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# CLUSTERS AND ORGANIZATIONAL NETWORKING

SULOIN Project: Developing the Logistics Cluster in Southern  
Finland

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ABSTRACT

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This thesis focuses on the development of international logistics network SULOIN – a project governed by Kymenlaakso University of Applied Sciences – that aims at creating cooperation models among international logistics clusters and logistics development organizations. SULOIN is amid the process of forming a network of various organizations involved in the logistics industry. The aim is to find overlapping interests and define shared goals. The selected partners offer industry specific, practice-based methods for operating in the logistics industry. The network also enables creation of new initiatives and projects that aim at increasing the competitiveness of the logistics cluster in Southern Finland.

The theoretical basis of the research consists of networking theories that show the benefits of organizational networking. The basis is on the concept of clusters, a concept of national, state, and local competitiveness within the context of global economy. Clusters are geographic concentrations of interconnected businesses, suppliers, and associated institutions in particular fields that cooperate as well as compete.

Using a qualitative research method existing European logistics networks and educational institutions were examined and surveyed. Persons representing existing logistics networks and educational institutions were asked to answer a concise survey regarding their organizations. The survey consisted of ten questions concerning the organization's strategy, network interaction, competition, EU-projects and future plans. The survey shows that developing certain geographic areas as logistics positions and information sharing are the main reasons for international cooperation in the networks. Germany, the Netherlands and Belgium are considered as the main logistics countries in Europe. As a result of the study cooperation with Russian logistics development centre is suggested.

Key words: clusters, networking, logistics, southern Finland

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Tutkimuksessa tarkasteltiin Kymenlaakson ammattikorkeakoulun hallinnoiman SULOIN-hankkeen (Sustainable Logistics Solutions through International Networking) kansainvälisen yhteistyöverkoston kehittämistä käyttäen hyödyksi laadullista tutkimusta. Tavoitteena oli selvittää Euroopassa toimivien logistiikkaverkostojen toimintaa, ja löytää sopivia yhteistyökumppaneita. Uusien kumppanuuksien ja kansainvälisen verkoston myötä SULOIN-hanke pyrkii parantamaan Etelä-Suomen logistiikkaklusterin osaamista, löytämään jo parhaaksi havaitut käytännöt tehokkuuden kehittämiseksi sekä luomaan uusia yhteistyömuotoja toimijoiden kesken. Hankkeessa on mukana logistiikka-alan yrityksiä Suomesta sekä liiketoiminta- ja tutkimusorganisaatioita ympäri Eurooppaa.

Tutkimuksen tietoperustan avulla osoitetaan verkostoitumisen hyödyt. Organisaatioiden välisiä suhteita tutkineet henkilöt Michael Porterin johdolla ovat osoittaneet, että globaalissa toimintaympäristössä parhaan tuloksen saavuttaminen edellyttää yhteistyötä usealla taholla. Niin sanottu klusterimalli perustuu ajatukseen, että organisaatio tuottaa hyötyä sekä itselleen että koko verkostolle. Klusterin ydinajatus on synergiavaikutus, jonka avulla strateginen tehokkuus, tuottavuus sekä innovaatiotoiminta kehittyvät.

Työn empiriaosuus suoritettiin laadullisena tutkimuksena, johon vastasi yksitoista henkilöä kuudesta eri eurooppalaisesta organisaatiosta. Tavoitteena oli selvittää logistiikkaverkostojen tämänhetkistä tilannetta sekä löytää kiinnostuneita yhteistyökumppaneita SULOIN-hankkeelle. Tutkimuksessa selvisi, että kaikkien organisaatioiden päällimmäisenä tavoitteena on alueensa logististen toimintojen kehittäminen sekä tunnettuuden edistäminen kansainvälisesti. Yhteistoiminta eri organisaatioiden kesken sekä erityisesti tiedon jakaminen koettiin tärkeäksi. Logistisesti tärkeimpinä maina esiin nousivat Saksa, Alankomaat ja Belgia. Suomi mainittiin yhdessä vastauksessa. Useimmat vastaajista esittivät organisaationsa tavoitteiksi uusien yhteistyökumppanien löytämisen. Tutkimuksen lopputuloksena ehdotetaan yhteistyön kartoitusta venäläisen logistiikkaverkoston kanssa Etelä-Suomen logistiikkaklusterin tunnettuuden parantamiseksi korostaen alueen logistista merkitystä itärajan läheisyydessä.

Asiasanat: logistiikka, klusterit, verkostoituminen, Etelä-Suomi

## TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Research objectives	1
1.2	Thesis structure	2
2	CLUSTERS AND ORGANIZATIONAL NETWORKING	4
2.1	The cluster concept	4
2.2	The Diamond of National Advantage by Michael Porter	5
2.3	Cluster definitions elsewhere	7
2.4	The value network perspective	8
2.5	Problems with implementing new approaches	10
3	LOGISTICS NETWORKS AND EDUCATIONAL INSTITUTIONS	11
3.1	Logistics in Wallonia, Belgium	11
3.2	Flanders Institute for Logistics, Belgium	11
3.3	Nov@log, France	12
3.4	ILOT, Russia	12
3.5	Port Center Network	13
3.6	EFLE network	13
3.7	Finnish Port Association	13
3.8	Merikotka, Finland	14
3.9	Straightway Finland	14
4	SULOIN PROJECT	15
4.1	Project objective	15
4.2	The cluster approach	15
5	RESEARCH	17
5.1	Research methods	17
5.2	Data gathering	17
5.3	Evaluation	18
6	RESEARCH FINDINGS AND CONCLUSIONS	19
6.1	The core mission of the networks	19
6.2	Methods of cooperation	19
6.3	Interaction with other networks	20
6.4	Interaction with partners and projects	20
6.5	Future plans	20

6.6	Discussion	21
7	CONCLUSIONS	22
	BIBLIOGRAPHY	24
	APPENDICES	27

## 1 INTRODUCTION

In today's global economy businesses try to find competitive advantage through collaboration and networking. Such practices as supply chains, value chains, extended enterprizes and clusters are common. However, collaboration is not valuable just for its own sake, but it should rather create new value propositions based on a mutual view to value creation. (Bititci et al. 2004, 1.)

