread packed in plastic boxes, packing buns in film, using special software, process management, implementation of innovative products like paper of mushrooms or party games or customers playing parts in local legends, participating in night museum concerts and learn history late at night, marketing innovations like using new social media (Orkut, Facebook and Twitter. Other areas of innovation, long-term experience in financial counseling, new production sites leading to better working conditions, partially loaded lorries. Planned innovations include, working on internet solutions, plans to introduce e-bills and travel services, precooked buns in MAP-packages, frozen dough processing and sales.

Innovation: organization and personnel

Testing of new technology at one of the factories is one way to go. Presentation of innovations in media gives possibility to promote company activities. The role of interviewees is seen as one of encouraging people, pressure, encourage

colleagues in the innovation process, ensure permanent development, reorganize work, be the leader.

Barriers to innovation

Lack of money and financing is the main reason. Another is lack of time for innovations or creativity or innovating new products. A more special one is incompetence among bank officials and business consultants.

Value of cooperation

Cooperation is seen as extremely important, but not being competent at cooperation is also mentioned as a barrier to innovation. Cooperation also brings higher extra value and satisfaction.

Actors and organizations as partners

Educational institutes and professional board members, local entrepreneurs work with us. Some companies are still looking for partners, probably because their businesses are new.

Lääne-Viru: educational institutions

Two educational institutions represent Lääne-Viru, one is a state college giving training and education, the other gives vocational training and education and also refresher courses.

Competitiveness

Competitive factors and advantages mentioned by these two schools include, doing things as well as possible, curricula, history of school, experienced teachers, make people better first – train them, specialty courses, quality, counseling service, product range and product innovations, cooperation with higher education, reliable teachers, teaching in only Estonian language, catering services, accommodation during school holidays, refresher courses, low price, three vans for catering.

Innovativeness

Innovative curriculum (portuguese cuisine), student practice bases in many countries, changes in communication, covering a vast territory are some examples of innovativeness . They also mention problems with technical innovations and that education is very conservative and relies on tradition. These are clearly barriers to innovation.

Innovation: organization and personnel

One school has appointed a coordinator for innovation. The role is to be a leader, to support and suggest and to show what advantages innovations bring along.

Barriers to innovation

As mentioned earlier, problems with technical innovations and that education is very conservative and relies on tradition are clearly barriers to innovation. People want to continue like before and are the greatest barrier to innovation.

Value of cooperation

You must be ready to support and cooperate, it is very important. There is cooperation between many schools in the region.

Actors and organizations as partners

Partners consist of entrepreneurs in the region, and other educational institutions like, technical universities, colleges and industrial companies.

There are plans and hopes of cooperation with basic and secondary schools and companies with up-to-date equipment. Also cooperation with local municipalities and county government would be appreciated. One of the schools would like to be a major partner in terms of providing counselor services in various fields like, finance, accountancy, taxation and legislation. It could be a counseling centre and offer work for students and make practice arrangements cheap for the school. You could also get good and unexpected ideas from the partners.

Vidzeme: companies

One of the companies does high quality translations, another works with forest inventory, inspection and planning, aerial photographing and mapping, digital terrain and 3D models and consultations for certification.

A third one is an engineering bureau specialized in systems producing electrical energy from solar power. A fourth one is a local beer brewing company.

Competitiveness

Competitive factors mentioned are: quality technical translations, use of advanced quality control and work-flow management systems, qualified and carefully selected translators, affordable prices and building text analysis and data base management software.

They also included usage of existing technologies in a new way, ability to understand unspoken needs of potential customers, investments in new technology, hyper spectral technology ownership.

Another main competitive factor is working exclusively for the solar-electrical market and offering full support from consultation to installation of the system.

Competitive factors for the brewery are having a unique niche product with elegant design, combined with a legend of a local manor. They also stimulate beer tasting as a way to market their high priced beer that is unlike any other beer.

Competitive advantages mentioned by the three companies are: one has qualitative and reliable service provision and attractive prices for high quality technical translations. This is attained using experienced translators, quality assurance systems and doing both linguistically and stylistically perfect translations. Another finds credibility as an important advantage together with new and innovative service, locally adjusted algorithms, their brand equals to working in a specific niche with highly developed technology. Also the culture within the organization is supportive and friendly and people there are 'pilots of chaos', meaning that everybody is motivated to be involved in all processes and contributing to them.

The third says that service quality and reliability are the main competitive advantages using tested, best quality components. They assess technical feasibility and make shadow analysis prior to installation, in order to determine best position of solar panels.

Competitive advantages for the brewery include quality, brand name, service support and product range. They also offer the customers to see how beer is made and facility excursions are part of their marketing tools as is internet communication as well.

Innovativeness

Technical innovations include design of text analysis software and a data base management platform. Management of internal work allocation processes have resulted in several products, one for document analysis, another allowing management of file's meta information and then a service innovation that customers can use website to create personal accounts and track progress of their orders. The customers can also access their translations and pay for them and using the system, and the translators can access the documents to be translated.

One company is using already existing technology from military sector, but the innovation lies in the way they are used in forest industry and environmental sector. . The recruitment process is also considered an innovation, by selecting people who can work in an environment of 'chaos'.

Another one works on a new innovation that should result in an innovative packaging and selling product, an easy-to-carry box of portable solar power.

Developing their brand and several side products is the main innovation for the beer brewing company. They work with the assumption that it is always possible to make things better. They consider beer taste and design as innovations in the product area and the excursions and beer tasting are innovations in service delivery. Developing partnerships with local enterprises and organizations in order to promote the brand and encourage beer consumption are considered social innovations.

Active use of internet communication channels is seen as part of the innovations, through the active involvement of the consumer both in testing new products and having press conferences for bloggers. In creating their distribution network, they use a Google Map on their website, to show where a new trading outlet is located. Side products include selling unfiltered beer directly from the brewery for Midsummer Day celebration and having a local bakery making a recipe for brewer's grain cookies.

Innovation: organization and personnel

Innovations in work processes are always considered and if good, quickly implemented. Communication is daily with all branches over Skype.

An institute has been established in order to develop solutions for research and development in the environmental sector. This institute is special also because it is established by a private company and not by a university or the state. The director spends a lot of time educating prospective customers about the technology and sometimes it is difficult to combine commercial and social functions of the company.

The brewery director sees as his main responsibility creating the brand. The brewer who comes from Germany is training two local apprentices who one day will continue with the brewing process. This is contrary to what breweries normally do i.e. recruiting from competitors. Innovations originate from company culture and people's thinking and not from the amount of money a company has. The Japanese management of *kaizen* i.e. continuous transformation, thinking and improvement is one way to spur innovations.

Barriers to innovation

Technological innovations also cause adaptation difficulties as people learn about new program features and master its interface. Everybody cannot always keep up with the latest software updates. Also the increased processing and work flow drives the company towards standardized format of communication, which reduces the 'face-to-face' interaction with customers. There is a need to retain multi-channel approach in serving the clients.

