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**SOCIAL ENTERPRISES IN WIND ENERGY PRODUCTION:
CASE STUDY FROM FINNISH RENEWABLE ENERGY INDUSTRY**

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Title

Social Enterprises in Wind Energy Production: Case Study from Finnish Wind Energy Industry

Commissioned by Social Enterprise in Community Renewable Energy**Abstract**

The goal of the present paper is to research social enterprises in the wind energy industry. This study has three major purposes: (1) describing the development of the social enterprise phenomenon in Europe and Finland, (2) clarifying the current situation in the Finnish wind energy market, and (3) with help of primary and secondary research, creating a business model for social enterprise in the wind energy industry.

The thesis was a qualitative practice-based research by nature and it was conducted during the autumn of 2012. The implementation of the thesis consisted of the following stages: (1) writing of literature review and collecting of secondary data, (2) data collection via semi-structured personal interviews, and (3) data analyses and reporting. Ten experts from national social enterprise network and wind energy industry were selected to this investigation. The interviews were recorded and transcribed. The collected data was analysed with the help of Domains of Entrepreneurship Ecosystem and SWOT analysis. One social enterprise from the national wind energy industry was presented as a case study example. Finally, a possible scenario for a social enterprise business model was created by the Business Model Canvas.

On the basis of the results of this research, it can be concluded that social enterprise business model can be utilized in the wind energy industry in Finland. Especially community owned social enterprise could be a particularly effective way to communicate with local landowners and thus reduce resistance against wind turbine projects in Finland.

Language

English

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social economy, social enterprise, social entrepreneurship, renewable energy, wind energy, Domains of Entrepreneurship Ecosystem, Business Model Canvas

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1 INTRODUCTION

The wind energy industry is currently developing rapidly in Finland. In merit to feed-in tariff, various companies have started to invest in wind energy projects starting in 2011. However, as public debate has recently shown, different entry barriers have emerged. Some of them are connected to the resistance of local communities and others to technological limitations.

The concept of social enterprises and social entrepreneurship emerged to publicity a few years ago in Finland. The Ministry of Employment and the Economy and their projects pushed the concept to the surface. This mode of operation is particularly interesting because it aims to do good for society or the environment by utilizing traditional business tools.

The aim of the thesis is to combine these two themes and create a comprehensive outlook on the wind energy industry and social enterprise development in Finland. Lumituuli Ltd., a social enterprise operating in the business field, is presented as a case study example.

An impact of the study topic in the national level is important: social enterprises are still new and unknown concepts in Finland. A limited number of previous researches, articles and theses connected to the study topic have been published in Finland. As far as is known, researches connected to social enterprises in renewable energy have not been published before. Internationally, the study topic is interesting, and previous publications of these themes can be found.

The thesis is commissioned by international Social Enterprises in Community Renewable Energy (SECRE) Project. It is one important part of the EU-funded Northern Periphery Programme (NPP). SECRE aims to develop services that allow social enterprises to apply renewable energy solutions in local economic development. Karelia University of Applied Sciences is the leading partner of SECRE. Other national institutes participating in the project are Metla Forest Institute and Savonia University of Applied Sciences.

2 THE AIM OF THE THESIS

The aim of the thesis is to contribute to the spread of social entrepreneurship in Finland by studying social entrepreneurship theory, interviewing experts with different backgrounds, and based on the results, to create a business model for social enterprises operating in wind energy production.

The theoretical section aims to create a framework with the help of comprehensive source material. The theoretical framework is the basis which can be used to draw conclusions to the development of social entrepreneurship and its role in Europe. The theoretical section examines definitions related to social entrepreneurship and concepts, as well as nuance differences in terms of social enterprises in different European countries.

In addition, concepts related to renewable energy industry will be determinate. The thesis provides an understanding of the industry of renewable energy and its development in Europe. A particular focus is on wind power-related concepts and projects and thus a review of Denmark's wind energy industry has been made.

The research section of the thesis aims to clarify social economy and social enterprise development in Finland, public awareness of the phenomenon and finally the current situation with the Finnish wind energy markets.

The objective of the thesis can be specified by the following research questions:

- How has social economy and social entrepreneurship evolved in Europe and in Finland?
- What is the current situation in wind energy markets in the European Union, and on the other hand how is the national market developing in Finland?
- How could the social enterprise business models be utilized in wind energy projects in Finland, and what matters should be taken into account?

3 BACKGROUND RESEARCH

This paragraph presents a literature review of the key publications and articles which are utilized in the theoretical section of the thesis. In addition, definitions of the terms connected to social entrepreneurship and wind energy are discussed in this paragraph.

3.1 Conceptual starting points and definitions of the terms

Social Enterprise in Finland is often misunderstood and mixed with the term **work integration social firm**. However, for example in the United Kingdom (UK), the term work integration social firm or **social firm** is a more detailed concept than the social enterprises. In the UK, the company called social firm works on the basis of the concept of social enterprise. That is why social firm as business model is just one possible option of social enterprise.¹

In Finland, work integration social firm concept is defined clearly In the Social Enterprise Law 1351/2003. The act came into force in 2004 and it describes requirements for a social firm.² Requirements are, for instance, that more than 30% of employees should be persons with a long unemployment history or people with disabilities. Therefore, the concept of social enterprise is wider than the social firm also because the business goal of social enterprise are not only social, but also other problems or challenges in society can be resolved by business operations. Social enterprises and social firms are parts of the **social economy**, and the concept has been described by the European Commission³.

The corporate form of social enterprise may be any legal corporate form⁴. In some countries special corporate forms to describe social enterprises exist. For instance, a **Community Interest Company** in England is a good example of special corporate form social enterprise. Social enterprise often uses a form of **cooperative**, because these two phenomena have similar values, such as community ownership. However, cooperative is not automatically a social enterprise. A traditional **limited company** is also often used as a form of social enterprise. In wind energy production the forms of **general partnership** and

¹ Demos Helsinki 2010, 25.

² 1351/2003 The Act on Social Firms 2003.

³ Defourny & Nyssens 2012, 2 – 3.

⁴ Houtbeckers 2011, 341.

limited partnership are generally excluded because of the amount of start-up investment needed⁵.

Renewable energy at the European level is well established and it includes solar energy, wind energy, hydro energy, bio energy, geothermal energy, as well as the energy available from the movements of waves and tides⁶. This thesis will focus on **wind energy**, and companies operating in that industry.

