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**THE ROLE OF CLUSTER ACTIVITIES ON ITS MEMBERS  
INTERNATIONALISATION**

Master's thesis

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## **ABSTRACT**

Although the scholars still debate what a business cluster is and what it has to do, the last dozen of years have shown that clusters enhance development, competitiveness and internationalisation by gathering together companies and institutions working in the same industry and turning competition into cooperation. The charm of clusters relies strongly in cooperation as the entrepreneurs have realized that it is much easier to solve challenges that companies are facing through cooperation rather than acting alone.

Since the Estonian domestic market is small, internationalisation and export are the keywords for Estonia as a country to increase economic growth and for the private sector to ensure survival in case of future economic crisis. Clustering is one possibility how to strengthen export capacity. It is believed that clusters can help any company in any industry compete in the most sophisticated ways, using the most advanced and relevant knowledge, skills and technology. Thus, the purpose of this thesis is to find out what kind of effect have cluster activities on its members internationalisation and whether the activities have helped them to enter new markets on the example of Estonian Defence and Security Industry Cluster, Estonian Wooden Houses Cluster and Estonian ICT Cluster.

Keywords: business clusters, internationalisation, export, competitiveness.

## **LIST OF ABBREVIATIONS**

EDSIC – Estonian Defence and Security Industry Cluster

WHC – Estonian Wooden Houses Cluster

EICTC – Estonian ICT Cluster

EAITT – Estonian Association of Information Technology and Telecommunications

## INTRODUCTION

As the current economical and political situation in the world is hectic, the business sector is eager to find new ways to survive. Since the Estonian domestic market is small, internationalisation and exports are the keywords for Estonian private sector and its survival in case of future economic crisis. Estonians may be smart, skilful and tech-savy people, but without exporting our knowledge, skills, products and services, the people nor country will benefit from it.

Clustering is a concept that is more and more used in world practice in order to enhance development, competitiveness and internationalisation. According to scholars a vibrant cluster can help any company in any industry compete in the most sophisticated ways, using the most advanced and relevant knowledge, skills and technologies. Clusters of different industries have existed in Estonia for a decade. Nonetheless, it is unknown if and how the clusters help their members to develop competences, cooperation and innovation in order to compete on the world market.

The author considers the topic of the master thesis relevant because it provides an overview of cluster activities in Estonia, on the example of three clusters representing different Estonian industries, and their impact on cluster members' internationalisation. As Estonian domestic market is small the country needs export to increase economic growth and living standards. Therefore it is important to take advantage of all possible means that can increase companies' international competitiveness and help them to conquer new markets.

The objective of the author is to find out what kind of effect cluster activities have on its members' internationalisation. In order to achieve the objectives the author has set the following research questions:

- What were the reasons behind the establishment of the clusters and what are their objectives?
- Which local and international activities the cluster members consider to be the most important ones?
- Have the cluster activities helped the cluster members to enter new markets and what else could the clusters offer regarding internationalisation?

For the master thesis to stay in the scope set for a master thesis, the author did not include all Estonian clusters in the research, but chose three clusters representing different industries in Estonia. The Defence and Security Industry Cluster, the Estonian Wooden Houses Cluster and the Estonian ICT Cluster all represent industries with a high importance on Estonian economy and potential for export. In addition to the clusters, the research involved three companies from each of the mentioned clusters.

In order to find answers for the set research questions, the author carried out two types of interviews. Firstly, the author interviewed the representatives from each cluster with an aim to get a broader overview of the clusters, their objectives, activities, membership and their interest in cluster activities. Secondly, the author carried out interviews with the companies representing each cluster with an objective to find out in which cluster activities the companies are interested in, how useful the activities are, and if the activities have helped in internationalisation. All together the author carried out 12 interviews.

The substantive part of the master thesis consists of three chapters. In the first chapter the author introduces the cluster concept and its theoretical framework, the reasons for clustering, and the activities clusters implement on local and international level. The second chapter brings out the sample and research methodology. In the last chapter the author first introduces the results of the research and then analyzes them.

# **1. THE CONCEPT OF CLUSTER AND ITS THEORETICAL FRAMEWORK**

This chapter introduces the definition of cluster and the theoretical framework, the reasons for clustering, representing the potential gain, and the activities clusters implement on local and international level.

There is no agreement in the literature about the ways in which to define and classify clusters. Although many definitions of clusters exist, depending on its purpose and the specific context of its use, there is no ultimate truth what a cluster is and what it has to do. For that reason, the author brings out a broad overview of different definitions taking into consideration that from the economic point of view, which is relevant to the current thesis, the main purpose of clusters is to better understand the drivers of competitiveness and growth.

## **1.1. Cluster concept**

The concept of cluster was first introduced by the English economist Alfred Marshall at the end of 19<sup>th</sup> century when he studied Great Britain's textile companies and described the advantages of agglomeration of economic activities in terms of availability of a qualified workforce and specialisation. Derived from his findings, he developed a concept called "industrial district", which means that companies and organisations concentrating on the manufacture of certain products are geographically clustered. Marshall brought out that companies belonging to the industrial district tend to be rather small, focus on a single function in the production chain and are extremely competitive. The major advantages for the companies belonging to the districts arise from the proximity of companies as it allows easier recruitment of skilled labour force and rapid exchanges of commercial and technical information through informal channels (Marshall 1890).



Marshall's theory was further developed by Michael E. Porter, a University Professor at Harvard Business School in 1980s. In his book "The Competitive Advantage of Nations", first published in 1990, he explains the concept of clusters through the nations' strategy of competitive advantage. He found that nations competitiveness relies highly on the location of the nation and innovation. Although in an era of global competition, rapid transport and high-speed telecommunications location should no longer be a competitive advantage, it is an advantage as the competitiveness lies increasingly in local things such as knowledge, relationships and motivation (Porter 1998a). In addition, the competitive advantage is strongly influenced by innovation and seen to be central in creating a competitive advantage by perceiving or discovering new and better ways to compete in an industry. Porter realized that the companies gain advantage against the best competitors because of pressure and challenge that is derived from their domestic rivals, aggressive home-based suppliers, and demanding local customers (Porter 1990).

Although Porter came up with his clustering theory while defining the competitiveness of nations, his revelations became the basis for the development of the concept of business clusters. After Porters' revelations clustering and cluster theory became a popular research topic all over the world and is studied thoroughly till now. As the cluster theory is being constantly upgraded, there is no common understanding how to exactly define clusters. Yet, there are many keywords that are used through the explanations.

In general, business clusters are geographic concentrations of interconnected companies and institutions in a particular field, which are linked by commonalities and complementarities and which compete but also co-operate. They are concentrations of firms that are able to produce synergy because of their geographical proximity and interdependence (Rosenfield 1997). Furthermore, clusters can be described as vertically and horizontally related economic partners of a certain industrial sector in a defined region (Cluster ... 2006). As well as, clusters may be defined as systems centered around a core of highly specialised enterprises within the same industry enriched by close links with supporting firms which produce what the former needs. Although the companies involved in a cluster compete with each other, the co-operation allows the parties to maximise the joint product of their relationship rather than the individual returns. (Formica 2003)

Depending on the business’s field of activity, a business cluster may include suppliers of specialized inputs, providers of specialized infrastructure, manufacturers of complementary products, companies in industries related by skills, technologies, or common input, governmental and other institutions such as universities and think tanks (Porter 1998a). In addition to government institutions, universities and think tanks, clusters may include linkages to standards setting agencies, vocational training and trade associations, that provide the essential training, education, information research, legal advice and technical support to the cluster (Kuah 2002).

Business clusters are strongly dependent on the relationships between the companies and institutions belonging to the cluster. It is believed that economic clusters are not just related and supporting industries, but rather related and supporting institutions that are more competitive by virtue of their relationships (Feser 1998). The geographical proximity allows intense interaction between the companies, so that a large amount of information can be exchanged within and between established webs of complementary or interdependent activities that forms tight supplier-customer links through a common vision, leading to formal and informal networking (Formica 2003). Furthermore, clusters are an effective instrument to concentrate resources and means in order to achieve critical mass and to accelerate the transfer of knowledge and know-how (Cluster ... 2006). All together it is a wide network that converges huge amount of knowledge that creates a competitive advantage.

Table 1. Overview of the cluster definitions by the most outstanding scholars focusing on cluster theory

<b>AUTHOR</b>	<b>DEFINITION</b>
<b>Porter, M.</b> (Porter 1998 referenced in Asheim <i>et al.</i> 2006, 74)	“Clusters are geographical concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, trade associations) in a particular field that compete but also cooperate. Clusters, or critical masses of unusually competitive success of particular business areas, are a striking feature of virtually every national, regional, state and even metropolitan economy, especially in more advanced nations.”
<b>Rosenfeld, S.</b> (Rosenfeld 1997 referenced in Asheim <i>et al.</i> 2006, 80)	“A cluster is very simply used to represent concentrations of firms that are able to produce synergy because of their geographical proximity and interdependence, even though their scale of employment may not be pronounced or prominent.”

<b>Feser, E.</b> (Feser 1998 referenced in Asheim <i>et al.</i> 2006, 80)	“Economic clusters are not just related and supporting industries and institutions, but rather related and supporting institutions that are more competitive by virtue of their relationships.”
<b>Roelandt, T. and Den Hertog, P.</b> (Roeland and Den Hertog 1999 referenced in Asheim <i>et al.</i> 2006, 80).	“Clusters can be characterised as networks of producers of strongly interdependent firms (including specialised suppliers), linked to each other in a value-adding production chain.”
<b>Enright, M.</b> (Enright 1996 referenced in Asheim <i>et al.</i> 2006, 80)	“A regional cluster is an industrial cluster in which member firms are in close proximity to each other.”
<b>Cooke, P. and Huggins, R.</b> (Cook and Huggins 2002 referenced in Asheim <i>et al.</i> 2006, 138)	“Geographically proximate firms in vertical and horizontal relationships involving a localized enterprise support infrastructure with shared developmental vision for business growth, based on competition and cooperation in a specific market field.”
<b>Swann and Prevezer</b> (Swann and Prevezer 1996 referenced in Breschi, Malebra 2005, 441)	“Clusters are here defined as groups of firms within one industry based in one geographic area.”
<b>Swan et al.</b> (Swan et al. 1998 referenced in Breschi, Malebra 2005, 441)	“A cluster means a large group of firms in related industries at a particular location.”
<b>Simmie and Sennett</b> (Simmie and Sennet 1999 referenced in Breschi, Malebra 2005, 441)	“We define an innovative cluster as a large number of interconnected industrial and/or service companies having a high degree of collaboration, typically through a supply chain, and operating under the same market conditions.”
<b>Enright</b> (Enright 1996 referenced in Breschi, Malebra 2005, 441)	“A regional cluster is an industrial cluster in which member firms are in close proximity to each other.”

Source: Asheim *et al.* (2006), Malebra (2005)

The previous table of cluster definitions shows that there is no mutual understanding on the cluster concept. However, most of the theoretics presented in Table 1 bring out the importance of **geographical concentration** and **proximity**, the **interdependence** of companies as all cluster members are interconnected with each other representing one field of activity, the **shared developmental vision** for business growth, and the fact that the members do not only **co-operate but compete** at the same time.

In addition to the four keywords, Asheim *et al.* (2006) has also brought out four different dimensions or defining criteria that should be present for a true, fully fledged, cluster to be said to exist. The dimensions are the following:

- There should be a spatial agglomeration of similar and related economic activity.
- These activities should be interlinked by relations and interactions of local collaboration and competition.
- There should be some form of self-awareness among the cluster participants and some joint policy actions.
- The cluster should be, in one way or another, successful (innovative, competitive).

Furthermore, Formica (2003) has also brought out top three ranking attributes of a successful cluster:

- *Technology and knowledge formation* – pools of specialised skills and technology that provide quality inputs into production systems. Strong commitment to, and investment in knowledge formation, that underscores a robust and integrated regional innovation system.
- *Civic entrepreneurs* – they champion issues, and are able to produce outcomes through their credibility and networks. They leverage off the social capital within the region/industry and bring others into the agenda.
- *Social capital* – a sense of shared vision and destiny. Common values that facilitate collaboration and wealth creation. A "sense of community" and progressiveness that attracts the interest of external stakeholders.

As a conclusion from the definitions above, we can note that there are **eighth main features** that a cluster must have. Firstly, a cluster must consist of groups of associated companies and institutions that are linked through their commonalities and complementarities in products, services, inputs, technologies or output activities. Secondly, clusters are geographically concentrated to one location. Thirdly, cluster members need to share a common vision and values for business's and sector's growth. Fourthly, cluster members need to be open to cooperation and competition at the same time. Fifth, a cluster must create an environment for knowledge and technology formation and exchange. Sixth, the cluster members should include civic entrepreneurs as they have higher credibility and wide networks. Seventh, the cluster must implement joint policy actions in order to create a favourable economic environment for cluster members. Eighth, a cluster should be innovative and competitive.

Table 2. Overview of clusters' main features

<b>Interconnected companies and institutions from related industries.</b>	<b>Geographical concentration and proximity.</b>
<b>Shared vision and values.</b>	<b>Concurrent cooperation and competition.</b>
<b>Environment for knowledge and technology formation and exchange.</b>	<b>Involvement of civic entrepreneurs.</b>
<b>Joint policy actions.</b>	<b>Be innovative and competitive.</b>

Source: Composed by the author

## 1.2. Reasons for clustering

There are many reasons why businesses are clustering, but mostly they are doing so to benefit from the cluster members in order to increase their competitiveness. Clusters affect competitiveness within countries themselves as well as across borders.

According to Porter's finding there are four broad attributes of a nation that shape the environment in which local firms compete and what promote or impede the creation of competitive advantage (Porter 1998c):

1. *Factor condition.* The nation's position in factors of production, such as skilled labour or infrastructure, necessary to compete in a given industry.
2. *Demand condition.* The nature of home demand for the industry's product or service.
3. *Related and supporting industries.* The presence or absence in the nation of supplier industries and 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, and the nature of domestic rivalry.

The determinants create the context in which a nation's firms are born and compete: the availability of resources and skills necessary for competitive advantage in an industry; the information that shapes what opportunities are perceived and the directions in which resources and skills are deployed; the goals of the owners, managers, and employees that are involved in or carry out competition; and the pressures on firms to invest and innovate. (Porter 1998c) The diamond is a mutually reinforcing system. The effect of one determinant is contingent on the state of others. According to Porter, the reasons for clustering grow directly out of the determinants of national advantage and are manifestation of their systemic character. One competitive industry helps to create another in a mutually reinforcing process.

It is seen that the determinants and the interaction between them create the forces that affect the likelihood, direction, and speed of development and innovation (Porter 1998c).

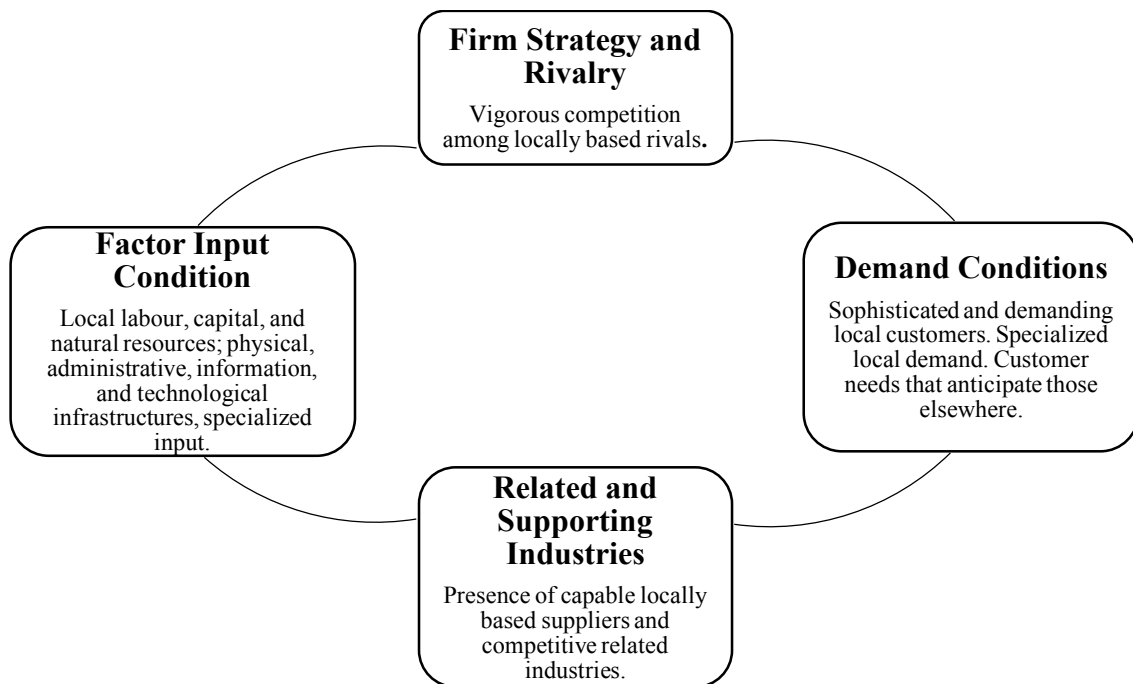


Figure 1. The Diamond of National Advantage

Source: Porter (1998c, 436)

Once a cluster forms, the whole group of industries becomes mutually supporting. Benefits flow forward, backward, and horizontally. Aggressive rivalry in one industry tends to spread to others in the cluster and entry from other industries within the cluster spurs upgrading by stimulating diversity in research and development, and providing means for introducing new strategies and skills. Information flows freely and innovation diffuse rapidly. Interconnections within cluster, often unanticipated, lead the perception of new ways of competing and entirely new opportunities. People and ideas combine in new ways. As a result the presence of an entire cluster of industries magnifies and accelerates the process of factor creation – they all invest in specialized but related technologies, information, infrastructure, and human resources, and numerous spillover occur. (Porter 1998c) Therefore, being part of a cluster allows companies to operate more productively in sourcing inputs; accessing information, technology, and needed institutions; coordinating with related companies; and motivating improvement (Porter 1998a). In addition, the knowledge spillovers arising from clustering, do not simply influence technological innovation and productivity, but has a wider

range of effects like altering the financing, marketing, managerial and organisational practices of beneficiaries, and by affecting firm growth and changing the nature of market structure. (Kuah 2002)

Furthermore, the geographic concentration of firms occurs because the influence of the individual determinants in the “diamond” and their mutual reinforcement are heightened by close geographic proximity within a nation. The concentration of rivals, customers, and suppliers will promote efficiencies, specialization, improvement and innovation. Close rivals tend to be jealous and emotional competitors who approach innovation in its broadest sense (Porter 1998c). It often involves ideas that are not even “new” – ideas that have been around, but never vigorously pursued (Porter 1990). As a result companies will gain advantage over international rivals if they could find new and better means to compete (Kuah 2002). The geographic concentration acts also as a strong magnet to attract talented people and other factors to it. A growing cluster signals opportunity, entrepreneurs take notice, and individuals with ideas or relevant skills migrate in from other locations (Porter 1998a).

In addition, universities located near a group of competitors will most likely notice the industry, perceive it to be important, and respond accordingly, and competitors are more likely to fund and support local institution activity. Even more, suppliers nearby will be best positioned for regular interchange and cooperation with industry research and development, and sophisticated customers will be demanding extraordinary service and product performance. (Porter 1998c)

Clustering also results in demand and supply conditions that are better in a cluster than in isolation and therefore promotes the growth of incumbent firms and attracts the entry of new firms. It also makes it earlier to benchmark against other players in the same industry. Companies within cluster have intimate knowledge of their suppliers’ costs and managers are able to compare costs and employees’ performance with other local firms (Kuah 2002).

Moreover, the proximity of companies and institutions and the repeated exchange among them fosters better coordination and trust. Clusters mitigate problems inherent in arm’s-length relationships without imposing the inflexibility of vertical intergration or the management challenges of creating and maintaining formal linkages such as networks, alliances, and partnerships. A cluster of independent and informally linked companies and

institutions represent a robust organizational form that offers advantages in efficiency, effectiveness, and flexibility. (Porter 1998b)

Lastly, clusters establish international networking and act as a bridge-head in the promotion of regional and cross-border cooperation. Even more, cluster initiatives also assist the regions in attracting foreign investments from the international key players (Cluster ... 2006).

Concluding the above we can bring out the main reasons for companies to cluster. Clusters provide access to information that a single company may not have alone. The information may include special and up to date information about market conditions, competition conditions, technical conditions, etc. The clusters also create a space for exchanging knowledge, skills and experience among the cluster members with an aim to strengthen their own competitiveness and industry as a whole. Former rivalry can be turned into gain by stimulating diversity in research and development and providing means for new knowledge, skills and technology. The exchange of experience among cluster members also creates access to new technologies through collaboration between the companies and other institutions. New technologies, in turn, create a fruitful ground for the creation of new companies that do not only provide new opportunities in the industry but may complete also the missing parts in already working companies and their line of production. Clusters also increase productivity and innovation as the relations between cluster members ease sourcing inputs, access to information, knowledge and technology, access to needed institutions on local and international level, research and development etc.

In addition, well-operating clusters and industries attract talented and skilled workforce to the companies, solving many problems related to the workforce, their competence and expectations. Joint international initiatives and activities can also ease the process of entering new markets. The cluster does not only provide information and contacts from the target market, but also assistance to access new clients through government institutions and VIPs (ministers and other state personnel representing the cluster in visits abroad). Furthermore, the joint activities implemented by the cluster either on local or international level and the support provided help the companies to save resources (time and money spent to similar activities the companies should implement on their own without the existence of a cluster). The close connections and interchange of knowledge also creates better opportunities for benchmarking with the competitions and therefore raise motivation. As a result of the



mentioned above, the competitiveness of each single company and the industry as a whole will increase. Even more, the joint marketing and promotion activities will raise the industry's reputation in homeland and abroad. Clusters also provide help in shaping policies in order to create a favourable economic scenery to act.

In other words we can say that a vibrant cluster can help any company in any industry compete in the most sophisticated ways, using the most advanced and relevant knowledge, skills and technologies.

Table 3. Overview of the main reasons for clustering

<b>Access to information.</b>	<b>Exchange of knowledge, skills and experience with an aim to strengthen the industry.</b>
<b>Access to qualified workforce.</b>	<b>Access to new technologies.</b>
<b>Access to international markets.</b>	<b>The creation of new companies that strengthen the industry.</b>
<b>Increase in productivity and innovation.</b>	<b>Interchange of knowledge and technology with educational institutions.</b>
<b>Saving of resources (time, money, etc.)</b>	<b>The access to new clients through government institutions.</b>
<b>Increase in competitiveness.</b>	<b>Benchmarking among cluster members and higher motivation.</b>
<b>Joint marketing and promotion activities in order to raise industry's reputation.</b>	<b>Shaping policies on local and international level in order to create favourable economic scenery.</b>

Source: Composed by the author

### 1.3. Cluster activities

As there is no common understanding of the cluster definition in the literature, there is no fixed list of activities a cluster should implement in order to be considered as a cluster. However, taking into consideration the theoretical background, the reasons for clustering, and the actual everyday activities of many clusters in the world, we can bring out the main cluster activities.

Table 4. Overview of the main cluster activities

<b>Developing competences (sharing knowledge and know-how).</b>	<b>Developing cooperation and innovation (product and service development) in the industry.</b>
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<b>Carrying out promotion and marketing activities.</b>	<b>Promoting internationalisation and exports.</b>
<b>Representing the cluster and its members in international events</b> (fairs, trade shows, conventions, expos, study visits, etc.).	<b>Organizing educational and training activities for the members</b> (seminars, trainings, study visits, etc.).
<b>Organizing seminars and workshops for parties interested in the industry</b> (information days, exhibitions, etc.).	<b>Tackling human resources related problems in the industry.</b>
<b>Providing the industry and media with communication and information about the cluster and its activities.</b>	<b>Shaping policies relevant for the industry on local and international level.</b>

Source: Composed by the author

All the cluster activities mentioned in Table 4 are important for the cluster's existence and its success. Taking into consideration, the theme of this thesis – internationalisation – the activities the author will focus further on are connected to the internationalisation and exports.

For an industry as well as for regions it is nowadays essential to open new markets and to find and attract new partners for co-operation. The scholars of international business theories argue that different kind of networks play a crucial role in internationalisation. Belonging to a network may accelerate the internationalisation of a company, because thanks to a network the company will have access to the experience of other network members in foreign markets and their contact base (Bugnar *et al.* 2009). Therefore export markets open and the companies have a possibility to broaden their scope of activities.

A cluster should support its members during internationalisation activities by offering the following opportunities (Cluster ... 2006):

- Access to international events, topics and trends;
- Participation in international projects;
- Set-up network activities between different clusters.
- Implement joint marketing and communication activities.

Participation in international events is one of the main activities a cluster should offer to its members. It is not only a networking opportunity, but a possibility to showcase the cluster members and its products and services with an aim to open the door to new markets. In addition, a cluster should participate in different international projects in order to increase

clusters' and its members' competitiveness by acquiring new skills, knowledge and awareness, and networking with foreign companies from the same industry. Thirdly, setting up network activities with other clusters is important to sustain competitiveness and innovation in a very fast developing economic scenery. This accelerates research and development and potentially leads to the development of new and improved products and services. Lastly, a cluster should carry out joint marketing and communication activities in foreign markets in order to raise the reputation and credibility of the industry and cluster. All the activities brought out above should be implemented consistently in order to bring an effect to the cluster and its members.

#### **1.4. The application of the theory in practice in Estonia**

The cluster activity in Estonia is organized by the regulation “Terms and conditions for supporting cluster development” issued by the Minister of Entrepreneurship and is based on the law “Structural Assistance Act for the period 2014-2020” issued by the Estonian Parliament. Furthermore, the regulation is the basis for the Enterprise Estonia’s development programme of clusters supported by the European Regional Development Fund. Latter is the main funding instrument for Estonian clusters.

The regulation defines cluster as a structure or organized group of independent parties (start-ups, companies, education institutions, non-governmental organizations, etc.), which aim is to encourage innovation through knowledge formation, exchange of knowledge and experience, network creation, dissemination of information, cooperation and sharing facilities among the cluster members and other institutions (Klastrite ... 2015). In addition, the regulation provides direct guidelines for the clusters regarding objectives, eligible activities and costs together with the exact terms and conditions that need to be fulfilled to meet the criteria of Enterprise Estonia’s cluster development programme.

According to the regulation the objective of the support mechanism is to increase international competitiveness of the cluster members through joint marketing and development activities. The activities that are eligible are: 1) cluster development activities; 2) the organization and implementation of cluster joint marketing activities; and 3) cluster international visibility and value cultivation activities. The cluster development activities may

include different researches and expertise for acquiring knowledge about the industry or target market (including norms, technical requirements, materials, products' functional properties, design, etc.), carrying out activities that contribute to the development of products and services, educating workforce, mapping the needs of workforce, mapping the technologies and equipment for cooperation and joint use, etc. The joint marketing activities may include target market researches and expertise, use of databases and information sources, and organization or attendance in events to introduce cluster members' products and services. The international visibility and value cultivation activities may include the organization of seminars, workshops, conferences and other similar events that help to develop cooperation and involve new partners. (Klastrite ... 2015)

The regulation also sets guidelines for the funding applicants. The funding can be applied by Estonian non-governmental organizations or foundations and must involve at least 10 cluster partners. Cluster partners can be corporations, state or local government institutions that are involved in the project through financing, management or implementation. The clusters and partners must have signed a consortium agreement that regulates the relations between parties during the project. (Klastrite ... 2015)

As the regulation sets clear guidelines what a cluster has to be and what activities it must implement in order to be eligible for Enterprise Estonia's funding, the clusters are forced to follow the criteria determined in the regulation. Despite this, the cluster theory and the regulation have several similarities. The theory brought out eight main features a cluster must have (Table 2). Taking into consideration the cluster and cluster partner definitions of the regulation, the author can conclude that seven features out of eight are met. The clusters must be a structure or organized group of different institutions which aim is to encourage innovation through several activities. Therefore, the author can conclude that the clusters involve interconnected institutions from related industries who are located closely, have created a space for knowledge and technology formation and exchange with an aim to develop innovation, and increase cooperation and competitiveness. As the cluster and its members must have signed a consortium agreement, the author can assume the parties have common vision, values and will for cooperation. Furthermore, as the cluster members or partners may involve enterprises, then the feature of civic entrepreneur involvement is also met. The regulation sets priority to the cluster development, joint marketing and international

visibility activities, but leaves out joint policy actions. The last is the only criteria that is not met by the cluster definition determined in the regulation.

The cluster theory also brought out ten most common cluster activities (Table 4). Although the regulation sets priority to three main fields of activity – cluster development, joint marketing and international visibility and value cultivation – most of the theory’s cluster activities can be implemented, because the three main fields involve several sub-activities mentioned beforehand. The only cluster activity that has not been brought out in the regulation involves policy shaping.

The biggest discord between the cluster theory and practice relies in the relationship between clusters and industry associations. In many countries from where the cluster theory is from, for example Germany, the clusters and industry associations are separate organizations, where industry associations are focusing solely on lobbying and clusters on business development and internationalisation. In Estonia, however, clusters and industry associations are working closely together. In fact, there is a very thin line between the two organizations, because in most cases the industry associations are the leading entities of the clusters. This is very untypical and can be found besides Estonia only in Latvia and Lithuania (Põld 2018).

Despite this, the author can conclude that the regulation “Terms and conditions for supporting cluster development” that regulates the cluster activity in Estonia relies strongly on the cluster theory, and the concepts and activities determined in the theory.

## 2. DESCRIPTION OF THE RESEARCH METHODOLOGY

This chapter introduces the sample selection and research methodology.

### 2.1. Sample

In order for the master thesis to stay in the scope set for a master thesis, the author did not include all Estonian clusters in the current research, but chose three clusters representing different industries in Estonia. All together there are 20 clusters in Estonia representing 9 different industries.

Table 5. Overview of the Estonian clusters

INDUSTRY	NAME OF THE CLUSTER
Clean Technologies, Recycling, Efficient use of resources	<ul style="list-style-type: none"> <li>• Green Economy Cluster</li> <li>• Real Estate and Energy Cluster</li> <li>• Road Cluster</li> </ul>
Creative Industries	<ul style="list-style-type: none"> <li>• Film Industry Cluster</li> </ul>
Defence & Security	<ul style="list-style-type: none"> <li>• <b>Defence and Security Industry Cluster</b></li> </ul>
Electronics	<ul style="list-style-type: none"> <li>• ESTRONICS – Smart Electronics Cluster</li> </ul>
Finance	<ul style="list-style-type: none"> <li>• Finance Estonia</li> </ul>
Forestry, Furniture, Wood Processing	<ul style="list-style-type: none"> <li>• Furniture Cluster</li> <li>• Furniture Cluster of South-East Estonia</li> <li>• Wood Industries Cluster</li> <li>• <b>Wooden Houses Cluster</b></li> </ul>
ICT	<ul style="list-style-type: none"> <li>• Digital Construction Cluster</li> <li>• <b>ICT Cluster</b></li> <li>• Smart City Cluster</li> </ul>
Logistics	<ul style="list-style-type: none"> <li>• Logistics Cluster</li> </ul>
Medicine, IT, Biotechnology	<ul style="list-style-type: none"> <li>• Active Life Cluster SportEST</li> <li>• Cell Therapy Cluster</li> </ul>

	<ul style="list-style-type: none"> <li>• Connected Health Cluster</li> <li>• Health Tourism Cluster</li> <li>• Medicine Export Cluster Medicine Estonia</li> </ul>
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Source: Estonian Clusters (2018)

The three clusters that were chosen by the author are the Estonian Defence and Security Industry Cluster (EDSIC), the Estonian Wooden Houses Cluster (EWHC) and the Estonian ICT Cluster (EICTC). The clusters were chosen by taking into consideration two aspects: 1) the industry’s economic relevance to Estonian economy; and 2) the industry’s export potential.