At the time when the concept of organization emerged, it could have been said that you were inside the organization only if you were an employee. That is because large companies had large numbers of employees. Today a company with relatively few employees of their own can have a value network consisting of tens of thousands of suppliers and other members that create a vast amount of revenue. For organizations to prosper in this world of relationships it is important to learn sensing patterns and to work with interdependencies. (Allee 2003, 11.)

This paper aims at reasoning why collaboration between businesses themselves as well as different organizations is rational. The idea for this study came from the SULOIN project (Sustainable Logistics Solutions through International Networking) which is amid the process of forming a network of various organizations involved in the logistics industry. SULOIN operates under North European Logistics Institute which is governed by the Kymenlaakso University of Applied Sciences. Hence North European Logistics Institute is the commissioner of this thesis.

### 1.1 Research objectives

The research of this thesis is founded on the situation of the SULOIN project as building its position as a logistics network. While becoming an effective network of its own it is important to understand how other networks operate, what kind of partnerships they have and in what kind of work they are engaged. By benchmarking other networks it is possible to skip the ineffective phases of network creation and find the right areas of concentration. This is achieved by investigating three themes regarding to existing logistics networks:

### 1. The core mission of the networks

This is about how networks categorize themselves and are they oriented for example in technological development or sharing know-how.

### 2. Internal and external interaction

Internal and external interaction includes the types of partnership that logistics networks have already created and are looking for. The geographical area they operate in is covered as well. It also includes communication and cooperation methods as well as concrete steps, such as what kind of projects they are participating.

Being the largest of these three themes, this part includes the competition of what networks may have been encountered from other networks. On the other hand interaction with other networks is covered. The involvement in European Union networks or projects is investigated as well.

### 3. Future plans

Final theme is future, and in particular what kind of plans the networks have for the future.

By investigating other networks and institutions common targets will come up, and on the other hand special focus areas that are not suitably covered can arise.

As the SULOIN project is continuing until the end of the year 2013, it is important to create a solid grounding for follow-up research and personal contacts to be used in the future.

## 1.2 Thesis structure

Thesis deals with the issue of organizational networking. The theory section provides the basis for understanding why it is worthwhile to cooperate among organizations even within the same industry. This section is founded on a concept of clusters, group of interconnected firms, suppliers, related industries, and institutions that arise in a particular location, introduced by Michael Porter in his

1990 book called *The Competitive Advantage of Nations*. In addition to Porter's thoughts, several literal and online sources are utilized to create a general view of organizational networking.

After the theory section, the thesis will focus on existing logistics networks relating to the SULOIN project. This section introduces existing logistics networks that are also possible future partners of SULOIN. Different organizations and their areas of operation are covered. Introducing these organizations will make it easier to understand why they are chosen. The section also introduces other Finnish logistics networks that are considered important with regards to SULOIN. The following section then introduces the SULOIN project more in depth, so it can be compared to previously mentioned organizations.

The research part of the thesis will utilize the organizations introduced in the section 3. Persons representing the aforementioned logistics networks and educational institutions have been asked to answer a concise survey regarding to their organizations. The survey consists of ten questions concerning the organization's strategy, network interaction, competition, EU-projects and future plans. It is also discovered what kind of partners they are looking for. The survey will help to understand the scope of networking of logistics organizations in Europe. It is implemented to bring up new ideas how to develop SULOIN, create new partnerships, and especially to find new focus areas that are not properly forwarded in other networks.

The last section deals with the conclusions of the research presenting further ideas for SULOIN and for follow-up research.



## 2 CLUSTERS AND ORGANIZATIONAL NETWORKING

Cooperation among businesses is not a new thing: organizations have always tried to reach their objectives by collaborating with other businesses rather than competing with them. A strategy based on cooperation can create advantages for companies without some specific resources or skills, and it also offers opportunities for synergy and learning. Global markets, rapidly changing technologies, economic uncertainty and many other aspects of present trends have increased the attractiveness of a cooperative strategy in companies. This method and the insights of cooperation can be applied also to partnerships between other types of organization. (Child & Faulkner 1998, 1-4.)

### 2.1 The cluster concept

Michael Porter has dedicated a great part of his career to examining competitiveness in the global economy. He has presented a theory of national, state, and local competitiveness within the context of global economy that gives a significant role to clusters. Clusters are geographic concentrations of interconnected businesses, suppliers, and associated institutions in particular fields that cooperate as well as compete (Porter 2008, 213). The more in-depth definition can be found in his book *On Competition* (1998, 266) going as follows:

*A cluster is a system of interconnected firms and institutions the whole of which is greater than the sum of the parts. Clusters play an important role in competition, and these raise important implication for companies, governments, universities, and other institutions in an economy. Clusters represent a new and complementary way of understanding an economy, organizing economic development, and setting public policy. Understanding the state of clusters in a location provides important insights into the productive potential of its economy and the constraints of its future development. Paradoxically, then, the most enduring competitive advantages in a global economy will often be local.*

The concept of cluster is a way of viewing national, state and city economies. It shows untraditional roles to companies, governments and different institutions enhancing competitiveness. The concept emphasizes the role of location when building successful businesses. The importance of location stems from the

interconnection of buyers, suppliers and other institutions that contribute not only to the efficiency but to the rate of improvement and innovation. How firms compete is important to analyze when improving the productivity and prosperity of a location; improved productivity of all industries enhances the prosperity of a location as a whole. (Porter 2008, 214, 225.)