The wind energy industry is rapidly developing at the national level, due to the favourable political environment. In order to achieve the European Union's climate and energy strategy goals, the Finnish Government supports the production of wind power by **feed-in tariff**, which is the price guarantee for limited time period for electricity produced from wind power. Feed-in tariffs have led to significant investments in wind power in Finland. During the last year, numbers of new wind energy projects have been started.⁷

3.2 Social entrepreneurship in literature

Social entrepreneurship as a concept is still quite wide and internationally undetermined. The definition of the concept may vary depending on the country or a part of the continent.⁸ For this reason, the theoretical section of the thesis will explore the concept from different perspectives.

This thesis makes use of different Finnish publications. For instance, the Finnish London Institute articles connected to social enterprises. Hänninen, Kostilainen Lilja, Mankki, Merenmies and Pöyhönen⁹ have researched social enterprise concepts in different European countries and this publication creates a varied overview in the development of social enterprises. Also Aaltonen, Henchl, Pecher and Stenholm¹⁰ researched international differences in the social enterprise concept.

⁵ Frände & Koskinen 2011. 18 – 19.

⁶ European Commission – Renewable Energy.

⁷ Ministry of Employment and the Economy 2012, 9.

⁸ Brouard & Larivet 2011, 2.

⁹ Hänninen, Kostilainen Lilja, Mankki, Merenmies and Pöyhönen 2009.

¹⁰ Aaltonen, Henchl, Pecher and Stenholm 2007.

Corporate responsibility is often strongly connected to social enterprises. Halme Mäkinen, Jalas and Joutsenvirta¹¹ have discussed the theme and other important topics in the book. Social Return on Investment has been presented by *Cabinet Offices in the Third Sector*¹². The Finnish approach is discussed by Floman, Malmivirta and Rove in their report¹³, which presents the social enterprise funding model in Finland.

The most utilized work in the international literature is Borzagara and Defourny's book¹⁴, which presents the social enterprises in fifteen different European countries. In published articles, the best definition for the social entrepreneurship is presented by the authors Brouard and Larivet in 2011¹⁵. The article focuses on the definition of the concept of social enterprise in different countries in Europe and North America. The political aspect of social entrepreneurship is discussed by Bland¹⁶ in the publication *Social Enterprise – the solution to the challenges of the 21st century, British model and its experience*. The report is a wide-ranging publication, and it presents social enterprises from different fields, as well as historical development of the business models and political programs in the United Kingdom.

3.3. Wind energy in literature

Much literature and many statistics on the wind power industry can be found, because it is one of the most widely used forms of renewable energy in the world. The European Commission has been supporting renewable energy at the political level, and their publications connected to renewable energy are excellent source of material for this study. Different EU directives are also good source of material. Renewable energy consumption, wind power consumption and electricity production are found in the statistics of the Eurostat databases and from publication titled *Yearly Statics 2008*.

In one of Vaasa University of Applied Sciences projects, wind power has been studied in the publication, *Wind Power Production Business Models and Opportunities*. This work is centred on the exploitation of the cooperative model in the wind energy production. An

¹¹ Halme Mäkinen, Jalas and Joutsenvirta

¹² Cabinet Offices in the Third Sector 2009.

¹³ Floman, Malmivirta and Rove 2011.

¹⁴ Borzagara and Defourny 2001.

¹⁵ Brouard and Larivet 2011.

¹⁶ Bland 2011.

international comparison of the most basic level is also to be found in this study. Awerbuch Krohn and Morthorst (2009) have researched renewable energy trends. The statistical information can be found from this article. *Renewable Energy Policy Network for 21st Century* (2011) has compared renewable energy industry in different countries.

4 SOCIAL ENTERPRISES

This section provides information about the history of social economy. A definition for the term social enterprise is discussed, and the different related concepts related have been introduced. Finally, social enterprise at the national level is presented.

4.1 European approach to social economy

Social economy is often described as businesses that operate between the public and private sectors. Social economy companies consist of cooperatives, mutual enterprises, foundations and associations which have business activities. Historically, social economy has constructed favourable conditions for the growth of business activities and particularly for social enterprises.¹⁷

According to Pättiniemi (2004), the concept of social economy came from France in the beginning of the 19th century. There the new problems of industrial capitalism, such as standoffs between work and capital, affected the development of social economy. Social economy is a part of the for-profit sector and thus it differs from the third sector and the non-profit sector. However, the most important goal in the company's operations is to make social good, and the social economy company uses business as a tool to achieve this social goal. Social enterprises are a part of the social economy, as well as work the integration of social firms, cooperatives and mutual enterprises.¹⁸ Today, the social economy is mentioned in several of the EU's documents and programs. Social economy embodies 2 million enterprises, 10% of all European businesses, and employs over 11 million paid employees.¹⁹

¹⁷ European Commission Social Business Initiative 2011, 1 – 2.

¹⁸ Pättiniemi 2004, 21.

¹⁹ European Commission Social Economy 2012.

4.1.1 Historical development of social enterprise in Europe

Development of social enterprise in Europe started in the early 1990s. The most important examples can be found in Italy, where the Parliament passed a law which created a legal form for social cooperatives in 1991. At the same time the United Kingdom social enterprise concept was greeted positively. The Harvard Business School launched a programme called *the Social Enterprise Initiative* in 1993. Since that the debate has expanded all over the world, many universities have done researches and started training programs connected to social economy. A good example is the European Research Network EMES, which has been doing social economy researches since 1996.²⁰

As mentioned above, social enterprises are often associated with the concept of social economy, which has roots in continental Europe. The concept of social economy has strengthened after it became the official term for the EU in the end of the 1980s. Thus it is a part of the political debate. The social economy is an entity composed of cooperatives, mutual societies, associations, foundations and social enterprises. Those organizations are following common principles: the aim of serving members or the community rather than generating profit, an independent management and democratic decision making process. Social economy organizations are operating between the traditional private for-profit sector and the public sector.²¹

4.1.2 Social enterprise definition

Definition for terms such as **social economy**, **social enterprise**, **social entrepreneurship** and **social entrepreneur** are usually poorly described, and these terms have different meanings depending on the country and language. These definitions are still developing and their meanings are incoherent⁷. For instance, in the United States social enterprises are understood as large private foundations, while in the United Kingdom this term has meaning for projects and organizations, owned and developed by government. On the other hand, in continental Europe, the term means social economy and cooperatives. Due to

²⁰ Borgaza et al. 2001, 2 – 7.