With a turnover of 97.3 billion EUR in 2014, 500 000 people directly employed and 1.2 million people indirect jobs, the European defence industry is a major industrial sector in Europe (Defence ... 2018). Among the development of the European defence industry, the Estonian defence and security industry has reborn. The Estonian Defence Industry Association involves more than 100 companies that are engaged in the defence and security industry making it a separate branch of economy, which creates job opportunities and gives an increasing contribution to economic growth. Unfortunately the Statistics Estonia does not distinct defence and security industry as a branch in its statistics and therefore it is difficult to find relevant statistics. However, the Estonian Defence and Security Industry Association has brought out that the total turnover of the defence and security industry was around 70 million EUR in 2015 of which the export turnover made up 13 million EUR (Pärnamäe 2017). Although the industry itself is new, the relevance of the sector is increasing rapidly taking into consideration the current world situation. As the defence industry is facing many difficulties and changes, the Estonian Government has noted the importance of the sector. In 2017 the Ministry of Defence and the Estonian Defence Industry Association signed mutually compiled document “Code of conduct of the development of the defence industry 2017-2019”, which is an addition to the Defence Industry Policy 2013-2022, and lists concrete measures and activities in order to develop and improve sector’s exports. It is forecasted that the defence industry’s export turnover will raise to 25 million EUR by 2019, which is a almost 50% more than in year 2015 (Tsahkna 2017).

Estonians also have long-term traditions in producing homes from round logs. Manufacturing of wooden houses started to develop in Estonia in the 1950s, nowadays the manufacturing of wooden houses has developed to one of the key industries in Estonia (EWHC 2018).

According to Eurostat, Estonia is the biggest producer of wooden houses in Europe regarding export volume. The volume of total production in Europe's wooden houses industry was 7,74 billion euros in 2015. The total volume of Estonian wooden houses sector was 318 million euros in 2015, which makes up 4,1% of Europe's total volume. (EWHC 2018) Forest and wood industry is one of the fastest growing value-added growth sectors in Estonia and also one of the higher turnover industries. Wood-based products are one of the most important commodity groups balancing Estonia's foreign trade balance sheet. The export of wood-based products exceeds the import more than three times and the foreign trade balance has been positive through times. (Metsa- ... 2017) According to the Statistics Estonia, the wood-based products export in 2017 was 2,12 billion EUR in total, which is 11% more than in 2016. The wooden houses make up 15% of the export of wood-based products making it the second biggest article in wood-based products exports. The wooden houses export in 2017 was 319 million EUR in total, which is a 5% increase compared to wooden houses export in 2016. (Puidupõhiste ... 2017)

In the last few decades, Estonia has also become a place where new IT solutions are invented. Estonians are pathfinders, who have built an efficient, secure, and transparent ecosystem. Today IT plays a central role in life in Estonia because people trust the IT solutions and are eager to use them to make life easier. 88% of households have computers and 88% of Estonian population uses the Internet regularly. There are almost 3700 IT companies in Estonia employing around 19 500 employees that makes 4,4% of the entire workforce. The total revenue of the sector is 3.69 billion EUR a year, which makes 7% of the Estonian GDP. The IT-solutions have improved everyday life tremendously. For example, at least 2% of state GDP is saved due to collective use of digital signatures, 840 years of working time is saved annually thanks to data exchange and the time to establish a business reduced from 5 days to 18 minutes. The solutions not only save time and money, but also help to make life more secure as the police work has become 50 times more effective. (e-Estonia 2018)

The Estonian IT sector has over 20 years of expertise and experience in automating public and private sector services. By today, Estonia has shared its e-governance journey with 60



governments and exported its solutions to over 130 countries around the world. In addition, Estonia has an ambitious start-up community who dare to create innovative solutions that change the world. (e-Estonia 2018)

As we can see from the statistics, all three industries – defence and security, wooden houses and ICT – have enormous relevance and importance on the economy of Estonia. Estonia is already world-known as an e-country and for years Estonia has promoted its IT competence and exported e-solutions. Estonian wooden houses building competence is more known in Europe, especially in Scandinavia, but the industry has great potential to broaden its activity even further as we have decades of experience in wooden houses export to Scandinavia. Estonia as a defence and security industry country is just about to get on world map and therefore Estonia has also great potential to become known as a country with a strong defence and security industry.

In addition to the included three clusters, the research also involved three companies from each of the mentioned clusters. The companies that are all cluster members were chosen by taking into consideration two aspects: 1) suggestions from the cluster representatives; and 2) the companies interest in internationalisation and export. Although random selection might have been more appropriate to carry out the research in order to avoid sample bias better, it was difficult to accomplish. The cluster representatives gave suggestions about the companies most likely to answer the interview requests, but it was still extremely hard to reach them. In fact, most of the companies did not answer the request at all, therefore the author was forced to find new companies that have a finished product or service that could be exported. Furthermore, the author wanted to carry out qualitative interviews with an aim to get more detailed information and feedback about the activities usefulness and companies expectations than would have been possible through an online questionnaire. All together the author contacted 25 companies in order to get the needed 9 interviews.

Table 6. Overview of the companies involved in the research

<b>NAME OF THE CLUSTER</b>	<b>NAME OF THE COMPANY</b>
<b>EDSIC</b>	<ul style="list-style-type: none"> <li>• Defendec OÜ</li> <li>• Threod Systems OÜ</li> <li>• Milrem AS</li> </ul>
<b>EWHC</b>	<ul style="list-style-type: none"> <li>• Matek AS</li> <li>• Hobbiton Home OÜ</li> </ul>

	<ul style="list-style-type: none"> <li>• Timbeco Woodhouse OÜ</li> </ul>
<b>EICTC</b>	<ul style="list-style-type: none"> <li>• GoSwift OÜ</li> <li>• OÜ Net Group</li> <li>• SK ID Solutions AS</li> </ul>

Source: Compiled by the author

## **2.2. Research methodology**

Taking into consideration the objective of the thesis, the research questions and the research sample, the author decided to carry out two types of interviews.

Firstly, the author interviewed the representatives from each cluster. The aim of the interviews was to get a broader overview of the clusters, their objectives, activities on local and international level, cluster membership and members' interest in cluster activities. The interviews were based on a questionnaire compiled by the author (Appendices 1-3).

Secondly, the author carried out interviews with the companies representing each cluster. The aim of the interviews was to find out in which cluster activities the companies are interested in, how useful do they consider the activities to be, and have the activities been helpful in internationalisation. The interviews were based on a questionnaire compiled by the author (Appendices 4-12).

### **3. ANALYSIS OF THE ESTONIAN CLUSTERS AND THEIR ACTIVITIES' INFLUENCE ON MEMBERS' INTERNATIONALISATION**

In this chapter the author provides a more detailed overview of the research parties, introduces the results of the research and analyzes them.

#### **3.1. Overview of the research parties**

In this section the author introduces the involved clusters and companies in more detail, bringing out their background and connection to the cluster.

##### **3.1.1. The Estonian Defence and Security Industry Cluster**

The Estonian Defence and Security Industry Cluster was established in 2012 with an initiative from the private sector. The main incentive for the establishment was the companies' interest in internationalisation and entering new markets. The additional force behind the establishment was the Enterprise Estonia's development programme of clusters that supports internationalisation, especially joint marketing activities, attendance in international events, and establishing a contact network abroad (Pärnamäe 2018).

The aim of the organization is to become the center of competence in research and development and export field. The vision of the cluster is to create synergy through the cooperation of national and international capital in order to strengthen the Estonian defence industry and its export (Estonian ... 2018). The mission of the cluster is to support the growth of competitiveness of innovative products and services of the sector by being a trustworthy and competent partner in joint marketing and product development activities (Strategy ... 2016-2018). As the local market is limited, the expected growth of the industry is only possible from foreign markets, and therefore the purpose of the cluster is to ensure access to

foreign markets, represent the industry in foreign events and grow sales through these activities (Pärnamäe 2018).

The specific objectives of the cluster are the following (Estonian ... 2018):

- Act as single focal point for defence and security industries in Estonia.
- Monitor defence and security industrial capabilities, products and technology in Estonia.
- Promote common interest of the Estonian defence and security industry.
- Support partnerships and co-operation with the national MoD, MoL and EDF, EDL, Police, etc.
- Assist in the participation of defence and security related R&D projects.
- Organize joint national and international marketing and export activities.
- Offering various seminars and workshops in subject relevant to the industry.
- Represent Estonia in European and international industrial defence and security institutions and bodies (NIAG, EDA).
- Foster the development of multilateral business activities.

In order to achieve its primary goals, the cluster carries out development activities in order to support the development of products and services, joint marketing activities in order to assure the growth of sales revenues of the partner companies and international activities to provide partners with the necessary contact network and thus support the sales activities of partners in international markets. The cluster has defined concrete products and services that they offer to its partners in order to enhance their collaboration and successful internationalisation. The products and services are (Strategy ... 2016-2018):

**1. *Contact network*** – the cluster helpg its partners to reach the final consumer. The Estonian Defence Industry Association has a functional platform for collaboration with international partners and most significant holding organisations of the field. The contact network includes Prime Contractors of the field.

**2. *Successful business relationships*** – the cluster helps to create successful relationships in target markets by providing an overview of the corresponding market, finding B2B partners, preparing business missions including VIP visits and meetings with end consumers. In addition, through the cluster, the companies can introduce their products and services at the target markets through governmental contacts.

3. *Participation in thematic conferences and fairs* – support the partners in the attendance and organizes joint visits to the events.

4. *Bootcamps* – organization of bootcamps, where collaboration of partner companies and R&D institutions will be initiated. The aim is to facilitate development of new, innovative products and services and take advantage of the latest innovations.

5. *Consultation in product development* – the cluster consults the partners in order to ensure the accordance of the product to the market needs and latest R&D possibilities.

6. *Consultation in funding* – the cluster consults the partners in compiling of various funding applications and successful participation in international public procurement procedures.

The cluster carries out local and international activities for the members. The aim of the local activities is to create a base for internationalisation. The local activities organized in the last three years can be divided into three themes: 1) consolidation of knowledge, experience and plans between companies; 2) consolidation of plans and activities between companies and the state; and 3) consolidation of activities between companies and research and development institutions. (Pärnamäe 2018)

Table 7. Overview of the local activities

ACTIVITY THEME	IMPLEMENTED ACTIVITIES
<b>Consolidation of knowledge, experience and plans between companies.</b>	<ul style="list-style-type: none"> <li>• Regular meetings of cluster members in order to set plans and implement coming activities.</li> <li>• Seminars and trainings to increase competence and share experience.</li> </ul>
<b>Consolidation of plans and activities between companies and the state.</b>	<ul style="list-style-type: none"> <li>• Seminars, conferences, information days for the state officials and wider public.</li> <li>• Structural cooperation with the state to describe the needs of the industry.</li> <li>• Participation of VIPs (ministers, officials, etc.) in international events to increase recognition of the industry and boost sales.</li> <li>• Legislation aspects to support the development.</li> </ul>
<b>Consolidation of activities between companies and research and development institutions.</b>	<ul style="list-style-type: none"> <li>• Validation of new product/service solutions developed by the members.</li> </ul>

Source: Compiled by the author

The aim of the international activities is help members to enter new markets and boost sales. The international activities of the last three years include: 1) representation of cluster and its

members in international events; 2) building a consortium of companies in order to implement EU projects; and 3) target market activities. (Pärnamäe 2018)

Table 8. Overview of the international activities

<b>ACTIVITY THEME</b>	<b>IMPLEMENTED ACTIVITIES</b>
<b>Representation of cluster and its members in international events.</b>	<ul style="list-style-type: none"> <li>• Participation in the biggest fairs in the industry: IDEX, UMEX, DSEI, Eurosatory.</li> </ul>
<b>Building a consortium of companies in order to implement EU projects.</b>	<ul style="list-style-type: none"> <li>• Help cluster members to participate in EU projects or win EU procurements.</li> </ul>
<b>Target market activities.</b>	<ul style="list-style-type: none"> <li>• Seminars in the following target markets: Europe, Ukraine, Middle-East, United States of America.</li> <li>• Hiring foreign target market experts.</li> </ul>

Source: Compiled by the author

The Estonian defence industry is highly export-oriented, fast-evolving and innovative. The range of products and services offered by the cluster members is wide, ranging from personal equipment to highly sophisticated cyber defence solutions. The product development of the members is aimed at developing solutions that are competitive in export markets. The evolution of the industry in recent years has shown that the companies have become firmly established in international markets, particularly in the fields of ICT, cyber defence, robotics and smart solutions. The number of companies operating in international markets increases year by year. (Estonia ... 2017) The countries, where the cluster members already import or are interested in exporting, are the Baltic countries, the Scandinavian countries, other European Union countries, the Middle-East and North America (Pärnamäe 2018).

At the moment the cluster has 17 members that include mainly private enterprises. The leader organization of the defence and security industry cluster is the Estonian Defence Industry Association. (EDSIC 2018)

Table 9. List of the EDSIC members

<b>NAME OF THE MEMBER</b>	<b>TYPE OF ORGANIZATION</b>	<b>FIELD OF ACTIVITY</b>
Baltic Workboats	Enterprise	Designs and produces boats and vessels from steel and aluminium.
Baltflex	Enterprise	Operates in the field of hydraulics.
BHC Laboratory	Enterprise	Cyber security capabilities development company

		that specialises in complex technical cyber security exercises.
Bristol Trust	Enterprise	Design, production management and sales of equipment for military and law enforcement agencies.
Bytelife Solution	Enterprise	Operates in the field of data centers and cloud solutions: automation, configuration management, custom software development, etc.
Defendec	Enterprise	Develops automatic and autonomous security monitoring platforms and is challenging the border protection and surveillance status quo.
Eli	Enterprise	Develops and produces unmanned aerial solutions.
Galvi-Linda	Enterprise	Specialised in military, law enforcement and outdoor equipment made of textile and synthetic materials.
Milrem	Enterprise	Specialised in military engineering, repair, and maintenance.
Milectria	Enterprise	Manufacturer of electrical systems with a product range comprising wire and cable harnesses and electrical paneks.
Nordic Armoury	Enterprise	Operates in the field of armament and optics.
Semetron	Enterprise	Planning, selling, and servicing and repairing hospital equipment, disposable items and other healthcare products.
Skeleton Technologies	Enterprise	Specialised in ultracapacitor development (energy storage devices that are more powerful than batteries).
Telegrupp	Enterprise	Defence and security systems integrator – turnkey security, communications and IT infrastructure solutions.
Terramil	Enterprise	Manufacturing innovative high quality polyethylene products (bomb shelters, anti piracy floats, transport and storage boxes, etc.).
Threod Systems	Enterprise	Specialised in developing, producing and operating unmanned aircraft systems designed for information collection and usage in military, governmental and civil applications.
Toci	Enterprise	Manufacturer of profiled and sheet metal products used in engineering, building and defence industry.
Estonian Defence Industry Association	Association	Organization that represents the main defence and security industry related enterprises in Estonia.

Source: EDSIC (2018)

In addition to the official members, the organization has many partners from the Estonian Defence Industry Association that involves around 110 members (including the members of

the cluster). Furthermore, the organization has international cooperation partners such as BAE Systems Hägglunds AB, MBDA France, Raytheon International, RUAG, SAAB Defence and Security and YKK U.K Branch in Finland (Estonian ... 2018).

The export turnover of the cluster members has increased steadily over the past three years. In 2014, the total export turnover was 16.5 million EUR while in 2015 17.8 million EUR and in 2016 20.8 million EUR. By 2019 it is expected that the export turnover will increase to 25 million EUR (Pärnamäe 2018).

The cluster activity is funded by the European Regional Development Fund and was also awarded the Bronze Label of the European Cluster Excellence Initiative in 2017 (EDSIC 2018)

### **3.1.2. The Estonian Wooden Houses Cluster**

The Estonian Wooden Houses Cluster was created in 2008 by 20 organizations. The establishers included both public organizations and companies producing wooden houses. The incentive for the establishment was the Enterprise Estonia's development programme of clusters that supports internationalisation. According to Kivil, the wish to start cooperation was already before the cluster programme, but as the Estonian Woodhouse Association was lacking funding, it did not happen before. However, the support from Enterprise Estonia boosted the creation of the cluster and its activities (Kivil 2018).

The cluster was created in order to improve the international competitiveness, raise the added value and export turnover of cluster companies through international cooperation between companies, R&D and educational institutions in the fields of joint marketing, product development and competence building. The specific goals of the EWHC are to increase the turnover, export turnover, profitability, productivity and added value of the cluster members and to increase the number of cluster organizations. (EWHC 2018)

In order to reach the objectives, the cluster carries out several local and international activities. The main activities are (EWHC 2018):

- Development of Estonian Woodhouse Portal – [www.woodhouse.ee](http://www.woodhouse.ee).
- Publishing of Estonian Wooden Houses newspaper.



- Providing the industry and media with communication and information about the cluster and sector activities.
- Organizing the contest “Pre-Fab House of the Year”.
- Organizing the Vocational Competition for Handcrafted Log Home Builders.
- Organizing architectural contest for students in cooperation with universities.
- Study/trade fair visits to the priority markets of cluster members.
- Air-tightness and thermovision studies.
- Study of cold bridges in wooden constructions.
- Competence enhancing events for cluster members – seminars and conferences.

The local activities organized in the last three years include: 1) organization of seminars to develop competences; 2) be industry’s main communication channel and spokesperson; 3) developing cooperation with other industries and clusters; and 4) hosting foreign business delegations. (Kivil 2018)

Table 10. Overview of the local activities

<b>ACTIVITY THEME</b>	<b>IMPLEMENTED ACTIVITIES</b>
<b>Seminars to develop competences.</b>	<ul style="list-style-type: none"> <li>• Organize seminars on relevant topics and include foreign specialists as speakers.</li> </ul>
<b>Being industry’s main communication channel and spokesperson.</b>	<ul style="list-style-type: none"> <li>• Mediate information to media.</li> <li>• Mediate information to government institutions, participate in working groups, provide feedback, etc.</li> </ul>
<b>Cooperation with other industries and clusters.</b>	<ul style="list-style-type: none"> <li>• Develop joint product development projects with other clusters and industries.</li> </ul>
<b>Host foreign business delegations.</b>	<ul style="list-style-type: none"> <li>• Host foreign business delegations in Estonia, introduce the industry and the companies in order to increase sales.</li> </ul>

Source: Compiled by the author

Regarding international activities the cluster has organized participation of cluster and its members in different international events and study visits in the past three years. There have been no other international activities so far, as the target of the cluster has been to develop and grow the cluster and industry in Estonia. However, starting from 2018 the cluster is involved in three major international projects – two Interreg projects in direction of Chinese and Middle-Eastern markets and an educational project in Europe. (Kivil 2018)

Table 11. Overview of the international activities

<b>ACTIVITY THEME</b>	<b>IMPLEMENTED ACTIVITIES</b>
<b>Representation of cluster and its members in international events.</b>	<ul style="list-style-type: none"> <li>• Joint participation of cluster members in international fairs and study visits to target markets.</li> </ul>
<b>Organization of study visits.</b>	<ul style="list-style-type: none"> <li>• Organization of study visits to target markets.</li> </ul>

Source: Compiled by the author

In addition, the EWHC has defined specific services that they offer to their members in order to enhance collaboration. The services are: owner supervision; woodhouse related specific nature of the design consultancy; advice and assistance in receiving and documenting object; and wooden house construction expertise. (EWHC 2018)

The members of the EWHC are highly export-oriented. The range of products and services the cluster offers is wide: modular houses, element houses, handcrafted log houses, machined log houses, garden houses, installation of wooden houses, designing of wooden houses. (EWHC 2018)

By today the cluster involves 47 organizations – architects, material providers, organizations supporting the development of the cluster, research and education organizations, wooden house producers and supportive service companies. The leader organization of the cluster is the Estonian Woodhouse Association. (EWHC 2018)

Table 12. List of the EWHC members

<b>NAME OF THE MEMBER</b>	<b>TYPE OF ORGANIZATION</b>	<b>FIELD OF ACTIVITY</b>
Aru Grupp AS	Enterprise	Wooden houses producer.
Esthus OÜ	Enterprise	Wooden houses producer.
Estnor OÜ	Enterprise	Wooden houses producer.
ELH Palkehituse OÜ	Enterprise	Wooden houses producer.
Greentec Houses OÜ	Enterprise	Wooden houses producer.
Harmet OÜ	Enterprise	Wooden houses producer.
Hobbiton OÜ	Enterprise	Wooden houses producer.
Hobbiton Home OÜ	Enterprise	Wooden houses producer.
KMT Prefab OÜ	Enterprise	Wooden houses producer.
Komforthus Eesti OÜ	Enterprise	Wooden houses producer.
Majand OÜ	Enterprise	Wooden houses producer.
Matek AS	Enterprise	Wooden houses producer.
Mountain Loghome OÜ	Enterprise	Wooden houses producer.

Nordic Houses KT OÜ	Enterprise	Wooden houses producer.
Palkehituse OÜ	Enterprise	Wooden houses producer.
Palmako AS	Enterprise	Wooden houses producer.
Palmatin OÜ	Enterprise	Wooden houses producer.
Pinska OÜ	Enterprise	Wooden houses producer.
Pärnu Log Homes OÜ	Enterprise	Wooden houses producer.
Q-Haus Baltic OÜ	Enterprise	Wooden houses producer.
Rakvere Metsamajand AS	Enterprise	Wooden houses producer.
Ramirent Baltic AS	Enterprise	Wooden houses producer.
Ritsu AS	Enterprise	Wooden houses producer.
Saare Ere AS	Enterprise	Wooden houses producer.
Tene Kaubandus OÜ	Enterprise	Wooden houses producer.
Tender Ehitus OÜ	Enterprise	Wooden houses producer.
Tenon Holding OÜ	Enterprise	Wooden houses producer.
Timbeco Woodhouse OÜ	Enterprise	Wooden houses producer.
Varola OÜ	Enterprise	Wooden houses producer.
Vipson Projekt OÜ	Enterprise	Wooden houses producer.
University of Life Sciences	University	Research and education.
Estonian Open Air Museum	State Museum	Research and education.
IMT-Institute	Educational institution	Research and education.
Tallinn University of Technology	University	Research and education.
Norwegian School of Log Buildings	Educational institution	Research and education.
Vanaajamaja MTÜ	Non-governmental organization	Research and education.
Estonian Wind Power Association	Association	Organization supporting the development of the cluster.
Estonian Woodhouse Association	Association	Organization supporting the development of the cluster.
Latvian Wood Construction Cluster	Association	Organization supporting the development of the cluster.
Uuenurga OÜ	Enterprise	Providing supportive services to the cluster.
Akzo Novel Baltics AS	Enterprise	Construction materials.
FER Project OÜ	Enterprise	Construction materials.
Optimera Estonia AS (Ehituse ABC)	Enterprise	Construction materials.
Tervemaja OÜ	Enterprise	Construction materials.
AB Tempt OÜ	Enterprise	Architect/engineering bureau.
Inseneribüroo Pluss OÜ	Enterprise	Architect/bureau.
Puitpesa OÜ	Enterprise	Architect/bureau.

Source: EWHC (2018)

In addition, the cluster has several supporters like Estonian Open Air Museum, Estonian Forest and Wood Industries Association, Enterprise Estonia, Port of Tallinn, State Forest Management Centre, Ministry of the Environment of the Republic of Estonia, Ministry of Foreign Affairs of the Republic of Estonia, Ministry of Economic Affairs and Communications of the Republic of Estonia and the Estonian Academy of Security Sciences. (EWHC 2018)

All Estonian manufacturers have long term traditions in producing wooden houses and are competitive in foreign markets. The main export countries of the cluster members are Scandinavian countries, Germany and Great Britain. Also important export partners are Japan, South Africa and South Korea. The cluster activity is funded by the European Regional Development Fund. (EWHC 2018)

### **3.1.3. The Estonian ICT Cluster**

The Estonian ICT Cluster was established in 2009 with an initiative from the private sector. It was a favorable moment due to the economic crisis, which was a thrust for cooperation between companies. In addition the Enterprise Estonia's development programme of clusters that supports internationalisation was of huge help. (Põld 2018).

The EICTC is the main force to support ICT companies cooperation and development in Estonia. It is a collaboration platform for enterprises with an aim to boost the development of new products and solutions and foster their export to international market. The cluster helps countries and organizations to achieve world-class digital societies. (ITL 2018)

As the ICT industry is wide, the cluster has defined three main focus themes (ITL 2018):

1. *E-Governance* – as cluster partners are key players behind Estonian e-governance solutions, the cluster is willing to share experience of creating effective lines of communication between the government, businesses and citizens.
2. *E-industry* – as cluster members are armed with experience in building complex systems and efficient in utilizing the knowledge in private sector, the cluster can help making any factory operate in real time as one integrated system.
3. *Intelligent Transport Systems* – the cluster develops a cooperation network that covers a wide range of advanced applications and innovative services that help users get the most out of the transport infrastructure.

The cluster offers its members support in entering external markets, developing employees' competences and developing innovative cooperation projects. The main activities of the cluster are (ITL 2018):

- Organizing different export and internationalization support activities.
- Increasing the competencies of cluster partners.
- Supporting cluster partners joint development projects.
- Supporting cooperation with other economic sectors.

The cluster organizes many activities in which more than 1400 people participate in a year. In the last three years the cluster has implemented the following local activities: 1) concentration of cluster members' common interests; 2) trainings to develop competences; 3) meetings with other business sectors to popularize IT; 4) creation of marketing channels; 5) implementation of local projects; and 6) creation of ITS Estonia. (Pöld 2018)

Table 13. Overview of the local activities

<b>ACTIVITY THEME</b>	<b>IMPLEMENTED ACTIVITIES</b>
<b>Concentration of companies' common interest.</b>	<ul style="list-style-type: none"> <li>• Focus on common interest: ITS, industry 4.0, e-state export, internet of business.</li> <li>• Implementation of activities in the fields of common interests.</li> </ul>
<b>Trainings to develop competences.</b>	<ul style="list-style-type: none"> <li>• Organization of training involving foreign experts.</li> </ul>
<b>Meetings with other business sectors to popularize IT.</b>	<ul style="list-style-type: none"> <li>• Developing industry 4.0 field in Estonia and organizing Industry 4.0 conference.</li> <li>• Organization of seminars on industry digitalisation.</li> <li>• Implementation of industry digitalisation pilot projects.</li> </ul>
<b>Creation of marketing channels.</b>	<ul style="list-style-type: none"> <li>• Creation of <a href="http://www.e-estoniix.com">www.e-estoniix.com</a> marketing channel to introduce e-solutions.</li> </ul>
<b>Implementation of local projects.</b>	<ul style="list-style-type: none"> <li>• Creation of the demo platform for industry digitalization – creation of a demo environment.</li> </ul>
<b>Creation of ITS Estonia.</b>	<ul style="list-style-type: none"> <li>• ITS Estonia network for more secure transportation and logistics.</li> </ul>

Source: Compiled by the author

In addition, the cluster implements international activities such as: 1) business delegations abroad; 2) study visits; 3) representation in international events; 4) target market activities; and 5) implementation of international projects. (Pöld 2018)

Table 14. Overview of the international activities

<b>ACTIVITY THEME</b>	<b>IMPLEMENTED ACTIVITIES</b>
<b>Business delegations abroad.</b>	<ul style="list-style-type: none"> <li>• Organization of business delegation to target markets.</li> </ul>
<b>Organization of study visits.</b>	<ul style="list-style-type: none"> <li>• Organization of study visits to target markets.</li> </ul>
<b>Representation of cluster and its members in international events.</b>	<ul style="list-style-type: none"> <li>• Participation in fairs and expos.</li> <li>• Representation of cluster members in target markets.</li> </ul>
<b>Target market activities.</b>	<ul style="list-style-type: none"> <li>• Hiring experts in target markets.</li> </ul>
<b>Implementation of international projects.</b>	<ul style="list-style-type: none"> <li>• Implementation of various international projects:               <ol style="list-style-type: none"> <li>1) Diginno – industry digitalization.</li> <li>2) Internet of Business – real-time economy.</li> <li>3) ICT Meta Cluster – ecosystem for entering new markets.</li> <li>4) FinEst Smart Mobility – intelligent transport solutions in Helsinki and Tallin harbour.</li> <li>5) Manufuture 2017 – international conference on future production.</li> <li>6) 5FOREXCELLENCE – management excellence.</li> <li>7) Creation of the IoB platform – internet of business platform.</li> </ol> </li> </ul>

Source: Compiled by the author

Besides the cluster has defined concrete services to provide for the memers in order to reach the objectives: 1) provide political and legal drafting consultation; 2) help with capacity building; 3) support change management and technology implementation; and 4) make any device a smart device. (ITL 2018)

By today the cluster has 34 members including business entities and research organizations. The leader organization of the EICTC cluster is the Estonian Association of Information Technology and Telecommunications. (ITL 2018)

Table 15. List of the EICTC members

<b>NAME OF THE MEMBER</b>	<b>TYPE OF ORGANIZATION</b>	<b>FIELD OF ACTIVITY</b>
Aktors	Enterprise	Develops information systems and other custom software solutions.
Baltic Computer Systems	Enterprise	Concentrates on IT infrastructure solutions.

BCS Itera	Enterprise	Consult and deliver Enterprise Resource Planning and Business Intelligence solutions.
CGI	Enterprise	Offers high-end business and IT consulting.
Columbus	Enterprise	Delivers business consultancy and technology solutions with a strong focus on manufacturing, food and retail industries.
Consulting Software	Enterprise	Provides expertise and know-how of developing and providing a combination of health care and social security counselling services.
Cybernetica	Enterprise	Develops and manufactures information security systems, maritime security and wide area radio communication systems, and investigates and applies security solutions.
Datel	Enterprise	Focuses on cloud and responsive browser based software, geospatial services, big data, statistics, etc.
Ecofleet	Enterprise	Develops the GPS-based fleet and team management service.
eKool	Enterprise	A school management tool bringing together students and their families, schools and supervisory bodies.
Elisa Estonia	Enterprise	Developing, operating and managing Telecom and IT services.
Ericsson Eesti	Enterprise	The driving force behind the Networked Society and a world leader in communications technology and services.
Estonian Information Technology College	Educational institution	Professional higher education institution applying IT studies.
Fujitsu Estonia	Enterprise	A leading IT company, providing a full range of innovative software, hardware and IT infrastructure solutions.
GoSwift	Enterprise	Deploys innovative traffic management solutions.
Guardtime	Enterprise	Invented Keyless Signature Infrastructure (blockchain technology).
Helmes	Enterprise	Focuses on design and development of software solutions.
HITSA	Foundation	Ensures that graduates of all levels have obtained digital skills necessary for the development of economy and society.
Levira	Enterprise	Digital services provider focusing on IT services, internet of things, broadcasting, media management, telecom infrastructure.
Mainor Ülemiste	Educational institution	Offers office space, facilities and business services for ICT, pharmaceutical, high-tech

		sector and other knowledge-based innovators.
Microsoft	Enterprise	Multinational technology company.
Net Group	Enterprise	Delivers software solutions focused on business development, e-justice, Telco e-Business, digital retail business, financial asset management, etc.
Nortal	Enterprise	Offers change management, strategy, policy and legislation and data-driven technology services.
Omniva	Enterprise	Helps to automate the management of purchase and sales invoices.
Proekspert	Enterprise	Creates life-simplifying, user-centric and functional software solutions.
Quretec	Enterprise	Offers software development and data management services for medical registries, biobanking, clinical trials, national statistics, bioinformatics, and biostatistics.
Reach-U	Enterprise	Combines the experience in digital cartography, GIS solutions, data analytics and agile, ISO-certified software.
SK ID Solutions	Enterprise	Specializes in international e-identity solutions.
Protex	Enterprise	Offers advanced textile solutions focusing on smart textile solutions.
Tallinn University of Technology	Educational institution	The flagship of Estonian engineering and technology education.
Technopol	Foundation	Science park having expertise in ICT, green technologies and life sciences.
Technopolis Ülemiste	Enterprise	Developing Ülemiste City offering workspace.
Telia Eesti	Enterprise	Provides tailored data communications, phone and IT services.
Tieto	Enterprise	Offers full IT lifecycle services.