The physical proximity is important with regard to clusters: only in very small countries clusters can be national, otherwise they are regional. The closeness of firms in a cluster let them to transact better, share technology and knowledge, start new businesses and capitalize innovations more easily. Also other information-centred goods in the area such as pools of employees with special skills, technological knowledge and traditional input-output linkages are in use. The key aspects of clusters are thus knowledge creation, innovation, accumulation of skills and the specialized expertise in the cluster area. (Porter 2007, 2.)

## 2.2 The Diamond of National Advantage by Michael Porter

Michael Porter has studied in great depth why some companies in certain nations are able over and over again to pursue improvements, innovate and find competitive advantage compared to other nations. He has found four attributes constituting the so called diamond of national advantage that he in his book *On Competition* (2008, 182) puts as follows:

- 1. Factor Conditions.** The nation's position in factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry.
- 2. Demand Conditions.** The nature of home-market demand for the industry's product or service.
- 3. Relating and Supporting Industries.** The presence or absence in the nation of supplier industries and other related industries that are internationally competitive.
- 4. Firm strategy, Structure, and Rivalry.** The conditions in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry.

Companies are born and developed in an environment constituted from these factors that affect when pursuing success. If a national environment offers sufficient resources and skills, information and directions, it will make companies to invest and innovate. Still gaining competitive advantage is not the final stage, but the environment pressures to upgrade the advantages in the long term. (Porter 2008, 182-183.)

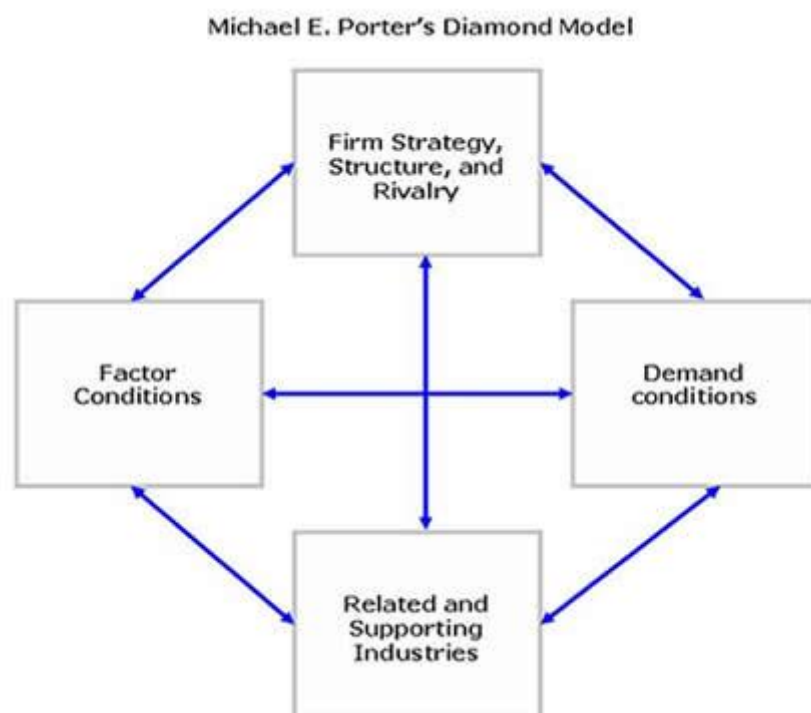


FIGURE 1. Determinants of National Competitive Advantage (Porter 2008, 183).

The most interesting one of these determinants regarding to organizational networking is the point three: Related and Supporting Industries. Firstly, supporting industries will make it easier to access cost-effective inputs. But more importantly, related and supporting industries located near each other enables the situation in which communication is easy and fast, information flows constantly, and ideas and innovations are shared. Technical interchange between related industries will drive more innovation, new skills will arise and entrants emerge.

This effect is strengthened when the suppliers themselves are strong global competitors. (Porter 2008, 193-194.)

Still, the national diamond works as a system: one point's effect depends on the others. For example, factor disadvantages will not lead companies to innovate unless there is sufficient rivalry. But this can be looked from the self-reinforcing point of view: local rivals can enhance domestic demand, suppliers can enter the industry they formerly supplied, or buyers can enter a supplier industry if they see it strategically rational. (Porter 2008, 198-199.)

The effects of the diamond model are not limited just to one competitive industry, rather than clusters of competitive industries. Clusters interact through vertical and horizontal relationships, and one competitive industry can help or even create another. After a cluster is formed, several industries will support each other. (Porter 2008, 199.)

### 2.3 Cluster definitions elsewhere

While Michael Porter might be the most well-known cluster theorist, there are several other definitions of clusters from which now a few is covered.

The former Department of Trade and Industry of The United Kingdom defines clusters as 'a concentration of competing, collaborating and interdependent companies and institutions which are connected by a system of market and non-market links' (DTI 1999, 22).

Ketels & Sölvell in their report to The European Union (2007, 8) defines regional clusters as 'the geographic concentration of economic activities in a specific field connected through different types of linkages, from knowledge spill-overs to the use of a common labour market'.

It is largely accepted that most cluster studies use Porter's work as a starting point for cluster analysis (Bergman & Feser 1999, 58). In this thesis the focus is more on the practical issues, so the definition of Porter's cluster is suitable.