²¹ Borgaza et al. 2001, 11 – 16.

these variations, the terms are often used without a full-understanding of the meaning, probably because they are not yet such exact concepts.²²

However, social enterprises can be defined as businesses operating between private and public sectors in market economy. Social enterprises trade for social and environmental purposes²³. Social enterprise can take a normal company form, and depending on the country it can be also a Limited Liability Company, a cooperative, a foundation, an association or a voluntary organization. In some countries, like in the United Kingdom, special company forms have been established²⁴. Generally, social enterprises have three common characteristics:

- Enterprise orientated: directly involved in the traditional trading business, trades for goods and services and operates with financial risk²⁵,
- Social aims: explicit aims such as job creation, which has a positive environmental or economic impact; following ethical value is more important than profit maximizing²⁶, and
- Social ownership and limited profit distribution: Autonomous organization based on participation of stakeholder groups. Profits are used for the benefit of the community²⁷.

Brouard and Larivet made a research about the meanings of the terms **social enterprise**, **social entrepreneurship** and **social entrepreneur**. The report provides definitions and boundaries of social enterprise in English speaking countries. Figure 1 shows the positions of terms in the field of business. **Government organizations** are state owned firms and agencies, **near-government organizations** are hospitals, universities and colleges. **Non-profit organizations** are often seen as the legal form of social enterprises which have been producing and delivering goods and services in communities. **Hybrid organizations** can have commercial aims and they are operating in both ways: non-profit and for-profit. **Social entrepreneur** is often described as a person, an individual or an innovator who leads a company towards social change. Social entrepreneur or social enterprise can

²² Brouard et al. 2011, 2.

²³ Social Enterprise UK Social Enterprise Explained 2012.

²⁴ Social Enterprise UK Community Interest Company 2012.

²⁵ Hänninen et al. 2009, 13 – 14.

²⁶ Social Enterprise UK 2012.

²⁷ Aaltonen, Heckl, Ingrid, Pecher & Stenholm 2007, 8.

operate in the private sector as well as in the public or non-profit sector. Social enterprises can be defined as a business with primary social goals. Companies reinvested the surplus for the purpose of the business or the community. The company form can be a cooperative, a foundation, as well as a non-profit association or mutual society.²⁸



Figure 1. Social economy, enterprise, entrepreneurship and entrepreneur.²⁹

Brouard et al. have researched the nuances of the term **social enterprise** across the world and made a common definition: “Social enterprises as organizations which pursue social missions or purposes that operate to create community benefit regardless of ownership or legal structure and with various degrees of financial self-sufficiency, innovation and social transformation.”³⁰

4.1.3 Social enterprises in the European Union policy

The EU supports social enterprises as a part of the social economy. Actually, the entire idea of the single market is based on a highly competitive social market economy, which means an open economy area. It creates space for companies driven not only by profit, but also for those driven by social and societal mission. According to the European Commission, public policies at the European level can help ensure this idea of a real single market, where different businesses, including social businesses, are operating.³¹ For instance, support funds from the European Social Fund and the European Regional Development Fund are an important part of social economy and social enterprise

²⁸ Brouard et al. 2011, 5 – 6.

²⁹ Brouard et al. 2011, 6.

³⁰ Brouard et al. 2011, 11.

³¹ European Commission 2011, 7.

development.³² The impact of the social economy is significant in the EU, especially for developing social integration in disadvantaged regions and in the production of personal services. According to the European Commission, social enterprises are divided:

Economic and entrepreneurial nature of initiatives:

- Continuous activity of producing goods and/or selling services
- High degree of autonomy
- Significant level of economic risk
- Minimum amount of paid work³³

Social dimension of the initiatives:

- An initiative launched by a group of citizens
- A decision-making power not based on capital ownership
- A participatory nature, which involves the persons affected by the activity
- Limited profit distribution
- An explicit aim to benefit the community³⁴

Social Business as a term covers an enterprise:

- whose primary objective is to achieve social impact rather than generating profit for owners and shareholders;
- which operates in the market through the production of goods and services in an entrepreneurial and innovative way;
- which uses surpluses mainly to achieve these social goals and
- which is managed by social entrepreneurs in an accountable and transparent way, in particular by involving workers, customers and stakeholders affected by its business activity.³⁵

The European Commission has noted social enterprises in different ways. For instance, the EU directives allow, under certain circumstances, the social enterprise favouritism in public procurement³⁶. The Lisbon Strategy of 2005 – 2008 allows the strengthening of the

³² Suomen Uusyrityskeskus 2012, 24 - 25.

³³ European Commission SMEs – Social Enterprises 2012.

³⁴ European Commission SMEs – Social Enterprises 2012.

³⁵ European Commission – Social Business Initiative.

³⁶ Hänninen et al. 40 – 42.

social economy. According to the European Parliament resolution: “The European Parliament whereas the social economy models should consequently be built on to achieve the aims of economic growth, employability, training and personal services, which permeate all EU policies.”³⁷

Thus social economy, as well as social enterprises, has recognized significance in the EU area³⁸. The European Council’s directive of value added tax allows Member States to authorize the social enterprises to not charge value added tax on goods or services offered for purposes of the public good³⁹. The Member state can support social enterprise with tax reliefs, as long as they are consistent with the Union legislation connection to State Aids⁴⁰.

According to the European Commission, it has adopted a Social Business Initiative action plan as a part of a package of measures entitled “The Responsible Business Initiative”. The Social Business Initiative provides a short-term action plan to stimulate the creation, development and growth of social businesses. As a part of the Social Business Initiative, the Commission is developing a financial tool which removes barriers and will provide easier access to financing for social enterprises. The total value of this Social Initiative is circa 90 million euro, started in the part of Social Change programme in 2010.⁴¹

4.1.4 Social enterprises in legislation

In the EU area, social enterprise is usually described as a business model, and the concept does not have any special legislation. However, in some countries like Sweden, Italy and the United Kingdom, social enterprise has its own legal company form. In Italy social enterprise is described in the Law of Social Enterprises; in the United Kingdom there is a law called the Companies (Audit, Investigations and Community Enterprise) Act 2004, and in Sweden social enterprise is treated in Law of Limited Profit Distribution Corporation.⁴²

³⁷ European Parliament Resolution 2009, 3.