Owner involvement in all processes in the organization can become a disadvantage, especially if new ideas are not accepted. Combined with lack of qualified specialists in the sector where one of the companies operates is a hindrance. Clients are also a barrier, when they are not familiar with the products, so they don't want to pay for services that they do not see the advantages of. That means resources have to be deployed in educating the possible future customers.

Regarding another company, the barriers are at policy level and in low public awareness about true costs and impact of solar power. Latvian customers are very skeptic about how much potential there is for solar power and would like their investments to pay back in a very short time. There are plans to cancel quotas for individual energy producers, making solar energy an even more risky business tariff wise. There is also a lot of paper work to be completed before getting a permit to install solar power in a house.

In the brewery case, only minor innovations can be implemented because banks are not responsive in financing new projects. The company is quite new and that is also seen as a barrier. Individual may also slip into routines that then inhibit innovations.

Value of cooperation and actors and organizations as partners

Collaboration with the company's network of 1000 or so translators is very important and there is great help from using a translator data base containing language combinations.

Cooperation with a sister company in Sweden and with the Swedish agency of military research is very important as well as an enterprise in Slovakia. Other partners are a research structure of Latvian State Forests, and institutes within the electronics, IT and solid-state materials sectors.

For one of the companies, its suppliers are the most important ones. A company in Germany is the main partner. Also companies that supplies power inverters, or delivers accumulator systems and makes solar energy kits are partners.

Cooperating with other companies is very important in increasing sales. Therefore companies should be developing different forms of cooperation that are beneficial for all parties involved. The partnerships can encourage visibility of a company's brand in contemporary art and culture institutions. The brewery has signed a cooperation agreement with a university to promote gastronomic tourism in the Vidzeme region. 'This is the first cooperation effort in Latvia which initiates research projects, internships and work on different projects related to gastronomic tourism'.

Riga: companies

Companies in the Riga region work in the following areas; production and marketing of organic (ecological) cosmetic products, technology development and sales of audio-engineering equipment, produce and market vertical wind tunnels. They also publish and sell board games and provide quality textile printing, wholesale and internet-shopping.

Competitiveness

Competitive factors for partner companies in the Riga area include, having the only eco-cosmetic brand, sound technology development and sales, totally new and innovative technological concept, providing a set of specific competencies, first to develop vertical wind tunnels, many different uses of vertical wind tunnels, serious focus on marketing, only publisher of board games, publishing rules of the games on internet, retail store network, own gift cards with expiration date and can be used partially, unique product/ service and market, unique offer – direct digital textile printing, full color printing on any fabric, unlimited number of colors/color transitions and components.

When asked for competitive advantages product quality was the most common attribute. Many have unique products as well like vertical wind tunnels and direct digital printing equipment or having the only Latvian eco-cosmetic brand. Life-long warranty, replacement of any piece, brand recognition, color durability and brightness and product updates almost daily, also enhance customer acceptance and competitiveness.

Other advantages are, production where best suited, use of knowledge from other businesses, internet-shop for on-line ordering, mobile, quick and comparatively cheap products like mini-wind tunnels.

Innovativeness

Innovativeness is described as, new plant/ equipment and manufacturing processes, specific brand stores, adoption of cosmetic container system, packaging waste collection. Aerodynamics innovations, different types of wind tunnels, interactive approach to servicing and interesting technological solutions also represent interesting innovative solutions. Acquisition of the latest technology and excellent printing quality add to the list as well as life-time warranty, unlimited gift cards and online shops, all of which were already mentioned above as competitive advantages.

Other areas of innovativeness include use of experience, balance between need and capabilities and participation in an opening event in the Olympics.

An innovation in process is development of software for collection of data in a tournament.

Innovation: organization and personnel

The management team is often the generator, especially in an entrepreneurial company or a family owned one. Innovation is an ongoing process and if there is 'no process for stopping creativity, then there is no need to invent processes to promote innovation!' Personal intuition is also seen as a way to channel innovativeness.

Everyone in organization comes with ideas. Management has the role of getting financing and competences. Innovations are the way to approach people. The organization needs leadership. Management informs business organizations about printing technology and new printing and product options.

Barriers to innovation

Limited capacity, no time, lack of relevant knowledge & skills inside company (technological & knowledge of market), lack of knowledge & lack of experience in specific areas, incompetence & ignorance, thinking inertia, inability to overcome stereotype thinking are the barriers mentioned. In addition there is lack of financial and human resources.

Value of cooperation

Cooperation is very much appreciated, especially with suppliers, buyers and media, with development partners and customers. People to cooperate with should have 'sparkles in their eyes'! Collaboration is vital with universities, companies and enterprises in many countries. Cooperation can also take place with acquaintances.

Actors and organizations as partners

One should be open to different things, but one should also integrate them with the processes. One can also have formal contractual developers, producers, manufacturers and even customers and they all become part of the innovation system. Technical cooperation can often be much simpler than marketing or sales cooperation just like there are big differences between formal and informal cooperation.

An example on innovative integration is board game logistics, where warehousing and distribution is actually done in another country with lower cost as a result.

Other

'Company X on a visit' is an interesting initiative, where Company X is invited as a guest at someone's house. There is a lecture and a demonstration, during which all visitors can test Company X's cosmetics and may buy them too.

Riga: educational institutions

Two educational institutions represent the Riga region. One is a business school offering higher education incl. doctoral programs. The other is a multi-branch technical university, the only one in Latvia.

Competitiveness

Quality of the programs, teaching methodology and study environment in general are seen as competitive factors by the business school. They were also the first higher education institution that offered Business management and Tourism study programs and first to offer doctoral programs. Modern technical equipment, specially created intranet system for students, that interconnects with that of the school, gives possibility for effective management of the study process. The school can offer study programs based on the needs of the students and those of society. Examples are master programs in Law and in Public management and doctoral program in Law. Students show their trust in the school and its quality of programs by continuing in the school after bachelor or master programs. The e-learning, study modules and the possibility to take only separate courses are competitive advantages. The school also has a stable, predictable price level.

The technical university sees their academic and scientific staff as a competitive factor. Another is the quality of study programs (form and content) and research quality. International cooperation and connection with companies and industries are also competitive factors. The MBA program 'Innovation and entrepreneurship' contains specialization on study programs in the field of innovation and has been developed with international partners.

Innovativeness

The previously mentioned e-studies together with study excursions are the most effective innovations. With four e-study programs students can study with the help of internet and come to the school only for the exams. The excursions take the students visiting international courts, or service companies, production sites or tourism information centers and tourism objects, after which they analyze development and marketing possibilities. For the students, this gives them new thoughts and ideas.

Innovation: organization and personnel

There are no specific systems regarding innovation, but stimulating the staff and the students is important and using the work that has been done by them can be turned into innovative projects. Special structural units, support mechanisms and instruments on how to use innovative results of research are in place.