Source: EICTC (2018)

Besides, the cluster has many other partner companies. The cluster considers all Estonian Association of Information Technology and Telecommunications members their trustworthy partners (Põld 2018).

The export turnover of the cluster members was 2,384 billion EUR in 2016 which is a slight increase compared to 2015 (2,233 billion EUR). The main export countries are: Finland, Sweden, Latvia and Lithuania. (Põld 2018)



The cluster activity is funded by the European Regional Development Fund. Estonian ICT cluster is the first cluster in Estonia to obtain the silver label of the European Cluster Excellence Initiative. (ITL 2018)

#### **3.1.4. The cluster members involved**

The research involved three companies from each cluster, all together nine companies.

The companies involved from the Estonian Defence and Security Industry Cluster are:

**Defendec OÜ** – Defendec is a company specialized in the development of world-class remote premises surveillance technology (Defence 2018). The company is operating globally having offices in Washington (USA), Singapore and Estonia and has exported its products to 30 countries in the European Union, Middle East and the United States of America (Tamm 2018). Its main product, Smartdec, is securing NATO's and European Union's external borders (Defendec 2018). Defendec is a member of EDSIC since 2012 (Tamm 2018).

**Threod Systems OÜ** – Threod Systems is a company specialized in developing, producing, and operating Unmanned Aircraft Systems that are designed for information collection and exploitation in military, governmental and civil applications (Threod Systems 2018). The company has exported its products to Finland, Ukraine, Kosovo, Greece, Cyprus, France, United States of America, Canada, England, Indonesia and Kazakhstan. Threod Systems is a member of EDSIC since 2015. (Nurmoja 2018)

**Milrem AS** – Milrem AS is a company specialized in manufacturing unmanned ground vehicles, developing robotic warfare solutions and performing concept of operations and doctrine level warfare analysis (Milrem 2018). The company has exported its products to Great Britain and the United States of America. Milrem is a member of EDSIC since 2015. (Hankewitz 2018)

The companies involved from the Estonian Wooden Houses Cluster are:

**Matek AS** – Matek is a company specialized in the production of custom made prefabricated timber frame houses (Matek 2018). The company exports 95% of its production to foreign

countries, for example Norway, Sweden, Finland, Germany, Switzerland, Italy, Iceland, Lithuania, Faroe Islands. Matek is a member of EWHC since 2011. (Mats 2018)

**Hobbiton Home OÜ** – Hobbiton Home is a company specialized in the production of handcrafted wooden houses. The company connects three handcrafted log home production companies making the company probably the biggest handcrafted log house producers in Europe. (Hobbiton Home 2018). The company has exported its products to Norway, Finland, France, Russia, Spain, the United States of America, Spain and Martinique. Hobbiton Home is a member of EWHC since 2009. (Prangli 2018)

**Timbeco Woodhouse OÜ** – Timbeco Woodhouse is a company specialized in manufacturing high-quality prefab timber frame elements and element houses (Timbeco Woodhouse 2018). The company has exported its products to Finland, Sweden, Norway, UK and Switzerland. Timbeco Woodhouse has been a member of EWHC for years but not exactly sure about the exact year (Muhu 2018).

The companies involved from the Estonian ICT Cluster are:

**GoSwift OÜ** – CoSwift is a company specialized in designing, deploying and operating Queue Management Services. It handles electronically/virtually queues of vehicles and people at traffic bottlenecks like border checkpoints, ports and tourist attractions. (Goswift 2018). The company has exported its products to Finland, Russia and Lithuania. GoSwift is a member of EICTC since 2014. (Plinte 2018)

**Net Group OÜ** – Net Group is a software development company specialized in the fields of e-Education, e-Governance, e-Business, Finance and Insurance, Utilities and Integrations (Net Group 2018). The company has exported its products to EMEA region (Europe, Middle East and Africa). Net Group is a member of EICTC since 2009. (Kongo 2018)

**SK ID Solutions AS** – SK ID Solutions is a company specialized in international e-identity solutions. It offers certification and time-stamping services, development of technology and applications for digital signing and validation services. (SK ID Solutions 2018). The company has exported its products to Latvia, Lithuania, Finland, Denmark, Ireland and Great Britain. SK ID Solutions is a member of EICTC since 2009. (Pihl 2018)

## 3.2. Research results

The author carried out 12 interviews in total – three interviews with the representatives of the clusters and nine interviews with the representatives of the cluster members.

### 3.2.1. Cluster research results

Considering the cluster concept and its features (Table 2) brought out in the theoretical part of the thesis, the Estonian Defence and Security Industry Cluster, the Estonian Wooden Houses Cluster and the Estonian ICT Cluster can be considered as full-fledged clusters.

Table 16. Cluster features and their compliance with Estonian clusters

<b>CLUSTER FEATURES</b>	<b>EDSIC</b>	<b>EWHC</b>	<b>EICTC</b>
<b>Interconnected companies and institutions from related industries.</b>	X	X	X
<b>Geographical concentration and proximity.</b>	X	X	X
<b>Shared vision and values.</b>	X	X	X
<b>Concurrent cooperation and competition.</b>	X	X	X
<b>Environment for knowledge and technology formation and exchange.</b>	X	X	X
<b>Involvement of civic entrepreneurs.</b>	X	X	X
<b>Joint policy actions.</b>	X	X	X
<b>Be innovative and competitive.</b>	X	X	X

Source: Compiled by the author

In case of all three clusters, the companies have concentrated in the clusters based on its geographical location, which is the Republic of Estonia, and the members include companies and institutions from similar field of activity. The members of the EDSIC include companies producing equipment for military and law enforcement agencies and companies developing various security systems. The EWHC includes mainly producers of wooden houses, supporting service companies, and research and development institutions. The EICTC includes a wide range of IT companies with different competencies and educational institutions. As most of the cluster members are private companies then the author can reason that the clusters involve also civic entrepreneurs.

All clusters brought out in their objectives that the aim of the cluster is to build their members' competences in order to increase international competitiveness and enhance export.

Therefore the author can conclude that the following cluster features are met: environment for knowledge and technology formation and exchange; be innovative and competitive, and shared vision and values.

The interviewed noted that one of the values of cluster activities is the opportunity to bring together old enemies and provide them a possibility to cooperate. Pärnamäe from the EDSIC considers competition one of the largest problems in the industry as the level of hatred is so high that it halts development. Despite this the cluster has managed to achieve a few good examples where fierce enemies are cooperating today to the extent of selling each other in international fairs (Pärnamäe 2018). Kivil from the EWHC brought out a joint project where five cluster members, who are direct competitors, are building a joint wooden house in the Estonian Open Air Museum as a reference building and covering all costs by themselves, which would have never been possible 15 years ago (Kivil 2018). Pöld from EICTC noted that the well-known e-Estonia marketing platform [www.e-estonia.com](http://www.e-estonia.com) is a joint cooperation project by the members with an aim to raise awareness and attract potential customers (Pöld 2018). According to this the author can conclude that all clusters feature concurrent cooperation and competition.

All clusters brought out that they are engaged in policy actions either on local level or international level, although the main policy shaping goes on in industry associations. Despite this, the author can conclude that the clusters are engaged in joint policy actions.

Considering the cluster theory, then the biggest difference between the cluster theory and involved clusters relies in the relationship between the clusters and industry associations. In many countries from where the scholars of the cluster theory are from, for example Germany, industry associations and clusters are completely separate organizations, while in Estonia they are closely connected and working together. In most cases, industry associations are the leading entities of the clusters. Pöld from the EICTC notes that this is untypical and can be found besides Estonia only in Latvia and Lithuania. In other countries, the industry associations are solely lobbying organizations, not organizations contributing to business development. As in Estonia the industry associations and clusters are working closely hand in hand, the associations have their input also in business development. (Pöld 2018) Although the organizations are working closely together, they are separate entities juridically. Still one might argue that the Estonian clusters rather resemble trade associations than clusters.

The author noted that all three clusters mentioned that the Enterprise Estonia's development programme of clusters supported by the European Regional Development Fund played a role in the establishment of the clusters. Therefore, the author may question if there would be no clusters without the support mechanism provided by the Enterprise Estonia or if the objectives and activities of the clusters would be different. The regulation which regulates the Enterprise Estonia cluster programme states that the objective of the support is to increase international competitiveness of the cluster members through joint marketing and development activities (Klastrite ... 2015). The author notes that the objectives of the clusters are the same as stated in the regulation. Furthermore, the regulation brings out the activities that are eligible: 1) cluster development activities; 2) the organization and implementation of cluster joint marketing activities; and 3) cluster international visibility and value cultivation activities (Klastrite ... 2015). Compared to the cluster activities, then the author can reason that also the involved clusters' activities are in accordance with the regulation in order to be eligible for the support.

Considering the cluster activities (Table 4) brought out in the theoretical part of the thesis, the author can infer that the activities of the involved clusters match the theoretical criteria. All three clusters asserted that they are involved in developing competences through different seminars, trainings, workshops and collaboration meetings between the members. Also the clusters noted that they are developing cooperation and innovation through the exchange of knowledge and technology between cluster members and the involvement of research and development organizations in cluster activities. The clusters also asserted that the clusters are carrying out promotion and marketing activities on both local and international level in order to raise the reputation of the industry, cluster and cluster members with an aim to become trustworthy partners at home and abroad. Besides the clusters are promoting internationalisation and exports by investing in the competence building and innovation, and representing the cluster and members in international events. All three clusters organize the participation in different international fairs, study visits to target markets, business trips together with the government to introduce the clusters and companies' competences, products and services. Even more, all clusters are providing up to date information to the media and industry with an objective to raise awareness in a wider public.

Although tackling human resources related problems is also one of the cluster activities, only the EWHC is engaged in the field. Kivil brought out that workforce is one of the most

important problems in the industry, which is the reason why the cluster deals directly with the preparation of workforce through seminars, conferences, etc. (Kivil 2018). The EDSIC deals with human resources indirectly. Pärnamäe stated that the cluster concentrates specialized workforce in the defence industry, but there is no specific programme or strategy to tackle the issue of raising competent workforce. Taking into consideration the specifics of defence industry and the spectre of the companies engaged, then it is difficult for the cluster to tackle the issue as all companies need workforce with slightly different profile (field specific knowledge). (Pärnamäe 2018) The EICTC does not deal with human resources as the Estonian Association of Information Technology and Telecommunications is responsible for it (Pöld 2018).

In case of policy shaping, then the EDSIC and the EWHC are both engaged on local and international level, although in some cases the activities are joint with the industry associations. Pärnamäe noted that policy issues have become to an extent where they must refuse the participation as there is not enough resources to be involved, still the cluster is involved in most important topics in Estonia, European Union and NATO (Pärnamäe 2018). Kivil stated that although the cluster is involved in policy making, it should not be a task for the clusters at least on local level. Cluster should build reputation, increase sales network and implement development activities and industry association should deal with educational and political aspects. Regarding policy making, the clusters should be active rather on European Union level. (Kivil 2018) The EICTC is not involved in policy issues as the task is allocated to the EAITT, which involves the cluster when necessary. In Europe the industry has an umbrella organization Digital Europe that shapes the policy. (Pöld 2018)

The EDSIC noted that the concentration of industry's internationalisation activities as a process should be a separate cluster activity. The process that concentrates the companies, knowledge, experience and helps to save costs as a result is vital and valuable. One of the biggest values of cluster activities is the inner consolidation of knowledge and activities (Pärnamäe 2018).

Table 17. Cluster activities and their compliance with clusters

<b>CLUSTER ACTIVITIES</b>	<b>EDSIC</b>	<b>EWHC</b>	<b>EICTC</b>
<b>Developing competences</b> (sharing knowledge and know-how).	X	X	X
<b>Developing cooperation and innovation</b>	X	X	X

(product and service development) in the industry.			
<b>Carrying out promotion and marketing activities.</b>	X	X	X
<b>Promoting internationalisation and exports.</b>	X	X	X
<b>Representing the cluster and its members in international events</b> (fairs, trade shows, conventions, expos, study visits, etc.).	X	X	X
<b>Organizing educational and training activities for the members</b> (seminars, trainings, study visits, etc.).	X	X	X
<b>Organizing seminars and workshops for parties interested in the industry</b> (information days, exhibitions, etc.).	X	X	X
<b>Tackling human resources related problems in the industry.</b>		X	
<b>Providing the industry and media with communication and information about the cluster and its activities.</b>	X	X	X
<b>Shaping policies relevant for the industry on local and international level.</b>	X	X	

Source: Compiled by the author

The clusters evaluated the interest of cluster members in local cluster activities on the scale 1-5, where 1 was not interested at all and 5 extremely interested (Figure 2). In general the cluster members are interested in the organized local activities. Pärnamäe stated that like in each community there are trend setters and the ones left behind, which applies also for the EDSIC. One third of the cluster members are always involved, one third are in between and one third the ones not active in any way (Pärnamäe 2018). Kivil noted that the members of EWHC are always interested, although there is always someone who is not interested, yet throughout times there is not a single cancelled activity (Kivil 2018). Pöld believes that the inclusion of members in the EICTC is very good thanks to targeted communication. For example, if there is an activity on e-governance, then the information goes only to those interested and active in e-governance topics (Pöld 2018).

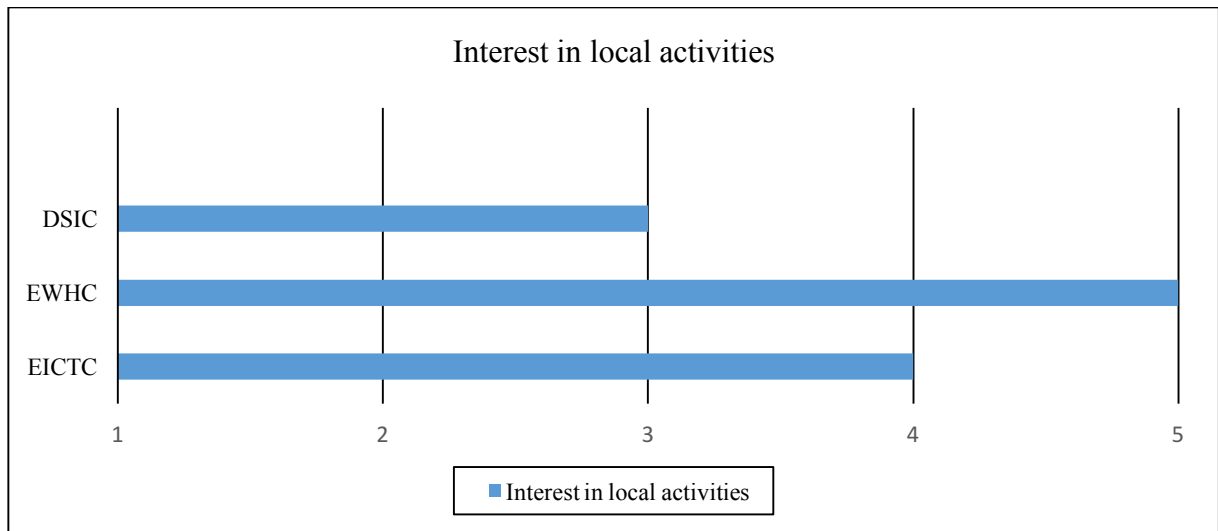


Figure 2. Cluster members' interest in local cluster activities

Source: Composed by the author

The clusters also evaluated the interest of cluster members in international cluster activities on the scale 1-5, where 1 was not interested at all and 5 extremely interested (Figure 3). The author can conclude that generally the cluster members are also interested in the organized international activities. Pärnamäe and Põld noted that the division of interest is exactly the same as in case of local events. Kivil asserted that the members would like more international activities as all companies are focused on export. The biggest problem of the Wooden House Cluster is that the cluster lacks resources and competences to offer international activities that are expected by the companies – activities, which increases sales directly (Kivil 2018).

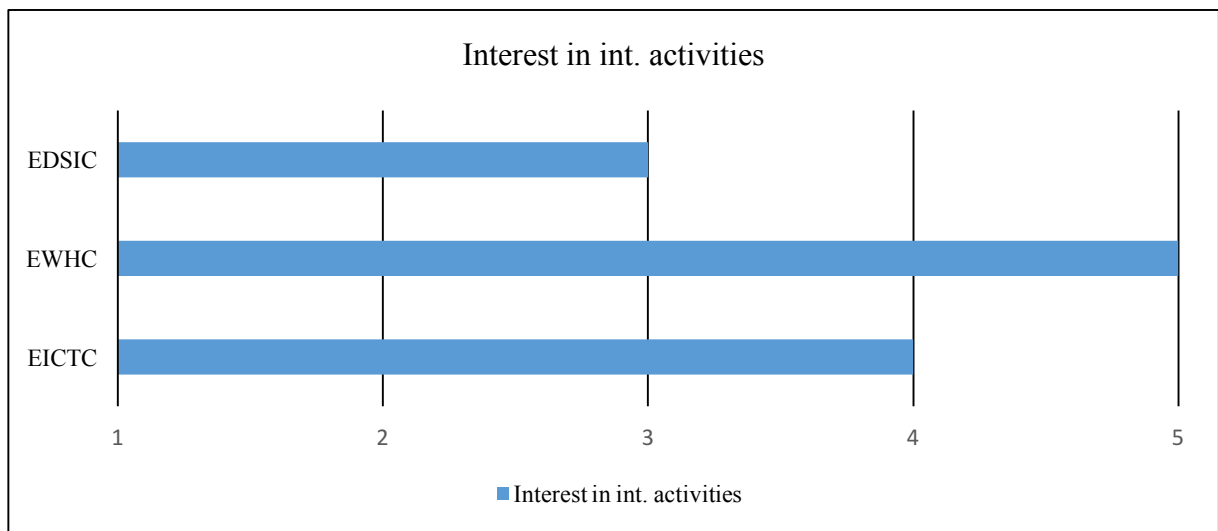




Figure 3. Cluster member's interest in international cluster activities

Source: Composed by the author

In addition the clusters also evaluated the interest of cluster members in different international fairs, trade shows, expos, etc. on the scale 1-5, where 1 was not interested at all and 5 extremely interested (Figure 4). The author can conclude that the position of the members's interest in international fairs, trade shows, expos, etc. is rather modest. Pärnamäe stated that the division is the same as in previous rankings, because there are cluster members who have not attended any international fair, and there is the core group who attends every event. (Pärnamäe 2018) Kivil brought out that the interest depends on the target market and which markets the companies are planning to enter. For example, Estonia was represented in the Swedish construction fair by two stands, one of the cluster and one of Enterprise Estonia, plus the cluster members' individual booths (Kivil 2018). Pöld stated that in the field of IT there are less international fairs and trade shows, because IT is everywhere and therefore it is hard to find a right fair for everyone. The members rather visit fairs according to their field of activity – e-governance, ITS, etc. (Pöld 2018)

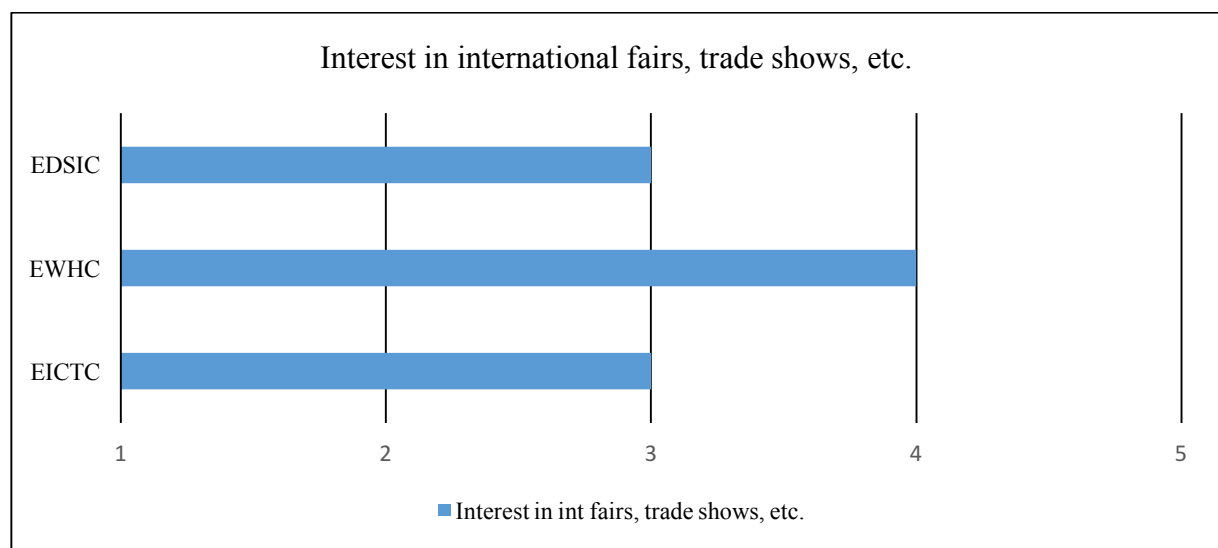


Figure 4. Cluster member's interest in international fairs, trade shows, expos, etc.

Source: Composed by the author

As helping cluster members to enter new markets is one of the core cluster activities the cluster members turn to clusters for assistance. All three clusters asserted that the cluster

members have turned to them in order to ask guidance from the cluster regarding internationalisation and export.

Table 18. The fields of activity in which the cluster members ask guidance from the cluster

NAME OF THE CLUSTER	FIELD OF ACTIVITY
<b>EDSIC</b>	<ul style="list-style-type: none"> <li>• Co-operation to save costs – money, time and workforce.</li> <li>• Contacts and networking.</li> <li>• Assuring access to the market – help from the government, embassies, etc.</li> <li>• Joint attendance in fairs.</li> <li>• Environment for the exchange of knowledge and know-how.</li> <li>• Organization of target market seminars.</li> </ul>
<b>EWHC</b>	<ul style="list-style-type: none"> <li>• Sales support.</li> <li>• Information about target markets – legislations, norms, contacts, networking, etc.</li> <li>• Support from the Estonian government/ministries – attendance of ministers in different events.</li> </ul>
<b>EICTC</b>	<ul style="list-style-type: none"> <li>• Assuring access to the market and contact base.</li> <li>• Hire foreign market experts.</li> <li>• Raising awareness about the cluster and companies.</li> <li>• Attendance in conferences and fairs.</li> <li>• Travel allowance.</li> <li>• Support from the Estonian government/ministries – attendance of officials in different events.</li> </ul>

Source: Compiled by the author

Pärnamäe stated that the most active members ask assistance to the extent that they have not enough resources to fill the requests. The members mainly ask co-operation and joint activities in order to save costs, and help in assuring access to the markets. As the defence and security field is sensitive it is very hard for a single company to reach right people and institutions, therefore the help of government and embassies is essential. The members also ask target market seminars to exchange information and experience of those who are already active in the market. (Pärnamäe 2018) Kivil brought out that the members would like mostly sales support abroad so that the companies would only produce and the cluster would do all international saleswork. Also different government officials should be more aware of the wooden houses industry and its importance to Estonia, because if an official abroad does not know that Estonia has other strong industries besides IT, it is a tragedy for the industry. (Kivil 2018) Pöld noted that the main assistance is needed in entering new markets and making the cluster and its members visible abroad (Pöld 2018). As a conclusion the author can conclude

that the most assistance is needed in assuring access to new markets, support from the government and ministries, and joint participation in conferences, fairs, study visits, business trips and other similar events.

The clusters also evaluated how much the clusters take into consideration the needs of members while organizing different activities or attendance in international events on the scale 1-5, where 1 was not at all and 5 completely (Figure 5). The EDSIC, EWHC and EICTC asserted that the needs of the cluster members are the main thriving forces for the cluster activities and therefore very much considered. Pärname noted that the needs of cluster members are extremely important, because without members participation there would be no activities (Pärnamäe 2018). Kivil stated that cluster is not capable of bringing out all problems in the industry and of companies, which is the reason why the cluster members need to be heard while mapping the hot topics and developing an action plan to be implemented together with the members (Kivil 2018). Pöld brought out that as all activities expect co-financing from the cluster members, then the cluster must take the needs into consideration in order to assure active participation (Pöld 2018).

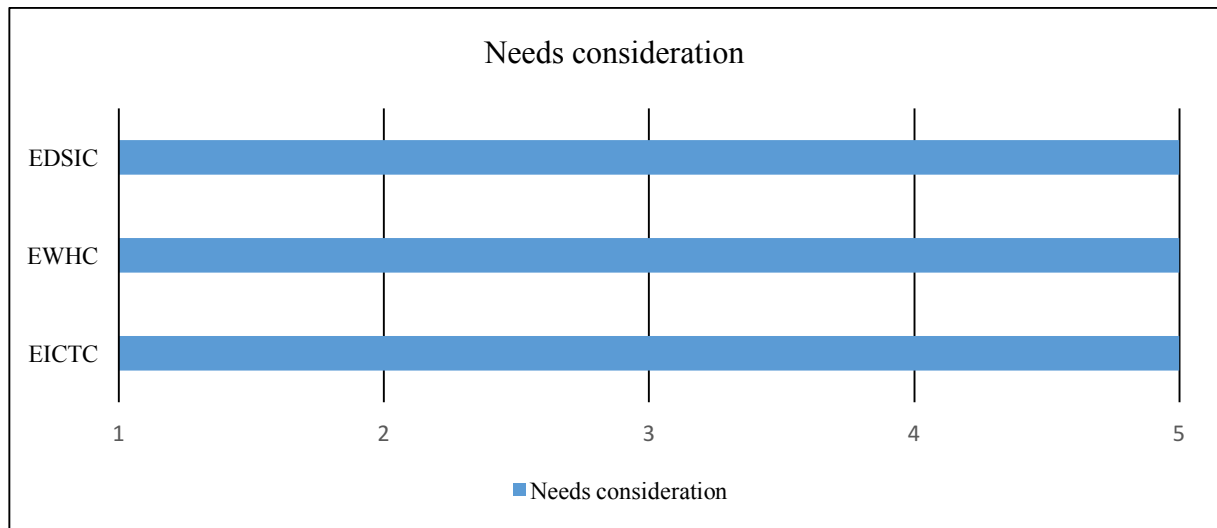


Figure 5. Cluster members' needs consideration by the clusters

Source: Composed by the author

During the interviews, the clusters also evaluated cluster achievements in the past three years. The author can conclude from the achievements brought out by the clusters (Table 19) that

the common features are connected to growth of the cluster and members' export possibilities, and cooperation between cluster members.

Table 19. The achievements of clusters

NAME OF THE CLUSTER	ACHIEVEMENTS
EDSIC	<ul style="list-style-type: none"> <li>• Linear export growth.</li> </ul>
EWHC	<ul style="list-style-type: none"> <li>• Growth of the cluster.</li> <li>• Move towards bigger and more complicated projects.</li> <li>• Cluster members are able to compete and cooperate at the same time – attend fairs, participate in procurements together, etc.</li> </ul>
EICTC	<ul style="list-style-type: none"> <li>• Creation of the marketing channel – <a href="http://www.e-estoniax.com">www.e-estoniax.com</a>.</li> <li>• Cluster reputation increase – only Silver Label cluster in Estonia.</li> <li>• Creation of the cross-sectoral pilot project model which helps to implement cross-sectoral cooperation projects.</li> <li>• Creation of ITS Estonia cooperation network.</li> <li>• Industry digitalisation to reach the focus in Estonia.</li> </ul>

Source: Compiled by the author

Besides the cluster members brought out objectives for the next three years. The EDSIC expects the continuation of growth, but in a slightly faster pace in order to increase export turnover growth two times by 2023 (Pärnamäe 2018). The EWHC does not have specific objectives yet, but they hope to be able to implement three international projects they are involved in, and that the turnover and revenue will not decrease due to fierce competition in the industry in Europe (Kivil 2018). The EICTC does not have specific objectives either, but they hope to continue internationalisation activities, initiate more joint projects and consortiums within the cluster, and phrase the specific products and services the cluster offers (Pöld 2018).

### 3.2.2. Cluster members' research results

The participating cluster members were asked to bring out the main reasons for joining the cluster (Table 20).

Table 20. The reasons for joining the clusters

<b>NAME OF THE COMPANY</b>	<b>REASONS FOR JOINING</b>
<b>DEFENDEC</b>	<ul style="list-style-type: none"> <li>• Cooperation with other companies.</li> <li>• Support mechanism by Enterprise Estonia.</li> <li>• Moral support by the state.</li> </ul>
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• Cooperation with other companies.</li> <li>• Support for export.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• Financial support to cover cost regarding fairs and business visits.</li> <li>• Support for export.</li> </ul>
<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Cooperation with other companies.</li> <li>• Support for export.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Cooperation with other companies.</li> <li>• Support mechanism by Enterprise Estonia.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• Access to information.</li> <li>• Increased visibility.</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• Support for export.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• Cooperation with other companies.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• Financial amplification from joint marketing and sales.</li> </ul>

Source: Compiled by the author

The most common incentives for joining a cluster were cooperation with other companies and support for export (Figure 5). Nurmoja from Threod Systems stated that cooperation in a cluster assures better information flow, companies can market goods together, organize joint participation in fairs and develop joint integrations for products and services (Nurmoja 2018). Mats from Matek believed that instead of killing each other with competition, it is wiser to cooperate, share information and conquer foreign markets together more forcefully (Mats 2018). Kongo from Net Group stated that it is not easy to operate in foreign markets alone, which is why it is better to join forces for a breakthrough (Kongo 2018). Tamm from Defendec brought out that also the moral support offered by the state was important inducement as it is almost impossible for a single company to involve ministry representatives that are necessary for the defence and security industry meetings and fairs (Tamm 2018). Hankewitz from Milrem added that as constant communication with potential clients is very important in the defence industry, the company faces lots of travelling in which cluster is of huge help by covering half of the costs to fairs and business visits (Hankewitz 2018). Muhu from Timbeco Woodhouse stated that cluster makes the company more visible through the cluster website as quite a lot of traffic comes to Timbeco's website through the cluster website (Muhu 2018).