³⁸ European Parliament Social Economy 2009.

³⁹ The Council of European Union 2006.

⁴⁰ Hänninen et. al 2009, 40 – 42.

⁴¹ Hänninen et. al 2009, 40 – 42.

⁴² The Ministry of Employment and The Economy 2011, 31.

4.1.5 Social aims and measurement

As mentioned earlier in the thesis, the primary target of social enterprise is to achieve social aims. The social aim can be selected from various options. Depending on the company's industry, social aim can be for instance: work creation for disabled people, increasing the amount of renewable energy or preventing the marginalization of the youth.

Measuring the social aim or the company operation social impact is an important but sometimes also a complicated question. However, few alternatives have been developed in the recent years, the most famous ones being **social accounting** and **social return on investment**. Social accounting is commonly used in the context of corporate social responsibility and it identifies how well an enterprise is achieving its aims and values.

However, a more useful tool for social enterprises is **social return on investment (SROI)**. It was developed by a group of professionals of the SROI Network in 2006. The SROI is a framework which measures and accounts the value creation of the company. It seeks to reduce inequality and environmental degradation. It also improves the welfare of the company by incorporation for instance of social or environmental costs and the benefits of operations.⁴³

The SROI measurement is divided to two categories: evaluative and forecast. **Evaluative SROI** is calculated afterwards and based on outcomes of operations that already took place. Forecast SROI predicts the amount of social value that will be created if the activities succeed. **Forecast SROIs** are especially useful in the planning stages of an activity.⁴⁴

SROI is a useful tool for evaluating activities and to show the impacts to stakeholders. The analysis method is chosen to each target individually; for the company owner to help the target setting, for the employees to demonstrate the importance of their work and for the stakeholders showing the impact of their investments. According to *A guide to Social Return on Investment*, SROI analysis consists of six stages:

⁴³ Cabinet Offices of The Third Sector 2009, 7.

⁴⁴ Cabinet Offices of The Third Sector 2009, 8.

Stage 1: Establishing scope and identifying stakeholders,
 Stage 2: Mapping outcomes,
 Stage 3: Evidencing outcomes and giving them a value,
 Stage 4: Establishing impact,
 Stage 5: Calculating the SROI, and
 Stage 6: Reporting, using and embedding. ⁴⁵

4.2 Finland – development of social enterprise

Even if social economy is a very important part of the Finnish economy – over 5.4 million people are member of cooperatives ⁴⁶ – social enterprise is still a new concept at the Finnish national level. Social enterprises have existed already for decades, but the concept of social enterprise was only defined few years ago. Finland also lacks behind the European systematic development of the sector and support networks⁴⁷. The first researches, done in 2009 – 2010, evaluated that the number of social enterprises in Finland can be between 5,000 ⁴⁸ to 15,000 enterprises⁴⁹.

A social enterprise and social entrepreneurship became a part of the public and administrative debate just a few years ago. 2010 was the first year that academic researches connected to social enterprise were published massively. During the same year the Social Entrepreneurs' Association of Finland (SYY ry) and the Finnish Social Enterprise Research Network (FinSERN) were established, as well as a research project called *Yhteiskunnallisten Yritysten Living Lab* (translated by author to: Social Enterprises Living Lab).

The Ministry of Employment and the Economy was an active party in the beginning of the first wave of social enterprises. The starting point was the Welfare project called *Hyvä* in 2009 – 2011. The Ministry's first publication connected to social economy was titled

⁴⁵ Cabinet Offices of The Third Sector 2009, 9 – 10.

⁴⁶ Yhdessä Yrittämään, 2012.

⁴⁷ Suomen Uusyrityskeskus 2012, 24 – 25.

⁴⁸ Karjalainen & Syrjänen 2009, 4 – 6.

⁴⁹ The Ministry of Employment and The Economy 2011, 26.

Social Enterprise Solutions for 21st Century Challenges, The UK Model of Social Enterprise and Experience by Jonathan Bland was published in 2010⁵⁰.

The Ministry's next research project connected to social economy and social enterprises was the project called *Yhteiskunnallisen Yrityksen Toimintamallia Valmistellut Työryhmä* (YTYRI). The main target was to define the social enterprise business concept and distinguish it from the term *corporate social responsible*. YTYRI team researched social enterprise concept during a half-year period from 2010 to 2011 and published articles and researches, for instance *Yhteiskunnallisen Yrityksen toimintamallin kehittäminen*.⁵¹

Based on the YTYRI team work, the Ministry of Employment and the Economy issued a mandate to the Association of Finnish Work to start granting *Yhteiskunnallisen Yrityksen Merkki* (translated by author to: the Social Enterprise Certificate). Since late 2011 the Association has granted the Certificate for social enterprises. During the same year the first conference for social innovators – Onnistamo 2011 – was organized in Helsinki⁵². The conference took place in 2012 and it will be organized the next time in the beginning of 2013. The International Social Enterprise in Community Renewable energy project also started in late 2011.⁵³

The United Nations' International year of Cooperatives was 2012. Social economy has been one of the primary targets of that year's events⁵⁴. Tampere Region Co-operative Centre's *Yhdessä Yrittämään!* (translated by author to: Common Entrepreneurs) –project has organized education in topics such as cooperative models and social economy for business advisors and other professionals in the public sector⁵⁵.

The Association of Finnish Work organized events called *Yhteiskunnallisen Yrityksen Superpäivä* (translated by author to: Super Day of Social Enterprise) in different cities in Finland. Administrative development of social enterprises has slowed down; the main reasons for this are the new officials in different institutes who are not interested in encouraging social entrepreneurship in national level. The economic situation has affected

⁵⁰ Bland 2010.

⁵¹ The Ministry of Employment and The Economy 2011.

⁵² Onnistamo 2011.

⁵³ Social Enterprise in Community Renewable Energy.

⁵⁴ Onnistamo 2012.

⁵⁵ Tampere Region Cooperative Center.

the development, for instance, a new Fund Model for Social Enterprises by SITRA and EERA has been postponed and is waiting for a better economic situation⁵⁶.