## 2.4 The value network perspective

As it is now covered that there is an important relationship between different operators in a cluster area, it is good to examine how the relationship works in practice and how the value is created. Verna Allee introduces in her book *The Future of Knowledge* (2003, 192) an approach called the value network, defined as follows:

*A value network is any web of relationships that generates both tangible and intangible value through complex dynamic exchanges between two or more individuals, groups, or organizations. People in organizations and enterprise networks engage in many different types of business interactions other than just exchanges of goods, services, and revenue. They also exchange knowledge and other intangibles such as favors and benefits in order to build relationships and ensure that everything runs smoothly.*

The goal of a value network is to generate economic prosperity or otherwise benefit its participants. People participate in a value network by exchanging their expertise and knowledge as tangible and intangible commodities that have value for other members of the network. In a successful value network every participant gives and receives value in ways that promotes their own success as well as the success of the value network as a whole. If not true, then the participants may withdraw or are expelled, or the whole network becomes unstable and may collapse or reconfigure. (Allee 2003, 192, 204.)

As opposed to the traditional value chain thinking, in this approach the intangible exchanges – such as knowledge – are not just activities supporting the original business model rather than part of the model itself. This view can for its part explain why economic clusters can be so efficient. (Allee 2003, 193.)

The value network must be analyzed in order to get the best of it. To analyze a value network some basic questions must be addressed. In the following, three aspects of value network analysis are discussed (Allee 2003, 201-207):

1. **Exchange analysis.** Mapping the exchanges across the system can reveal the real purpose of the organization. There has to be logic to the way value moves in the system, both tangible and intangible exchanges must happen and the whole system has to be optimized so there are no bottlenecks or dead ends where value can be misplaced. The analysis can be done by breaking down the value flow and looking for the aforementioned weaknesses.
2. **Impact analysis.** Each value transaction has some kind of an impact on the participants. By examining each of the inputs different costs and benefits to the network and its every participant can be found.
3. **Value creation analysis.** Every participant is extending value to other participants in the network. By analyzing each value output new tangible and intangible value or extended value to other participants can be found.

This kind of an analysis could be called the whole-system approach. The object is to find the unchanging laws and principles that in fact allow the change in the whole structure. This approach is based on the principle of exchange allowing exploring countless of forms of organization. A value network perspective can create greater value for the people in the network, for other members of the network, and even for the good of the society and the planet. (Allee 2003, 226.)

Even though different approaches to organizational networking and business relationships together with technological possibilities can give an opposite image, business is still about the interaction between real people. In a traditional linear view business can be seen only as a material flow and a set of operations in between the process, and the role of people and the human relationships are diminished. By combining the tangible and intangible transactions the role of people is inevitably taken into account, as the knowledge transfer and other non-material flow give the network its interdependency. Every transaction is only meaningful in relationship with the network as a whole. (Allee 2003, 240-242.)

## 2.5 Problems with implementing new approaches

Michael Porter (1998b) has presented five reasons why new approaches are difficult to implement in traditional business thinking:

1. Business leaders are interested in answers to the important questions they are facing, not the questions that necessarily advance scholarly literatures.
2. Theories or models that require restrictive assumptions are untenable, because managers cannot hold everything else equal. Standard economic models of firms and product markets have captured little of the complexity and dynamism of actual competition.
3. Economists begin with the presumption that firms are governed by markets, and economic models leave little or no latitude to managers. Managers know that firms have considerable latitude to create buyer value and shape markets.
4. Concerns of businesses go well beyond issues that can be addressed with the preferred tools of the profession.
5. Economists have rarely seen their roles as guiding competitive strategy or helping companies push profits up.

According to Porter this is starting to change and the decisions of real firms are taken into account little by little (1998b). The increased amount of business literature in recent years can be a proof for that.

### 3 LOGISTICS NETWORKS AND EDUCATIONAL INSTITUTIONS

Logistics networks aim at bringing together the interests and knowledge of the different participants in logistics value chains. Their work is based on cooperation between international partners and especially knowledge and information sharing. Educational institutions are platforms for knowledge and information sharing and they also do research in their fields of expertise. This section deals first with the existing logistics networks and educational institutions in Europe that are in the target group of the research. Thereafter, existing Finnish logistics networks that are operating near the same field as SULOIN are briefly introduced.

#### 3.1 Logistics in Wallonia, Belgium

Logistics in Wallonia is a transport and logistics cluster supporting the competitiveness of the logistics sector of Wallonia in Belgium and abroad. It aims at defining a common strategy and optimising human and technological resources in the Walloon territory so as to attract global players. This innovation network is looking for partners in the field of research and training as well as private partners to participate in the projects.

The Walloon region of Belgium has put in place an unprecedented multi-sector policy of Competence Centres in order to speed up industrial redeployment. This political will has created transition bringing together a large number of players from the domains of industry and science. Five sectors of activity have been chosen due to their potential for economic development. Amongst these sectors that of logistics plays a strategic and very specific role, thanks to its network of dynamic services providers, its recent rate of growth, its transversal nature, and its future prospects. (Logistics in Wallonia 2012.)

#### 3.2 Flanders Institute for Logistics, Belgium

The Flanders Institute for Logistics is a centre of expertise supporting Flemish companies in logistics projects to improve competitiveness through the implementation of sustainable and innovative concepts and technologies. This aims at strengthening Flanders' position as a key logistics region in Europe. The



Institute was founded in 2003 by the Flemish government and it operates using brainstorm sessions involving members and others in combination with company visits and personal expertise. (Vlaams Instituut Voor De Logistiek 2012.)

### 3.3 Nov@log, France

Nov@log is a pole of competitiveness supporting innovation in French businesses. It aims at developing logistics systems and services. The special themes in the pole are traceability, intermodality, processes and flows of industrial logistics, the maritime and terrestrial interface, urban and logistics movements, environment and security. The operation of the pole is engaged around four elements:

1. The implementation of a common strategy of economic development coherent with the overall strategy of the territory.
2. Close partnerships between the stakeholders around the projects.
3. Concentration on technologies destined for high potential growth markets.
4. A sufficient critical mass to acquire and develop an international visibility.