Barriers to innovation

Financial resources or reallocation of existing money is a barrier, but also lack of human resources. In spite of this, they always find some solutions how to support innovative ideas.

Value of cooperation and actors and organizations as partners

Cooperation is the basis for success, especially in education. It creates new business possibilities with companies, professional associations, state institutions and so on. Main partners are higher education institutions. Important parts of cooperation are the individual contacts and non-formal cooperation between lecturers in different educational institutions.

Kurzeme - Liepaja : companies

Companies and organizations in Liepaja include an ancient ship that promotes tourism, host a presentation of Liepaja, and the ship can be a place for traditions, weddings, birthdays, funerals...

Another place is a prison, that is part of maintaining and developing the cultural heritage of Liepaja, it attracts tourism, is a place for organizing events...

A reception centre in Liepaja informs and consults residents. Then there are two industrial companies, one that produces and trades cogeneration equipment and its service. The other one produces and trades medical elastic textiles.

Competitiveness

Competitive factors and advantages include the following; unusual offer in tourism and education, convenient location and a wide range of services, flexibility and development, qualified employees, internal process arrangement and organization of work, quality, wide range of production, service, competent and skilled personnel, brand popularity, efficient use of financial resources, long experience in medical textile industry.

When looking at the attributes for competitive advantages, they include;

- Reliability and service
- Quality, reliability, wide range of innovative services
- Quality, service and support
- Quality, reliability, service, product range, brand name and innovative products
- Quality, brand, the range and diversity of products, innovative products, other innovations, reasonable and low prices

Other areas of competitiveness include, littoral fishing (during winter), understanding and having an innovative approach can lead to the best solution, all functions are in Latvia –warehouses, service and the enterprise.

Innovativeness

Service based business that is also educational and through which people can improve their knowledge about geography. Learning how to hoist and operate sails and giving new experiences of seaman's life and marine tourism.

Innovativeness in the company –new offers in every tourist season. We visit similar places of attraction and participate in tour guide courses. Innovations help us attract new visitors.

Observing, studying, learning and if possible, adopt the things needed. The employees of the reception centre do everything for the client who gets full service at one point.

Innovative product, cogeneration equipment can work on bio-gas and has an electronic and computerized control system (good for the environment). We need knowledge in mechanics, electronics, computer science, several technologies and how to use oil gas.

Technical innovations and production adheres to EU requirements and training off staff working with the technological computerized equipment are examples of innovativeness.

Innovation: organization and personnel

There is a good pier and a good team and the City of Liepaja. The environment and the historical place of the old prison play a great role. People, the work place and the environment are needed. People and skilled workers are the main factors.

In all companies the interviewee was responsible for the projects and innovations.

Barriers to innovation

Lack of funding and problems at the beginning with getting a Latvian ship registry was a barrier. Financial side causes problems, because visitor's fees have to pay for our investments. We lack financial resources and we have national level problems with getting software in order to obtain information from other institutions. Lack of skilled workers and financing are main barriers. Bureaucracy and unbalanced legislation combined with lack of funds is our problem.

Value of cooperation

Cooperation is appreciated and important. Cooperation is done with hotels, Liepaja Museum of the Occupation, other tourism companies both in Latvia and Lithuania. Partners can also be local authorities, government institutions, ministries etc. There is a close connection between the partners. Cooperation is

necessary if you have deliveries from many countries. Cooperation is done if it is productive, but we can manage with our own resources too.

Actors and organizations as partners

Specific actors include, travel agencies, yacht clubs, societies of old ships from all over the world, and some local enterprises. We see the others as partners, but they are not part of our business. Our partners are a large range of enterprises from public catering to construction firms and we have formal cooperation with tourism firms. In addition we have informal relationships with reliable, well-known partners. Local authorities and some government institutions and ministries form the base of our partners. In the energy field we have partners from many different fields like, mechanics, technicians, electro-technicians, from producers of engines to producers of computers. They are all considered part of our business. Innovation projects have also been done without any partners.

Kurzeme – Liepaja : educational institutions

The educational institution representing Liepaja is a university branch, giving higher education in technical and economical sciences.

Competitiveness

The professional lecturers are highly qualified and there are updated material and technical resources. There is also very good cooperation with employers and social partners, secondary and vocational schools, other higher education establishments and close international links. The students are very motivated.

Quality, reliability, service, support, brand name and innovative products are the main competitive advantages. They also offer life-long learning and do scientific research.

Innovativeness

Their innovativeness lies in having a syllabus for life-long learning, a scientific centre and serious research work. New knowledge helps them create and 'catch' innovative ideas at the university and in enterprises.

Innovation: organization and personnel

The main innovative factor is people. Innovations need support, activity and guidance.

Barriers to innovation

Problems with financing the new syllabus, it cannot be carried them out as planned.

Value of cooperation

They cooperate with enterprises, factories, plants, other higher education institutions and we appreciate cooperation.

Actors and organizations as partners

Their partners have to be innovative, active employees and enterprises. Cooperation is formal but changes sometimes into informal.

Central Baltic Innovation Tools for Practise 2009-2011

Part 2: Analysis and ideas

Comparing the different regions participating in this survey, they all have identified a wide variety of competitive factors and advantages as well as many different views on innovativeness. When trying to categorize these using any specific theoretical framework, you quickly see that this is not easy. They truly reflect the day-to-day business views and how things really are in the different organizations and the markets or areas they operate in.

Many of the interviewees are the entrepreneurs themselves and explain their own visions and accomplishments. This is good, because then you get the true understanding of how they think in terms of competitiveness and innovativeness. That is what this survey is all about. Other again, have been working with the companies or educational institutions for a long time, and therefore know thoroughly the environment they work in.

When making a comparison between the different regions I have tried to find the main things or theme that is common to the various partners and schools in the region. Looking at how the companies and the educational institutions have explained their views on the different questions in the survey one can draw some conclusions, but it is of course just one conclusion of this large and rich survey material.

By looking at each company or educational institution by itself there could be more specific analysis and therefore also recommendations on how to secure and develop the business or organization. This is not possible here, for two reasons, first it was not within the scope of the survey and subsequent report, secondly the names of the companies and educational institutions are not to be used in this report.

The results of the comparison will be presented as summaries of the different regions, by trying to find the common elements that can be found in most of the organizations in the region. Not all companies do necessarily have all of the elements, but some or one of them. What is not always clear, is how the companies were selected and therefore we cannot draw any general conclusion based upon this material.

Following is a list of the main theme, found in each of the regions. We will discuss each of them and later there will be some more examples and theory about the different themes and competitive advantages and innovation. But first, let's take a look at some other information about the organizations. In the survey there were questions about the number of employees, year when established and whether the customers or students were local, regional or from abroad

(international). Not knowing how the companies were selected, we cannot draw any specific conclusions regarding size or where the customers come from.