4.2.1 The legal position and legislation

In contrast to the United Kingdom or Italy, the national legislation does not accept social enterprise as a company form in Finland. The Social Enterprise Act (1351/2003) covers work integration social firms, which employ disabled or long-term unemployed people. A company gets the work integration social firm status, when more than 30% of staff fulfils the criteria of the Act. For compensation, Finnish society grants salary subsidies for social firms, as illustrated in subsection 3.1.⁵⁷

However, the work integration social firm is just one part of social economy and thus the Social Firm Act does not cover the entire social economy. As mentioned above, the legal status of a social enterprise as a company form does not exist in Finland. This means that the company form of social enterprise can be any legal corporate form like Limited Company (*osakeyhtiö*), Cooperative (*osuuskunta*), Mutual enterprise (*keskinäinen yhtiö*) or Foundation (*säätiö*). Social enterprise can be identified to be based on the company rules: the social mission and notification of limited profit distribution should be printed in the rules of the company⁵⁸.

4.2.2 Social Enterprise Certificate

Although the role of a social enterprise in Finland is still not legally defined, social enterprise can be determined according to the basis of different criteria, for instance criteria of the Social Enterprise Certificate. Criteria are based on reports and background researches of the Ministry of Employment and Economy's YTYRI group of experts, as mentioned above.

⁵⁶ Floman, Malmivirta & Rove 2011.

⁵⁷ 1351/2003 The Act of Social Firms.

⁵⁸ The Association of Finnish Work 2012.

Since late 2011, about thirty companies have been awarded with the Social Enterprise Certificate in Finland. The certificate is granted by the Association of Finnish Work. According to certificate rules, social enterprise has to fulfil the following priority criteria:

- The primary goal and purpose of the business is to create social good. Social Enterprise operates in a responsible manner.
- Limited profit distribution. Social enterprise uses the biggest part of the operation profit for social purposes described in the business plan.
- Openness and transparency of the business. To ensure transparency, the applicant has to add the social objective and limited profit distribution to the rules of the company and other official documents.⁵⁹

The Association of Finnish Work evaluates social enterprises based on criteria. If a company meets criteria, the association grants the Social enterprise certificate. It is a fixed-term for three years and requires continuous reporting and controlling. Applying for the certificate requires membership of the association, and the costs depend on the turnover of the company.⁶⁰

4.2.3 Social enterprises and financial support

One tricky question, at the national level, is the social entrepreneurs' access to capital and what is the attitude of investors towards social enterprises. First of all, social enterprises do not have any special support trusts or mechanisms in Finland. That is because this kind of support mechanism can be against the free competition of the EU. Another important aspect is the investors' attitude. The social enterprise concept is a newfangled way of entrepreneurship, and that is why investors are not familiar with the idea of social responsible investment⁶¹. Anyhow, Finland's Sustainable Investment Forum⁶² is actively working with the idea of social responsible investment and new projects such as Pankki 2.0 (translated by author to: Bank 2.0)⁶³ for instance can change the investors' attitudes in the future. The third solution could be micro loans or crowd funding. The latter is

⁵⁹ The Association of Finnish Work 2012.

⁶⁰ The Association of Finnish Work 2012.

⁶¹ Sorsa 2011, 323 – 324.

⁶² Finland's Sustainable Investment Forum.

⁶³ Pankki 2.0 – Rakennamme Suomeen Eettistä pankkitoimintaa.

unfortunately banned because of the Act of Money Collection, and that is why the situation of crowd funding is complicated in Finland⁶⁴.

5 INDUSTRY REVIEW

This section provides a short overview of the European Energy Industry. The Categories are general energy statistics in Europe, industry review in Denmark and industry review in Finland.

5.1 Key figures in European Union

This chapter presents a current situation of the energy sector in the EU. The aim of this chapter is to provide general information and statistics connected to energy production, energy consumption, the renewable energy industry and finally the wind energy industry in the EU. All accessed data is collected from Eurostat databases. The most important indicator is the primary production of energy. This variable has been chosen because it provides detailed information about renewable energy industry by energy source. It is the best variable to show how the energy industry is organized in the EU.

5.1.1 General energy statistics

The EU uses approximately 1.769 Million tons of oil equivalents (Mtoe) of energy per year. This indicator is called **gross inland consumption of primary energy**. Primary energy production in the EU area was 831 Mtoe and net energy imports 953 Mtoe in 2010.⁶⁵ This means that the EU produces about 47% of its energy needs itself⁶⁶. Especially crude oil and feedstock products are imported from outside the EU, mainly from Norway, Russia, Libya and Saudi-Arabia⁶⁷.

⁶⁴ Suomen Kuvalehti - Joukkorahoitus kompastui Suomessa.

⁶⁵ Eurostat Energy Statistics.

⁶⁶ European Commission Market Observatory of Energy 2012.

⁶⁷ Eurostat Yearly Statistics 2011, 25 – 27.

Figure 2 shows the development of primary energy production in the EU. As can be seen in the figure, energy production has been decreased since 2004. Total primary energy production was 830,868 thousand tons of oil equivalent in 2010. The share of renewals has increased by almost 50% during the observation period from 92,681 to 166,647 thousand tons of oil equivalent. European energy policy targets for 2020 ensure positive development in the future⁶⁸.

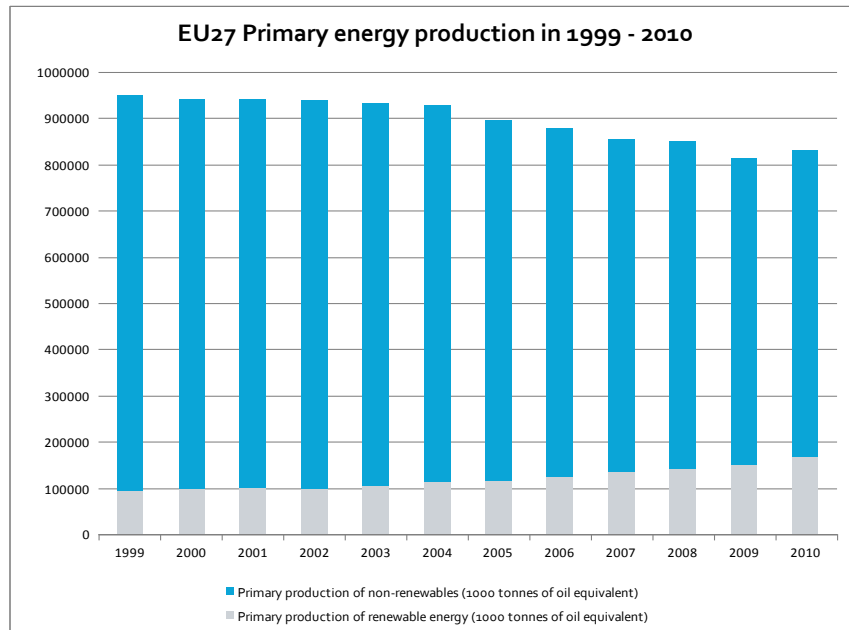


Figure 2. Development of primary energy production.⁶⁹

Following figure 3 presents the five largest producers of primary energy in the EU. The amount of produced energy is divided to renewable and non-renewable energy. These five countries produce more than 66% of the total primary energy and about 41% of the renewable energy in the EU.