In addition to these aspects sustainable development and environmental management of logistics are key themes. Nov@log has accompanied 75 projects with respect to logistics. (Nov@log Info 2012.)

### 3.4 ILOT, Russia

ILOT or North-Western Russia Logistics Development and Information Centre is involved in the region's transport logistics development by sharing best practices and helping businesses to implement them. ILOT also offers consultation for small and medium-sized companies in the usage of logistics IT-systems. The Centre's main activities include monitoring regional and cargo transit flows and it assures companies' access to logistics information resources. Market research and analysis and producing legislation initiatives are also part of their work. ILOT has participated in several international projects. (ILOT 2003; Pimonenko 2011, 6-7.)

### 3.5 Port Center Network

Port Center Network (PCN) is a concept of an educational centre of the modern port activity bringing together the port community, the citizens, schools, and universities. Educational exhibits and on site visits of the port are arranged, and on the other hand collaboration with research institutions and the promotion of cooperation between ports are in the centre's mission. Port Center Network is supported by the European Sea Ports Organization (ESPO). (PCN 2012.)

### 3.6 EFLE network

European Forum of Logistics Education offers a platform for internationalization of educational programmes and for knowledge sharing and learning. The network consists of 26 institutions from 14 different countries. EFLE organizes annual meetings for the participants to meet people from other universities both inside and outside Europe and to create the possibility for networking and collaboration, information sharing and the creation of international relationships between different institutions. (EFLE 2012.)

In the research part of the thesis European Forum of Logistics Education is represented by the respondents from the HAN University of Applied Science

### 3.7 Finnish Port Association

The Finnish Port Association was founded in 1923 and is the central organization for municipal and private ports. Its main function is to overlook port operators' interests in Finland. The Port Association offers expert services and information but primarily benefits its members by bringing up factors concerning the legislation of port-specific transport and logistics, the development of the transport system, and the implementation of legislation relating to safety and environmental issues. Internationally the Port Association operates through the European Sea Ports Organization (ESPO), where its officers and representatives work in committees. (Finnports 2012.)

### 3.8 Merikotka, Finland

Kotka Maritime Research Centre (KMRC) is a centre of expertise focusing on maritime transport, maritime safety, and the marine environment. It connects Finnish universities and research institutes and their expertise to find new approaches through interdisciplinary research and international cooperation. The activities of KMRC aim at safeguarding the unique nature values of the Gulf of Finland and Baltic Sea. Improving maritime safety creates prerequisites for the conservation of the marine environment despite rapidly growing traffic. Maritime transport and port operations and their economic impacts are also important areas of research at KMRC. Research creates better conditions for business and strengthens the position of South-Eastern Finland as a competent provider of logistics services. (Merikotka 2012.)

### 3.9 Straightway Finland

Straightway Finland is a network of over 50 companies from the logistics industry. It offers transport services over road, rail, sea and air, warehousing and forwarding services as well as value-added services. It also advises companies for settling into new areas and gives help to start-up businesses. Straightway tries to network customers, so that when they are in a need of logistic services the help is near. This is done by cooperating with different organizations, participating in seminars, meetings and fairs and by network marketing. Also hosting potential customers and company visits can come into question. (Straightway 2012.)

## 4 SULOIN PROJECT

SULOIN is a shortened form of a phrase Sustainable Logistics Solutions through International Networking. As mentioned earlier, SULOIN is a project of North European Logistics Institute (NELI). NELI focuses on supply chain management by developing transportation logistics, technologies and new cross border business models. The institute serves as a platform for research and development actors in the Kymenlaakso region together with national and international actors in the field of logistics. NELI generates cooperation, new business, research, and development in the field of transportation and logistics.

This section introduces the SULOIN project and is based on discussions underwent with the project manager of SULOIN and on the material available on North European Logistics Institute's website (NELI 2012, Lopperi 2012).

### 4.1 Project objective

The main objective of the SULOIN project is to create cooperation models among international logistics clusters and logistics development organizations. The focus is on sustainable development. The project also includes international benchmarking regarding forest industry and food industry supply chains and distribution systems.

SULOIN aims at forming a network of various organizations involved in the logistics industry. The aim is to find overlapping interests and define shared goals. The selected partners offer industry specific, practice-based methods for operating in the logistics industry. The network also enables creation of new initiatives and projects that aim at improving the competitive landscape of the regions.

### 4.2 The cluster approach

Cluster organisations can play a significant role in setting up market and user demand analysis and in providing such information to partner organizations. Cluster organizations act as mediators in the connection between innovation actors and users bringing together buyers and suppliers and identifying

opportunities for business-to-business cooperation. This can induce collaboration among cluster firms as well as between firms from different clusters willing to cooperate and share expertise to create innovation and develop products and services together. In addition organizations in a cluster are often involved in the identification of the need for technological innovations of their cluster firms and in facilitating the transfer in the whole supply chain within the cluster or elsewhere.

Cluster development allows the comparing of logistics systems in order to find weaknesses and strengths, how to improve the core competencies and reach competitive advantage. International benchmarking and sharing best practices are important factors in regional development and can benefit other sectors as well. The network model can give more information to regional actors about international logistics operations and the role of sustainability in logistics development. New opportunities to businesses to internationalize and to create new start-up businesses can arise.

The cooperation happens between companies, international logistics development organizations, educational organizations and institutional actors. Students are helping in the different parts of the project by doing thesis works that are related to the project. The project continues until the end of the year 2013.

## 5 RESEARCH

The principal aim of this research is to map the situation of different logistics networks and educational institutions in Europe: what are their fields of interest, how they collaborate with their partners, what kind of projects they are participating, what their future plans are, and what kind of partners they are looking for. This will help the SULOIN project to gain more visibility among logistics networks, as well as find a way to differentiate from other networks. Most importantly, it will discover potential partnerships by creating personal contacts and finding common interests between the networks.