Where is the business or students coming from?

The main conclusion is that in all regions, customers and students mostly come from the region or nation. This is natural, because regionally as well as nationally, the population base is quite small, at least compared internationally.

In three regions, Vidzeme, Kurzeme-Liepaja and Södermanland the businesses have many local customers. In six of the regions, Pääjät-Häme, Södermanland, Läänemaa, Saaremaa, Riga and Kurzeme-Liepaja they also have at least one company, that exports a 100% or more than half of its production.

Size of the organizations

The size of the partner companies and the educational institutions vary considerably and stretch from 1 to 300 employees. In Pääjät-Häme and Vidzeme regions most were small enterprises with 20 employees or less, but some had actually more people working, because they used rental personnel. In most cases this way of organizing work makes the business more efficient and more competitive and this can also be a sign of innovativeness. In Saaremaa and Riga regions they had several larger organizations, with between 200 and 300 employees. In these two regions also the educational institutions were larger than elsewhere. In the other regions there was a mixture of small companies, mainly from about 10 and up to 100 employees.

When were the organizations established?

There were 43 companies in the survey and 49% were established between 2003 and 2008. Another 47 % were established in the 1990's and 2000-2001 and only 4% in the 1980's. Some of the educational institutions have a long history dating back to 1862 in Riga, 1899 in Pääjät-Häme, 1915 in Lääne-Viru, 1918 in Läänemaa and 1922 in Saaremaa, but have been reorganized or become parts of larger organizations. Other schools that have a long history, are those in Itä-Uusimaa (1958) and Kurzeme-Liepaja (1961). Most of the others or 65% have been established in the 1990's or later, though many of them also have may have part of their organization, which has a longer history.

Main themes by region

- Itä-Uusimaa - service concept
- Päijät-Häme - process integration, brand
- Södermanland - uniqueness, only one of its kind
- Läänemaa - service and technical innovations, updates
- Saaremaa - origin, destination and uniqueness
- Lääne-Viru - quality/reliability, price, continuous improvement
- Vidzeme - brand, quality control, new ways and innovations
- Riga - unique, only of its kind, quality
- Kurzeme- Liepaja - unusual offer, competence and experience

Itä-Uusimaa - Service Concept

There are two different approaches in Itä-Uusimaa that both are related to the Service Concept. First, what is most often called the Service Concept is actually a combination of several service oriented concepts, where customer service and customer orientation puts the customer in focus, all the time. Quality service and integrated service means that every step in the whole service process is designed and integrated in such a way, that the customer focus is always kept in mind. All of the companies mention customer service as one of their competitive factors or advantages.

The second approach is one, where the customer gets all the service he/she needs, from one point and this could also be called a One-Stop-Shop. You design your service in such a way, that the customer with just one stop or one phone call can have all his/hers wishes or requirements fulfilled. Examples of this is the media service producer, the road-side service point, the company selling and installing geothermal heating systems. One of the educational institutions, the commercial college, is also a very good example of one -stop-shopping, it provides education and service in three languages, has international students as well and also services the business community in many different ways.

Many of the service concept related competitive advantages were achieved through innovativeness. The turn-key service concept in production and planning of tele-networks is an example of this. So are the applied technical innovations through customer need recognition that the provider of geothermal heating systems has implemented. The business college created a working and learning environment where everyone is allowed to try out new things, free of fear to fail.

Päijät-Häme - process integration, brand

Most of the companies and one of the educational institutions in the Päijät-Häme region mention brand as being one of their competitive factors or advantages. The one company that does not mention it is actually saying that not having its own collection of product (i.e. a brand name), is a barrier to innovation. This shows how important the brand can be, because the customer often buys because of the brand recognition and takes the brand name as a guarantee for quality and service. Brand recognition can be achieved in many ways. It can be the result of good and reliable service over a long period of time, by word-of-mouth (i.e. satisfied customers pass on the word from one to another) and it can also be the result of marketing efforts, like advertising or an efficient sales force.

The other concept that can be identified in this region is process integration. There are several companies and educational institutions that innovatively have integrated their processes and thereby achieved a competitive advantage over its competitors. This can of course be accomplished in many different ways. The ski resort and the leisure activities company have both concentrated on their core competencies, namely management of the process itself, on building and securing the brand, and on ensuring the quality of their service. They have relied on outside people, by renting personnel, when needed and in the right quantities. By this they have achieved efficiency in their business and are both able to look into new opportunities.

Both companies that produce wooden products have integrated the whole production process, so that it is as efficient as possible and all who work in both businesses, know and can work with every step of the production. This is similar to the ski resort and the leisure activities company, who's personnel also work with every kind of work and can be called 'jacks-of-all-trades'.

The educational institutions in turn, have customized studies and implemented multi-field projects in an effort to give the students more practical orientation and give them thorough basic skills throughout the school.

Innovativeness in most of these organizations is done through cooperation with other businesses and that is a key to continuous improvement. You can always

learn new things and new ways to improve old habits, when you have someone to discuss with and to work with.

Södermanland - uniqueness, only one of its kind

Two of the Södermanland companies claim uniqueness or only one of its kind, the other two explain their uniqueness with other words like, high level of expertise or good corporate citizen or being on the way to become the first company in Sweden in its line of business to acquire both the ISO 9001 and ISO 14001 quality certificates. One of the companies has a patent on dehumidification and has a market share of 90% in that business. Even though the patent expires in 2012, the company has made a lot of incremental developments to their product and they are confident that they maintain their competitive advantage. Having patents is one way of securing business for a certain period of time, but once the patent expires, there might be competitors who rapidly copy the innovation and gain market share. That will also press prices lower, so it is of utmost importance to have the right and high enough price as the patent is valid. That will also secure funds for continuous development.

Providing a car washing service, where you pick up and deliver the car at the customer's premises has been a unique way to do business, but it is very easy to copy and as times have become tougher through layoffs in industry, there is always a potential for new entrants into this kind of business.

Läänemaa - service and technical innovations, updates

In Läänemaa region there are both service and technology oriented companies, and most of them see innovations and updates in their business as an important part of their competitive advantages. There are new products and services in sanatorium treatments, additional steps in the production process by addition of painting and varnishing of furniture products, technical and product innovation and adaptation in heating systems, the implementation of e-learning and creation of excellent learning environments. Much of this is accomplished in cooperation with other businesses or schools and often involves new equipment and procedures in the organizations.

Many of the innovations mentioned are updates or adaptations to the processes or offerings of the companies. They can be anything from new mud treatments and seasonal packages to on-line services and long-term training of the personnel. Also the educational institutions show the sd of innovativeness by starting to use new smart boards, data projectors and having computers in every classroom. Only by continuously updating the way things are done and

introducing new ways to do work more productively, can an organization stay competitive.