The United Kingdom, the oldest industrialized country in the World, is in first place. Renewables are heavily supported by a green certificate system and they are an important part of the climate change strategy⁷⁰.

France is globally well-known as one of the nuclear power countries. It produces more than 70% of its electricity with nuclear energy⁷¹. The EU policy development drives

⁶⁸ The Ministry of Employment and The Economy 2012, 9.

⁶⁹ Source of data: Eurostat.

⁷⁰ Chadim, Coenraads, Held, Klebmann, Konstantinaviciute, Reece, Resch & Panzer 2008, 162 – 163.

through renewable energy, and renewables already play an important role in primary energy production.

Germany is in the third place of primary energy production and it is nominally the biggest renewable energy producer in Europe. The main reason for positive development of renewable energy industry is the German Renewable Energy Act, which includes political incentives, for instance, feed-in tariffs for hydro, biofuel and wind energy⁷². As a result, Germany produces almost 25% of its primary energy by utilizing renewable energy sources.

The Netherlands is in the fourth place of primary energy production and its markets of renewable energy have been supported, for example, by feed-in tariffs. The amount of feed-in tariff in Netherland is 63 euro per megawatt hour (MWh) to on-shore and 82 euro per MWh to off-shore wind turbines. As a result, a large increase of renewable energy consumption has been noticed.⁷³

The energy sector of Poland is dominated by both the hard coal and lignite industries. Poland's RES Directive target is to increase the amount of renewable consumption by 15% by the end of 2020. Hydropower and biomass are currently the main sources of renewable energy in Poland.⁷⁴

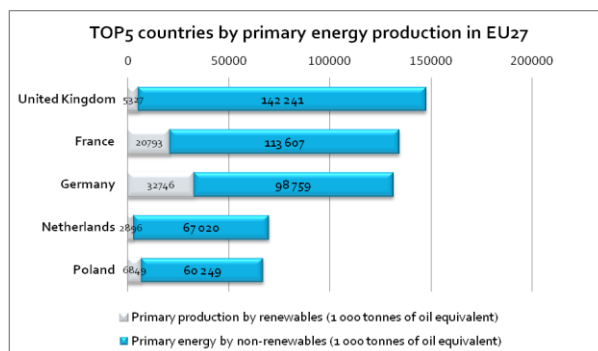


Figure 3. Primary energy production in selected European countries.⁷⁵

⁷¹ Spero News 2012.

⁷² Chadim et al. 2008, 59 – 60.

⁷³ Chadim et al. 2008, 109 – 110.

⁷⁴ Chadim et al. 2008, 114.

⁷⁵ Source of data: Eurostat.

5.1.2 Renewable energy statistics

Renewable energy market in Europe is increasing because of *the European Union Directive on the promotion of the use of energy from renewable sources and amending and subsequently repealing 2009/28/EC* (RES-directive) has come to force. RES directive entered into force in June 2009 and it obliges member countries to increase renewable energy share. Thus the average share in EU27 will be 20% from final energy consumption in 2020. When compared to renewable energy consumption in 2005, the average increase will be 11.5% in the EU area.⁷⁶

This thesis will focus on a national renewable energy market and that is why the most interesting data will be the primary energy production. Figure 4 shows the amount of renewable energy of primary energy production. When considering the primary production of energy in the EU27, it can be detected that the share of renewable is already 20%. This is explained by the measurement difference between the terms primary energy production and final energy consumption. Primary energy production does not take into account energy import from other countries; it is the amount of energy produced in the country. Thus energy imports will decrease the share of renewables in the final energy consumption in the EU area. The increasing share of renewables in imported energy, as well as increasing the own renewable energy production are important for achieving energy policy targets.

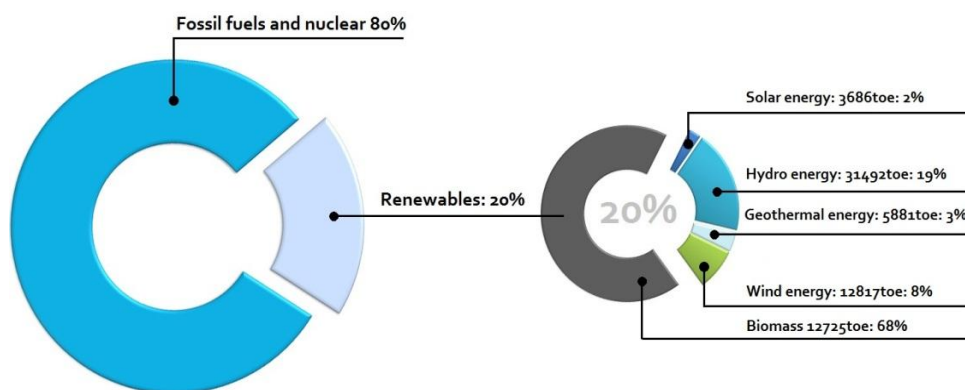


Figure 4. Renewable energy share of primary energy production in the EU27.⁷⁷

The EU and its member countries can achieve the RES directive targets by two ways: for buying more renewable energy from outside of the EU or increasing renewable energy

⁷⁶ Directive 2009/28/EC

⁷⁷ Source of data: Eurostat.

production. Actually both are used simultaneously, but the focus point should be on increasing amount of own production. That will bring about positive economic development to the EU area by increasing the number of jobs and investments in new technology.

The figure attached in Appendix 1 shows the share of renewable energy from primary energy production by country in Europe. Renewable energy is a very important source of energy in countries like Austria, Finland, Italy, Latvia, Lithuania, Portugal and Sweden. This means an excellent utilization of renewables in homeland production. However, all countries are also importing a lot of energy from foreign countries. Thus the share of renewables of final energy consumption is smaller.