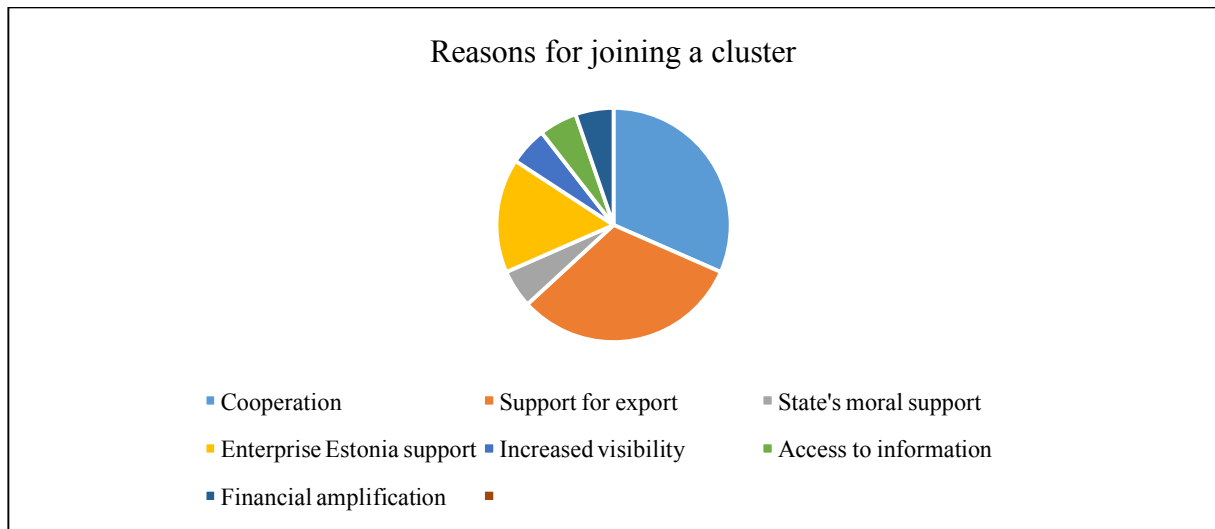


Figure 5. Division of reasons for joining a cluster

Source: Composed by the author

The cluster members also brought out expectations towards cluster activities that they had before joining the clusters and getting to know the real cluster activities (Table 21).

Table 21. Expectations towards cluster activities

<b>NAME OF THE COMPANY</b>	<b>EXPECTATIONS FOR CLUSTER ACTIVITIES</b>
<b>DEFENDEC</b>	<ul style="list-style-type: none"> <li>• Joint marketing.</li> <li>• Joint product development and integration.</li> </ul>
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• Were not sure what the cluster does, but expected more or less the same what the cluster does.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• Cooperation between cluster members.</li> <li>• Joint product development.</li> <li>• Exchange of information and experience between cluster members.</li> </ul>
<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Cooperation and information flow between cluster members.</li> <li>• Joint communication about the wooden houses industry.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Affordable development possibilities: trainings, study visits, etc.</li> <li>• Cooperation between cluster members.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• Access to potential clients' interest.</li> <li>• Exchange of information and experience between cluster members.</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• Cooperation between cluster members.</li> <li>• Export support.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• Joint marketing.</li> </ul>

	<ul style="list-style-type: none"> <li>• Raising awareness of the industry among decision makers.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• Joint marketing.</li> <li>• Cooperation between cluster members.</li> </ul>

Source: Compiled by the author

From the table the author can conclude that the three most common expectations towards cluster activities were: 1) cooperation between cluster members; 2) joint marketing and communication activities; and 3) joint product development and exchange of information and experience.

As clusters are carrying out many everyday activities on local and international level, the cluster members were asked to bring out three most important activities for their company (Table 22). The selection of activities included the cluster activities brought out in Table 4 in the theoretical part.

Table 22. Most important cluster activities

<b>NAME OF THE COMPANY</b>	<b>THREE MOST IMPORTANT ACTIVITIES</b>
<b>DEFENDEC</b>	<ul style="list-style-type: none"> <li>• Developing competences (sharing knowledge and know-how).</li> <li>• Developing cooperation and innovation (product and service development) in the industry.</li> <li>• Promoting export and internationalisation.</li> </ul>
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• Developing cooperation and innovation (product and service development) in the industry.</li> <li>• Carrying out promotion and marketing activities.</li> <li>• Promoting export and internationalisation.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• Promoting export and internationalisation.</li> <li>• Providing the sector and media with communication and information about the cluster and industry.</li> <li>• Shaping the policies relevant for the industry on local and international level.</li> </ul>
<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Developing competences (sharing knowledge and know-how).</li> <li>• Developing cooperation and innovation (product and service development) in the industry.</li> <li>• Shaping the policies relevant for the industry on local and international level.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Developing cooperation and innovation (product and service development) in the industry.</li> <li>• Providing the sector and media with</li> </ul>

	<p>communication and information about the cluster and industry.</p> <ul style="list-style-type: none"> <li>• Shaping the policies relevant for the industry on local and international level.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• Carrying out promotion and marketing activities.</li> <li>• Organizing education and training activities for the members and partners.</li> <li>• Providing the sector and media with communication and information about the cluster and industry.</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• Developing cooperation and innovation (product and service development) in the industry.</li> <li>• Carrying out promotion and marketing activities.</li> <li>• Promoting export and internationalisation.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• Carrying out promotion and marketing activities.</li> <li>• Promoting export and internationalisation.</li> <li>• Representing the cluster and members in international events.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• Developing competences (sharing knowledge and know-how).</li> <li>• Carrying out promotion and marketing activities.</li> <li>• Promoting export and internationalisation.</li> </ul>

Source: Compiled by the author

According to the table the author can resume that the most relevant cluster activities are: 1) promoting export and internationalisation; 2) developing cooperation and innovation in the industry; and 3) carrying out promotion and marketing activities.

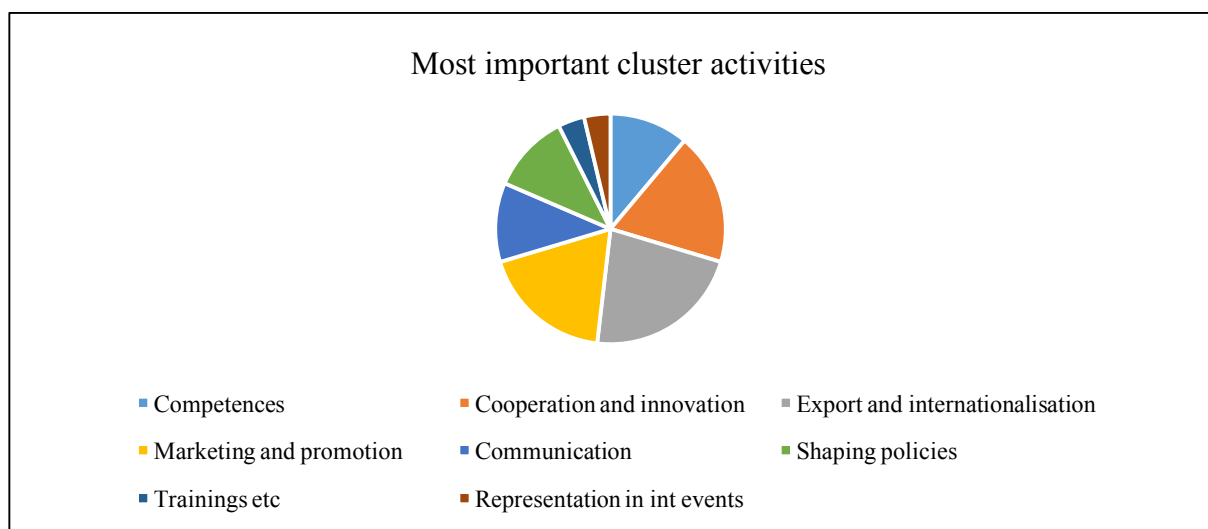


Figure 6. Most important cluster activities in the eyes of cluster members

Source: Composed by the author



Furthermore, the cluster members brought out the types of local and international cluster activities in which they had participated in the past 3 years (Table 23 and Table 24).

Table 23. Participation in local activities in the past 3 years

<b>NAME OF THE COMPANY</b>	<b>PARTICIPATION IN LOCAL ACTIVITIES</b>
<b>DEFENDEC</b>	<ul style="list-style-type: none"> <li>• Target market seminars.</li> <li>• Information days.</li> <li>• The defence industry's annual forums.</li> <li>• Receptions of foreign delegations.</li> <li>• Joint exhibitions.</li> </ul>
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• Seminars.</li> <li>• Receptions of foreign delegations.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• Trainings.</li> <li>• The defence industry's annual forums.</li> <li>• Joint exhibitions.</li> <li>• Communication activities.</li> <li>• Receptions of foreign delegations.</li> </ul>
<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Joint communication activities regarding the industry.</li> <li>• Trainings, seminars, workshops.</li> <li>• Meetings with different state officials.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Target market seminars.</li> <li>• Gatherings of wooden houses friends (gatherings of companies in a free form).</li> <li>• Leisure events together with cluster members to exchange experience.</li> <li>• Board meetings taking place in the premises of cluster members.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• Prefab House of the Year contest.</li> <li>• Trainings, seminars, workshops.</li> <li>• Visits of different production facilities of the cluster members.</li> <li>• Estonian Wooden Houses newspaper.</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• Participated in many different cluster events like seminars, trainings, etc.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• All local seminars.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• Receptions of foreign delegations.</li> <li>• Trainings.</li> <li>• Brought foreign experts to Estonia to share their competences with the cluster.</li> </ul>

Source: Compiled by the author

The most common activities the cluster members have taken part in are different seminars, training and workshops with an aim to develop competences and exchange information and

experience with fellow cluster members. Prangli pointed out that the organized leisure events are very important because the company representatives can exchange knowledge and experience in a more casual environment (Prangli 2018). Plinte noted that GoSwift has participated in many cluster activities as cluster is an important element in both local and international cooperation (Plinte 2018). Muhu brought out that the Prefab House of the Year contest is a good output for internationalisation as the contest visuals are often showcased in airport and ports, where potential foreign clients can easily notice them (Muhu 2018).

The cluster members also evaluated how useful the organized local activities are for their companies and employees on the scale 1-5, where 1 was not useful at all and 5 extremely useful (Figure 7).

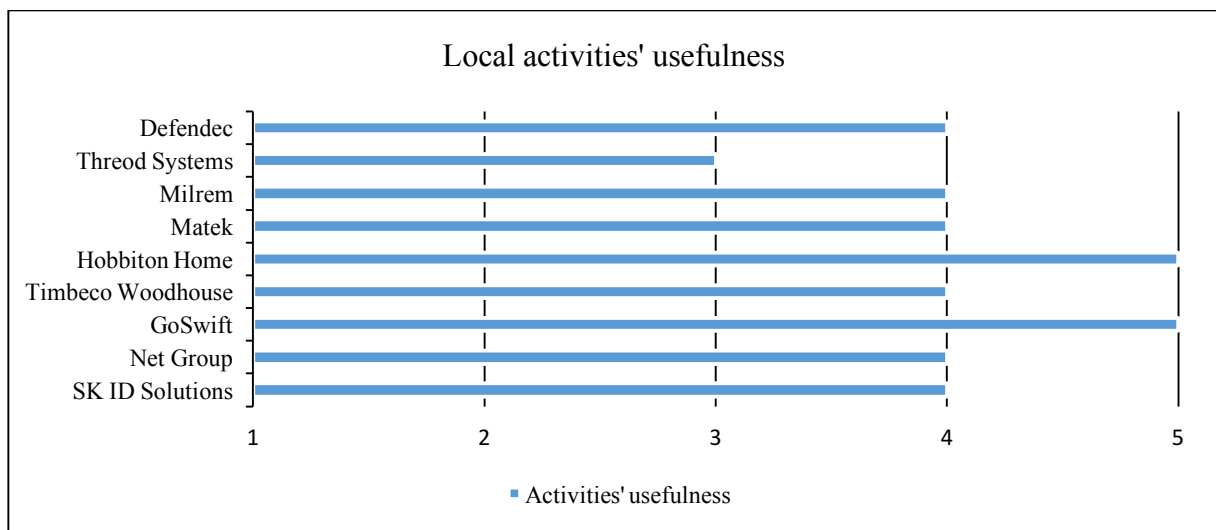


Figure 7. Local activities' usefulness for the cluster members

Source: Composed by the author

In general the cluster members consider local activities useful. Tamm noted that although the activities are professionally organized and they participate in every event, it is difficult to measure the real usefulness as the company's sales cycle is long and sometimes the results appear in 2-3 years (Tamm 2018).

As in case of the local activities, the cluster members brought out the international activities they had participated in the past 3 years (Table 24).

Table 24. Participation in international activities in the past 3 years

<b>NAME OF THE COMPANY</b>	<b>PARTICIPATION IN LOCAL ACTIVITIES</b>
<b>DEFENDEC</b>	<ul style="list-style-type: none"> <li>• International fairs.</li> <li>• Study visits to target markets.</li> <li>• Business delegations/visits.</li> </ul>
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• International fairs.</li> <li>• Business delegations/visits.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• International fairs.</li> <li>• Business delegations/visits.</li> </ul>
<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Joint software procurement project.</li> <li>• External communication and marketing activities.</li> <li>• International fairs.</li> <li>• Study visits to target markets.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Study visits to target markets.</li> <li>• External communication and marketing activities.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• No participation in any international activities.</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• International fairs.</li> <li>• Study visits to target markets.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• Business delegations/visits.</li> <li>• International fairs.</li> <li>• Development of the e-governance marketing strategy.</li> <li>• Presentations to different institutions about the industry's value proposition.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• International fairs.</li> <li>• Development of marketing materials.</li> </ul>

Source: Compiled by the author

From the table above the author can conclude that the most popular international cluster activities are international fairs, business delegations/visits and study visits. Prangli brought out that they have not participated in international fairs as do not consider them important for the company (Prangli 2018). Muhu noted that they have not participated in any cluster international activities as they are collaborating with Enterprise Estonia's consultants in Scandinavian markets, because they are on spot, know the market situation and speak the language. If the cluster would have similar consultants in target markets, they probably would use their help instead of Enterprise Estonia's consultants. (Muhu 2018)

Besides the cluster members evaluated how useful the organized international activities are for their companies and employees on the scale 1-5, where 1 was not useful at all and 5 extremely useful (Figure 8).

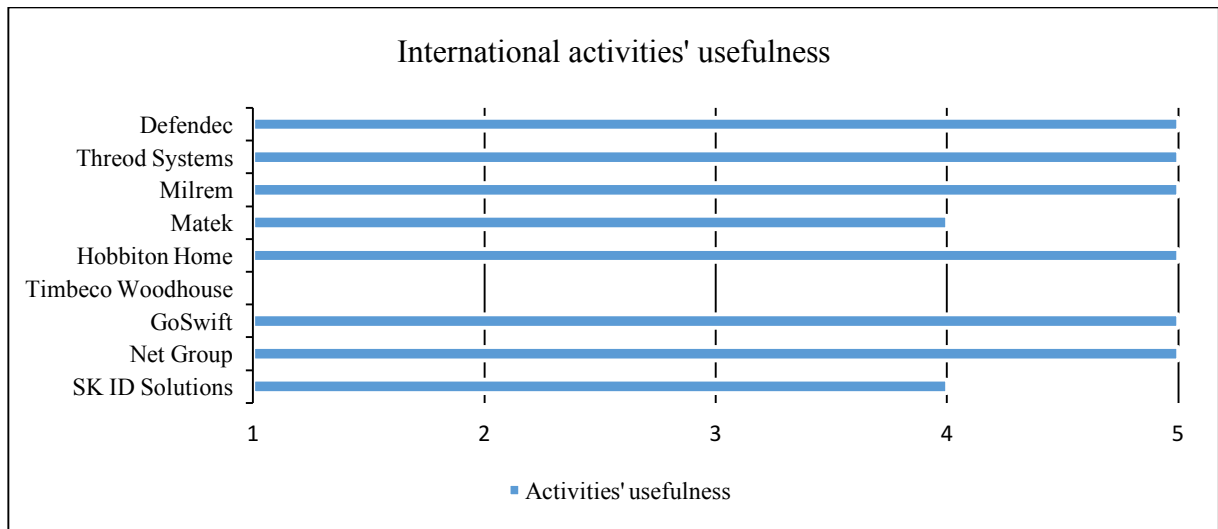


Figure 8. International activities' usefulness for the cluster members

Source: Composed by the author

Timbeco woodhouse did not answer the question as have not participated in any international events. Despite this the cluster members consider international activities very useful. Tamm asserted that participation in international fairs is very useful as alone they could not afford it and the last fairs in the Middle East have brought concrete deals. Tamm also brought out that the study visits to target markets could be more useful in a few years when the cluster members have grown and gained experience in order to exchange knowledge and experience with foreign companies. (Tamm 2018) Nurmoja noted that the international activities have been the biggest help for the company in terms of all cluster activities (Nurmoja 2018).

The research parties also evaluated how well the needs and ideas of the cluster members are heard and considered in the cluster on the scale 1-5, where 1 was not considered at all and 5 extremely considered (Figure 9).

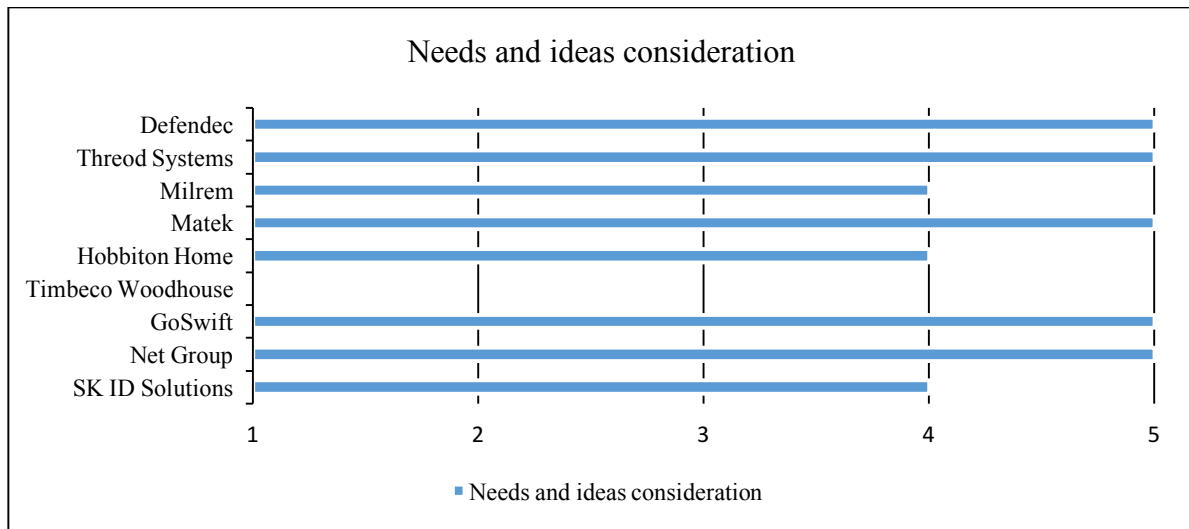


Figure 9. Needs and ideas consideration by the clusters

Source: Composed by the author

The cluster members believe that their needs and ideas are considered very well in the cluster. Muhu was unable to answer the question as lacks information on the matter (Muhu 2018).

The companies were also asked to list the fields in which they have asked help or guidance from the cluster regarding internationalisation and export (Table 25). The given list included the following activities:

- Information about the target market;
- Assistance in entering the new market (VIP meetings etc.);
- Contact base for the target market;
- Sales support in the target market;
- Legislation etc. in the target market;
- Marketing and promotion assistance in the target market;
- Participation in different fairs, expos, trade shows, etc.;
- Other.

Table 25. Fields in which cluster members have asked assistance

NAME OF THE COMPANY	FIELDS OF ASSISTANCE
DEFENDEC	<ul style="list-style-type: none"> <li>• Sales support in the target market.</li> <li>• Legislation etc. in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> <li>• Marketing and promotion assistance in the target</li> </ul>

	market.
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• Assistance in entering new markets.</li> <li>• Contact base for the target market.</li> <li>• Sales support in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> <li>• Marketing and promotion assistance in the target market.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• Information about the target market.</li> <li>• Assistance in entering new markets.</li> <li>• Contact base for the target market.</li> <li>• Sales support in the target market.</li> <li>• Marketing and promotion assistance in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> </ul>
<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Information about the target market.</li> <li>• Legislation etc. in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Have not asked for assistance.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• Have not asked for assistance.</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• Information about the target market.</li> <li>• Assistance in entering new markets.</li> <li>• Sales support in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> <li>• Marketing and promotion assistance in the target market.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• Assistance in entering new markets.</li> <li>• Marketing and promotion assistance in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> <li>• Creation of marketing strategy.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• Sales support in the target market.</li> <li>• Participation in different fairs, expos, trade shows etc.</li> <li>• Marketing and promotion assistance in the target market.</li> </ul>

Source: Compiled by the author

Muhu stated that although they have not asked for assistance yet due to working target markets, they might ask help when entering Germany in the coming 3-5 years period (Muhu 2018).

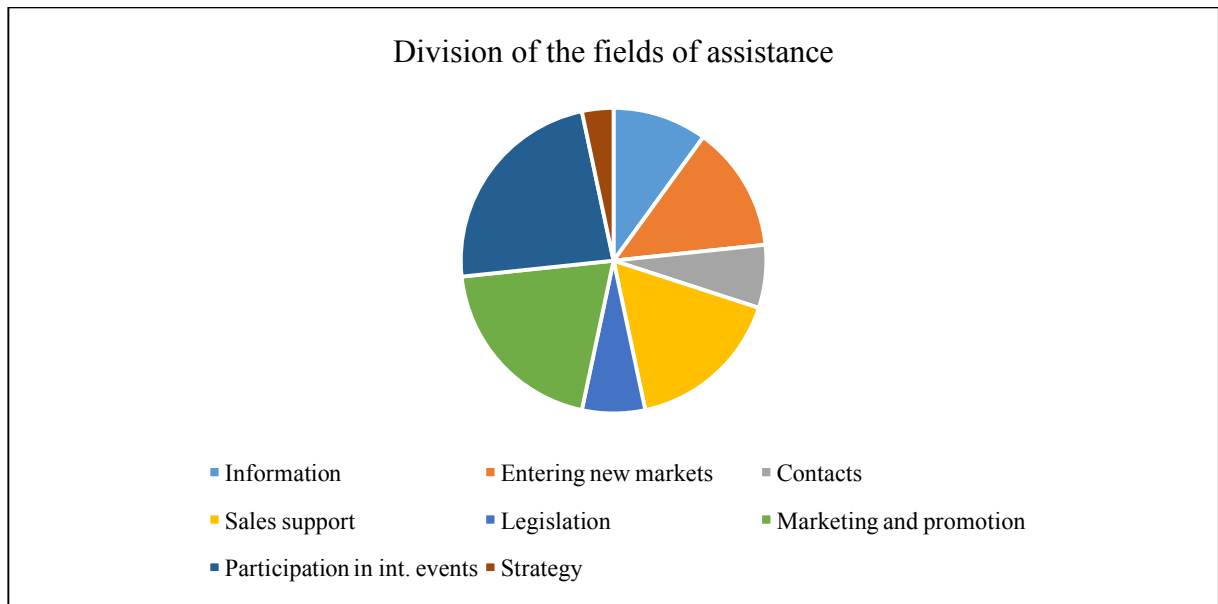


Figure 10. Division of the fields in which cluster members have asked assistance  
 Source: Composed by the author

From the table and figure above the author can conclude that the most assistance is needed in organizing joint participation to international events like fairs and trade shows, in implementing marketing and promotion activities in target market and in sales support in target markets.

The research parties also evaluated whether the cluster activities have helped them to enter new markets on the scale 1-5, where 1 was not at all and 5 very much (Figure 11).

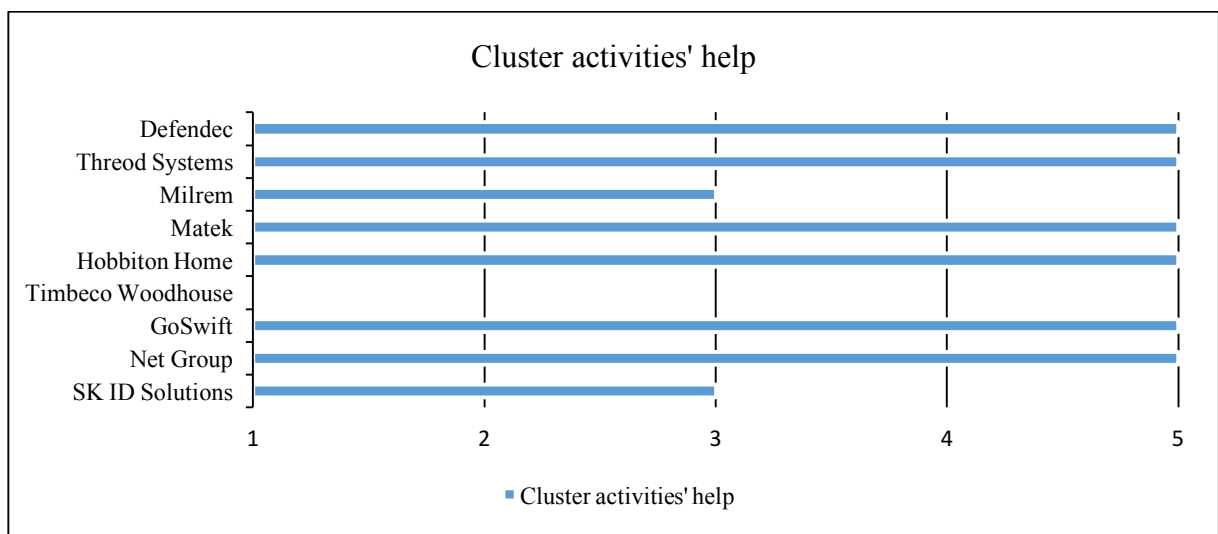


Figure 11. Cluster activities' help in entering new markets

Source: Composed by the author

Timbeco Woodhouse did not answer the question as they have not asked for nor received any help regarding internationalisation and therefore unable to evaluate if the cluster activities have helped or not. (Muhu 2018) Nevertheless the cluster members in general believe that the cluster activities have helped them in entering new markets very much.

The companies were also asked to evaluate if the clusters are implementing enough international activities and providing enough support for entering new markets on the scale 1-5, where 1 was not at all and 5 more than enough (Figure 11).

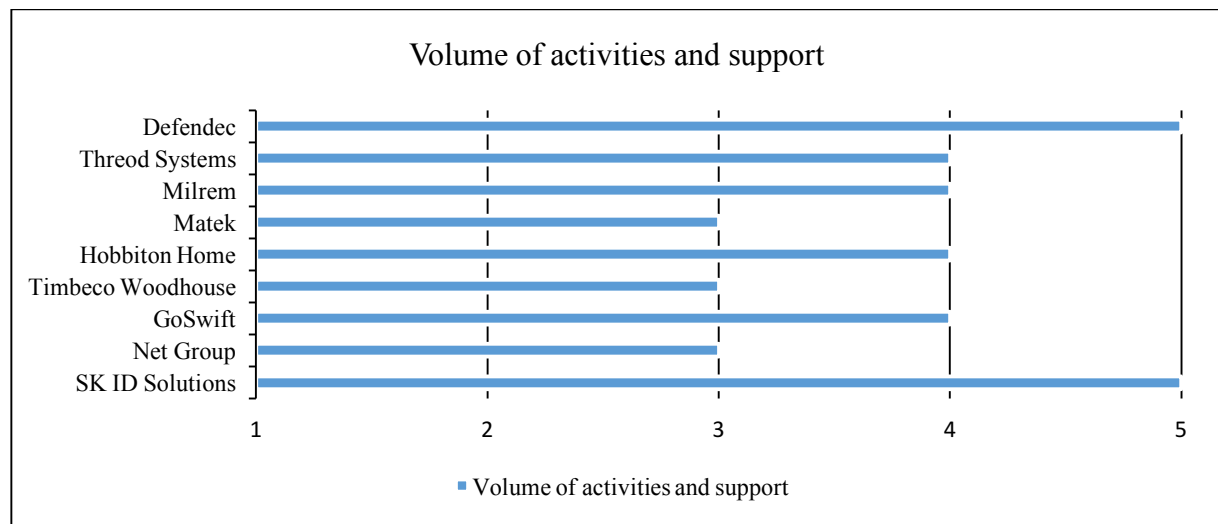


Figure 12. The volume of activities and support regarding internationalisation

Source: Composed by the author

In general the clusters are implementing enough international activities and providing enough support regarding internationalisation. Mats noted that the cluster could do more in terms of gathering market information if there would be more resources (Mats 2018). Muhu stated that he would expect more initiative from the cluster to enter new markets together (2018). Kongo brought out that there is no need for additional activities rather additional funding (Kongo 2018). Pihl from SK ID Solutions noted that cluster does as much as there are resources given by the members and programme, and allocating more activities with the current financial system is not viable (Pihl 2018).



The companies also brought out the activities that the clusters could offer in addition to the current cluster international activities (Figure 13). The most common need for clusters would be consultants in the most important target markets who would help the companies on spot. The companies brought out that although the Enterprise Estonia has consultants in some markets, there is a clear need for sector-specific consultants. In addition, the clusters could deal more with the reputation and visibility of the industries in order to raise awareness in public and among decision makers.

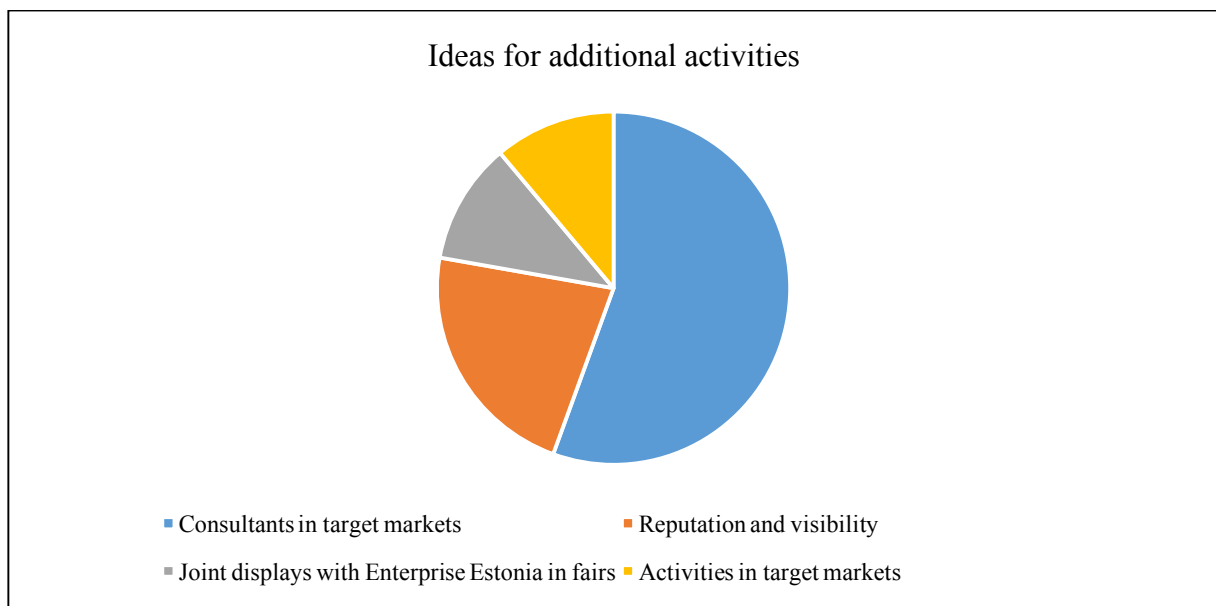


Figure 13. Ideas for additional cluster activities

Source: Composed by the author

The cluster members were also asked to list their expectations for the clusters in the coming three years (Table 26).