Saaremaa - origin, destination, uniqueness

Saaremaa region is represented by many different types of companies and two educational institutions. The material describes many aspects of competitiveness and innovation and it is difficult to pinpoint any specific theme, but origin, destination and uniqueness in one form or the other seem to describe this region well.

There are many ways you can describe these aspects, specific niche product, Saaremaa as destination, attractive living conditions, Muhu traditional embroidery, combination of German quality and Estonian cost, Saaremaa's origin and specialty curriculum. Each of these highlight the extraordinary of the region and when properly marketed and maintained, can reach far in keeping the region and its products attractive to customers and tourists.

Lääne-Viru - quality/reliability, price, continuous improvement

In Lääne-Viru region one attribute was mentioned by several businesses and both educational institutions, was price competitiveness. Combined with quality and reliability of the products, that is true competitive advantage. In today's competitive environment price, especially in producing goods, has again become important, when the global economy makes it possible to transfer production all over the world.

The businesses from Lääne-Viru region, participating in the survey, are more or less regional in their business, and half of them are services providing, so low price should definitely give them an advantage over competition. The educational institutions certainly benefit from having low prices on their education and other types of courses.

The other attribute is quality and reliability and brand is also mentioned by several of the organizations and is definitely a competitive advantage.

The innovativeness in Lääne-Viru takes many shapes and shows that there is always room for improvements. It can be done in small increments like, offering sliced bread, tiny portions of packed pastries, making paper of mushrooms, inventing new games and having night concerts, working on an internet solution, providing better working conditions, becoming more learner centered or visiting companies as part of training. All of these examples show that all the

organizations in the region are on the road of continuous improvement and that there is a great deal of innovativeness in them.

Vidzeme - brand, quality control, new ways and innovations

Brand is definitely one of the attributes for the companies in the Vidzeme region. The importance of brand will be discussed some more later on.

Quality control is especially done by one company in particular, the high quality translation company. It has created several new computer applications that help both customers and translators to interact, in order to secure timely and accurate high quality translations. It has developed both technical and service innovations.

The other companies have also created new ways to use old technology, both in the case of the company working with forest inventory, inspection and planning, aerial photographing and mapping, digital terrain and 3D models and consultations for certification, which is using old military technology in new ways. The same applies to the engineering bureau specialized in systems producing electrical energy from solar power. It uses components readily available components and makes new system packages for using solar power to make electricity. Innovations can be made just by assembling old components in a new or more efficient way and offering them to the prospective customers.

The last example is the brewing company that is using internet communication social media in many stages of their business. They let customers use it when voting for their favorite beer, they called a press conference for bloggers using the net and they use Google Maps for informing customers about new trading outlets. Social media will without question become a powerful channel to raise recognition and preference for many brands

Riga - unique, only of its kind, quality

Uniqueness is certainly the most dominant attribute among all the partner companies and the two educational institutions. This can be seen in statements such as; 'strongest eco-cosmetic brand', 'nobody has developed this business in the world', 'totally new innovative technological concept', 'no other board game publishers', 'unique product or service', 'the first higher education institution to offer business management and tourism and doctoral programs' or 'only university in Latvia specializing in technical field'.

We are talking about cosmetics, vertical wind tunnels, audio equipment, board games, textile printing and education. Ordinary things, that everybody thinks has

been around forever, but there is something new in the way these products are presented to the customer or how they are produced. This is how innovations in all aspects of an organization can be turned into competitive advantages that last from year to year.

Also here quality is mentioned by almost everyone. Quality will be covered some more later on.

Kurzeme- Liepaja - unusual offer, competence and experience

The two areas that best represent the Kurzeme-Liepaja region are the unusual tourism related businesses, the ancient ship, the prison and the reception centre. The two other partner companies and the educational institution, plus the reception centre, all four represent competence and experience.

The unusual tourism attractions are very interesting and should continue with their strive for renewing their offerings and to engage in cooperation with other businesses, like hotels, restaurants and other tourism actors in the region, in order to secure a steady flow of visitors. Here the reception centre can provide a good platform and starting point. Word-of-mouth, happy customers, together with good contacts with all government institutions and local government and other partners are ways to secure that people from near and far away get to know the attractions.

Competence and experience are very good competitive advantages, provided the organization can keep the people and provide training when new technologies and procedures need to be implemented. Some of the biggest challenges in organizations that have a lot of experience and skilled personnel, is resistance to changes and implementation of new ways of operating. This has to be dealt with one way or the other. Terms you come across when trying to implement change in an organization includes, empowerment, team building and vision. We will discuss these terms later on.

Common themes and concepts

Some of the themes or concepts discussed above are common to different regions. **Brand** is one of them, **service concept** and **quality** another, and **uniqueness** is a third one. Let us take a look at what each of the concepts consists of and how they can be used in order to secure the competitiveness and innovativeness in your organizations. There will only be a short overview of each of the concepts at this time.

Brand

The concept of *brand* is well established in marketing and the first brands were developed a century ago. Since the 1960's did branding become a central issue in marketing and most discussions of brands concern physical or tangible products, like consumer packaged goods. During the last 20 years there has been a trend to create service brands, i.e. for intangible services, which are created only when you consume or use them. There may or may not be a physical part of the service. The American Marketing Association has a definition of a brand: 'A name, term, sign, symbol or any other feature that identifies one seller's product or service as distinct from those of other sellers.'

But brands exist only to serve the customer. The customer must be able to connect the brand with something he/she has a need for and must see that there will be some added value by selecting one seller instead of buying from another. In this respect the brand as a concept is always an image in the mind of the customer. When talking about *brand image*, we mean a concept that describes the image of the brand that the seller wants to create in the mind of the customer. So the brand is actually the image that is created in the customer's mind and the process of creating this image is called *branding*.

How can we create successful service brand relationships?