### 5.1 Research methods

The research of this thesis is carried out using a qualitative research method. Qualitative research usually gathers information by other means than counting and the core of the data consists of textual information (Wilson 1999, 4). Qualitative research also takes into account the research analyst's own background and role when analyzing the material (Davies 2007, 26). The main reason of choosing a qualitative method over quantitative is that the sample size is small, and in order to get in-depth insight on how logistics networks operate it is sensible to let the respondents use their own words.

The aim is not to conduct a basic or scientific research rather than find out how logistics networks and institutions work. Using qualitative methods is also a good platform for follow-up research which is an important factor in the SULOIN-project.

### 5.2 Data gathering

A questionnaire consisting of 10 open-ended questions with three background questions was made with an online survey tool and was then sent via e-mail to a predefined group of people with a cover letter including the basic information of the study and SULOIN project. This approach was chosen as it was not possible to meet the respondents face-to-face due to geographic locations. Online survey with open-ending questions gives the respondents time to think their answers and

fill out the questionnaire when they feel appropriate. The questionnaire was sent to 15 people and it attracted 11 responses from 6 different European institutions.

The target group to whom the questionnaire was sent was comprised together with the project manager of SULOIN. Internet research and personal contacts were utilized in the process.

### 5.3 Evaluation

Bryman (2005, 33) finds out four disadvantages of self administered questionnaires:

1. There is no interviewer to help the responder if a question is not understood.
2. The whole questionnaire can be read before starting to answer the questions, so early answers can be influenced by the latter questions.
3. There can be no certainty who has answered the questionnaire.
4. Response rates are usually lower than in an interview-based research.

On the other hand he shows apparent advantages (2005, 32):

1. Questionnaires are invariably cheaper, especially when respondents are geographically dispersed.
2. Questionnaires are usually quicker than interviews.
3. There are no problems arising from the presence of interviewers, such as changing the nature of answers according to characteristics of interviewers.

In this study it is important to analyze accurately what the respondents are saying: are they referring to facts or just using the situation at hand to advertise their network. The possible future relationship between SULOIN and the respondents' networks has to be taken into account when analyzing the content.

## 6 RESEARCH FINDINGS AND CONCLUSIONS

The eleven respondents represented six European logistics networks and educational institutions introduced in chapter three. This section presents the main findings and conclusions from the questionnaire and discusses the questionnaire approach as a research method.

### 6.1 The core mission of the networks

The cooperation between different actors including the knowledge sharing and the sharing of best practices came up from the answers. Another notable theme was the promotion of one's region as a top logistic location. These are of course the same themes that are in the networks' documented missions. As a reference to the networking theory it can be mentioned that cooperation and knowledge sharing are the main reasons why organizations seek value creating relationships.

### 6.2 Methods of cooperation

The respondents' networks are in very different places in terms of their evolution, which can be seen in the amount of organizations included in one network that varies from 5 to 250. The partners represent logistics industry and services and educational institutions mainly from European countries.

The methods of cooperation with partners include both electronic and face-to-face options. E-mail is in use in everyday contacts as well as telephone and Skype. Face-to-face meetings are preferred when concrete projects are in need of furthering. ILOT also mentions that especially in Russia face-to-face meetings are in use; this is useful as SULOIN is expanding its operation into Russia. Different events are utilized in order to get face-to-face meetings. Projects and seminars are the main cooperation methods when something concrete is tried to be driven forward.



### 6.3 Interaction with other networks

The Netherlands is seen as the main player in the logistics field. Other countries receiving several votes are Germany and Belgium. These countries are all gateways to Europe, strategic locations with highly developed transportation and infrastructure. Finland was mentioned in one answer that came from ILOT, Russia. This clearly indicates the need to promote Southern Finland as a gateway to Russia and the Baltic countries.

The respondents are not in general confronted with competition from other logistics networks. Two of the networks mention other institutions or companies that are not part of the own network or regional cluster. The general focus is on cooperation rather than competition.

### 6.4 Interaction with partners and projects

If the networks are looking for partners, they prefer similar pools of expertise or companies in the field of logistics. Russian ILOT mentions the most detailed requirements and their goal in building the network to a designated direction seems clear.

When asked about the EU networks or EU projects they are in, it becomes clear that there is some kind of interaction but in general very little or there is not anything to report yet. From EFLE network some people are involved in the projects and some are not. This can be kept as a weakness in the questionnaire layout, but it shows that there are different roles inside the network. In any case, the problems using EU funding is highlighted for example in Susanna Järvinen's thesis (KyAMK 2011) that indicates that there are difficulties in applying the funding or that there is not sufficient information on how to apply the projects in Finland. This may be the case in other European countries as well.

### 6.5 Future plans

More cooperation and especially becoming more international are the main themes for the networks in the future. Particularly ILOT is looking for new

partners and Nov@log is looking for to become more international. The answers reflect the continuation of the network process as well as the on-going need for cooperation with existing and possible future partners.

## 6.6 Discussion

The answers indicate some problems in the questionnaire layout. When examining the answers it is not always clear if the respondents are answering on behalf of themselves or the organization they represent. This can be due to different preferences in written English or the respondents' reluctance to make generalizations for the whole network. This is especially the case with EFLE network because of its nature as a forum to different institutions. On the other hand it is not such a big problem as this is not a scientific research and there is no intent to draw definite conclusions from the answers.

Another drawback is the small sample. There could have been more respondents from different networks in Europe. This is only a problem when examining the general methods of cooperation and benchmarking the best practices that now remain scarce in the research. On the other hand the sample is sufficient in terms of creating new relationships.