Table 26. Expectations for the clusters in the coming three years

NAME OF THE COMPANY	EXPECTATIONS
<b>DEFENDEC</b>	<ul style="list-style-type: none"> <li>• Continuation of marketing activities.</li> <li>• Continuation of participation in international events like fairs.</li> <li>• Joint product development and integration.</li> </ul>
<b>THREOD SYSTEMS</b>	<ul style="list-style-type: none"> <li>• Continuation of the same support and policies as now.</li> </ul>
<b>MILREM</b>	<ul style="list-style-type: none"> <li>• Continuation of current activities and ensure financing for the next period.</li> </ul>

<b>MATEK</b>	<ul style="list-style-type: none"> <li>• Continuation of current activities.</li> <li>• More resources to hire consultants in target markets.</li> </ul>
<b>HOBBITON HOME</b>	<ul style="list-style-type: none"> <li>• Continuation of cooperation.</li> <li>• Increase in reputation abroad.</li> </ul>
<b>TIMBECO WOODHOUSE</b>	<ul style="list-style-type: none"> <li>• More attention on export and target markets.</li> <li>• More effort in target markets where Estonians have a strong position (like Scandinavia).</li> </ul>
<b>GOSWIFT</b>	<ul style="list-style-type: none"> <li>• Continuation of current activities.</li> <li>• More resources.</li> </ul>
<b>NET GROUP</b>	<ul style="list-style-type: none"> <li>• More funding for the cluster.</li> <li>• Consultants in target markets.</li> <li>• Cluster should start selling its products and services.</li> </ul>
<b>SK ID SOLUTIONS</b>	<ul style="list-style-type: none"> <li>• Continuation of current activities and ensure financing for the next period.</li> </ul>

Source: Compiled by the author

In general the cluster members expect the continuation of the cluster activities and more funding to do and achieve more. In some cases there is some fear about sustainability due to the funding mechanism. Hankewitz is worried about the future funding of the cluster as there are parties believing that the defence and security industry receives too much funding and the funding model is worrisome (Hankewitz 2018). Kongo stated that the cluster should develop a strategy for selling its products and services in addition to the cluster activities funded by the European Regional Development Fund support mechanism (Kongo 2018). Tamm brought out that participation in international fairs is crucial in defence industry and as the company is not that strong enough to attend fairs alone, the continuation of participation in fairs together as a cluster is vital. He also expects more joint product development and integration together with the cluster members in order to become stronger and enter new markets together (Tamm 2018). Muhu noted that more stress should be put on export possibilities and strengthening the position in already existing markets (Muhu 2018).

### **3.3. Analysis of the research results**

From the obtained results the author can conclude that the objectives of the clusters match with the expectations and reasons for joining the clusters brought out by the cluster members. All three clusters brought out in their objectives that the aim of the cluster is to build their member's competences in order to increase international competitiveness and enhance

export. The main reasons for joining a cluster were the possibility to cooperate with similar companies, receive support for export and funding from Enterprise Estonia. In addition, the cluster members mainly expect cooperation between cluster members, joint marketing and communication activities, joint product development possibilities and a chance to exchange information and experience. Cooperation, exchange of information and experience develop competences that in turn increases international competitiveness of the cluster members. The joint marketing and communication activities raise awareness of the industry and companies and therefore help open doors to new markets.

Regarding the cluster activities then all clusters are implementing the activities valued by the clusters the most. The most relevant cluster activities were developing cooperation and innovation, promoting export and internationalisation; and carrying out promotion and marketing activities.

The clusters rated the interest of cluster members' in local activities good bringing out that there are always companies who are interested in all organized activities and companies who are not. The cluster members have participated the most in different seminars, trainings and workshops with an aim to develop competences and exchange information and experience with fellow cluster members. In general, the cluster members consider the local activities to be useful for their companies and employees.

The clusters also rated the interest of cluster members' in international activities good bringing out that the division of interest is exactly the same as in case of local activities. The clusters evaluated the members' interest in international fairs, trade shows, expos etc., however, rather modest bringing out that the interest depends on the exact topic of the fair and the target markets. Yet the cluster members have participated the most in international fairs, business delegations and study visits and consider the international activities to be the most useful cluster activities of all. The cluster members brought out that the cluster activities have helped them in entering new markets very much. In addition, the cluster members believe that the cluster is implementing enough international activities and is providing enough support for entering new markets. Therefore remains the question if the clusters undermine their international activities and their importance for the cluster members.

The clusters and cluster members also evaluated how much the clusters take into consideration the needs of members while organizing different activities or attendance in international events. Both the clusters and companies brought out that the needs and ideas are extremely considered.

The research parties also brought out the fields in which the companies need the most guidance from the clusters. The clusters pointed out that the companies ask mostly assistance in entering new markets (government support), contact network in target market and joint participation in different fairs, expos, trade shows, etc. The cluster members, however, brought out that they need the most assistance in joint participation in international events, marketing and promotion assistance in target market and sales support in target market. The author can hereby resume that assessment varies among the clusters and companies, and that the clusters should turn more attention to the fields of assistance the companies value the most.

The author can also conclude that the expectations of the clusters for the coming three years match with the expectations of the cluster members. In general the cluster members expect the continuation of the current cluster activities and more funding in order to do and achieve more. The clusters also expect the continuation of their activities together with more projects and possibilities to assure industry's growth.

## SUMMARY

As the domestic market in Estonia is small for many high-potential industries internationalisation is indispensable for their development and survival. Yet it is difficult, not to say impossible, for an unknown company from a quite unfamiliar country to enter foreign markets due to the lack of experience, resources, contact network and governmental support.

Clustering is one possibility how to enhance development, competitiveness and internationalisation by gathering together companies and institutions working in the same industry and turning competition into cooperation. The immediate exchange of information and experience together with the many local and international training and learning opportunities, and the support from the state officials increase companies' international competitiveness and therefore help them to compete with the foreign competitors as equals.

The objective of the master thesis was to find out what kind of effect cluster activities have on its members' internationalisation. The author included three Estonian clusters representing different industries in the research – the Estonian Defence and Security Industry Cluster, the Estonian Wooden Houses Cluster and the Estonian ICT Cluster – and three companies from each cluster. In total the author carried out 12 interviews in order to find answers for the set research objective and questions.

According to the thesis's objective and set research questions, the author can conclude the following:

- The Estonian Defence and Security Industry Cluster, the Estonian Wooden Houses Cluster and the Estonian ICT Cluster are fully-fledged clusters and match the main cluster features. Still one might argue that the Estonian clusters rather resemble trade associations than clusters, because in Estonia clusters and industry associations are working closely together and, in fact, there is a very thin line between these two

organizations. In most cases clusters and industry associations are completely separate organizations.

- The main incentive for establishing the clusters was the funding mechanism from Enterprise Estonia. It remains unclear if the clusters' objectives and activities would be different if the clusters main funding source would not be Enterprise Estonia's development programme of clusters that provides clear guidelines for the objectives and eligible activities.
- The objectives of the clusters match with the reasons for joining the clusters brought out by the companies. All parties want to develop competences and cooperation in order to increase international competitiveness and enhance export.
- The cluster activities valued the most by cluster members are developing cooperation and innovation, promoting exports and internationalisation and carrying out promotion and marketing activities. All mentioned activities are implemented by the involved clusters.
- The cluster members are interested in local activities and very interested in international activities. The most important local activities are seminars, trainings and workshops and the most important international activities are participations in international events and business delegations/visits. All in all the cluster activities have helped the members to enter new markets.
- The most assistance by the clusters is needed in organizing joint participation in international events (fairs, trade shows, business delegations/visits etc.), implementing marketing and promotion activities in the target market and providing sales support in the target market. All in all the clusters provide enough support regarding internationalisation.
- The cluster members would like more consultants in local markets to help the companies on spot. In addition, the clusters could deal more with the reputation and visibility of the industries in order to raise awareness among decision-makers. The support of decision-makers is vital for all three industries.
- The expectations for the coming three years are the same among the clusters and cluster members. All parties would like to assure funding for the next period in order to continue with their current activities and if possible do even more.

As a conclusion the author can reason that the cluster activities have an important role in cluster members internationalisations as they help to develop competences and cooperation in order to raise competitiveness and provide support in different fields that help to increase export directly. Therefore the author has reached the objective of the master thesis and answered all research questions.

As there have been no studies on the Estonian clusters and internationalisation, the author finds that the chosen topic and research were unique and important to consider, because the research results not only provide an overview of the cluster activities and their contribution to the opportunities for companies to enter new markets, but also provide insight for the clusters to improve their strategies and action plans for the coming funding period.

There are several opportunities to develop this master thesis. One possibility is to carry out a study in each cluster in order to get a more precise overview of each clusters' members satisfaction with the cluster activities to develop a concret action plan for the coming years. Another possibility is to study the linkages between cluster activities and industry association activities with an aim to find means how to make both organizations more effective. Third possibility is to study the funding mechanisms of clusters and find ways how to turn clusters into self-sufficient organisations.

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## APPENDICES

### Appendix 1. Interview with the CEO of the Estonian Defence and Security Industry Cluster

#### QUESTIONNAIRE FOR THE CLUSTERS

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the cluster:** Estonian Defence and Security Industry Cluster
- 2. Date of establishment (year, if relevant also month):** 2012
- 3. Field of activity:** Defence and security
- 4. Number of members:** 17
- 5. List of members:**

NAME OF THE MEMBER	TYPE OF ORGANIZATION	FIELD OF ACTIVITY
Baltic Workboats	Enterprise	Designs and produces boats and vessels from steel and aluminium.
Baltflex	Enterprise	Operates in the field of hydraulics.
BHC Laboratory	Enterprise	Cyber security capabilities development company that specialises in complex technical cyber security exercises.
Bristol Trust	Enterprise	Design, production management and sales of equipment for military and law enforcement agencies.
Bytelife Solution	Enterprise	Operates in the field of data centers and cloud solutions: automation, configuration management, custom software development, etc.
Defendec	Enterprise	Develops automatic and autonomous security monitoring platforms and is challenging the border protection and surveillance status quo.
Eli	Enterprise	Develops and produces unmanned aerial solutions.
Galvi-Linda	Enterprise	Specialised in military, law

		enforcement and outdoor equipment made of textile and synthetic materials.
Milrem	Enterprise	Specialised in military engineering, repair, and maintenance.
Milectria	Enterprise	Manufacturer of electrical systems with a product range comprising wire and cable harnesses and electrical paneks.
Nordic Armoury	Enterprise	Operates in the field of armament and optics.
Semetron	Enterprise	Planning, selling, and servicing and repairing hospital equipment, disposable items and other healthcare products.
Skeleton Technologies	Enterprise	Specialised in ultracapacitor development (energy storage devices that are more powerful than batteries).
Telegrupp	Enterprise	Defence and security systems integrator – turnkey security, communications and IT infrastructure solutions.
Terramil	Enterprise	Manufacturing innovative high quality polyethylene products (bomb shelters, anti piracy floats, transport and storage boxes, etc.).
Threod Systems	Enterprise	Specialised in developing, producing and operating unmanned aircraft systems designed for information collection and usage in military, governmental and civil applications.
Toci	Enterprise	Manufacturer of profiled and sheet metal products used in engineering, building and defence industry.
Estonian Defence Industry Association	Association	Organization that represents the main defence and security industry related enterprises in Estonia.

Saab välja tuua peamised sihtriigid, kus kas juba tehakse või tahetakse eksportida. Siis on Skandinaavia, Balti riigid, muu Euroopa, Lähis-Ida ja Põhja-Ameerika need kõige peamised.

Ekspondikäibe numbrid viimasel kolmel aastal on:

2016 20,8M€

2015 17,6M€

2014 16,5M€

## Appendix 1 continued

### INTERVIEW QUESTIONS

**6. Name of the interviewed:** Ingvar Pärnamäe

**7. Position of the interviewed:** CEO

**8. Date of the interview:** 14.03.2018

#### **9. Why the cluster was established?**

Klaster asutati ettevõtete enda initsiatiivil. See huvi oli tol korral ning on jätkuvalt fokuseerunud sellele, et kuidas paremini eksporditurgudele pääseda. Ja just süvendatult sellist rahvusvahelistumist. Klasteri meede kui selline, mida EAS pakub, toetab üsna palju igasugust välismaal käimist ning kontaktide otsimist ja loomist. Tulevikus võib fookus natukene muutuda ja päris hästi meile see enam ei istu, mida EAS pakub ja toetab, aga eks me peame vaatame.

Kuna EAS meede oli saadaval, siis oli see lisatõukejõud, et klaster käivituks. Tõenäoliselt oleks klaster käivitunud nii või naa, kuid natukene teises tempos.

Ja klaster ise, et kuna ta on täna ise hästi tihedalt seotud EASi meetmega, siis isegi kui see ära kaob, siis ma arvan, et klaster jätkab igal juhul. Selle aasta alguses tuli välja ka Eesti Kaitsetööstuse Liidu laiem strateegia ning klaster on seal selgelt ära toodud. Klaster kujunebki selliseks ekspordi ja rahvusvahelistumisele suunatud nõuandmise osakonnaks. Igaüks, kes tahab ettevõttega selles valdkonnas tõsisemalt rinda pista, siis läbi selle kehandi võiks see toimuda.

#### **10. Who was behind the establishment? (selection, mark in bold)**

- **Initiative from the private sector**
- Initiative from the public sector
- Initiative from the third sector
- Other (please specify) ...

#### **11. What are the objectives of the cluster?**

Klasteri eesmärgid on rahvusvahelistumine kõige laiemas mõttes. Kuna siseturg on meil väga piiratud, siis kõik see kasv, mida me loodame saada, saab valdavalt tulla vaid välismaalt. Ja klasteri eesmärgid ongi nendele turgudele pääsu avamine, väljas käimine (üritused ja messid) ning läbi nende tegevuste müüginumbrite kasvatamine.

## Appendix 1 continued

Seal on natukene juures ka arendustegevust, aga ütleme, et fookuses on see kõvasti allpool prioriteedina kui rahvusvahelistumine.

**12. What are your everyday activities you offer to the members? (selection, mark in bold)**

- **Developing competences (sharing knowledge and know-how)**
- **Developing cooperation and innovation (product and service development) in the industry**
- **Carrying out promotion and marketing activities**
- **Promoting exports and internationalisation**
- **Representing the cluster and its members in international events**
- **Organizing education and training activities for the members**
- **Organizing seminars and workshops for parties interested in the industry**
- **Tackling human resources related obstacles**

Kaudselt jah võib öelda, et me koondame spetsialiseerunud tööjõudu kaitsetööstuse valdkonnas, kuid meil pole välja töötatud kindlat programme või strateegiat selle kohta, kuidas me kasvatame personali, ei ole. Praegu on see praktikas olnud ikkagi niimoodi, et klaster peab tagama selle, et on piisavalt mehitatust ja kompetentseid inimesi, et me ei võta päris inimesi tänavalt tööle. Kui vaatad klastri inimesi, siis kõik on selles valdkonnas mõned aastad vähemalt tegutsenud. Minul on kaitsetööstusega kokkupuude aastast 2005 – see on päris pikk kogemus, ei ole niisama üleöö tekkinud. Mis ettevõtteid puudutab, siis kuna meie ettevõtete amplituud on meeletult lai ning me ei ole nagu IT klaster, kus kõik teevad softi ja arendust, siis meie ei saa ettevõtete eest mingisugust personaliarendust tegema, kuna iga ettevõtte vajab valdkonnaspetsiifilist teadmist ning peab selle ise endale leidma. Mida me saame teha, siis me saame häid kogemusi jagada nendega kellele ei ole nii hästi ja see on tihtipeale seotud inimestega. Kui suudad endale õiged inimesed tööle võtta, siis asjad hakkavad juhtuma ja vastupidi.

## Appendix 1 continued

- **Providing the industry and media with communication and information about the cluster activities and industry**
- **Shaping the policies relevant for the industry on local and international level**

Jah, kuigi klasteri roll on siin natuke väiksem, valdavalt käib töö ikkagi Eesti Kaitsetööstuse Liidu kaudu kui räägime sektorist tervikuna, sest klaster on vaid osa sektorist. Aga me oleme üha rohkem igasuguses *policy making*'us sees ja me oleme viimase paari kuu jooksul sinna, et me peame ei ütlema mingitele asjadele, kuna lihtsalt ei jõua enam. Ma võiksin muidu ainult sellega tegeleda. Alguses ei saanud käima, meid ei kaasatud, kuid nüüd on see nii mastaapseks kujunenud.

- **Other (please specify): .....**

Ma ikkagi tooks eraldi välja sektori rahvusvahelistumise tegevuse koondamise kui eraldi protsessi. See, mis koondab neid ettevõtteid omavahel, koondab seda teadmist, koondab seda kogemust ja aitab kokkuvõttes ka raha kokku hoida. Kui sa teed ikkagi ühiselt asju, siis ma arvan, et asjad tulevad kokkuvõttes odavamad ning kui ei tule odavam välja, siis vähemalt ajakulu on väiksem ning võibolla on vähem vigu. Näiteks saad kohe ära öelda, et ei, sinna turule ma küll ei lähe, kuna kuulsin klasteri teise liikme kogemust. Ka see on väärt info.

Ma arvan, et klasteri kõige suurem võlu on sisemine konsolideerumine ja mitte tingimata institutsionaalne konsolideerumine, vaid just see teadmiste ja tegevuste konsolideerumine.

### **13. Have you organized any activities/projects on local level in the past 3 years? If yes, please specify. Name the activity/project and the reason for organizing it. If not, please specify the reasons.**

Siin Eestis klasteriga?

Kuna me põhifookus on väljapoole, siis siin Eestis käib nii-öelda baasi loomine, millega välja minna. Baasi loomine käib mitmel tasemel: ettevõtete vaheline teadmiste, kogemuste ning plaanide konsolideerimine, ettevõtete ja riigi plaanide ning tegevuste konsolideerimine ning ettevõtete ja teadusasutuste plaanide ja tegevuste konsolideerimine. Need on kõik kolm tasandit, mida tooksin eraldi välja. Need kõik käivad erinevalt.



## Appendix 1 continued

Ettevõtete vaheline – seal on hästi palju regulaarseid koosolekuid, kus vaatame üle, kuidas meil on läinud ja mis on tulemas, teeme plaane näitusteks ning messideks, teeme seminare ja koolitusi, et kasvatada kompetentsi üritades jagada teistega, et kui kellelegi on midagi hästi läinud, siis seda jagada ja kui midagi on halvasti, siis ka seda jagada. See on väga keeruline protsess ja seda on väga tähtis välja tuua, et see ei ole asi, mis sünnib naturaalselt. Mis on olnud ikkagi mastaapseim probleem, on ettevõtete vaheline konkurents. See viha level on mõnikord ikka nii kõrge, et see on kirjeldamatu ning see on uskumatu arengupidur. Me oleme mõned head näited suutnud saavutada, kus vanad väga verised konkurendid on tulnud ümber ühe laua, õppinud üksteisega koos töötama. Tänapäevaks on saanud väga veristest konkurentidest, kes ei suutnud üksteisega isegi rääkida, koostööd tegevad ettevõtted. Me olime siin veebruari lõpus väljas Abu Dhabis ning seal oli konkreetset vanad konkurendid, kes suutsid juba üksteist isegi müüa. See on jõudnud sinnani. See ei oleks juhtunud, kui ei oleks olnud sellist süsteemset ja järjepidevat tööd klastrina. See on ülitähtis. Kui see ei teki, siis ei ole seda koostööd ning ilma koostööta ei ole ka klastrit. Ettevõtted on selles mõttes kõige tähtsamad, sest ilma ettevõtetest pole seda klastrit nagunii, kuna riik ja teadusasutused ei tule tegema klastrit.

Koostöö riigiga – erinevate koolituste, konverentside ja seminaride korraldamine, teabepäevade korraldamine. Aga ka muidu struktureeritud koostöö, kus me kirjeldame neile, mida meil oleks vaja ning nemad meid jõudumööda aitavad. Klatri kontekstis on näha kõige rohkem seda, et meil on vaja erineva taseme VIPe, kes tuleks ja aitaks müüa Eesti kaitsetööstust. Selle me oleme saanud kenasti käima, Kaitseministeeriumiga töötab see väga hästi. Siseministeeriumiga on ka hakanud asi liikuma. Kui on vaja minna Eesti ettevõtteid kusagile turule müüma, siis täitsa asjad liiguvad. Emiraatides just oli meil kaasas suur kaitsejuhataja, järgmisele üritusele on meil planeeritud kaitseminister Luik. Lisaks veel seadusandlik baas, kuid see läheb juba natukene laiemaks, kus pole ainult klaster, kuid meile on oluline, et oleks keskkond, mis laseks sektoril kasvada ning ei oleks piiranguid ees. Osades sektorites on mastaapsed piirangud ees, mis takistavad arengut.

Ülikoolidega – käib töö kõige vähem intensiivsel tasemel. Nende roll on valideerida neid lahendusi, mida ettevõtted välja käivad. Sealt tuleb ka akadeemilisemat teadmist sisse ning intellektuaalset taset, mida meil muidu oleks keeruline saavutada. Siin järjest kasvab ka ettevõtete enda *in house* teaduspool. Arvan, et see on ainuvõimalik tee, kuidas see areng saab minna. Kui sa tahad ikkagi olla tõsiseltvõetav eksportiv kaitsetööstuse ettevõte, siis peavad

## Appendix 1 continued

sul endal olema majas teadustaustaga inimesed. Tugevamad ettevõtted on selle juba läbi hammustanud ning on näha, kuidas teadustaustaga inimene suudab avada uusi perspektiive.

**14. Have you organized any activities/projects on international level in the past 3 years? If yes, please specify. Name the activities/project and the reason for organizing it. If not, please specify the reasons.**

Oleme osalenud ja, kuid päris korraldanud on ehk palju öeldud. Oleme aidanud ette valmistada rahvusvahelisi projekte. Näiteks oleme aidanud kokku panna konsortsiumi Eesti ettevõtete vahel, et minna Euroopa Liidu projekte püüdma. Klastril ja Liidul on teatud määral piirid ikkagi ees. Meie roll saab olla huvi ja tegevuste konsolideerimine, kuid päris selline sisuline tegevus või projekti ära toomine konkreetses valdkonnas, siis seal jäävad meie käed lühikeseks. Seal peavad juba ettevõtte või ettevõtted juba ise rohkem panustama. Kindlasti oleme aidanud ning oleme ise ka osalenud mingites Euroopa Liidu projektides, mis võiks aidata mingeid uusi avada meie ettevõtetele ning sidemeid luua.

**15. What kind of local activities/projects you have been involved in in the past 3 years? Name the activities/projects and the reason why you were involved.**

Ei ole, see pole ka meie prioriteet olnud. Siin isegi vist pole selliseid projekte, et kui tahaksime osaleda, siis saaksime. Praegu ei näe me ka seda ette, et peaksime hakkama sellega tegelema. Mida me siin kohalikul tasemel soovime saavutada on see, et suhe riigiga oleks meil olemas ning kui vaja, siis saame aidata üksteist.

**16. What kind of international activities/projects you have been involved in in the past 3 years? Name the activities/projects and the reason why you were involved.**

Alles hiljaaegu oleme osutunud edukaks paaris projektis Euroopa Liidus. Osalemine on ka erineva tasemega, kuid oleme igaljuhul pildis rohkem kui ei kunagi varem. See on selline kasvav trend ja läbi selle on see juba kasvav trend, et Euroopa Liit põhimõtteliselt on kaitsetööstuse valdkonnas aktiivsem. See on tegelikult omamoodi väike revolutsioon eelmisel aastal. Kui varasemalt üldse ei tegeletud ning peeti rahvusriikide asjaks, siis nüüd hakatakse järgmisest aastast sadades miljonites raha lauale panema, et tehke nüüd projekte.

Seal on mitu asjaolu kokku langenud – Donald Trump, Ukraina ja Krimm ning Brexit. Millest Euroopas on nüüd aru saadud, siis et ei ole endast mõistetav transatlantiline koostöö. Ühel

## Appendix 1 continued

hetkel võib sul USAs olla mingi hull ametis, kes saadab kõik perse ning seda on Donald Trump briljantselt saavutanud ning Euroopas on aru saadud, et peame ka oma võimeid hakkama arendama, kuna ei saa ainult Ameerikale loota. Alates teisest maailmasõjast on olnud arusaam, et NATO on Euroopas ning temale tuginedes võidame suure sõja, kui venelased peaksid ründama. See on muutunud kardinaalselt. Samamoodi Brexit – kuna oluline kaitsetööstuse riik lahkub süsteemist, siis jällegi on ülejäänud pott palju nõrgem kui varem. Selle foonilt on otsustatud, et Euroopa peaks ka ikka midagi tegema ning ei saa loota, et on meeletu rahu pidevalt. Ukraina ja Krimmi pool näitab seda, et mitte miski siin ei ole kindel. See, et meil on olnud 75-80a rahuaega, siis see on pigem ajaloos meeldiv erand, kuid mitte kindlasti reegel.

Need rahvusvahelised projektid on peamiselt olnud seotud kaitsetööstusega laiemas plaanis. Hästi palju tuleb juurde igasuguseid kübervaldkonna minevaid asju, kus Eesti on tugev ning mille puhul alati vaadatakse meie otsa, et teil on seal mingid arvutioskajad. Samuti tuleb üha rohkem robotika valdkonda juurde. Meil on küll neid nišivõimeid, mida maailmale pakkuda.

### **17. How interested the members are in the organized events? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....**3**.....4.....5

Nagu igas koosluses, siis on tagalohisejaid ning kaasaminejaid. Igas grupis on need rolled täpselt ühtviisi jagunenud. Kolmandik on neid, kes põrutavad eest, kolmandik on need, kes on kusagil vahepeal ning kolmandik on neid, kes lohisevad taga (saada meil või mitte, helista või mitte, aga väga välja ennast ei vea, vaid tiksubad kaasa).

Kui ma tulin klastrisse tööle, siis mul olid ootused palju kõrgemad. Ma polnud varem erasektoris töötanud, eluaeg riigiametnik olnud, ja siis mul oli millegipärast ajalehtedest jäänud mulje, et erasektor on kohutavalt initsiatiivi täis. Anna ainult võimalus ja kohe hakkab juhtuma. Kui siis tulin siia ning on ikka nagu elus – ei juhtu siin niisama midagi, hädavaevu suudad välja peksta asju mõnede puhul.

### **18. How interested the members are in international activities/projects? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....**3**.....4.....5

## Appendix 1 continued

Samas seis, vahet ei ole. Tegelikult ka vahet ei ole, millest sa räägid, see jaotus on ikka alati sama.

### **19. How interested are the members in different international fairs, trade shows, expos, etc.? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....**3**.....4.....5

Jälle sama. On ettevõtteid, kes pole kunagi kusagil väljas käinud ning ei tule ka kunagi välja. On üks tuumikgrupp, kes pidevalt käivad. Kõige aktiivsemad, kes juba midagi teevad. Olen proovinud ka teisi saada, et tulge kaasa ning käige kasvõi niisama messil ringi, aga väga raske on tulema.

Minu loogika ütleb, et ettevõtte huvi klastris olla on see, et välisturgudele minna. Aga nii see pole. Inimestel on normaaljaotus kõver, nii lihtsalt ongi. Ma ei oskagi muud öelda.

Mina ei saa ka ausalt aru. Võib-olla on see minus endas kinni. Ma ei oska teha asju poolikult, ma kas teen või ei tee, ma ei tiksu niisama. Või isegi kui ma tiksun, siis ma vähemalt suudan artikuleerida, miks ma tiksun. Kui sa ei suuda isegi seda öelda, siis mul on mõnede puhul täpselt sama küsimus, et mida sa üldse teed siin? Miks sa siis oled siin? Ära siis ole ja mine tegele mingite muude asjadega.

### **20. Do the members ask any help or guidance from the cluster regarding internationalisation and export? (mark in bold)**

**Yes**

No

If yes, please specify in which fields: .....

Aktiivsemad küsivad nii, et ei suuda ära toota seda abi. Keskmine punt ei küsi mitte midagi, kuid on rahul, kui sa pakud neile midagi. Ja see viimane punt – neid ei huvita ka midagi, kogu aeg vinguvad, et sa ei paku neile midagi ja kui pakud, siis on vähe pakutud.

Nad tahavad seda põhiasja saada, mida klaster teeb. Seda koostegutsemist, et teha asju odavamana kuluna nii ajalises, rahalises kui ka inimeste tööjõu mõttes. Klastris teeme ka väga palju tööd ära, mida ettevõtted peaksid muidu ju ise tegema – kontakte luua ja ehitada. Mingite asjade puhul on ka nii, et ettevõtted üksi ei saagi kunagi letti – meie käes,

## Appendix 1 continued

riigiaparaadi või saatkondade käes on võti. Läbi klatri loome me suurema pildi ning oleme riigi jaoks ka tõsiseltvõetav partner ja riik on valmis ettevõtetega suhtlema. Tahetakse sidemeid, kontakte, koos välja minemist. Seadusandluse abi küsivad isegi vähem, seda oskusteavet saavad omasuguste käest. Meie saame luua keskkonna, kus infovahetus toimub. Saame teha erinevaid sihtturu seminare, kus võtame kokku need riigid, kes on huvitatud ning nad omavahel räägivad, jagavad häid ja halbu kogemusi. Sihtturu seminaridest on populaarsed olnud Euroopa, Ukraina, Ameerika, Lähis-Ida riigid.

Samas alati ei tohi kõike välja rääkida. Hea näide on USA – suur turg ning igasugused lepingud riigi poolt olemas, piiranguid võimalikult vähe, saatkonnad taga. Võtsime klatrile tööle nõuniku, ameeriklase. Selle asemel, et iga ettevõtte võtaks endale ise nõuniku, see maksaks kõvasti rohkem, siis võtsime klatrile ühiselt nõuniku ehk nii-öelda jagatud kulu. Ta tuli siia, tegi päev otsa seminari, kuidas käivad Pentagoni hanked. Ta oli ise Pentagonis hankemajanduses töötanud ning teadis täpselt, kuidas hanked käivad, mida vaja on, kuidas saad ukse vahele, mida agentuurid teevad, kuidas raha liigub, kuidas otsustatakse jne. Tulemuseks oli see, et kuidas kõik vaatasid, et oi, ma ei taha sellega tegeleda. Samas on see ka *fain*, et kui sa ei ole veel küps sellega tegelemiseks, siis ära ka tegele endale üle jõu käiva asjaga. Oota parem viis aastat ning siis on äkki rohkem auru ja jõudu.

Neid võimalusi on kordades rohkem, kui ettevõtted suudavad täna ära realiseerida. Ettevõtete kasv on aeglasem, kui ma ise alguses arvasin.

IDEX – suur relvastusmess Abu Dhabis.

UMEX – suur robotikale ja mehitamata süsteemidele keskendunud mess Abu Dhabis.

Üle aasta käivad need, üks aasta on üks, teine aasta teine.

DSEI – Londonis toimuv mess.

Eurosatory – Pariisis toimuv mess.

Üle aasta käivad ka need, üks aasta on üks, teine aasta teine.

Lisaks käivad ettevõtted isa vastavalt oma erialale messidel. Baltic Workboats käib oma laevamessidel, Nordic Armoury ja Bristol Trust käivad käsitulirelvade messidel.

See geograafia, mida me ära katame ning ürituste hulk klatri peale on muljetavaldavalt suur. Isegi kui ainult üks ettevõtte käib, siis ta toob info koju ja jagab teistega – kas oli asjalik, kes seal veel osaleda võiks, tihtipeale ka müüvad üksteist. See on ka lahe. Niimoodi on päris uut äri tekkinud – üks ettevõtte on läinud, temal ei ole õnnestunud, kuid andnud kontaktid edasi ning temal on õnnestunud.

## Appendix 1 continued

If not, please specify the reasons: .....

**21. How much do you take into consideration the needs of the members while organizing different activities or attendance in international events? (scale 1-5, 1 not at all, 5 completely – mark in bold)**

1.....2.....3.....4.....5

Ainult seda võtamegi, meil ei ole mõtet ise midagi leiutada. Kui ettevõtteid ei tule taha, siis pole tegevust. Iga kahe kuu tagant saame klastriga regulaarselt kokku ja siis vaatame alati üle järgmiste sündmuste graafiku. Iga jumala kord käime läbi, kui palju meil siin on kambas ja kui palju seal. Meil on nii-öelda kirjutamata reegel, et kui meil on üle viie ettevõtte, siis teeme üritust klatri ürituse nime all. Kui ei ole viite ettevõtet koos, siis nad lähevad sinna nii-öelda pundina ja esindavad ka klatri, kuid pole klatriüritus selles mõttes. Üle viie ettevõtte sündmusi aasta peale kokku väga palju ei tule.