5.1.3 Wind energy statistics

Particularly in countries with a limited amount of forest and fields, wind energy is one very important source of energy. Wind energy has played a significant role in renewable energy production in Denmark, Spain and Ireland, where more than 20% of renewable energy is produced by wind power.⁷⁸

Figure 5 shows four different indicators from European wind energy markets. First of all, countries are divided into six categories depending on installed capacity of wind turbines. Countries are marked by different colours. Secondly, the numbers on selected countries show: the first number is the total of wind turbines, the second number installed wind turbines in and the third number the increase or decrease percentage of installed capacity. All data presented is gathered from 2011. As showed in Figure 6, the biggest countries in term of production capacity (MW) are Germany and Spain. The number of wind turbines is also the biggest in those two counties. A rapid increase in the number of turbines is taking place in Norway (+20%), Ireland (+20%) and Sweden (+%). In some countries, e.g. Denmark and Switzerland, the number of turbines is decreasing. This means decreasing in replacement investments.

⁷⁸ Eurostat Energy Statistic 2011.

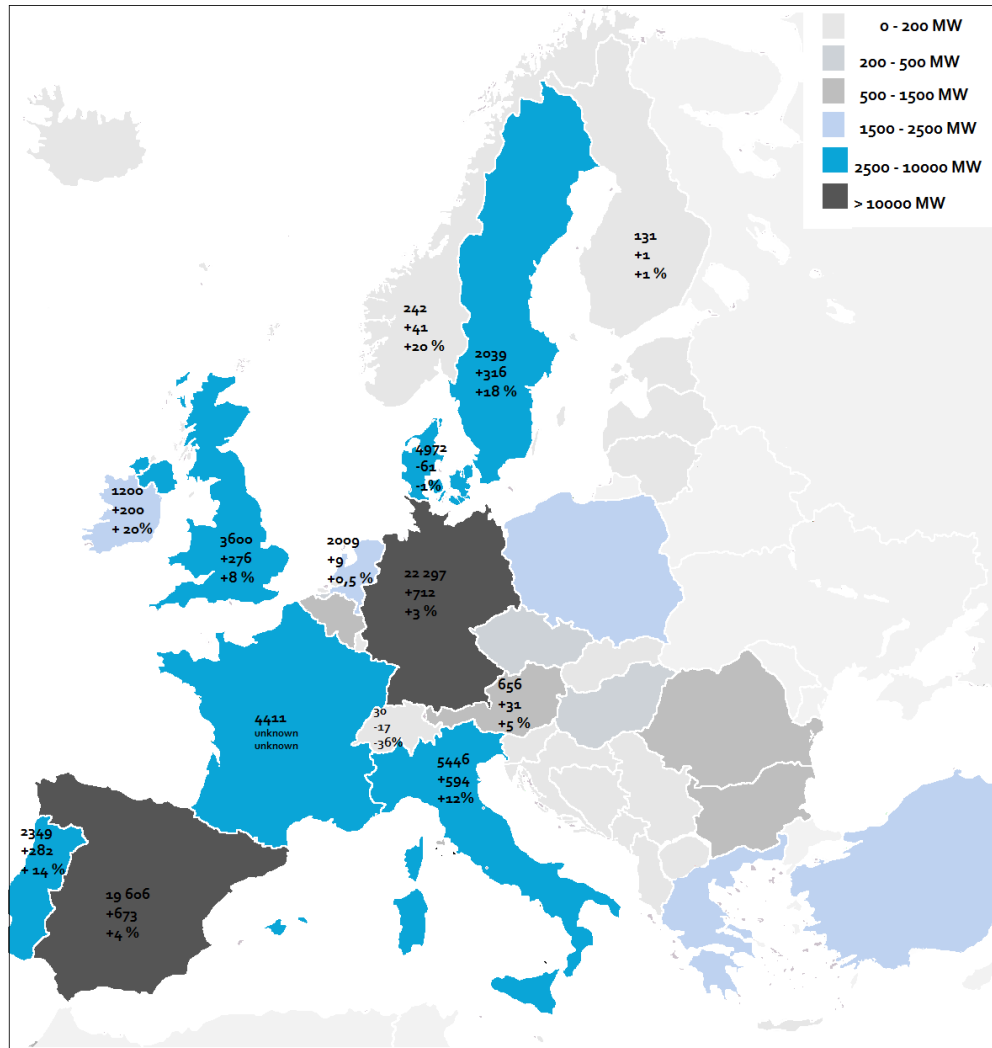


Figure 5. Installed wind turbine capacity in Europe.⁷⁹

5.2 Denmark as an example of wind energy development

Denmark geographically belongs to Scandinavia and it is the smallest Nordic country, with a land area of only 43,094 square meters. Denmark is a flat country with its the highest point at 170 meters above sea level. The average wind speed is 7.6 meters per second and that is why the land has good positions for the wind energy industry⁸⁰. Nowadays, Denmark produces over 25% of its electricity by wind power and the national target is 50% in 2020. According to the Danish Minister for Climate, Energy and Building, Martin Lidegaard, the Danish government aims to produce all energy by renewables by 2050⁸¹.

⁷⁹ Source of data: IEA Wind 2011 & Eurostat.

⁸⁰ The Official Website of Denmark 2012.

⁸¹ Winning with Wind 2012, 2 – 3.

5.2.1 Wind industry history

Historically Denmark is valued as a pioneer country in wind electricity development. The most important person behind this is Poul Ia Cour (1846-1908), who was the first innovator of modern wind turbines⁸². He tested his first wind turbine for electricity generation in 1887. In 1905 Ia Cour founded the Society of Wind Electrician and started to publish the magazine called The Journal of Wind Electricity, which was the world's first magazine connected to wind energy⁸³.

The most important factor in the positive development has been the regulated favourable feed-in tariff for electricity from renewables, including wind. As a result, the number of employees in the wind energy industry was 24,700 at the end of 2009. The annual growth rate during the period from the year 1999 to 2009 was approximately 15%. The wind industry accounts for more than 70% of total energy technology export in Denmark. The value of export in 2009 was about 5.59 billion euro⁸⁴.