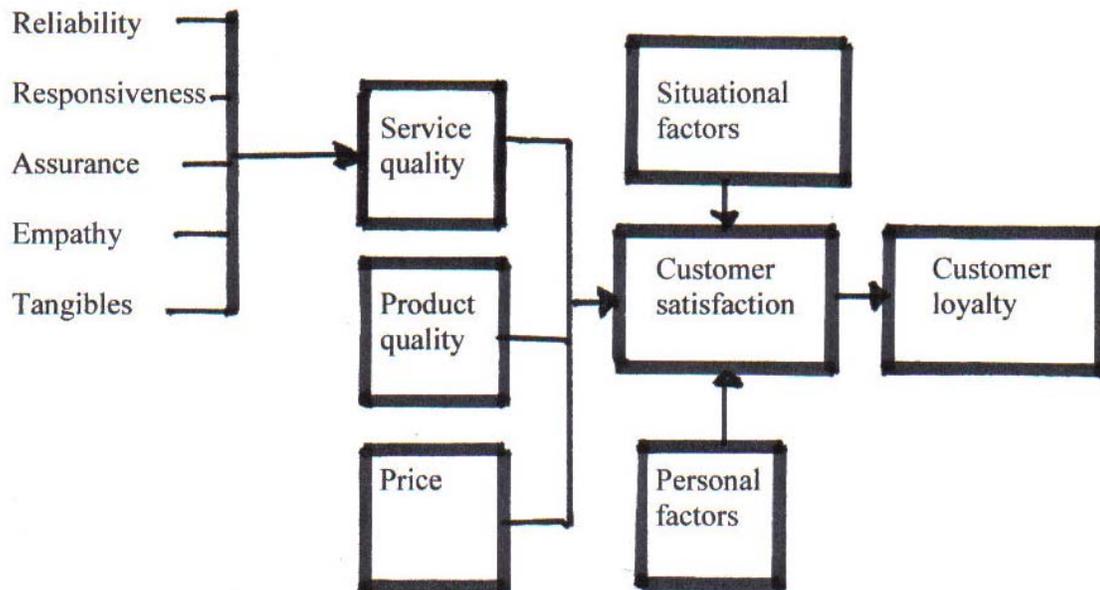
There are of course several ways to do this and one is to look at three different aspects of an organization. First, an organization, mainly through various planned communication activities, externally makes promises about the brand and thus creates brand awareness among prospective customers. Then of course, the organization has to internally make sure it can fulfill the expectations they have created as promises in the minds of the customers. Finally, there is the moment of truth, when the interaction with the customer occurs during the service process. That is where the employees have to play their part in fulfilling the promises. Only after this can the customer know whether his/hers service experience was good enough for him/her to come back again.

Service Concept and Quality

Service Concept can be explained in at least a dozen ways. We will take you through some of the fundamental attributes and try to explain the main components and how they relate to one and other.

We often talk about satisfaction and service quality and mean the same thing. Researchers agree that they are two separate concepts, where satisfaction is a broader term or concept and service quality focuses specifically on dimensions of service.

The following picture explains the relationships between the different terms used in this context.



Reliability is delivering on promises. Of the five dimensions, reliability has consistently shown to be the most important determinant of perceptions of service quality. Reliability is defined as the ability to perform the promised service dependably and accurately.

Responsiveness is the willingness to help customers and to provide prompt service, in dealing with customer requests, questions, complaints and problems.

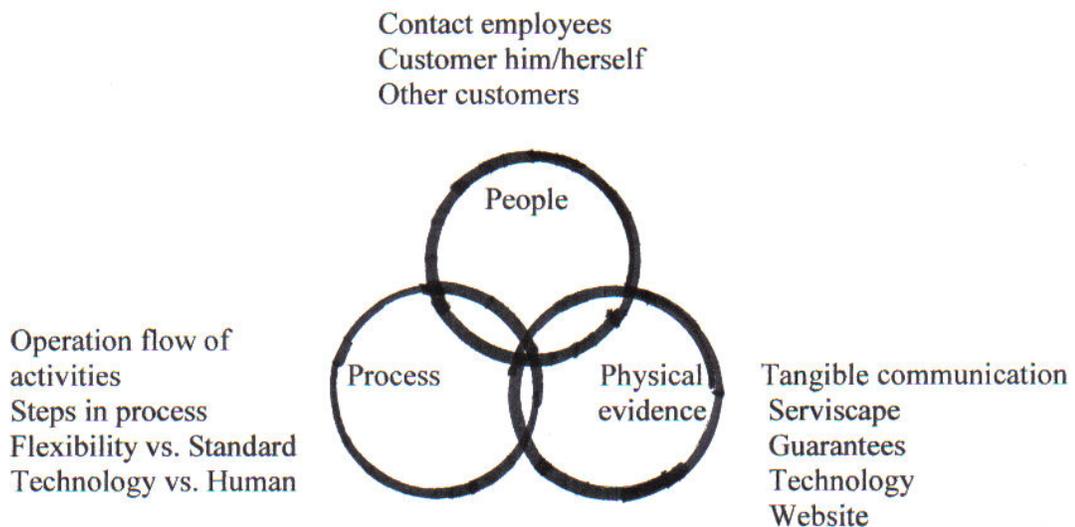
Assurance means inspiring trust and confidence. It is defined as the employee's knowledge and courtesy and the ability of the organization and its employees.

Empathy means treating customers as individuals and is defined as caring, individualized attention that the organization provides its customers. Customers

want to feel understood and in b-to-b services, customers want suppliers to understand their industries and issues.

Tangibles represent the service physically and can be defined as the appearance of physical facilities, equipment, personnel and communication material. Service industries that emphasize tangibles include hospitality services, where the customer actually visits the establishment to receive service, i.e. restaurants, hotels, stores and entertainment businesses.

The other terms in the picture should be self-explanatory. Another picture highlights the three important elements that give evidence of service, when seen from the customer's point of view.



The customer sees at least three different part of the service provider. People is often the most important and also the most crucial in the service encounters, and that includes the employee, the customer him/herself and also the fellow customers around him/her.

One of the hardest part of providing service, is to find the optimal process of producing the service. There may be several processes for different types of customers, some like to get involved themselves and some want employee to be at hand all the time. The amount of technology in the service processes has increased over time and sometimes the customer becomes frustrated, like in many cases of service contact over the phone. Just think about all the selections you have to listen to, before you get to speak to someone, if you ever get that far.

This brings us to the last of these three areas, the physical evidence. Also here technology has become more visible and the internet and the web makes many times a big difference, it can give you information fast and guide you to the right

service provider or if the organization does not have a good website, it might stop the customer at the door.

These two pictures show some of the different parts that make up and influence the concepts of Service Concept and quality. Many more interesting discussions on this and other topics related to service and quality can be found in a number of textbooks on this subject under terms like Services Marketing and Management, Marketing Management and Relationship Marketing Management.

Uniqueness

The third of the common themes is uniqueness. We have already seen many examples of it when discussing the different regions. Uniqueness is of course a very powerful way to gain a competitive advantage, but it has to be done in a way, that preserves the uniqueness. If someone has a good idea or an invention, one must try to gain some kind of protection for it through a patent or other kind of protection as an intellectual property. A writer can retain his/hers copyright, but can choose to give it up to the publisher. In the same way an employee can give up an idea and hand it over to the employer. Many companies ask employees to give up their right to an invention, by asking them to sign an agreement when they first start in the company. This may actually become a hindrance and suppress people's inventiveness.

It must be said however, that normal work related innovative enhancements and development to an organization's processes do not normally end up becoming patent or intellectual property issues. Instead they can become powerful additions to a company's competitive advantages.