**22. Are you involved in policy making on local level with an aim to develop the sector and gain value for the member? (mark in bold)**

Yes

No

If yes, please specify in which fields:

Seadusandluse algatusi on juba liiga paljaks läinud. Kui on abstraktne tööstuspoliitika, siis me ei jõua sellega tegeleda. Kuid seal võib tulla üllatavaid teemasid. Näiteks täna hommikul – ettevõtte tahab eksportida USAsse toitaineid ning tuleb välja, et USAs on Eesti suu- ja sõrataudi ohtlike riikide nimekirjas ehk pole võimalik Eestist ühtegi toiduainet eksportida USAsse, sealhulgas neid sõjaväe toidupakke. Siit hakkame siis tegelema veterinaar- ja toiduametiga, Toiduliiduga jne. Ma pole varem lehest lugenud või kuulnud, et kellelegi oleks varem selline probleem olnud.

If not, please specify the reasons: .....

## Appendix 1 continued

**23. Are you involved in policy making on international level with an aim to develop the sector and gain value for the members? (mark in bold)**

**Yes**

**No**

If yes, please specify in which fields:

Euroopa tasemel käib kõva *draft*'imine regulatsioonide osas ning osaleme ka NATOs. Aga jällegi mitte ainult klastrina, vaid liiduna.

If not, please specify the reasons: .....

**24. What are your main achievements in the past 3 years?**

Ekspordikäibe kasv väga konkreetselt– põhiline number, mida saab mõõta. Kasv olnud 4-5 aastat, kui seda on mõõdetud, olnud lineaarne. Pole olnud hüperkasvu, kuid on olnud täiesti konkreetne ilus kasv. Midagi hüppelist me ka ei prognoosi, me pole selline ohoo sektor start-up'i maailmast, kes mõtleb mingi asja välja ja paugutab kogu maailmas laiali. Saavutamaks lineaarset kasvu meie jaoks täiesti piisav.

**25. What are your goals for the coming 3 years?**

Kasvu jätkamine natukene kiirema tempoga. Aga põhimõtteliselt numbriliste eesmärkidena soovime aastaks 2023 ekspordikasvu suurendada üle kahe korra ning käibe kasvu samuti üle kahe korra.

## Appendix 2. Interview with the Project Manager of the Estonian Wooden Houses Cluster

### QUESTIONNAIRE FOR THE CLUSTERS

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

1. **Name of the cluster:** Estonian Wooden Houses Cluster
2. **Date of establishment (year, if relevant also month):** 2008 lõpp
3. **Field of activity:** Production of wooden houses
4. **Number of members:** 46 members
5. **List of members:**

NAME OF THE MEMBER	TYPE OF ORGANIZATION	FIELD OF ACTIVITY
Aru Grupp AS	Enterprise	Wooden houses producer.
Esthus OÜ	Enterprise	Wooden houses producer.
Estnor OÜ	Enterprise	Wooden houses producer.
ELH Palkehitud OÜ	Enterprise	Wooden houses producer.
Greentec Houses OÜ	Enterprise	Wooden houses producer.
Harmet OÜ	Enterprise	Wooden houses producer.
Hobbiton OÜ	Enterprise	Wooden houses producer.
Hobbiton Home OÜ	Enterprise	Wooden houses producer.
KMT Prefab OÜ	Enterprise	Wooden houses producer.
Komforthus Eesti OÜ	Enterprise	Wooden houses producer.
Majand OÜ	Enterprise	Wooden houses producer.
Matek AS	Enterprise	Wooden houses producer.
Mountain Loghome OÜ	Enterprise	Wooden houses producer.
Nordic Houses KT OÜ	Enterprise	Wooden houses producer.
Palkehitud OÜ	Enterprise	Wooden houses producer.
Palmako AS	Enterprise	Wooden houses producer.
Palmatin OÜ	Enterprise	Wooden houses producer.
Pinska OÜ	Enterprise	Wooden houses producer.
Pärnu Log Homes OÜ	Enterprise	Wooden houses producer.
Q-Haus Baltic OÜ	Enterprise	Wooden houses producer.
Rakvere Metsamajand AS	Enterprise	Wooden houses producer.
Ramirent Baltic AS	Enterprise	Wooden houses producer.
Ritsu AS	Enterprise	Wooden houses producer.
Saare Ere AS	Enterprise	Wooden houses producer.
Tene Kaubandus OÜ	Enterprise	Wooden houses producer.
Tender Ehitus OÜ	Enterprise	Wooden houses producer.
Tenon Holding OÜ	Enterprise	Wooden houses producer.
Timbeco Woodhouse OÜ	Enterprise	Wooden houses producer.
Varola OÜ	Enterprise	Wooden houses producer.
Vipson Projekt OÜ	Enterprise	Wooden houses producer.



University of Life Sciences	University	Research and education.
Estonian Open Air Museum	State Museum	Research and education.
IMT-Institute	Educational institution	Research and education.
Tallinn University of Technology	University	Research and education.
Norwegian School of Log Buildings	Educational institution	Research and education.
Vanaajamaja MTÜ	Non-governmental organization	Research and education.
Estonian Wind Power Association	Association	Organization supporting the development of the cluster.
Estonian Woodhouse Association	Association	Organization supporting the development of the cluster.
Latvian Wood Construction Cluster	Association	Organization supporting the development of the cluster.
Uuenurga OÜ	Enterprise	Providing supportive services to the cluster.
Akzo Novel Baltics AS	Enterprise	Construction materials.
FER Project OÜ	Enterprise	Construction materials.
Optimera Estonia AS (Ehituse ABC)	Enterprise	Construction materials.
Tervemaja OÜ	Enterprise	Construction materials.
AB Tempt OÜ	Enterprise	Architect/engineering bureau.
Inseneribüroo Pluss OÜ	Enterprise	Architect/bureau.
Puitpesa OÜ	Enterprise	Architect/bureau.

## INTERVIEW QUESTIONS

**6. Name of the interviewed:** Lauri Kivil

**7. Position of the interviewed:** Projektijuht

**8. Date of the interview:** 16.03.2018

### 9. Why the cluster was established?

Eestis olid enne klastrite tulekut erialaliidud. Siis avanes Euroopa Liidu toetusmeede, kus toetati klastreid. Sisuliselt on liit samasugune võrgustik kui klaster, kuid klaster on nii-öelda laiendatud võrgustik. Meil oli Eesti Puitmajaliit, kuid oma organisatsiooni olemuse mõistes ei olnud ta abikõlblik, et saada toetust võrgustiku arendamiseks. Seejärel loodi Eestisse 10-15 klastrit, et minna Euroopa Liidu süsteemi peale.

Aus vastus on see, et antud meede ajendas. Erialaliidud olid juhtpartnerid kõikides klastrites. Sisuliselt tähendab see seda, et juhtpartneri jaoks ei ole probleem, kui sul on mingi teine punt, kuna raha tervikuna läheb ikkagi ju sektori arendamisse. Raha tuleb vaid läbi teise kanali, Euroopa Liidu projekti ning klatri, kuid jõuab siiski ettevõtetele välja. EASi mõistes peame

## Appendix 2 continued

arendama klastrit, mitte ettevõtet, kuid enamuse klastreid näeb seda, et toetussüsteem arendab kogu sektorit.

Raha oli tookord 70% toetust mingitele X tegevustele.

### 10. Who was behind the establishment? (selection, mark in bold)

- **Initiative from the private sector**
- Initiative from the public sector
- Initiative from the third sector
- Other (please specify) ...

Liit ja klaster toimivad siiski eraettevõtete initsiatiivil. Puhtalt eraettevõtete, majatootjate, initsiatiiv teha mingisuguseid ühiseid turundus- ja arendustegevusi koos. See soov kui selline oli olemas ka varem, muidu ei oleks ju Eesti Puitmajaliitu, kuid kuna liidul ei olnud piisavalt vahendeid, siis Euroopa Liidu toetusmeede võimendas ülikiirelt mõningaid asju tegema. Projekt ise on marginaalne, mida esile tõsta, kuid see toetus 70% tol ajal võimendas teatud asju ning nende tegevuse kiirust. Klaster hakkas tervikuna toimima ning ka liit hakkas palju efektiivsemalt töötama. Samuti ka sektor – rohkem infot hakkas liikuma, tänu klastriprojektile oli rohkem üritusi. Selle pea 10 aastaga on klaster väga hästi tööle läinud – kõik tunnevad kõiki ja teavad, mida teised teevad. Inimesed tunnevad üksteist, tehakse ühiseid projekte.

Mul on kahju, et MKM ning EAS näevad seda, et me peame selge juti tõmbama vahele sellele, mis on klaster, mis on juhtpartner erialaliit, mis on sektor ning on veel ettevõtted. Tegelikult me arendame ju majandust tervikuna.

Klastriga alustada oli oluliselt lihtsam, kuna tänu erialaliidule olid kümme aastat inimesed juba koos eksisteerinud. Vähemalt teadsid üksteist natukenegi, oldi aetud riigiga seotud asju, mis erilist eelarvet ei nõudnud, kuid kus ikkagi tehti koostööd. Selle baasilt oli ka oluliselt lihtsam hakata kirjutama klastriprojekti ning seda ka ellu viia. Tühja koha peale sellist süsteemi luua oleks ikka väga raske, kuna klastriprojekt eeldab siiski ka kõigi panust, kasvõi rahaliselt.

Minu hinnangul on kõikide klastrite taga erialaliitude kokku pandud seltskond, kes on kokku töötanud ning nägid selles võimalust võimendada kogu sektori arengut.

## Appendix 2 continued

### 11. What are the objectives of the cluster?

Eesmärgid on üsna tugevalt seotud määrusega. Kui sul on võimalus teha ühisturundust, rahvusvahelistumist ning arendustegevust selle projekti raames, siis su eesmärgid on üsna selgelt sellega seotud.

Ettevõtete jaoks on laias laastus sellised probleemid:

- töäjõud – klaster täna tegeleb päris otseselt töäjõu ettevalmistamisega: seminarid ja konverentsid, mida korraldame.
- tarneahel – ettevõtte võib jalutada iga kell tarneahela ettevõttesse ning temaga koostööd tegema hakata, aga see, et seal tekiksid head diilid ning koostöö, siis selleks on vaja luua võrgustikku.
- arendustegevused – kuidas sa toote lõpuks valmis teed, millist tehnoloogiat saad kasutada, koolitused ja infolevik, sihtturu seadusandlus, materjalide tõlkimine jne.

Keeruline on neid kolme mõõta. EASi jaoks on meil vaja oma eesmäärke mõõta ning me ise soovime ka seda teha, kuid kuidas me mõõdame, kui hästi me töäjõudu ette valmistame või kuidas me partnerite võrgustikku loome. Jah, me saame öelda, kui palju ettevõtteid sinna koondub, kuid seda me ei saa mõõta, kui hästi ettevõtted omavahel suhtlevad. Või kui hästi oskavad ettevõtted oma maju projekteerida ning neid maha müüa? Ainus mõõdik, mida me hetkel vaadata saame on majandustulemused, kuidas näitajad kasvavad.

Me oleme EASiga mõned kohas väidelnud, et mõõta seda palju on ettevõtte või klaster tervikuna kasvanud või arenenud, kuid palju sellest on toimunud tänu klatri meetmele, siis see on päris keeruline küsimus.

Kui võtta appi matemaatika, siis meie projekti 3a eelarve on 500 000 eurot reaalselt toetust ehk aastas ümmarguselt 170 000 eurot, mida EAS investeerib täna läbi klatri meetme sektori arengusse. Kui palju aga investeerib ükskõik, milline ettevõtte enda arendamisse ja seeläbi ka sektori arendamisse? Sektori käive on aastas ca 350 miljonit eurot, klatri ettevõtete käive ca 200 miljonit eurot. Ütleme, et laias laastus investeeritakse klatri peale arendus- ja turundustegevusse 2 miljonit eurot. Ja kui hakata mõõtma seda, et EAS investeerib meie sektorisse 170 000 eurot aastas versus see, milliseid investeeringuid sektor ise teeb turundus- ja arendustegevusse, siis see on ikka väga ebaõiglane EASi poolt mõõta, kui palju on nende toetus panustanud sektori arengusse. See on ikkagi marginaalne toetus ühe sektori arengusse.

## Appendix 2 continued

Loomulikult me oleme teinud selle 170 000 väga palju asju ära, kasvõi seda, et sektori maine on väga hea ning seda üks ettevõtte oma kommunikatsiooniga ei ehita. Seda peab tegema ikkagi mingisugune võrgustik, kes on usaldusväärne partner. Kindlasti suudame klastrina selle rahaga ära teha kordades rohkem kui üks ettevõtte üksikuna, see ongi see klasteri efekt. Suudame kasutada seda väga efektiivselt. Näiteks selline asi nagu maine loomine – kas Eesti puitmajasektor näeb välja hea või halb välja – seda ei suudaks teha ükski ettevõtte üksi. Kui üks ettevõtte hakkab kirjutama, et ta on jube kõva ettevõtte, siis tihtipeale otsitakse selle peale välja hoopis tema luukered kapist välja. Kui seda aga kirjutab klaster või erialaliit, siis on tegemist usaldusväärse partneriga.

Meil on õnneks klastrisse koondunud selline seltskond, kes suudavad oma käivet, kasumit ning lisandväärtust pidevalt suurendada. Sektoris on ka palju neid, kes seda tegelikult ei suuda.

### 12. What are your everyday activities you offer to the members? (selection, mark in bold)

- **Developing competences (sharing knowledge and know-how)**
- **Developing cooperation and innovation (product and service development) in the industry**
- **Carrying out promotion and marketing activities**
- **Promoting exports and internationalisation**
- **Representing the cluster and its members in international events**
- **Organizing education and training activities for the members**
- **Organizing seminars and workshops for parties interested in the industry**
- **Tackling human resources related obstacles**
- **Providing the industry and media with communication and information about the cluster and sector activities**
- **Shaping the policies relevant for the industry on local and international level**
- **Other (please specify): ...**

## Appendix 2 continued

Poliitikate kujundamine ei peaks tegelikult olema klasteri tegevus. Vähemalt mitte meie kontekstis. Klaster peaks olema mainekujundaja, müügivõrgustiku kasvataja ning teatud arendustegevuste elluviija. Tegelikult erialaliit peaks tegelema igasuguslike haridusvaldkonna asju ning poliitikate kujundamise asju. Me oleme enamvähem suutnud välja kujundada nii, et liidus on juhatuse, kes küll ei saa palka, kuid juhatuse peamiseks eesmärgiks on olla need, kes panevad lipsu ette ning lähevad ministriga kohtuma. Klaster otseselt sellisesse mängu ei trügi. Paratamatult oleme pidevalt tõmmatud sinna, kui keegi küsib intervjuud või seisukohta, mida me klasteri seisukohalt ka peame avaldama, kuid juhtpartner ehk katusorganisatsioon peab tegema riigi tasandil poliitikaga. Peavad silma peal hoidma ettevõtluskeskkonnal ning et suudaksime ellu jääda konkurentsis teiste riikidega.

Klaster on poliitikaid kujundanud hoopis Brüsseli tasandil, mis on märksa kaugemaleulatavam tegevus – kuidas palkmajad uute energiatõhususe kontekstis saaksid erisuse. See on teema, mida Eestis pole mõtet arutada. Oleme teinud teatud pöördumisi ja osalenud töögruppides. See on hoopis teistsugune poliitikate kujundamine.

### **13. Have you organized any activities/projects on local level in the past 3 years? If yes, please specify. Name the activity/project and the reason for organizing it. If not, please specify the reasons.**

Need seminarid, mis meil siin toimuvad, on eelkõige ikkagi meie enda ettevõtete arendamiseks. Oleme üritanud neile alati kaasata rahvusvahelist kompetentsi esinejate näol või kui teeme palgimeeste omavahelisi mõõduvõtmisi, siis üritame ka välismaalt saada osalejaid. Tegime just sügisel Norra ehitusturu seminari ning Norra KPMG omanikud ja tippjuhid tulid Eestisse rääkima. Me ei taha oma klasteriprojektis arendada näiteks leedukaid, vaid see on ikkagi meie sektori arendamiseks. Leedukad on täna ikkagi meie konkurendid, me ei suuda neid veel koostööpartneritena näha.

Kõik seminarid ja asjad on suunatud meie enda inimestele, kuid neisse on alati põimitud rahvusvahelist kompetentsi. See on klasteriprojekti ülisuur pluss, et tuua neid inimesi väljapoolt on raske ja kallis, kuid klasterimeede aitab väga palju. Iga aasta oleme teinud sellise seminari, kus on keegi tulnud USAst, Jaapanist, Prantsusmaalt või mõnest teisest riigist rääkima oma riigist ja turuolukorrast.

## Appendix 2 continued

**14. Have you organized any activities/projects on international level in the past 3 years? If yes, please specify. Name the activity/project and the reason for organizing it. If not, please specify the reasons.**

Meil on siin ka teistsugused skeemid. Viimane näide on see, et paar nädalat tagasi tulid Jaapani palkmajade tootjate liidu esindajad siia ning pidime neid siin võõrustama ning tootjatega tutvustama oma toodangut. Peamised rahvusvahelised tegevused, milles me osaleme ongi need, kui siia tulevad eri riikide äridelegatsioonid.

**15. What kind of local activities/projects you have been involved in in the past 3 years? Name the activities/projects and the reason why you were involved.**

Me oleme igale poole kogu aeg kaasatud, kas ta on riigi tasandil või mõnel muul. Igasugused töögrupid, anname tagasisidet jne. See on osa meie tööst, et oleme infopartner igal pool.

Sellistes suurtes projektides nagu täna näiteks klastriprojekt on, kus on eraldi tegevuskava elluviimane, siis sellega on meil niigi palju tegemist ning samaväärse asja kõrvale tekitamine tähendab seda, et sa pead kas leidma inimese juurde või jätma mingi asja ära.

Oleme koostööd teinud teiste klastritega. Näiteks oleme IKT klastriga pannud sektorid omavahel kokku – aprillis peaks meie ja nende mehed ühte punkrisse kokku pandama ja välja töötama uusi lahendusi. Kaitsetööstuse klastriga on välja töötatud puidulahendusi kaitsesektorisse.

Sellised, mis on tähtsad või mis vähemtähtsad, on väga raske välja tuua, kuna see ongi meie töö olla kõiges kaasas.

**16. What kind of international activities/projects you have been involved in in the past 3 years? Name the activities/projects and the reason why you were involved.**

Siiani ei ole osalenud. Oleme olnud sellises arenemisfaasis, kus seni oleme tegelenud ikkagi Eesti sektori arendamise ja kasvatamisega. Nüüd oleme jõudnud sellesse faasi, kus meie klatstri toetusprojekt saab sügisel läbi ning praegu algab Interregi projekt, kus oleme partnerid kahes projektis. Üks projekt on nii-öelda Hiina suuna turundusprojekt, kuhu on kaasatud Eesti, Läti ja Soome. Teine on Lähis-Ida turundus- ja arendusprojekt, kus on Rootsi, Soome ja Eesti. Kuna klaster ei ole juriidiline keha, siis me oleme sees ikkagi kui võrgustik. Kas ta on puitmajaliit või puitmajaklaster ning selle liikmed, siis see vormub ikkagi selle

## Appendix 2 continued

projekti kontseptsiooni käigus. Initsiatiiv on tulnud muidugi klatri poolt minna nendesse uutesse projektidesse sisse.

Lisaks on ka üks haridusvaldkonna projekt, kus osalevad Eesti, Inglismaa, Portugal, Leedu ja Soome.

See aasta seega käivitub meil kolm rahvusvahelist projekti. Varasemalt me nii aktiivselt rahvusvahelistes projektides osalenud ei ole.

### **17. How interested the members are in the organized events? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....3.....4.....5

Seda on nii raske vastata sedasi. See sõltub väga palju sellest, kui palju on klatri ettevõtteid ning palju on inimesi kusagil varasemalt osalenud. Kui meil oleks klatri vaid 10 ettevõtet, siis oleksid kindlasti kõik pidevalt huvitatud. Kuid, kuna meil on 46 ettevõtet, siis paratamatult on neid, kes ei ole kõigest huvitatud. Me ei ole aastate jooksul ühtegi asja ära jätnud, mida oleme planeerinud. Selles mõttes on viis – nad on planeeritud asjadest ikkagi väga huvitatud ning ära teinud.

### **18. How interested the members are in international activities/projects? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....3.....4.....5

Rahvusvahelistest tegevustest on nad väga huvitatud ning tahaksid aina rohkem rahvusvahelist tegevust. Koduturg – see ei ole üldse nende turg. Meie probleem on pigem see, et me ei suuda nii hästi selliseid asju rahvusvahelisel tasandil pakkuda nagu ettevõtteid ootavad. Ettevõtteid ootavad sellist tegevust, mis toob neile tööd ja müüki. Nende asjade tegemiseks on oluliselt rohkem ressursi vaja. Tänapäevane klatri meede ei toeta otseselt müügitegevust või –korraldamist.

### **19. How interested the members are in different international fairs, trade shows, expos, etc.? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....3.....4.....5

## Appendix 2 continued

Huvitatud vastavalt enda seatud sihtturgudele. Näiteks otsustasime, et selle aasta expo meid ei huvita ja me ei osale. Samas näiteks Rootsi ehitusturumess – seal oli lausa kaks riiklikku stendi – EAS tegi oma stendi ning meie tegime oma stendi. Lisaks veel ettevõtted oma boksidega.

See sõltubki suuresti sellest, kuhu ettevõtted plaanivad siseneda. Praegu on kolm põhilist turgu Norra, Rootsi ja Saksamaa. Kuna Skandinaaviamaade valuutakurss on meie jaoks nii kriitiline juba, siis otsime uusi turge. Sõltuvalt sellest muutub ka huvi. Näiteks Iirimaa, mis seni pole kunagi fookuses olnud, võib tulla. Proovime leida siiski Euroopa turge, kuna Euroopa maht on nii meeletu. Meie mõistes on EL siseturg nii suur. Kõik asjad, mis väljaspool õnnestuvad – Lähis-Ida, Jaapan, USA või Kanada – see on kõik lahe. Ettevõtted ei ütle nendele projektidele ära, aga strateegiliselt luua turgu tuleb fookusseeruda ikkagi Euroopasse.

### **20. Do the members ask any help or guidance from the cluster regarding internationalisation and export? (mark in bold)**

**Yes**

No....

If yes, please specify in which fields:

Küsivad palju tuge ja tahavad, et klaster teeks kogu müügi nende eest ära. See oleks unistus, et nemad ainult toodaks ja keegi teine teeb kogu rahvusvahelise müügitöö ära.

Spetsiifilised asjad, milles oodatakse klasteri või liidu tuge täna on:

1. Kõik toetav informatsioon turule minekuks – seadusandlus, mis kohapeal on nõutud, kuidas kohapeal asju teha, kuidas kohapeal tuleb meie puhul asju toota, juriidika, partnerite võrgustik). Tahetakse siseturu infot.

2. Eesti riigi tuge – meie ei saa kõike ära teha, Eesti riigil on suur roll. Kui teistes riikides käib müügitöö ministrite tasandil, et minister saab aru, et tema ministeeriumi palk ja ministeeriumi raha, mida laiali jagada tuleb tegelikult müügist ja tootmisest, siis ettevõtted selgelt tahaksid, et riik teadvustaks seda oluliselt rohkem. Soovitakse ministreid igasugustele üritustele kaasa. Eestis on ports igasuguseid ametnikke, kes ei tea seda, mida on Eesti edulood. Rääkida kümme aastat ainult IT sektorist samal ajal, kui Eestis on väga tugev elektroonika sector, masina- või puitmajatööstus, on väär. Ja kui mõni proua kusagil välisesinduses seda ei tea,



## Appendix 2 continued

siis on see meie jaoks tegelikult traagika. Metsasektor annab laias laastus 10% kogu tööhõivest ja SKP-st.

If not, please specify the reasons: .....

**21. How much do you take into consideration the needs of the members while organizing different activities or attendance in international events? (scale 1-5, 1 not at all, 5 completely – mark in bold)**

1.....2.....3.....4.....5

Meie klaster ei ole klastrateooria järgi tüüpiline klaster. Klaster peaks seadma sihte ja ettevõtted lohiseks järgi. Meie oleme hästi avatud organisatsioon – meie uue strateegia kokkupanemine toimub niiviisi, et meil istub seitse meest terve päeva koos ja mõtleb välja, mis on sektori probleemid ning millega peame rohkem tegelema. Klaster ei ole nii tark, et ta suudab välja mõelda, mis on sektori ja ettevõtete probleemid. See tundub natukene selline riigi lähenemine, kus arvatakse teadvat, millised on probleemid majandussektoris, kuigi kordagi pole ettevõtetes käidud. Me läheneme sellega, et ettevõtted teavad, mis on probleemid küsimused ning mis on viie aasta pärast need küsimused. Kaardistame ära sektori probleemi ja katsume leida tegevuskava, mida on võimalik ühiselt ellu viia. Osa asju ei olegi võimalik üldse ühiselt ellu viia, kuigi võib probleem olla. Ehk me arvestame otseselt ettevõtete vajadusi ja küsimusi, mitte klasteri töötajate plaane.

**22. Are you involved in policy making on local level with an aim to develop the sector and gain value for the member?**

Yes

No....

If yes, please specify in which fields:

Aga rohkem läbi liidu.

If not, please specify the reasons: .....

## Appendix 2 continued

### 23. Are you involved in policy making on international level with an aim to develop the sector and gain value for the members?

Yes

No....

If yes, please specify in which fields:

Jah, klaster on seotud EL uute regulatsioonidega.

If not, please specify the reasons: .....

### 24. What are your main achievements in the past 3 years?

Tead ma ei oskagi sellele vastata. Laias laastus olen õnnelik, et klaster kui selline kasvab. Seltskonda pole praktiliselt ära läinud, ettevõtted osalevad aktiivselt tegevustes, mis me välja mõtleme. Suudame asju strateegiliselt planeerida. Saavutus on see, et oleme liikunud suuremate ja keerulisemate tegevuste poole. Pigem vähem asju, aga lahendame suuremaid ja keerulisemaid probleeme. Teatud asjad ei ole ka õnnestunud. Näemegi, et pole võimalik asju koos teha, aga oleme neid alustanud ning oleme aru saanud, miks neid asju pole võimalik koos teha. Oleme liikunud ära pisikestelt seminaridelt ja messikülastustelt natukene tummistematele asjadele.

Organisatsioonina oleme arenenud selliseks, et suudame teha konkurentsialast koostööd. Sektor ehitab täna ühe ühise maja Eesti Vabaõhumuuseumisse, mis maksab 200 000 eurot. See on ettevõtete enda rahastatud. Kuna ettevõtete käive on siiski küllaltki väike, siis ettevõtetele lihtsalt investeerida 200 000 eurot kummalisse ühisturunduse projekti nii, et see ei pruugi ühtegi eurot tagasi tuua, on vaid see, et need ettevõtted teavad ja usaldavad üksteist. Sellist asja ei oleks eksisteerinud kümme või 15a tagasi. See on asi, see on edulugu!

Rahastaja peaks seda arvestama, et alati ei peaks lugema päid või raha, vaid see, et konkurentsisis olevad ettevõtted teevad koostööd ja osalevad koos hangetel või messidel. Aprillis tuleval messil on meil ühes boksis koos neli elementmajade tootjat – nad on kõik konkurendid, kuid suudavad esindada riiki tervikuna. Neil on praktiliselt kõikidel materjalidel ka sama visuaal, keegi ei taha eristuda silma kellelegi. EASi aruandes pead pidevalt kirjutama mitu kontaktkohtumist oli, aga see ei ole üldse oluline, mis seal toimus. Aga võib-olla helistab inimene pool aastat hiljem tänu mõnele messile ja mida ta seal nägi.

## Appendix 2 continued

Alustava klastrina ma kindlasti räägiks teist juttu – siis ongi oluline need kümme seminari ja õppereisi, kus käidi. Lisaks on messidel omaette väärtuseks vabal ajal koos veedetud aeg – see, et hakatakse omavahel kusagil õllekas rääkima ning uusi lahendusi leidma. Selline asi on ka vajalik, kuna sektorit ei saa hakata ka niisama kokku kasvatama, kui puudub usaldus. Ja et usaldus tekiks peavad inimesed üksteisega hästi läbi saama. Selle baasilt saab teha olulisi ja keerulisi asju.

### **25. What are your goals for the coming 3 years?**

Päris ausalt ütlen, et täna veel ei ole. Me eesmärgiks on, et suudame ära majandada need kolm suurt projekti, mis meile sisse sõitsid. Et me üldse suudaks nendes partneritena kaasas olla ja saame sealt järgmise sisendi. Oleme nii-öelda atra seadmas – klasterprojekt saab läbi ning otsime uut ressursi.

Ühe eesmärgi võin öelda küll. Kui palju me suudame seda klastrina täita, on omaette küsimus. Meil on kõva konkurents ja keerulised olukorrad sihtturgudel. Ma siiralt loodan, et sektori käive ja kasum ei kuku, kuid meil on niivõrd tugev konkurents, et on oht, et kasv peatub. Kui klaster kuidagi suudaks aidata sellele kaasa, et välismaises ja –turunduses oleme konkurentidest paremad ja näeme välja paremad, et töö jääks ikkagi meie kätte.

## Appendix 3. Interview with the Cluster Manager of the Estonian ICT Cluster

### QUESTIONNAIRE FOR THE CLUSTERS

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

**1. Name of the cluster:** ICT Cluster

**2. Date of establishment (year, if relevant also month):** 2009

**3. Field of activity:** ICT – e-governance, e-industry, ITS (intelligent transportation systems)

**4. Number of members:** 34

**5. List of members:**

Liikmed on eraettevõtted + ülikoolid. Me oleme öelnud, et kõik ITL liikmed on ka klasteri liikmed ehk 89. Kui aga võtta ametlikke liikmeid, keda on toetatud läbi klasteriprogrammi, siis neid on 34.

NAME OF THE MEMBER	TYPE OF ORGANIZATION	FIELD OF ACTIVITY
Aktors	Enterprise	Develops information systems and other custom software solutions.
Baltic Computer Systems	Enterprise	Concentrates on IT infrastructure solutions.
BCS Itera	Enterprise	Consult and deliver Enterprise Resource Planning and Business Intelligence solutions.
CGI	Enterprise	Offers high-end business and IT consulting.
Columbus	Enterprise	Delivers business consultancy and technology solutions with a strong focus on manufacturing, food and retail industries.
Consulting Software	Enterprise	Provides expertise and know-how of developing and providing a combination of health care and social security counselling services.
Cybernetica	Enterprise	Develops and manufactures information security systems, maritime security and wide area radio communication systems, and investigates and applies security solutions.
Datel	Enterprise	Focuses on cloud and responsive browser based software, geospatial services, big data, statistics, etc.