Every one of the networks reacted positively to the possible cooperation with SULOIN. This can be revealed from the answers but especially from the e-mails exchanged behind the scenes: every network expressed their willingness to map cooperation methods with SULOIN in the future. This is important as now there are more personal contacts in different networks.

## 7 CONCLUSIONS

The networks that answered the survey represent the supporting organizations of the cluster theory still including inside them many competing businesses and associated institutions. Mainly the supporting role emerges as their being the connectors between different actors in their field of expertise. Clusters take time to shape and obviously none of these networks have had sufficient time to become complete - if that is even possible. A great part of their core mission is exchanging intangibles, for example knowledge sharing, which in its part reflects the value network theory presented earlier. These networks have clearly internalized how sharing intangible assets can benefit the whole network. For the people in these networks it means sharing their knowledge and expertise with other participants.

In many respects these networks include the same focus points as SULOIN: developing one's own region as a logistics area and creating a web of international players in the logistics field. The methods as well seem to be very similar. Now as the areas of operation are covered, it would be sensible to move on and search an area where the cooperation is most probable. Following is a few ideas.

The North-Western Russia Logistics Development and Information Centre ILOT stood out from the survey with its director's precise answers and the clear mission that it is following. It is hard to do internet research on this network partly due to the lack of Russian language understanding and partly because there is not enough information available. However it seems that the network is under the control of its director Mikhail Pimonenko who is also interested in the future cooperation with SULOIN. Pimonenko was also the only one mentioning Finland as a key player in the logistics field. This indicates that he understands the gateway role of Finland to Russia and the Baltic countries, as well as the other way around from Russia to the European Union. This is definitely the one network that deserves more in-depth analysis and mapping the cooperation methods with SULOIN.

Participating in EU projects is a concern that SULOIN could bring up in discussions with other networks. As stated in Järvinen's thesis, there are sufficient funds left unused when organizations do not know how to apply or there is not enough information on the projects. There could be possibilities for these

networks together with SULOIN to participate in EU projects. This could be a clear focus point in the follow-up research.

On the other hand the general methods of cooperation emerging from the answers are the same that SULOIN already uses: face-to-face contacts whenever possible, different electronic medium, participating in projects and seminars and visiting organizations. It can be assumed that there is no hidden information here that could be discovered with more in-depth research; these are the methods that networks use in their day-to-day contacts.

As a conclusion, in order to gather more in-depth information regarding European logistics networks, a different approach of research could be used. As mentioned there are problems with the questionnaire approach, and more profound findings may be obtained for example with telephone interviews or long-term correspondence using e-mail.

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## APPENDICES

### SURVEY QUESTIONS AND ANSWERS

#### 1. Background information

##### Name

1. Philippe Demoulin
2. Piet Belet
3. Francis Rome
4. Mikhail Pimonenko
5. Jan Jansen
6. R.B. Meijers
7. Reinder Pieters
8. Nico Lamers
9. Richard Westerman
10. Bernard Piette
11. Philippe DEYSINE

##### Organization

1. Havencentrum Lillo
2. V.I.L.
3. Flanders Institute for Logistics
4. Nort-West Russia Logistics Development Centre ILOT
5. HAN University
6. HAN University of Applied Sciences
7. HAN/Arnhem Business School
8. Tradon / HAN
9. HAN University of Applied Sciences
10. Logistics in Wallonia
11. Nov@log

##### Title

1. General manager
2. Key account manager
3. Director
4. Director
5. -
6. Mr.
7. Senior lecturer and researcher
8. Drs
9. Lecutrer
10. Manager
11. Managong Director

#### 2. What is the core mission or strategy of your network / cluster?



1. Name of the cluster: Port Center Network to promote cooperation between ports and port visitor / information centers.
2. To organise Flanders as being one of the logistic top-regions within Europe.
3. To enhance the competitiveness of the logistics sector in flanders (Belgium)
4. Supplying of logistics development in the region, consulting for implementation of modern IT in logistics, learning of best practice in logistics and helping to companies in its usage
5. Collaboration in SCM of FMCG and Healthcare
6. Knowledge transfer and sharing regarding improvement of Healthcare processes and activities, aligning both (internal) supply chain and patient flows. With a regional focus.
7. To aid the llogistic supply chain to perform better and to adapt to new challanges especially sustainability
8. Knowledge about purchasing ans 9secured) logisitics
9. Provide the best education and advice for studentes and companies specifically in logistics, QRM and LEAN manufacturing
10. We want to turn our region into a top logistic location by developing activities that aim at : - fostering the innovation in companies through collaboration with universities and research organisations, - providing networking platforms for our members, - promoting our region abroad
11. Incubate and grow innovative projects mxing business and research in the logistics and supply-chain area

**3. As what type of network / cluster are you best defined?**

Technology oriented

Know-how oriented

Other

1. Know-how oriented
2. Other: Logistics/supply chain
3. Know-how oriented
4. Know-how oriented
5. Know-how oriented
6. Know-how oriented
7. Know-how oriented
8. Know-how oriented
9. Know-how oriented
10. Other: Actually both
11. Know-how oriented

**4. How many organizations are included in your network?**

**In total (estimate)**

1. 10

2. 310
3. 5
4. Nearly 25-30
5. 50
6. 20
7. 10
8. 50 - 75
9. 200
10. 250
11. 100

### **From which industries**

1. Educational touristic port authorities
2. In general : production plants and logistic providers
3. Logistics
4. Transport, Logistics, Freight-Forwarding, Universities and Technical Schools
5. Logistics
6. Healthcare
7. Food Logistics Service Providers Retail
8. Paper/ printing/ transport/ educational/ consultancies/ barcode technology/ RFID
9. Manufacturing, Electronics, Service oriented, Chemical, Transport, Education, small business
10. Our members are coming from different types of activities : - logistics services providers - industrial companies - infrastructure managers - training organisations - research centres and university departments
11. Logisticians, infrastructure operators (inland waterways, railways, ports), IT solutions providers, automotive, chemical, energy, innovative SMEs Universities, research labs