The other type of uniqueness, that many companies mentioned, are of a completely other type. They are often unique places or destinations, new and interesting ways to do things or other types like, the taste of beer or the packaging of something. Even if a place is unique, it must be seen as something that competes with other unique places or destinations. First, there must be a steady flow of visitors, in order to be able to sustain the business aspect, but on the other hand there must not be too many visitors, so that the uniqueness vanishes and it becomes overcrowded and spoiled. This has happened to many scenic destinations and old towns. Cooperation with other, similar destinations or places and with the surrounding business community can give the necessary steady flow of visitors.

Having a unique taste or packaging can be hard to retain as a unique feature, unless it can be patented or can become a brand which is recognized and connected to a specific business. Without properly securing the uniqueness in one way or another, it will probably be copied by a competitor and the competitive advantage will be gone or at least diminished.

Barriers to innovation

Now let us look at some of the barriers to innovation and see how we can deal with, at least some, of them. When analyzing the survey answers, there were three main categories of barriers that could be defined.

A) A lack of market or customers, combined with too much competition in certain areas. This is a major problem that only can be solved by reaching further, outside the region or by revamping the product line or service concept.

B) Personnel and organizational barriers, in mainly three different categories. First one is lack of resources, second is personnel specific and third has to do with third party related things.

- 1) Lack of professionally skilled employees, lack of specific and deep knowledge, lack of resources, are understaffed or the personnel is fully working at customer premises, lack selling power, limited capacity, no time, lack of relevant knowledge & skills inside company (technological & knowledge of market), lack of knowledge & lack of experience in specific areas, low market price, lack of human resources, no full-time staff.

For this type of barriers there can be many possible ways to solve them. Rental personnel or temporary help in critical situations might help. But in the long run only education and training will solve a shortage in knowledge and skills. This is especially true, when outside recruiting is not possible and there is a shortage in the industry. Then you have to go outside your own region or maybe abroad, to find the right skills. Some of the companies in the survey have done just this. Other possibilities include taking apprentices and teaching them to become skilled in the profession. The brewery is doing just this.

- 2) Change resistance among the employees or there are differences in the organization in terms of actors, experience, point of view, models of activity and even the way of doing business, when the goal is that all should work together.

Commitment of others, fears regarding the project continuation, resistance and/or opposition from both employees and clients regarding changes, introducing new methods is always risk taking and is sometimes hard to implement, difficult to coordinate, many parties involved.

Technological innovations also cause adaptation difficulties,

incompetence & ignorance, thinking inertia, inability to overcome stereotype thinking, computer fear, lack of human touch, worker's resistance to change.

This category is often very hard to get to grips with. Very often you don't know exactly, what or where the problem is. Again education and training is probably the best cure for this problem. The road to take, is the one of continuous learning or life-long learning. This can be done by assessing every employees skills and matching them to this/her present job and to future challenges. These could be those of the employee him/herself or something the company management has in mind. Based upon this, a personal development plan should be made and a yearly budget for education and training should be reserved. Only by continuously preparing the employees for coming challenges and changes, the organization will be able to avoid the bulk of these barriers.

Another area lies in the management system of the organization. Management has to signal about change, well in advance, by creating a vision about where the organization is heading and by communicating this to everybody in the organization. The timing is crucial and it must be before the change is happening, but not too early and never too late. In this way employees can orientate towards the new and see how they can participate in the change process themselves. They can also come up with good ideas and in those cases they become drivers of change, instead of resisting change.

Once the vision has been communicated, there must be training and a number of change teams have to be created. The best way to include people in change, is to empower them. Change will only occur if many people are involved and if innovation and risk taking are encouraged. Empowerment, i.e. giving the employees something to say in the matter at hand, is a key tool in building the leverage necessary to create the change. Participation reduces resistance to change and it also generates good ideas.

- 3) The rigidity of collective labor agreements, bureaucracy and unbalanced technical barriers, energy fluctuations, legislation, when developing systems for airplanes you have to follow certain rules, lack of flexibility in national system, legislative restrictions and 'black holes', animal welfare assurance, copyright protection, national level problems with getting software.

Things that are connected to outside third parties is also hard to find an easy solution to. The best and sometimes the only way, is to cooperate with the third party, be it a local government institution, state agency, or

labor organization. Only by participating in the dialogue and try to explain your own views on the matter, can you bring change to it. By working together with other businesses or organization that share the same problem, you can become stronger and you have a greater chance to change the conditions, that you perceive as a barrier.

- C)** There were a great number of statements regarding financing and lack of money and some of these **financial** barriers, are hard to give any specific advice on. Sometimes a new and enhanced business plan can give the financier the confidence needed to open up the strings of his/hers purse. A sound plan that shows a steady flow of income, which in turn after careful spending will give a profit, that can be plowed into the business again. That kind of plan is always a good start, because it shows that you have paying customers, you know where to spend the money and by reinvesting the profits, you show you want to build your business and grow. That secures the financing, because the financier can see a return on his/hers investment in the company.

Competitive factors and competitive advantages

What kind of competitive factors or competencies does a company need in order to have a competitive advantage? When looking at the survey answers, there were a lot of different attributes mentioned and the statements explained how they were perceived as giving competitive advantages. There are many ways to assess how certain factors influence the business and how they become advantages.

Following are a few of these attributes for competencies a business needs. They should be:

Valuable – They should make a significant contribution to the fulfillment of customer needs. A competence is valuable, when it allows the organization to reduce costs or increase revenue over what it would have been without the competence. Since the customer needs change over time, the organization needs to continually reassess the competences, to see whether or not new ones are needed (or old ones are not needed anymore).

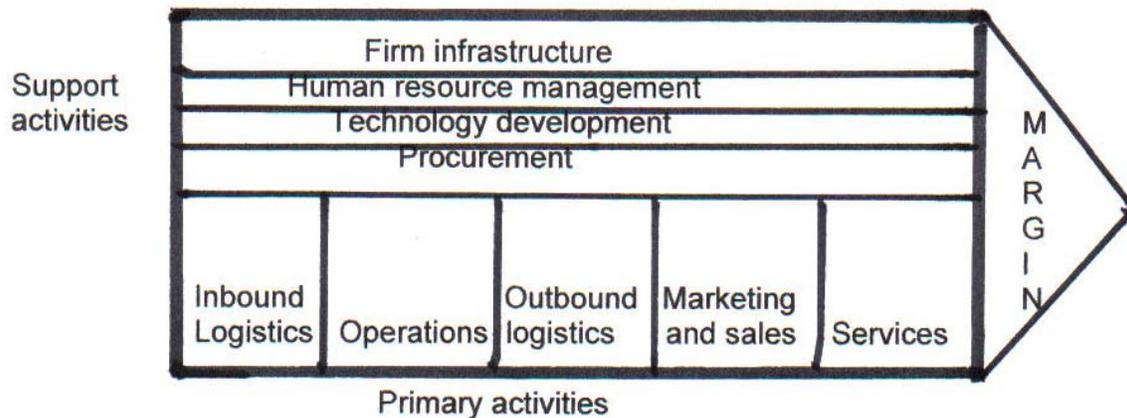
Scarce - A competence is valuable if it is not widely shared by other companies. If many organizations develop the same competence, no one will get a good return on that investment. Very often companies need the competence to deliver high-quality products, but quality itself may not be a competitive advantage: it has become a prerequisite for survival.