Ecofleet	Enterprise	Develops the GPS-based fleet and team management service.
eKool	Enterprise	A school management tool bringing together students and their families, schools and supervisory bodies.
Elisa Estonia	Enterprise	Developing, operating and managing Telecom and IT services.
Ericsson Eesti	Enterprise	The driving force behind the Networked Society and a world leader in communications technology and services.
Estonian Information Technology College	Educational institution	Professional higher education institution applying IT studies.
Fuijtsu Estonia	Enterprise	A leading IT company, providing a full range of innovative software, hardware and IT infrastructure solutions.
GoSwift	Enterprise	Deploys innovative traffic management solutions.
Guardtime	Enterprise	Invented Keyless Signature Infrastructure (blockchain technology).
Helmes	Enterprise	Focuses on design and development of software solutions.
HITSA	Foundation	Ensures that graduates of all levels have obtained digital skills necessary for the development of economy and society.
Levira	Enterprise	Digital services provider focusing on IT services, internet of things, broadcasting, media management, telecom infrastructure.
Mainor Ülemiste	Educational institution	Offers office space, facilities and business services for ICT, pharmaceutical, high-tech sector and other knowledge-based innovators.
Microsoft	Enterprise	Multinational technology company.
Net Group	Enterprise	Delivers software solutions focused on business development, e-justice, Telco e-Business, digital retail business, financial asset management, etc.
Nortal	Enterprise	Offers change management, strategy, policy and legislation and data-driven technology services.
Omniva	Enterprise	Helps to automate the management of purchase and sales invoices.
Proekspert	Enterprise	Creates life-simplifying, user-centric and functional software solutions.
Quretec	Enterprise	Offers software development and data management services for medical registries, biobanking, clinical trials, national statistics, bioinformatics, and biostatistics.
Reach-U	Enterprise	Combines the experience in digital cartography, GIS solutions, data analytics and agile, ISO-certified

		software.
SK ID Solutions	Enterprise	Specializes in international e-identity solutions.
Protex	Enterprise	Offers advanced textile solutions focusing on smart textile solutions.
Tallinn University of Technology	Educational institution	The flagship of Estonian engineering and technology education.
Technopol	Foundation	Science park having expertise in ICT, green technologies and life sciences.
Technopolis Ülemiste	Enterprise	Developing Ülemiste City offering workspace.
Telia Eesti	Enterprise	Provides tailored data communications, phone and IT services.
Tieto	Enterprise	Offers full IT lifecycle services.

Ekspordiriigid hästi olenevad toodetest, klaster otseselt ei toeta nende TOP 5 juba toimiva turuga tegelemist. Puhtalt numbritest lähtuvalt on TOP-is: Soome, Rootsi, Läti, Leedu 2016. aastal oli 2,384 miljardit eurot (2015. aastal 2,233 miljardit eurot),

## INTERVIEW QUESTIONS

**6. Name of the interviewed:** Doris Pöld

**7. Position of the interviewed:** Cluster Manager

**8. Date of the interview:** 19.03.2018

**9. Why the cluster was established?**

Too moment oli soodne majanduslik olukord. Oli parasjagu kriisisituatsioon ning see on hea tõuge koostöö jaoks. Ka EASi klatriprogramm oli kindlasti abiks, lisarahastus.

**10. Who was behind the establishment? (selection, mark in bold)**

- **Initiative from the private sector**
- Initiative from the public sector
- Initiative from the third sector
- Other (please specify) ...

**11. What are the objectives of the cluster?**

Täna oleme ekspordisuunal öelnud oma üldiseks eesmärgiks: we help countries and organizations to build world-class digitaal societies.

Ettevõtete poole kommunikeerime me, et me oleme IT ettevõtete koostööplatvorm neile oluliste teemade lahendamiseks ja nende äri kasvatamiseks. Uue äri arenduseks.

## Appendix 3 continued

12. What are your everyday activities you offer to the members? (selection, mark in bold)

- **Developing competences (sharing knowledge and know-how)**
- **Developing cooperation and innovation (product and service development) in the sector**
- **Carrying out promotion and marketing activities**
- **Promoting exports and internationalisation**
- **Representing the cluster and its members in international events**
- **Organizing education and training activities for the members**  
Läheb kompetentside arendamise alla.
- **Organizing seminars and workshops for parties interested in the industry**
- Tackling human resources related obstacles

Seda teeb meil tegelikult erialaliit. Kuna klaster asub erialaliidus, siis on jäänud see nende ülesandeks.

- **Providing the industry and media with communication and information about the cluster activities and industry**

See on meil liiduga küll ühine, kuid jah.

- Shaping the policies relevant for the industry on local and international level

Seda teeb samuti erialaliit ka.

- **Other (please specify): .....**

Ma arvan, et ei ole tegelikult. Kindlasti ka uute projektide algatamine ning kogu see pool. Klasteriteooria järgi on alati vaadatud, et klaster kui eraldi organisatsioon ning seal see nii ongi. Näiteks Saksamaal, kust ka klasteriteooria väga paluski pärit on. Nendes riikides on erialaliitusesse kuulumine kohustuslik, kus sa pead olema lihtsalt mingi liidu liige. See, et Eestis on loodud erialaliidud ning sinna alla klaster on eripärane võrreldes teiste riikidega. Seda võib veel leida ka Lätis ja Leedus, kuid üldiselt see ei ole tüüpiline. Meie riigi kontekstis on see väga mõistlik lihtsalt sellepärast, et tugevad ja kes on üldse koostöövalmis või –võimelised organisatsioonid kipuvad siiski olema need, kellel on mingi sotsiaalne

## Appendix 3 continued

vastutus ning kes kuuluvad erialaliitu. Ja siis panna ühele ja samale organisatsioonile kahe erineva erialaliidu ja klasteri ülevõtmise kohustus läheb liiale. Lisaks pole ettevõtted huvitatud mitmes erinevas organisatsioonis olemisest. Parem olgu erinevad tegevused. Kuna meil on kõik vabatahtlik, siis pead koheselt ka arvestama, et liitumist ja tasusid ning nende topelt asjadega. Ma olen hästi palju alati seletanud, et meil on liit ja klaster koos. Meie mõistes on see lihtsam, kuid teistes riikides on raskem aru saada. Nende jaoks on erialaliidud väga selgelt ainult lobby organisatsioonid, mitte äriarendusse panustavad organisatsioonid.

**13. Have you organized any activities/projects on local level in the past 3 years? If yes, please specify. Name the activity/project and the reason for organizing it. If not, please specify the reasons.**

Kõik suuremad projektid on olemas kodulehel, nii kohalikud kui rahvusvahelised. Koostööprojektide arv on kokku läbi aastate olnud 17. Tegevused ja projektid on meil erinevad asjad. Reeglina ettevõtted ei tea, millised on meie projektid ehk millega on saadud rahastus erinevatele tegevustele. Nad ei tea, et nad käisid sisenemas Aafrika turule selle või teise projektiga, nad teavad, et nad käisid Aafrikas IKT klastriga.

Kohalike tegevuste list on üüratu. Umbes 1400 inimest aastas osaleb meie tegevustes. Ma nagu seda tööd ei tee, et need kõik kirjas oleks. Ma saan välja tuua mingeid suuremaid tegevusi ja projekte.

Oleme korraldanud koolitusi ning toonud rahvusvahelisi koolitajaid Eestisse. Korraldame kohtumisi teiste majandussektoritega, et IT-d populariseerida. Näiteks tööstus 4.0 valdkonna arendamine Eestis ning selle raames Industry 4.0 konverentsi korraldamine. Nüüd juba neljandat aastat seminarid tööstuse digitaliseerimise teemal üle Eesti. Kogusee teadlikkuse tõstmine. Väga konkreetselt teatud ettevõtetega oleme kolm tööstuse digitaliseerimise pilootprojekti ellu viinud. Siin on just see, et sõltub ettevõttest, kelle käest sa küsid ning kas ta on seal osalenud või mitte. E-estoniax turundusväljundi oleme meie loonud. E-estonia brändi oleme meie kunagi loonud IKT klasteri raames loonud. See, mida täna EAS kasutab on tegelikult meie ettevõtete loodud. Kogu see ühine turunduslugu. Äriviisidid välismaale on see, mis me teeme ettevõtetele. Õppereise teeme samuti. Messidel väljas käimised ning sihtriikides ettevõtete esindamine, aidata neil seal jalg maha saada. Klasteri roll on aidata ettevõtetel näida suurem ning avada neile neid uksi, mida nemad ettevõtetena ei saaks avatud. Teatud riikides oleme sihtturu eksperte palganud ja aidanud. Üks meie väga suur teema on e-



## Appendix 3 continued

riigi turundus ja kui sa võtad e-riigi turunduse, siis põhiline partner kellega sa pead läbi rääkima on avalik sektor. Mingisuguse X riigi avaliku sektori inimene (ministeerium näiteks), siis nad ei tee ust lahti mingisugusele IT-ettevõttele, kuid nad teevad ukse lahti IT-ettevõtete kogumile.

Koondamine ettevõtete ühishuvi: ITS, tööstus 4.0, e-riigi eksport. Lisaks veel reaalamajanduse projektid. Võtame ettevõtted nende ühishuvide osas kokku ning teeme siis nendega selles valdkonnas tegevusi. Siis me tõesti otsime lisa koostööprojekte ja lisarahastust selleks, et neid tegevusi, mida ettevõtjatega teeme, rahastada.

See, kui palju huvi ettevõtetel on, sõltub valdkonnast ja tegevustest. Need, kes on tööstus 4.0 valdkonnas, siis neid huvitavad tegevused, mida me siin kohapeal teeme. Kui räägime e-riigi valdkonna ettevõtetest, siis neid huvitab see, mida me rahvusvaheliselt teeme. Nendega teeme ikkagi tugevalt tegevusi – täna Dubai EXPO on teema, Aafrika turud. Kuna liikmeid on palju, siis valdkonnapõhisus.

**14. Have you organized any activities/projects on international level in the past 3 years? If yes, please specify. Name the activities/project and the reason for organizing it. If not, please specify the reasons.**

Äriviisidid, õppereisid, sihtturu ekspertide palkamine. Industry 4.0 konverentsi korraldamine.

**15. What kind of local activities/projects you have been involved in in the past 3 years? Name the activities/projects and the reason why you were involved.**

Kodulehelt vaadata üle projektide nimekiri.

**16. What kind of international activities/projects you have been involved in in the past 3 years? Name the activities/projects and the reason why you were involved.**

Kodulehelt vaadata üle projektide nimekiri.

**17. How interested the members are in the organized events? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....3.....4.....5

Vabatahtliku ühenduse spetsiifikast tulenevalt öeldakse juba, et kui sul liikmeskonnast 20% osaleb, siis on see juba väga hea protsent. Meil ma arvan, et liikmete kaasatuse protsent on

### Appendix 3 continued

oluliselt kõrgem. Julgen skaala panna nelja peale. Me suuname oma kommunikatsiooni väga palju. Teame, et nüüd on see tegevus ja see on selle teemaga seotud ettevõtete huvi, siis me suunamegi seda infot näiteks ITS teemadest huvitatud ettevõtetele. Suuname kommunikatsiooni ka vastavalt. Me ei proovi kõigile kõike teha.

**18. How interested the members are in international activities/projects? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....3.....4.....5

E-riigi ekspordis siiski sama asi. Meil on tugev juhtgrupp, kellel on ka huvi suurem ja kellega me tegutseme.

**19. How interested are the members in different international fairs, trade shows, expos, etc.? (scale 1-5, 1 not interested at all, 5 extremely interested – mark in bold)**

1.....2.....3.....4.....5

Meie valdkonnas hakkab seda kuidagi vähemaks jääma. Kuna IT on nii tihkelt sees, siis meile enam väga spetsiifiliselt leida messi on raske, et vot see on see õige. Ma tean, et meil on mingid oma messid, millest ollakse ka huvitatud, aga meil on raskem panna kokku üldist üldiste huvidega messi. Jällegi siin peab väga teemapõhiselt lähtuma. ITS on oma, e-riigile oma jne.

**20. Do the members ask any help or guidance from the cluster regarding internationalisation and export? (mark in bold)**

Yes

No

If yes, please specify in which fields: .....

Esimene asi on ikkagi uste avamine ning enda nähtavaks tegemine. Meie aitame nende usku kuulutada, me aitame nende samu laule teha ja rääkida nende juttu. Me ei toeta üksikettevõtet üksinda, klastris toetatakse ettevõtete koostööd, et ettevõtted saaksid paista suuremad ja paremad. Kui turueksperte oleme palganud, siis ikkagist klatri ettevõtete peale ühiselt.

## Appendix 3 continued

Sihtriigi seadusandluse osas nad ei ole küsinud abi, aga pigem on seal just algne turule sisenemine. Teadlikkuse tõstmine meist ja meie teemadest, võib olla messidel ja konverentsidel esinemine, esmaste uste avamine, kontaktide saamine. Võib olla ka konkreetne reisitoetus. Kui otsustame teha ärivisiidi, siis on meie roll ka VIPide kaasa kutsumine ja ka riigivisiitidel käime kaasas. Kui oleme otsustanud, et kusagile on vaja kaasa avaliku sektori esindajat, siis see on meie teha. Meil on seda välismaal olemist aga nii palju, et me ei eelda seda. Lisaks meie sihtturud ei ole traditsioonilised.

If not, please specify the reasons: .....

**21. How much do you take into consideration the needs of the members while organizing different activities or attendance in international events? (scale 1-5, 1 not at all, 5 completely – mark in bold)**

1.....2.....3.....4.....5

Ikkagi väga palju võtame arvesse. Kasvõi juba sellepärast, et tavaliselt iga tegevus eeldab mingit kaasfinantseeringut. Kui ei ole huvitatud ettevõttest, ei ole ka mõtet teha. Loomulikult mingid tegevused on ka sellised ütleme pika perspektiiviga tuleviku äriarenduse tegevused, kus siis tuleb ettevõtetele suuremat selgitustööd teha, miks nad seda vajavad ja kuidas see neid tulevikus aidata võib. Meie omad on igatahes uutele asjadele avatud.

**22. Are you involved in policy making on local level with an aim to develop the sector and gain value for the member? (mark in bold)**

Yes

No

If yes, please specify in which fields:

Kõik, mis puudutab tööstuse digitaliseerimist. Välisministeerium kaasab meid ka välispoliitika teemadesse.

Lisaks, kuna oleme koos erialaliiduga ning nemad tegelevad poliitikaga rohkem, siis kõik valdkonnad, kus on IT sees. Seal me räägime pidevalt kaasa.

If not, please specify the reasons: .....

## Appendix 3 continued

**23. Are you involved in policy making on international level with an aim to develop the sector and gain value for the members? (mark in bold)**

Yes

No

If yes, please specify in which fields:

Meil on selleks oma katusorganisatsioon – Digital Europe ja selle kaudu. Seal sõltub hästi palju EL regulatsioonidest: kõik, mis puudutab andmemajandust, telekomide seadusandlust ning kõik, mis puudutab *transformation in industries*. Tööstuse digitaliseerimine on täna väga tugevalt teemaks.

If not, please specify the reasons: .....

**24. What are your main achievements in the past 3 years?**

E-estoniax kui turundusväljundi loomine. Klasteri tuntuse tõus – see, et oleme Eesti ainuke kõrgetasemega klaster ning rahvusvaheliselt tunnustatud. Tegelt on meil võimalus minna kulla peale. Sektoriüleste pilootprojektide mudel, mille oleme teinud, et kuidas selliseid sektoriüleseid koostööprojekte teha. ITS Estonia koostöövõrgustiku loomine ning teema algatamine. Ja tööstuse digitaliseerimise teema fookusesse jõudmine Eestis.

**25. What are your goals for the coming 3 years?**

Raske koht on see, et me hakkame neid alles sätima. Oma strateegia uuendamisega hakkame alles tegelema. Kindlasti aga rahvusvahelistumise osa jätkub. Meie e-riigi edulugu on endiselt selline, millega õnnestub meil end maailmas nähtavamaks teha ja müüa. Meil on selles ka eeliseid. Ettevõtete koostöö on klasteri raames oluliselt paranenud. Ühiste konsortsiumite ja projektide algatamine on üks teema, mida senisest rohkem tahame teha. See on muidugi väga lähiaja teema, kuid klasteri teenuste selge sõnastamine ning klasteri kui teenuse selline turundamine. Natukene võib see klasteri toimimise mudelit mõjutada. meie põhieesmärk, mis meil on väljas, siis see jääb ikkagi samaks. Et me aitame luua *digitaal society*'t.

## Appendix 4. Interview with the Co-founder & VP of Strategic Sales of Defendec OÜ

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** Defendec OÜ
- 2. Date of establishment (year, if relevant also month):** 2006
- 3. Field of activity:** Development of world-class remote premises surveillance technology.
- 4. Countries of activity:** Company operates globally with offices in Washington, D.C, Singapore and Estonia. Exported products to 30 countries in European Union, Middle East and the United States of America.
- 5. Involvement in the cluster since:** Since the beginning in 2012.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Jaanus Tamm
- 7. Position of the interviewed:** Co-founder & VP of Strategic Sales
- 8. Date of the interview:** 29.03.2018

#### **9. Why did the company decide to become a member of the cluster?**

Üks ajend oli see, et koostegemise käigus saab rohkem. Teine oli see, et seal oli ka see toetusemehhanism taga, et EAS toetas. Kaks peamist asja. Kolmas asi on see, et riigi moraalne tugi. Kui klaster liikmed lähevad kusagile, siis saab kas Kaitseväge või ministeeriumi esindajaid kutsuda kohtumistele või messidele kaasa. See on meie tööstusharus ülioluline. Üksi niimoodi ei saa, et lähed messile ja palud, et kaitseminister tuleks kaasa. See oleks mõeldamatu.

#### **10. What were your expectations towards the cluster before joining the cluster?**

Ühisturundustegevus oli selline kõige suurem ootus. Teine ootus, mis on meil kogu aeg olnud jam is vaikselt hakkab ka esimesi ilminguid tekitama, on ühistootarendus või toodete integratsioon. Muidu eestlastel on hästi kombeks nikerdada kusagil nurgas üksinda, aga

## Appendix 4 continued

eestlased on väga aktiivsed suhtlema välismaal, et ühte hoida. Meie piirivalve rakendus, mida meie nüüd maailmas müüme, siis eelmise aasta lõpust ja sellel aastal presenteerisime kontseptsiooni, kus olid sees ka Eesti firmade droonid, droonipesad, kaamerad. Need tooted olid reaalselt integreeritud ja seda oli meil palju lihtsam teha, kuna olime messi bokside koos. Alati kliendid tulid küsisid meie sensoreid ja siis küsisid kõrvvalt drone, vaatasime, et seda võiks koos müüagi. Siis tegimegi oma toote väärtuspakkumise ümber.

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

<b>Developing competences (sharing knowledge and know-how)</b>	<b>Developing cooperation and innovation (product and service development) in the industry</b>
Carrying out promotion and marketing activities	<b>Promoting exports and internationalisation</b>
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
Providing the sector and media with communication and information about the cluster and industry	Shaping the policies relevant for the industry on local and international level
Other (please specify)	

**12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?**

Sihtturu seminarid, kui oleme kusagile läinud, siis oleme teinud selle kohta sellise seminari, kutsunud eksperte ja kogemusi jaganud. Koolitusi meil pole kuigi palju olnud, pigem infopäevad. Iga-aastased aastafoorumid. Väliskülaliste vastuvõttud – kui näiteks Kaitseministeeriumisse või Kaitsevärke tuleb keegi, siis nad tulevad nagu klastrisse ning meil on võimalik minna ja pitchida neile, esineda ja tutvustada tooteid. Ühisnäitused Eesti sisesealt – lühinäitus Riigikogus, pikem näitus Kaitseministeeriumis eesistumise raames ning nüüd tuleb ka Eesti 100 raames showroomi ka mingi näitus edasi. Siseriiklikult me teeme, kuid meil ongi pigem kaks suunitlust - kas siiatulevatele delegatsioonidele tutvustada meie tooteid ehk ekspordi suunaga tegevus või siis siseriiklikult riigiasutustele ja otsustajatele

## Appendix 4 continued

tutvustada, mida me teeme. Ega nad ei tea kuigi palju sellest. Ja meie teemad on sellised, et sa ei kirjuta sellest iga päev Postimehes.

### **13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

Paneksin nelja. Üritused on väga hästi korraldatud, professionaalselt ja ses mõttes hästi läbiviidud. Kuna meie müügitsükkel on niivõrd pikk ehk kui meil käib mõni delegatsioon, siis sellest tolku on ehk alles 2-3 aasta pärast. Me alati osaleme kõikidel nendel üritustel, kuid seda otsest kasu ei pruugi olla võimalik alati selgelt mõõta. See võtab aega. Teinekord on ka niimoodi, et promome sellepärast, et äkki näkkab, kuid pole otsest strateegiat. Vahest, kui käivad delegatsioonid, siis on lihtsalt vaja tutvustada Eestis ja meie edulugu. Sealt ei pruugi alati mingit diili tulla.

If not useful, what was lacking? ...

### **14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

Oleme osalenud messidel, õppereisidel ja ärivisiitidel – delegatsioonidel. Kui peaminister või president läheb kusagile riiki, siis äridelegatsioon kutsutakse kaasa. Ühistegevus, kus ei ole messi ega sellist õppevisiiti, kuid on kohtumisi. VIPidega kaasamine on puhas eksporditegevus.

### **15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

Messid on väga kasulikud. Üksi me ei jaksaks neid teha ning viimaselt kahelt messilt Lähis-Idas on ka väga konkreetseid diile tulnud ja Prantsuse messil on diilidele mõju olnud.

VIP reisirid on pigem ka 5, kuna nendest on väga palju abi olnud. Meie sektorile on väga oluline, et keegi riigisektorist toetab, soovitab ja avab uksi.

## Appendix 4 continued

Õppereisid paneksin pigem neli sellepärast, et oleme liiga väiksed veel ja liiga kogenematud, et kuidas teha välisfirmadega koostööd. Me natuke siin kasvame ja saame kogemusi juurde ning siis hakkab see ka ehk paremini minema.

Meie sektor on sellises vanuses, et me tahame müüa tooteid. Kui sa lähed aga õppereisile teiste tehnoloogiafirmadega sellest sektorist, siis sa pead tegelikult suutma nendega rääkida tehnoloogia arendamises kaasa. See nõuab natukene sellist teistsugust mõtteviisi ja lähenemist, mida meil on alles tekkimas.

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

Väga, me oleme üks aktiivsemaid kaasarääkijaid ning oleme ka üldse väga aktiivne eksportija. Meil on palju kogemusi ning seetõttu on meil ka lihtsam oma soove seal väljendada ja lihtlasi leida ning neid läbi suruda.

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

If yes, please specify in which fields: (mark in bold)

Information about the target market	Assistance in entering new markets
Contact base for the target market	<b>Sales support in the target market</b>
<b>Legislation etc. in the target market</b>	<b>Marketing and promotion assistance in the target market</b>
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify)

Seda turu regulatsiooni – selle vastaks ei ja jaa. Me teeme kahte suunda. Toote eksport – seal me pole väga abi küsinud, kuna teame oma kliente, potentsiaalseid kliente ning turuolukorda paremini. Uus teema, mis on täiesti uus asi, on see Euroopa Liidus European Defence Hunt, kust hakatakse osasid projekte finantseerima. Seal on küll asi nii, et klastrist on väga palju abi



## Appendix 4 continued

olnud uute võimalike regulatsioonide loomisel ning kontaktide loomisel, et kes on Brüsselis see inimene, kellega suhelda, ja ka siis Euroopa riikides, kus oleks abi vaja, et kellega suhelda. Tehnoloogia ja arendamine – seal on küll klastrist väga palju abi. Kui ma tahan aga näiteks Omaani või Ameerikasse eksportida, siis tuleb pigem ise hakkama saada ja siis messidel abi küsida.

If not, please specify the reasons: .....

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

Jaa, paneme viis. Me oleme osalenud Lähis-Ida messil, mis on meile hästi abiks olnud.

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....5

Siin nurinat ei ole.

**20. What could the cluster offer to its members in addition to its current international activities?**

Ei oska praegu küll midagi juurde rohkem soovitada. Oleme paindlikud. Mingid nõunikud on mingitesse riikidesse määramisel, oleme operatiivsed tegutsejad.

**21. What do you expect from the cluster in the coming 3 years?**

Kindlasti turundus- ja messitegevus – kindlasti ootaks, et jätkuks. Meil tööstus ei ole veel nii suureks kasvanud, et saaksime lähiaastatel ilma klastrita messidel käia või vähemalt mitte nii palju. Meie sektoris on messil käimine ülioluline – see näitab, et me oleme olemas. Ja see on väga kuluefektiivne – mitme suure firmaga ühes riigi boksis. Firmad maksavad natuke, riik maksab enamus ja saab rohkem müüki panustada.

Koos rohkem ühistootarendust teha ning tooteid omavahel integreerida. Teha asju selles vötmes, mitte nokitseda üksinda, vaid integreerida. Ma arvan, et seal on palju selliseid asju.

## **Appendix 4 continued**

Milrem teeb Threodiga asju koos. Võib-olla jõuame täiesti uue toote arendamiseni ka koos. Me Eestis võime siin vehkida, et oleme kõvad mehed, kuid välismaal me oleme ikkagi sipelgad. Aga sipelgad on koostöös tugevad.

## Appendix 5. Interview with the CEO of Threod Systems OÜ

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** Threod Systems OÜ
- 2. Date of establishment (year, if relevant also month):** 2012
- 3. Field of activity:** Developing, producing and operating unmanned aircraft systems that are designed for information collection and exploitation in military, governmental and civil applications.
- 4. Countries of activity:** Soome, Ukraina, Kosovo, Kreeka, Küpros, Prantsusmaa, USA, Kanada, Inglismaa, Indoneesia, Kasahstan.
- 5. Involvement in the cluster since:** 2015 alates.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Villiko Nurmoja
- 7. Position of the interviewed:** CEO
- 8. Date of the interview:** 02.04.2018

#### **9. Why did the company decide to become a member of the cluster?**

Me loodame, et see toetab meie ekspordipüüdlusi. Ehk kui kõik ettevõtted on koos ja ajavad ühte asja, siis informatsioon liigub paremini, ettevõtted saavad koos turustada ja müüa oma vahendeid ning tooteid, käia ühiselt messidel, kohtuda klientida, teha ühiseid integratsioone. Selles mõttes, et ta toetab.

#### **10. What were your expectations towards the cluster before joining the cluster?**

Ega ma liitumise hetkel päris hästi ei teadnud, mida see klaster endast kujutab ning mismoodi see toimuma hakkab, aga enamvähem ootasime midagi sellist. Täna on ta sellisel kujul realiseerunud ka.

## Appendix 5 continued

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

Developing competences (sharing knowledge and know-how)	<b>Developing cooperation and innovation (product and service development) in the industry</b>
<b>Carrying out promotion and marketing activities</b>	<b>Promoting exports and internationalisation</b>
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
Providing the sector and media with communication and information about the cluster and industry	Shaping the policies relevant for the industry on local and international level
Other (please specify)	

**12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?**

Siseriiklikult on meil olnud seminare, nendel oleme osalenud. Klaster on aidanud ka visiite siia korraldada, et nendega tegeleda.

**13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....**3**.....4.....5

Selline keskpärane. Arvan, et sinna kolme juurde ta jääb.

If not useful, what was lacking? ...

**14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

Väljaspoole on olnud erinevad visiidid ja messid.

**15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

## Appendix 5 continued

See on kõige suurem abivahend üldse täna. Kui võtame kaitsetööstuse klasteri, siis ta on ekspordile suunatud ning siseriiklikult ei tee siin midagi.

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

Ma arvan, et see jääb sinna nelja ja viie juurde. Võib isegi viis olla, sest ükski asi pole kunagi vastuseta jäänud.

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

If yes, please specify in which fields: (mark in bold)

Information about the target market	<b>Assistance in entering new markets</b>
<b>Contact base for the target market</b>	<b>Sales support in the target market</b>
Legislation etc. in the target market	<b>Marketing and promotion assistance in the target market</b>
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify)

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....5

Ma arvan, et nelja palli süsteemis. Jah, et annab küll.

## **Appendix 5 continued**

### **20. What could the cluster offer to its members in addition to its current international activities?**

Ausalt öeldes ei oskagi niimoodi midagi välja pakkuda, et mida saab teha.

### **21. What do you expect from the cluster in the coming 3 years?**

Ootan selle sama toe ja poliitika jätkamist nagu ta seni on. Et ta hingusele ei läheks ja toetab ettevõtete püüdlusi ekspordi arendamisel.

## Appendix 6. Interview with the Export Director of Milrem AS

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** Milrem AS
- 2. Date of establishment (year, if relevant also month):** 2013
- 3. Field of activity:** Manufacturing unmanned ground vehicles and developing robotic warfare solutions.
- 4. Countries of activity:** Ameerika, Suurbritannia
- 5. Involvement in the cluster since:** Ei oska täpselt öelda, 2015 või 2016.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Gert D. Hankewitz
- 7. Position of the interviewed:** Export Director
- 8. Date of the interview:** 09.04.2018

#### **9. Why did the company decide to become a member of the cluster?**

Väga suur põhjus on rahaline. Klustriga liikmeks olemine aitab väga palju reisimisele kaasa, kulud jagatakse pooleks. Meil on väga palju reisimist, kus käime toodet müümas. Käime erinevatel messidel ja üksikvisiitidel, pidevalt on suhtlus potentsiaalsete klientidega väga oluline. See on üks põhi põhjus, miks me klustriga liitusime. See rahvusvahelistumine ja kõik need ilusad muud sõnad kehtivad ka meie kohta, kuid praktiline väärtus on kulude kokkuhoiul.

#### **10. What were your expectations towards the cluster before joining the cluster?**

Koostöö ja arendustegevus ka kindlasti. Klustris on väga palju ettevõtteid, osadega teeme juba ka täna koostööd tegema hakanud. Näiteks Threod Systemsiga arendame koos ühte toodet, ELIga samamoodi ühistoodet. Teine on ka enda kursis hoidmine. Kõik klatri liikmed ju reisivad ja koguvad infot, jagavad meie kohta infot ning meie jagame nende kohta infot.

## Appendix 6 continued

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

Developing competences (sharing knowledge and know-how)	Developing cooperation and innovation (product and service development) in the industry
Carrying out promotion and marketing activities	<b>Promoting exports and internationalisation</b>
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
<b>Providing the sector and media with communication and information about the cluster and industry</b>	<b>Shaping the policies relevant for the industry on local and international level</b>
Other (please specify)	

**12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?**

Koolitused, aastafoorumid, näitus Kaitseministeeriumis ja Riigikogus, kommunikatsioonitegevused, välismaa visiitide võõrustamine.

**13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

If not useful, what was lacking? ...

**14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

Messid ja ärivisiidid on põhilised asjad, mis me väljaspool teeme.

**15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

If not useful, what was lacking? ...



## Appendix 6 continued

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....**4**.....5

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

If yes, please specify in which fields: (mark in bold)

<b>Information about the target market</b>	<b>Assistance in entering new markets</b>
<b>Contact base for the target market</b>	<b>Sales support in the target market</b>
Legislation etc. in the target market	<b>Marketing and promotion assistance in the target market</b>
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify)

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....5

**20. What could the cluster offer to its members in addition to its current international activities?**

Soove vist isegi ei ole. Me oleme küll mõelnud klatri rahastuspõhimõtete muutmise peale, kuid see ei sõltu nii väga klatriist. Tegevuste maht on piisav. Valdkonnaspetsiifiliste konsultantide olemasolu sihtturgudel võiks ka abi olla. Meil on USAs konsultant olemas, kui ka teistes riikides oleks, siis ehk aitaks kaasa. Meil päris paljudel turgudel on ka oma konsultandid olemas, kuid kui saaks seda kulu kuidagi klatriiga jagada, siis oleks hästi.

## **Appendix 6 continued**

### **22. What do you expect from the cluster in the coming 3 years?**

Järjepidevust. Selles mõttes, et räägitakse väga, et kaitsetööstusklastrile jagatakse väga palju raha. Loodame, et seda raha meilt ära ei võeta järgmisteks tegevusteks.