### **From which countries**

1. Belgium, Netherlands, France, Italy, UK, etc
2. Flanders
3. Netherlands, Germany, Spain, Denmark, Turkey
4. Russia, Finland, Estonia, Latvia, Leuthenia
5. Netherlands Russia Germany Belgium France
6. The Netherlands
7. The Netherlands
8. Netherlands/ Belgium
9. Netherlands, Belgium, England, Sweden, Norway, Germany
10. Mainly Belgium
11. Mainly France

## **5. How do you cooperate with your partners?**

### **Methods (electronic vs face-to-face)**

1. Mails calls visits events
2. Electronic and via events
3. Electronic and face-to)face
4. Mostly with E-mail. Sometimes, especialy in Russia face to face
5. E-mail Skype Website Conferences Articles
6. Mostly face to face or direct mail contact
7. Email telephone meetings
8. Face to face and electronic (e-mail) I am self employed and hire myself for various kind of projects to organisations as a specialist (trainer/ consultant). My customers are companies and organisations with different kind of backgrounds
9. Skype, visits, phone, email, tekstmessages
10. We use a mix of methods including face to face and electronic contacts. For concrete projects, we prefer face-to-face meetings.
11. Mianly face to face to make collaborative projects happen

#### **Concrete steps (projects, seminars etc.)**

1. -
2. Events, seminars, projects,aso
3. Projects
4. Participation in projects, exhibitions, forums and seminars.
5. E-mail Skype Website Conferences Articles
6. Projects within healthcare institutes, organising seminars, organising Minor study programme Healthcare processes
7. Seminars workshops interviews articles
8. -
9. Projects, intervision days, seminars, congresses
10. We organise working groups, seminars and company visits.
11. –

#### **6. What kind of partners are you looking for?**

1. Any those who can help to achieve our aim
2. Overhaul Logistic organisations within the countries of Europe.
3. Similar centers of excellence
4. Partners which ready to improve logistics skills for better international cargo transportation by all transport modes according to harmonisation of Russian standards and requirments with up today international ones.
5. We ahve enough but new ones are always welcome in Transport, Warehousing, Transport, FMCG and health care
6. Healthcare related in the broadest sense
7. Best in class in sustainable physical distribution
8. -
9. Partners who are interested in training or guidance towards improvement of processes or partners who need students to help them with this
10. We are open to any kind of partnership

11. Innovative logistics clusters European R&D partners

**7. Are you confronted with competition from other logistics networks?  
Which ones?**

1. No
2. Not really ; our colleagues of the Netherlands eventually ( Dinalog)
3. NA
4. No. There is a definite competition with some public organizations (associations, unions) in the field of transport and logistics.
5. Not really ... we are always looking for collaboration
6. Lean
7. No
8. No, none
9. Yes, other schools, knowledge centers, private consultants and logistics companies
10. Our direct competitors are the neighbouring regions. On a cluster point of view, we try to develop a relation which does not imply direct competition but more complementarities
11. No so much considering the very specific nature of our mission of "pole of competitiveness" and the related label

**8. Which countries do you see as the main players in the logistics field?**

1. Belgium Netherlands Germany China
2. In EU : Germany/France/UK and Belgium more or less as transit country/central point.
3. The Netherlands and Germany
4. In business logistics: Holland, Germany, Finland, Sweden, Poland In logistics science: USA, UK
5. Netherlands, Belgium, France, Germany, Poland, Ukraine and Russia
6. US
7. The whole of the EU (I see it as one country), As states (still) The Netherlands/Belgium, Germany and the UK
8. Netherlands/ UK/
9. Netherlands, Belgium, Germany, Denmark, China and Japan
10. Netherlands Germany USA India China
11. –

**9. Are you involved in any EU network? If so, which one and what are your experiences with it?**

1. No
2. Just starting, until now : more Flanders-oriented.
3. Only on an ad hoc basis
4. It's appeared a kind of "Facebook" for transport and logistics specialists, but the main items, that they discuss, it is searching for better jobs.
5. Yes EFLE

6. No
7. ISL good
8. No
9. Several knowledge networks, not much experience personally
10. We have contact with different European clusters but these contacts are not formalised in a network.
11. No enough feedback to draw conclusions

## **10. EU projects**

### **What EU projects are you involved in?**

1. None
2. Discussing
3. SoCool
4. Rail Baltica Growth Corridor Russia
5. HTAS-EMS
6. None
7. None
8. None
9. RAAK Pro
10. We are in one EU project; it's a project "Regions of Knowledge" in the framework of FP7
11. Regions of knowledge (Log4Green)

### **Describe your role in the project(s)**

1. -
2. -
3. In house consultant
4. Partner
5. Sub-contractor
6. None
7. -
8. -
9. Project leader for QRM implementation
10. We are running one of the 6 WP's
11. Bring intelligence and recommendations from the French side for joint European initiatives

## **11. What plans does your network have for the future?**

1. Improve quality of information exchange organise events and exchange of know how
2. To become more international.
3. We would like to build more cooper
4. Continue to o our best in the fields of our activity and look for partners for projects with our ideas.

5. No new plans, we are just involved in a large Dutch project of Dinalog
6. Expansion throughout the Netherlands
7. To share our knowledge with others and continue research
8. I am not a full time professional logistician. My network evolves with the assignments I acquire. Momentarily I am very much occupied with riskmanagement in administrative logistic chains of exam executions within organisations for higher education in the Netherlands
9. Extend RAAK pro eu project. Further implementation of QRM in Europe
10. We intend to get Interreg projects and remain open for other possibilities.
11. Grow European and international relationship for our enterprise and R&D members