Nonimitable – Competencies and resources differ in the extent to which competitors can imitate them. A resource such as location for a store is difficult to imitate and the same is the case for a brand name. Competencies that involve complex interactions are difficult to duplicate, because it can be hard to know exactly what the interactions contain. But sometimes a competitor can create the competency at a lower cost than the pioneer and sometimes the imitator learns from the pioneers mistakes.

Sustainable – From the above we can conclude, that the more difficult it is to imitate a competence, the longer it is likely to last. When other things are equal, the organization should try to find competencies that are likely to be durable and long-lasting. Because building a competence often involves a lot of money, we should always prefer one that promises return over a longer period of time.

This brings us to the Value Chain, a tool for assessing competencies analyzing a business or a unit thereof. The term was popularized by Michael Porter and in this context we will just present you with the main figure, which to some extent is self-explanatory. More on this subject you can find in most textbooks on Strategic Management.

Porter's value chain model



Source: Porter, Michael E., *Competitive Advantage: Creating and Sustaining Superior Performance* (1985), Free Press, a division of Simon and Schuster Adult Publishing Group.

The value chain shows how a product or service moves from the raw-material stage to the customer. For an organization, the essential idea of the value chain, is to create additional value without adding significant additional cost and to capture the value that has been created.

The primary activities are those which are associated with the physical creation of the product or service, with its sale and distribution to customers.

The support activities provide the assistance necessary for the primary activities to take place. There should always be a balance between the resources you put on the primary and support activities. When you invest in infrastructure, it should pay off in the streamlining of the primary activities and the same goes for human resources and technological development.

At the other end there must always be a margin that is positive and leaves money in the chest.

Innovation and innovativeness

Innovation is something people actually use or put to work. An innovation is the end result of a (innovation) process, it can be a tangible product but it can also be a service, a new way of thinking or a new way of doing something.

An innovation could mean that you using an object in a new way or that you start producing an old product in a new way, or use another material than before. Intangible products, like ideas or services or the use of internet in a specific new way can be innovation, even though you can't get a patent.

Innovations can be classified in many different ways. Depending on the context in which they are studied, one would identify different sets of categories. In the guidance for the questionnaires there were the following two:

Tallqvist identifies many types of innovations and the following is more oriented towards the deliverables of the company/ organization:

product innovation	<ul style="list-style-type: none"> - new functionality, new feature - changes in performance or quality - changes in price or cost-in-use - architecture: modularization, platforms, standardization
process innovation	<ul style="list-style-type: none"> - tangible and intangible processes - core or administrative processes
input innovation	<ul style="list-style-type: none"> - new materials, new energy forms - new knowledge, new property rights
social and organizational innovation	<ul style="list-style-type: none"> - social innovations (human being and behaviour) - organizational innovations, institutional innovations - contract innovations
markets-innovation regulation	<ul style="list-style-type: none"> - in terms of regions, customers, competitors,

(Torkel Tallqvist (2009): Leadership in Repetitively Innovative Mature Companies, Åbo Akademi University Press, p. 31.)

Low and Marriotton the other hand, try to capture innovation in four categories:

product innovation	- changes in products and services offered
process innovation	- changes in the way products and services are created and delivered
position innovation	- changes in the context in which products and services are introduced
paradigm innovation	- changes in the underlying mental models which frame what the organization does

(Robin Lowe and Sue Marriott(2006): Enterprise: Entrepreneurship and Innovation. Concepts, Contexts and Commercialization. Butterworth-Heinemann, Elsevier, USA, p. 70)

Many textbooks classify innovations in terms of incremental and emergent or radical and revolutionary changes in the way people think, products are made, business processes or organizations. Very often one thinks that in order to be innovative, it has to be substantially different. When talking about innovation, the notion is that the change must be positive, it must give added value to the producer and to the customer and increased productivity is the way most companies measure innovation.

The so called *Oslo Manual* used by OECD defines innovation in the following ways:

Definition of Innovation

An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.

With its new definition from 2005 it:

- Extends coverage to 4 types. Objective is to better accommodate service industries and non-technological innovation
- Product innovation (goods and services)
- Process innovation (in making or supplying goods and services)
- Marketing innovation (first use of methods to influence demand)
- Organisational innovation (in specific domains of business)

For each of the four categories it explains it in more detail:

- A **product innovation** is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics.
- A **process innovation** is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.
- An **organisational innovation** is the implementation of a new organisational method in the firm's business practices, workplace organisation or external relations.
-
- A **marketing innovation** is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

Then it explains the **Degree of novelty** of the innovation

- new to the firm.
- new to the market (firm and competitors)
- new to the world (optional for surveys)
- radical or disruptive innovation (optional but impractical)

It further explains what it considers as innovation activities:

- **Innovation activities** are all scientific, technological, organisational, financial and commercial steps which actually, or are intended to, lead to the implementation of innovations. Some innovation activities are themselves innovative, others are not novel activities but are necessary for the implementation of innovations. Innovation activities also include R&D that is not directly related to the development of a specific innovation.

List of publications concerning innovations

Ali-Yrkkö, J. and Palmgren, C. (Eds.); Finland and the Globalisation of Innovation. ETLA- Research Institute of the Finnish Economy (B218 Series), Taloustieto Oy, Helsinki 2006.

Dal Zotto, C. and van Kranenburg, H. (eds.); Management and Innovation in the Media Industry. Edward Elgar, Great Britain 2008.

Grønhaug, K. and Kaufmann, G. (eds.); Innovation: A Cross-Disciplinary Perspective. Norwegian University Press 1988.

von Hippel, E.; The Sources of Innovation. Oxford University Press 1995.

Karlsson, C. (Ed.); Handbook of Research on Innovation and Clusters. Handbook of Research on Clusters Series, 2. Edward Elgar, Great Britain, 2008.

Kettunen, J., Ilomäki, S-K., Kalliokoski, P.: Making Sense of Innovation Management. The Federation of Finnish Technology Industries, Tampere, 2008.

Leiponen, A.; Knowledge Services in the Innovation System. ETLA B 185 and Sitra 244, Taloustieto Oy, Helsinki, 2001.

Lowe, R. and Marriott, S.; Enterprise: Entrepreneurship and Innovation. Concepts, Contexts and Commercialization. Butterworth-Heinemann, Elsevier, USA, 2006.

Science, Technology and Innovation Indicators in a Changing World: Responding to Policy Needs. OECD 2007

Tallqvist, T.; Leadership in Repetitively Innovative Mature Companies, Åbo Akademi University Press, 2009.

West, A.; Innovation Strategy. Prentice Hall International (UK) 1992.