## Appendix 7. Interview with the CEO of GoSwift OÜ

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** GoSwift OÜ
- 2. Date of establishment (year, if relevant also month):** 2000
- 3. Field of activity:** Designs, deploys and operates Queue Management Services.
- 4. Countries of activity:** Soome, Vene, Leedu.
- 5. Involvement in the cluster since:** Ei oska sellele nii väga täpselt vastata, kuid kujutan ette, et kusagil 3-4 aastat oleme seal olnud.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Hannes Plinte
- 7. Position of the interviewed:** CEO
- 8. Date of the interview:** 27.03.2018
- 9. Why did the company decide to become a member of the cluster?**  
Sest, et ta pakub tuge meie rahvusvahelistumise eesmärkide täitmisel.
- 10. What were your expectations towards the cluster before joining the cluster?**  
Kõike seda, mida nad praegu teevad. Et aitavad Eesti ettevõtteid välisurgudele, sealhulgas siis meid. Mitte ainult klaster, vaid ka klasteri liikmed teevad koostööd välisurgudel. Ka see on märkimisväärselt oluline. Jagavad omavahel informatsiooni.
- 11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

## Appendix 7 continued

Developing competences (sharing knowledge and know-how)	<b>Developing cooperation and innovation (product and service development) in the industry</b>
<b>Carrying out promotion and marketing activities</b>	<b>Promoting exports and internationalisation</b>
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
Providing the sector and media with communication and information about the cluster and industry	Shaping the policies relevant for the industry on local and international level
Other (please specify)	

### **12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?**

Osalenud väga paljudel erinevatel klasteriüritustel. Klaster on väga oluline komponent nii siseriikliku koostöö kui rahvusvahelistumise suunal. Seetõttu on klasteri üritustel, mis toimuvad siin kui ka välisüritustel oluline koht. Samamoodi oleme teinud ise ettepanekuid ürituste elluviimiseks. Väga palju on seoseid klasteriga.

### **13. How useful the organized local events have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

Kohalikud üritused viis, muidugi.

If not useful, what was lacking? ...

### **14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

On olnud messidel osalemisi. On olnud sihtturu reise, kus oleme klasteri partneritega koos läinud mõnele turule esmakontakte looma või lausa konkreetsemate eesmärkidega peale läinud. On olnud erinevaid asju.

### **15. How useful the organized international events have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

## Appendix 7 continued

1.....2.....3.....4.....5

Samamoodi viis, muidugi.

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

Võetakse arvesse küll.

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

If yes, please specify in which fields: (mark in bold)

<b>Information about the target market</b>	<b>Assistance in entering new markets</b>
Contact base for the target market	<b>Sales support in the target market</b>
Legislation etc. in the target market	<b>Marketing and promotion assistance in the target market</b>
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify)

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....5

Alati võib rohkem teha.

## **Appendix 7 continued**

### **20. What could the cluster offer to its members in addition to its current international activities?**

No kui rohkem raha oleks, siis võiks olla sihtturgudel esindajad. Sarnaselt nagu EASil on, kuid EASil on sektoriülesed. Palju rohkem oleks kasu, kui oleks klastril ning kus oleks klastriesindajad sektorispetsiifiliselt. Infotehnoloogia klastril on näiteks mingi vend kusagil sihtriigis, kes ajab klatri asju. Sellest oleks palju rohkem kasu.

### **22. What do you expect from the cluster in the coming 3 years?**

Raha. Selles mõttes, et kõikide seniste tegevuste jätkumist. Klastritest on väga palju abi, nii otsest abi kui kaudset abi. Kõige olulisem on see, et nad edasi jätkaksid. Et ei tekiks mingisugust sulgemist või laialiminemist.

## Appendix 8. Interview with the CEO of OÜ Net Group

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** OÜ Net Group
- 2. Date of establishment (year, if relevant also month):** 1999
- 3. Field of activity:** Software development company specialized in e-Education, e-Governance, e-Business, Finance and Insurance, Utilities and Integrations.
- 4. Countries of activity:** EMEA piirkond, Aafrika riigid
- 5. Involvement in the cluster since:** algusest peale seotud ehk 2009.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Priit Kongo
- 7. Position of the interviewed:** CEO
- 8. Date of the interview:** 09.04.2018

**9. Why did the company decide to become a member of the cluster?**

Et ühendada IT firmade jõud, sest välisurgudel ei ole üksinda väga lihtne toimetada, aga mitmekesi on jõud suurem ja võimalus läbi murda suurem.

**10. What were your expectations towards the cluster before joining the cluster?**

Klassikaline müügiprotsess hakkab pihta turundusest, et tekitada huvi võimalikes klientides, siis selgelt turunduses olid ootused. Et klastriga võimendada meie nähtavust, Eesti IT sektori temaatika teadlikkust võimalike otsustajate seas, et asi oleks laual.

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

## Appendix 8 continued

Developing competences (sharing knowledge and know-how)	Developing cooperation and innovation (product and service development) in the industry
<b>Carrying out promotion and marketing activities</b>	<b>Promoting exports and internationalisation</b>
<b>Representing the cluster and members in international events</b>	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
Providing the sector and media with communication and information about the cluster and industry	Shaping the policies relevant for the industry on local and international level
Other (please specify)	

### 12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?

Omavahelised seminarid, mis oleme teinud, nendel oleme osalenud.

### 13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)

1.....2.....3.....4.....5

Kindlasti need seminarid, mida oleme teinud, on palju olnud sellised, kus saame üksteist tundma õppida. Ega muidu ei saa me teada, kes kus toimetab ja mida teeb, kui ei ole kohalikke üritusi.

If not useful, what was lacking? ...

### 14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?

Äriviisidid kindlasti, messidel osalemised. Töötasime välja e-riigi lahenduste turundusstrateegia klastrile, mis oli väga sisukas töö. Oleme teinud koostööd teiste Eesti organisatsioonidega nagu näiteks Välisministeerium ja Kaubandus-ja Tööstuskoda, et tutvustada seda Eesti IT sektori väärtuspakkumist maailmaturul, et kõik, kes mööda maailma ringi käiksid räägiksid ühte ja sama juttu. See on hästi õnnestunud.



## Appendix 8 continued

**15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

Information about the target market	<b>Assistance in entering new markets</b>
Contact base for the target market	Sales support in the target market
Legislation etc. in the target market	<b>Marketing and promotion assistance in the target market</b>
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify) Strateegia loomine, väga oluline. Ma arvan, et seda ei saa kindlasti välja jätta. Enne, kui üldse midagi teha, tuleb küsida miks ja need miks küsimused on meil väga hästi läbi mõeldud. Turundusstrateegia on meil tehtud ja see toimib hästi.

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....5

## **Appendix 8 continued**

Võiks rohkem olla. Tegevusi vaja ei oleks, tegevused on teada. Klastril täna on raha otsas ehk rohkem ressursi oleks vaja.

### **20. What could the cluster offer to its members in addition to its current international activities?**

Sihtturgudel oleks vaja tegevust. Aafrika on meil mitmel ettevõttel fookuses, kuid seal spetsiifiliste ürituste tegemine on juba suurem projekt. Suurem projekt nõuab rohkem ressursi ja seda paraku pole olemas. Eelarveperiood on läbi, kuid elu näitab, et selliseid asju tuleb aina juurde. Tulevikus peaks olema vähem projekte, kuid nad peaksid olema suuremad. Mitte sellised ühe-kahe tuhande suurused projektid, et teeme siin-seal, vaid nüüd on asi juba konkreetsem – tead, millistele turgudele peaks minema. Nendele turgudele teha konkreetses alamplaani pikema perspektiiviga. Oleme mõelnud ka klatri esinduspunkti sihtturule tekitada.

### **21. What do you expect from the cluster in the coming 3 years?**

Lisaks eelpool toodule ootame, et klastrist peaks tekkima või ta peab arenema rakendusüksuseks, mis tähendab seda, et ta peab hakkama aktiivselt müüma ka oma teenuseid sarnaselt EGAg. Paljud klatri liikmed vaatavad klatri ainult rahapumbana, et kui EASist raha saavad, siis tegutsevad. Aga tegelikult võiks ju hakata müüma ka oma konsultatsiooni ja nõuandeteenuseid. Seda oleme arutanud ka, aga see strateegia tuleks meil välja töötada.

## Appendix 9. Interview with the CEO of SK ID Solutions AS

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** SK ID Solutions AS
- 2. Date of establishment (year, if relevant also month):** 2001.
- 3. Field of activity:** International e-identity solutions – certification and time-stamping service, developing technology and applications for digital signing and validation services.
- 4. Countries of activity:** Läti, Leedu, Soome, Taani, Iirimaa, Suurbritannia.
- 5. Involvement in the cluster since:** Algusest alates ehk 2009.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Kalev Pihl
- 7. Position of the interviewed:** CEO
- 8. Date of the interview:** 11.04.2018

**9. Why did the company decide to become a member of the cluster?**

Eelkõige rahaline võimendus, mis sellest turundus- ja müügitegevusest tuleb. See oli algselt esimene kõige tähtsam põhjus.

**10. What were your expectations towards the cluster before joining the cluster?**

Jaa, kogu see ühisturundus, mis oli toleiks hetkeks demokeskuse näol juba olemas. Seda ühistegevust kõik said aru, et on vaja jätkata. See andis väga selgelt sellist alust, et kokku tulla. Ootus oligi, et toimuks ettevõtete koostöö, et välisurgudele minna.

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

## Appendix 9 continued

<b>Developing competences (sharing knowledge and know-how)</b>	Developing cooperation and innovation (product and service development) in the industry
<b>Carrying out promotion and marketing activities</b>	<b>Promoting exports and internationalisation</b>
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
Providing the sector and media with communication and information about the cluster and industry	Shaping the policies relevant for the industry on local and international level
Other (please specify)	

### 12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?

Oleme võtnud vastu külalisi siin Eestis. Oleme toonud Eestisse kompetentsiga inimesi rääkima nii meile kui teistele klasteri liikmetele, et kompetentse kasvatada. Ja osalenud ka koolitustel.

### 13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)

1.....2.....3.....4.....5

Koolitused ja kohale toodud eksperdid on ikka üsna head. Paneme nelja, kindlasti saab paremini teha.

If not useful, what was lacking? ...

### 14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?

Messidel, osalenud nii laval ettekannetena kui boksidega. Välja töötanud turundusmaterjale.

### 15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)

1.....2.....3.....4.....5

## Appendix 9 continued

Turundusmaterjalid väljatöötamine valdavalt 4. Lavadel esinemine 5, need on väga olulised asjad. Boksiga väljas oleks on selline neli. Kokkuvõttes siis 4.

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

**Yes**

No

If yes, please specify in which fields: (mark in bold)

Information about the target market	Assistance in entering new markets
Contact base for the target market	<b>Sales support in the target market</b>
Legislation etc. in the target market	<b>Marketing and promotion assistance in the target market</b>
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify): Kulude jaotamine.

Kui see klasteri värk töötab enamasti selle peal, et kuidas ühiselt end suuremaks teha, siis klaster annab võimaluse teiste ettevõtetega testida, kas keegi punkti tuleb kui kusagile minnakse. See on selline kulude jaotamise ning ettevõtte suurendamise teema. Aga just see kulude jaotamine on oluline.

If not, please specify the reasons: .....

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

## Appendix 9 continued

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....**5**

Klaster teeb niipalju, kui ta meie enda antud rahast saab teha. Loomulikult teeb ta kõike seda, mida me soovime. Sellele on raske vastata, aga ju ta siis viis peab olema.

**20. What could the cluster offer to its members in addition to its current international activities?**

Ega klaster ei ole asi iseeneses, vaid klaster teeb neid tegevusi, mida meie tahame. Puudust praegu pole, aga pidevalt läheb rahastuse vähendamise poole. Kui uut rahastust ei tule ja kogu see asi peab end ise hakkama ära majandama, siis mingeid täiendavaid ülesandeid klastrile sellises finants skeemis ei paneks. Hetkel on see, et mitu aastat on tööd tehtud ning nüüd tuleks vaadata, et millised tegevused ühishuvi osas jõudu koguvad, et ka edasi teha. Meie oleme oma sellist üldist valmisolekut näidanud, et oleme valmis sinna raha panustama ning sellist ühist koordineerimist ja tuge vähemalt e-riigi asjade turundamisel ja kuvandi tekitamisel kindlasti edasi teha. Kas sinna tuleb palju sõpru või vähe sõpru, seda veel ei saa.

**21. What do you expect from the cluster in the coming 3 years?**

Loodan, et jätkub ja ei sure ära see initsiatiiv. Et leiame piisavalt palju seda tuge ning motivatsiooni, et tegevusi edasi teha.

## Appendix 10. Interview with the CEO of Matek AS

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** Matek AS
- 2. Date of establishment (year, if relevant also month):** 1988
- 3. Field of activity:** Production of timber framed houses.
- 4. Countries of activity:** Norra, Island, Rootsi, Leedu, Fääri saared.
- 5. Involvement in the cluster since:** kohe kui selle asja moodustasime, 2011 liitusime.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Sven Mats
- 7. Position of the interviewed:** CEO
- 8. Date of the interview:** 28.03.2018

#### **9. Why did the company decide to become a member of the cluster?**

Soovisime teha koostööd teiste sarnaste ettevõtetega, et olla tugevamad välisurgudele minekul. Selle asemel, et siin nagu üksteist ära tappa, pigem siis infot vahetada ja ühiselt natukene jõulisemalt neid välisurget võtta.

#### **10. What were your expectations towards the cluster before joining the cluster?**

Ega me tegelikult seda ootust ei omanudki, et keegi meile nüüd midagi tegema hakkab. Meil on tegelikult Puitmajaliit ja klaster, kuhu rahulikult võib võrdusmärgi vahele tõmmata. Kuna klaster on EAS meetmest rahastatav, siis ütleme nii, et liidul ja klastril väga sügavat vahet ei ole. Põhiline eesmärk oli see, et kõigepealt saada kõik need oma ala tegijad laua taha ning saada omavaheline info liikumine hästi käima. Teine pool oli see, et teha sellist ühist jõulist kommunikatsiooni Eestist kui puitmajatootmise maast, mis läheks riigi suunas, kuid mis läheks välja ka. Riigi suunas oli siis see, et suunata natukene neid EAS meetmeid õigetesse kohtadesse, rääkida vähe tugevamalt kaasa hariduspoliitikas ning ütleme nii, et välismajanduspoliitikas ka. Peab tunnistama, et meil on see õnnestunud ka.

## Appendix 10 continued

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

<b>Developing competences (sharing knowledge and know-how)</b>	<b>Developing cooperation and innovation (product and service development) in the industry</b>
Carrying out promotion and marketing activities	Promoting exports and internationalisation
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
Providing the sector and media with communication and information about the cluster and industry	<b>Shaping the policies relevant for the industry on local and international level</b>
Other (please specify)	See on ajas natukene muutuv. Arvan, et täna on need sellised põhisuunad, kuid arvan, et siin lähimatel aastatel tööjõu teema tuleb hästi tugevalt ülesse.

**12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?**

Me oleme osalenud praktiliselt kõikides tegevustes. Meil on niimoodi, et on väheseid projekte, kus me pole osalenud. Meil on sertifitseerimisprojekt, kus me ei ole kaasas, kuna meil on kõik sertifikaadid olemas. Lisaks on mingid väga spetsiifilised palgimeeste asjad, kus me ei ole osalenud. Pean tunnistama, et olen ise ka neid asju väga palju vedanud. Kommunikatsioonitegevused, koolitused, seminarid, töötoad, erinevate riigi esindajate ja haridusnimestega kohtumine.

**13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....**4**.....5

If not useful, what was lacking? ...



## Appendix 10 continued

**14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

Meil oli mingi ühine tarkvaraprojekt, kus tegime ühise tarkvarahanke. Väliskommunikatsiooni tegevused, kus oleme klastriga teinud paarkümmend artiklit välja. Lisaks messid ja sihtturud.

**15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

Saaks paremini teha, kuid kõik on ikka kasulikud asjad olnud.

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

Kuna mul on nii kõva hääl, siis pean viie panema.

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

<b>Information about the target market</b>	Assistance in entering new markets
Contact base for the target market	Sales support in the target market
<b>Legislation etc. in the target market</b>	Marketing and promotion assistance in the target market
<b>Participation in different fairs, expos, trade shows etc.</b>	Other (please specify)

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

Muidugi oleme saanud kõvasti abi.

## Appendix 10 continued

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....**3**.....4.....5

Saaks oluliselt paremini veel. Saaks uute turgude infot, kui oleks rohkem ressursi seda hankida.

**20. What could the cluster offer to its members in addition to its current international activities?**

Kohalikud turu peal olevad konsultandid. See võikski olla kõige olulisem, et on konsultante, kes jagavad sulle sihtkohal olulist informatsiooni. Nii insenerid kui ka need, kes tunnevad kohalikku seadust, norme jne. See oleks teema, mis oleks oluline.

**21. What do you expect from the cluster in the coming 3 years?**

Ootame senise tegevuse stabiilset jätkamist. Kui meil õnnestuks natukene ressursse juurde saada, siis võiks põhiturgudele leida konsultante juurde. Põhimõtteliselt arvan, et see, mida me teeme on mõistlik tegevus.

## Appendix 11. Interview with the Chairman of the Board and Executive Manager of Hobbiton Home OÜ

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** Hobbiton Home OÜ
- 2. Date of establishment (year, if relevant also month):** 1997
- 3. Field of activity:** Production of handcrafted wooden house buildings.
- 4. Countries of activity:** Eesti, Norra, Soome, Prantsusmaa, Venemaa, Hispaania, Ameerika Ühendriigid, Martiiniue.
- 5. Involvement in the cluster since:** Alates algusest ehk 2009.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Andrus Prangli
- 7. Position of the interviewed:** Chairman of the Board, Executive Manager
- 8. Date of the interview:** 24.03.2018

#### **9. Why did the company decide to become a member of the cluster?**

Nägime esiteks suuremat võimalust puitmaja tootjate koostöö arendamiseks läbi võimenduse seoses eurotoetustega. Tänu sellele, mis võimalused avanesid läbi EASi klasteriprogrammi, siis oli meil võimalik rohkem tööjõudu palgata puitmajatootjate koostöö nimel tööle. Puitmajaliidu algatusel oli see. Sellepärast hakkasime sellest kinni.

#### **10. What were your expectations towards the cluster before joining the cluster?**

Otseselt ei oodanud oma ettevõttele midagi, vaid sektori arengule. Oma ettevõttele ootasime võimalusi taskukohasemalt ennast arendada, koolitusi, võimalusi käia õppereisidel, tutvuda teiste sarnaste sektoritega mujal Euroopas. Need oleks otsesemad ootused. Teine ootus on see, et ei hääbuks koostöö, kuna ilma klasteri toetuseta oleks see asi jäänud varjusurma moodi olukorda. Kui on olemas klasteri juht ning lisaks veel turundustöötaja, siis oli võimalik võimendada kogu puitmajatootjate maine kujundamist. Suhtlemine riigiga jms on võimalik

## Appendix 11 continued

koos teha. Kui on omaosalus liiga suur, siis ainult Puitmajaliidu toega oleks asi jäänud viirelema. Oleks olnud klubi, et käime koos, aga mida rohkem ette võtta ei oleks saanud.

**11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)**

Developing competences (sharing knowledge and know-how)	<b>Developing cooperation and innovation (product and service development) in the industry</b>
Carrying out promotion and marketing activities	Promoting exports and internationalisation
Representing the cluster and members in international events	Organizing education and training activities for the members and partners
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
<b>Providing the sector and media with communication and information about the cluster and industry</b>	<b>Shaping the policies relevant for the industry on local and international level</b>
Other (please specify)	

**12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?**

Olen osalenud turuseminaridel, kust saan infot turgude kohta. Näiteks Norra turg, Rootsi turg, Saksamaa ehk sellised turud, mis meid huvitavad. Meil on sellised üritused nagu puitmajasõprade kogunemine, kus ettevõtted saavad vähemalt korra aastas kokku ning suhtlevad vabamas vormis. See on väga oluline. Vaba aja üritused koos teiste tootjatega, kus saab kogemusi vahetada. Alati läheb ikka tööjutuks, millest saab õppida. Vahest toimuvad kas juhatus koosolekud või üldkoosolekud kellegi tootja juures ehk saab ühtlasi käia ka selle tootja tootmist vaatamas. See on ka väga oluline.

**13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

Ega ma muidu ei oleks Puitmajaklastris kui ei peaks neid oluliseks.

If not useful, what was lacking? ...

## Appendix 11 continued

**14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

Oleme käinud õppereisidel. Klaster on teinud ka meediakampaaniaid välismaal, kus oleme osalenud. Messidel meie ei ole osalenud, see ei ole meie jaoks oluline. Ajendiks ikka, et targemaks saada, areneda, õppida uut ja huvitavat, mida teised teevad.

**15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

**17. Have you asked any help or guidance from the cluster regarding internationalisation and export?**

Yes

No

Information about the target market	Assistance in entering new markets
Contact base for the target market	Sales support in the target market
Legislation etc. in the target market	Marketing and promotion assistance in the target market
Participation in different fairs, expos, trade shows etc.	Other (please specify)

If not, please specify the reasons: Ei ole vajadust olnud.

**18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)**

1.....2.....3.....4.....5

Ühele turule oleme klatri kaudsel toel sisenenud. Jah, on küll aidanud, paneme siis viis. Teistele turgudele ei ole tahtnud ja abi ka ei ole küsinud.

## Appendix 11 continued

**19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)**

1.....2.....3.....4.....5

**20. What could the cluster offer to its members in addition to its current international activities?**

Rohkem tegeleda mainekujundamisega sektoris. Ma ei tea, kui võimalik see tegevus on, kuna see on kallis tegevus, kas klaster seda suudab suurema riigiabita teha. Tootjad peavad ise panema vähemalt pool raha alla, kuid kuna see on nii üldine tegevus, siis siin peaks riigiabi suurem olema. Meil on turud Norra, Rootsi ja Saksamaa ning oleme neist rohkem huvitatud. Üldiselt mõeldes sektori arengule, siis on kogu Euroopa Liit.

**21. What do you expect from the cluster in the coming 3 years?**

Et ühistegevus jätkuks, et Eesti tootjate maine suureneks välismaal. Et Eesti tootjate maine kujuneks selliseks, et Eesti tootjat peetakse kvaliteetseks ala nagu Prantsusmaa turul Soome toode. Kui öeldakse kvaliteetne puitmaja, siis mõeldakse kohe Soome. Eesti võiks olla ka üks. Kuna Eesti on kõige suurem eksportöör Euroopa Liidus, siis võiks Eesti maine kui kvaliteetse tootja maine olla kliendi silmis veelgi suurem. Eestit otseselt ei seostata veel puitmajaga.

## Appendix 12. Interview with the Marketing Manager of Timbeco Woodhouse

### QUESTIONNAIRE FOR THE COMPANIES

**BACKGROUND INFORMATION** (prepared before the interview and cross-checked during the interview)

- 1. Name of the company:** Timbeco Woodhouse OÜ
- 2. Date of establishment (year, if relevant also month):** 1993
- 3. Field of activity:** Manufacturing high-quality prefab timber frame elements.
- 4. Countries of activity:** Finland, Sweden, Norway, UK, Switzerland.
- 5. Involvement in the cluster since:** See on hea küsimus. Olen ise siin 1,5a töötanud ning seda ajalugu ei teagi öelda. Aga liiduga oleme juba pikemat aega seotud.

### INTERVIEW QUESTIONS

- 6. Name of the interviewed:** Erki Muhu
- 7. Position of the interviewed:** Marketing Manager
- 8. Date of the interview:** 06.04.2018

#### **9. Why did the company decide to become a member of the cluster?**

Ma arvan, et see on iga eksportiva ettevõtja soov saada ligi informatsioonile, mis puudutab selliseid üldiseid päringuid või üldiseid otsimisi. Meil kodulehe tuleb ka päris palju külastajaid läbi Puitmajaliidu veebi, mis näitab ka seda, et sellest klastrist otsitakse sobivaid ettevõtteid ning klikitakse edasi huvipakkuvate ettevõtete lehtedele. See on üks selline asi, et olla pildis. Klatri kodulehel on informatsioon üleval väga paljudes keeltes, näiteks ka jaapani keeles. Timbeco gruppi kuuluv ettevõte on üks suurimaid Jaapanisse eksportivaid ettevõtteid.

#### **10. What were your expectations towards the cluster before joining the cluster?**

Põhiline ongi tegelikult potentsiaalsus kliendi huvile ligi saada. Lisaks kogemuste jagamine omavahel ühistel koosolekutel ja aastakoosolekutel. Informatsiooni vahetamine, probleemide lahendamine ning riiklikult ütleme suuremate tegevuste tegemine on ühine jõud, mis

## Appendix 12 continued

ühendaks. Iga klient tuleb erinevat teed pidi, me ei tea, kust ta on selle informatsiooni kätte saanud, võib-olla klatri lehelt, võib-olla objekti ehitustöödel nähtud reklaamide peal jne. Neid variante, kuidas klient meieni jõuab on palju, kuid klaster võiks olla üks väljund, kust ta võiks meie juurde tulla.

### 11. Clusters are carrying out many everyday activities. In which are you the most interested in? (selection, choose 3 most relevant – mark in bold)

Developing competences (sharing knowledge and know-how)	Developing cooperation and innovation (product and service development) in the industry
<b>Carrying out promotion and marketing activities</b>	Promoting exports and internationalisation
Representing the cluster and members in international events	<b>Organizing education and training activities for the members and partners</b>
Organizing seminars and workshops for parties interested in the industry	Tackling human resources related obstacles
<b>Providing the sector and media with communication and information about the cluster and industry</b>	Shaping the policies relevant for the industry on local and international level
Other (please specify)	

Puitmajakonkurss propageerib puitmajade või tehasmajade ehitamist Eestis. Võib-olla see tööjõu ja poliitikate kujundamine on tore asi, mis võiks alati olla, kuid mingit märkimisväärset mõju sel ei ole. Tööjõu probleemiga tegelevad kõik Eesti ettevõtted, igapäev on see tekk endale kõige lähemal. Suur probleem on kolmandatest riikidest tööjõu tulek Eestisse. Meil üks projekterija on Makedooniast, see probleemide rägastik ja dokumentide ajamine on meeletu tegelikult. See, et sa pead tõestama, et ta on inimene, kuigi ta on õppinud Soomes Aalto ülikoolis ja on väga kõrgelt haritud.

### 12. In which cluster's local activities you have been involved in in the past 3 years? Why have you decided to participate?

Tehasemaja konkurss, koolitused seoses puitmajadega, erinevad tehase külastused, seminarid ja töötod. Puitmaja leht Maalehe vahel, hea väljund, kus meediapinda kasutada. Meie artikkel oli seal ka esindatud. Tehasemaja konkurss on hea väljund ka rahvusvahelistumise



## Appendix 12 continued

mõttes. Võidupilte on näidatud nii lennujaamades kui sadamates ehk välismaa potentsiaalne klient võib neid silmata.

**13. How useful the organized local activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

Maksimaalselt ei ole suutnud ka ise seda ära kasutada, kuid usun, et üldiselt on hästi. Kuna liikmeid on palju seal ja kõik on tugevad tegijad, siis on tegemist väga elujõulise asjaga. Tunnustamine ja pildis hoidmine on päris hästi neil õnnestunud.

If not useful, what was lacking? ...

**14. In which cluster's international activities you have been involved in in the past 3 years? Why have you decided to participate?**

Rohkem on koostööd olnud EAS kontaktidega Skandinaavias. Sealt oleme saanud rohkem toetavat jõudu. See on tingitud sellest, et seal on inimesed kohapeal ning rohkem turuga seotud. Kui klastril oleks ka oma inimesed sihtturgudel, siis võiks sellest rohkem abi olla. Aga mingit otsest sellist ei oskagi välja tuua, mis nendega seoses on.

**15. How useful the organized international activities have been for your company and employees? (scale 1-5, 1 not useful at all, 5 extremely useful – mark in bold)**

1.....2.....3.....4.....5

If not useful, what was lacking? ...

**16. How well are the needs and ideas heard and considered in the cluster? (scale 1-5, 1 not considered at all, 5 extremely considered – mark in bold)**

1.....2.....3.....4.....5

Kuna ma ei ole ise seal koosolekutel käinud, kus ettevõtte tegevjuhid käivad, siis ma ei oska sellele tegelikult vastata. Tegevjuht on hästi hõivatud, siis ta andis selle info jagamise minu hoolde, kuid kahjuks ei oska ma vastata.

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### 17. Have you asked any help or guidance from the cluster regarding internationalisation and export?

Yes

No

Information about the target market	Assistance in entering new markets
Contact base for the target market	Sales support in the target market
Legislation etc. in the target market	Marketing and promotion assistance in the target market
Participation in different fairs, expos, trade shows etc.	Other (please specify)

If not, please specify the reasons: Üks ekspordiprogramm oli neil Saksamaale. Me ise Saksamaale ei ole minemas, fookus on endiselt Skandinaavias. Saksamaa tuleb ehk lähima 3-5a plaani ning see võiks olla koht, kus võiks püüda nende abi.

### 18. Has cluster activity helped you to enter new markets? (scale 1-5, 1 not at all, 5 very much – mark in bold)

1.....2.....3.....4.....5

Hetkel me ei ole abi küsinud ega saanud. Kuid võib-olla tulevikus võiks Saksamaa olla see koht, kus me abi saame. Kuna meil endal on Skandinaavias tugev kliendibaas olemas, siis me peame nendega tegelema. Need on kliendid, kes tellivad meilt kogu aeg. Me ei pea otsima iga päev uut klienti.

### 19. Is the cluster implementing enough international activities and providing enough support for entering new markets? (scale 1-5, 1 not at all, 5 more than enough – mark in bold)

1.....2.....3.....4.....5

Alati võiks paremini. Minuni pole väga palju informatsiooni jõudnud, et kuulge lähme nüüd sinna suunda, lähme sinna turule ja teeme koos midagi. Aga ma näen, et nad teevad seda vaikselt. Võib-olla võiks see rohkem teemaks olla.

### 20. What could the cluster offer to its members in addition to its current international activities?

## Appendix 12 continued

EAS teeb ühisstende erinevatel teemamessidel. Kas see on üks teema, mida saaks EASiga koos teha? Samasuguste asjadega jätkata, mis puudutab näiteks ekspordimissioone, mis sihtriigi inimesed kokku kutsub ning kuhu minnakse ühiselt asja tutvustama, oma tegevustest ja asjadest rääkima. Tegelikult on meil vaja seda sõna levitada, et me oleme tugevad tegijad ja soovime sellele turule siseneda. Professionaalsetele seltskondadele esitlemine. Meil pole eraklientide juurde mõtet minna, meie huvi on leida koostööpartnereid, kes meid esindavad ja meie tooteid müüvad. Me suudame seeläbi efektiivsemad olla. Panna enda müügiorganisatsioon kusagile Saksamaale püsti on nii kulukas. Lisaks võiks olla klastril endal konsultandid turgudel nagu EAS konsultandid, kes tunnevad kohalikku olu ning oskavad keelt rääkida.

### **21. What do you expect from the cluster in the coming 3 years?**

Usun, et ekspordile rohkem tähelepanu panna. Klaster võikski rohkem sihtriigi põhiselt tegeleda. Kui vaatame laiemat plaani, siis pole mõtet kõikide Euroopa turgudega tegeleda, vaid vaadata, kus me konkurentsisis oleme. Kui oleme Skandinaavias tugevad, siis tasuks seda trummi edasi lüüa. Mitte vaadata riike, kus me logistiliselt oleme kaugel, kus meie kultuurilised eripärad on ehk liiga suured. Tegeleda just selle asjaga, mis meil tugev on ning seda veelgi tugevdada.