5.2.2 Wind power capacity and energy cluster

As presented previously in Figure 5, almost 5,000 wind turbines are located in Denmark, with a total capacity of 3,871 Megawatt (MW) in the end of 2011⁸⁵. The national target of offshore turbine capacity is 1,020 MW by the end of 2012⁸⁶. The Danish Governments' Action Plan for Energy describes that the target for offshore wind is 4,000 MW in 2030. The wind power will produce more than 50% of the total electricity consumption⁸⁷.

Around 80% of Danish wind turbine capacity is owned by individuals and cooperatives⁸⁸. New innovations and technological development by Danish companies has led to a strong national wind energy cluster. For instance, Vestas Wind Systems is the global leader in the wind turbine manufacturing industry with a market share of about 14% and a turnover of

⁸² Meyr 2004, 1.

⁸³ Danish Wind Energy Association 2012.

⁸⁴ Danish Wind Industry Annual Statistics 2010, 6 – 7.

⁸⁵ Dragan, Moccla & Wilkes 2012, 4.

⁸⁶ Renewable Energy Policy Network for the 21st Century 2011, 77.

⁸⁷ Renewable Energy Policy Network for the 21st Century 2011, 58 – 59.

⁸⁸ Danish Wind Energy Association 2012.

about 6.9 billion euro in 2010⁸⁹. Another globally important Danish manufacturer is Siemens, which has a 5.7% market share⁹⁰. However, the global economy crises have affected the Danish wind energy cluster; for instance Vestas will terminate thousands of employment places during the next few years⁹¹. The Danish Wind Energy Association has more than 240 industrial members and is responsible for ensuring the compliance of the industry⁹².

5.2.3 Social enterprises and social economy as a part of wind energy industry

According to Hänninen (2009), the social enterprises concept is a synonym for the term *social economy* in Denmark. Social economy or social business means privately or communally owned companies or other organizations and entities that have a social or community objective and investing profits of that goal. Social enterprises and social economy organizations are generally classified into four main categories, based on their activities:

- voluntary organizations, which offer support in crisis centres and women's shelters or second hand stores of churches,
- cooperatives and companies with democratic decision-making. These companies operate in the fields of banking, insurance, retail or agricultural production,
- organizations, which offer education or preparation for working life for customers, who have a long history of unemployment, and
- projects, which support local regional or suburban area development in co-operation with the public-, private- and third sectors.⁹³

The EMES Research Network has researched Danish social enterprises in 2004. According to the research, the percentages of the legal forms of businesses were: a registered organization (15%), foundations (31%), limited liability companies (8%), and self-sufficient institutions (46%). The result reflects the public and the third sector domination of social enterprises in action. The social enterprise strategy was published in January

⁸⁹ Vestas Wind Systems.

⁹⁰ Renewable Energy Policy Network for the 21st Century 2011, 58.

⁹¹ Kauppalehti 7.11.2012.

⁹² Danish Wind Energy Association 2012.

⁹³ Hänninen et al. 2009, 40 – 42.

2010. According to that, each year 500 to 600 new social enterprises are established. Currently more than 45,000 companies are calculated to be a part of social economy. That is about 16% of all businesses.⁹⁴

Social economy, in the field of wind energy, is being exploited quite diversely in Denmark. In wind energy production, a social enterprise company form is often cooperative. The cooperative owns one or more wind turbines. For instance, a cooperative called Middelgrund owns a 40MW offshore wind park near Copenhagen. In 2004, with 8,500 members, Middelgrund was the biggest wind cooperative in the World.⁹⁵

Cooperation as a corporate form has long traditions in Denmark and it is very popular especially in the wind energy industry. According to van Est (1999) old traditions are important aspects and that explains the popularity of the cooperative model in Denmark. He also mentioned that local citizens can step into the shoes of the wind corporate better, when they own one share from the cooperative.⁹⁶

Cooperative tradition plays an important role in Denmark, and in 2009 a law that requires each new wind energy company to sell at least 20% of shares to local residents, came into force. Thus the cooperative is usually owned by local residents, farmers and small businesses. Residents benefit from cooperative activities. This is not only because of the cheaper price of electricity, but also because it helps the positive regional development of the community. Another option would be to sell all produced energy to a local energy company and thus get revenue from shares. The cooperative pays interest to share capital.⁹⁷

5.3 Wind energy industry in Finland

According to Kuuva (2012) from Finnish Ministry of Employment and the Economy:

The government is making major investments in the promotion of renewable energy. It has reserved 115 million euro for subsidising feed-in tariffs next year, under the feed-in tariff system implemented in 2011. In addition, EUR 50 million a year is being granted

⁹⁴ Hänninen et al. 2009, 40 – 42.

⁹⁵ Palmroth 2004, 138 – 140.

⁹⁶ Van Est 1999, 139 – 140.

⁹⁷ DTI 2005, 7 – 9.

in support of renewable energy sources and for improving energy efficiency. For next year, a separate amount of 100 million euro has been reserved for traffic biofuel refinery investments. Preparation of a new energy support programme for 2013–2017 has begun.⁹⁸

5.3.1 Current situation of the market

Prices in the energy construction market have stayed the same over the last few years; this is likely caused by the global recession. Construction costs, prices of different metals and prices of power plant components have remained at the same level and price changes have been moderate.⁹⁹

Investment costs of wind turbines have been decreasing during the last decades in Finland. In the beginning of 1990s, the investment cost was around 2,000 – 2,500 euro per kilowatt (€/kW), but the current level is 1,500 euro per kilowatt¹⁰⁰. That is still slightly more than the average European level. In Finland, the level of investment cost varies depending on the geographical location. For instance, an estimated level for the coastal area is 1,360 €/kW and for off-shore projects 1,930 €/kW. The cost level continues decreasing when the price of 50MW wind farm will be approximately 60 million euro in 2020. At that time the number is expected to be 1,240 €/kW.¹⁰¹

5.3.2 Impact on national economy

As a part of renewable energy, the wind energy industry is one of the key industries to achieve the EU's energy policy targets by 2020. As mentioned earlier in Figure 5, there are 131 wind turbines, with total capacity of 197 MW, in Finland. The Finnish government's long-term climate and energy strategy aims to achieve 2,500 MW of wind energy production by the end of 2020¹⁰². However, the total number of the new wind power projects under development is actually almost four times more than the target, as can be seen in Figure 6.

⁹⁸ Kuuva 2012.

⁹⁹ Kivistö, Vakkilainen & Tarjarinne 2012, 6.

¹⁰⁰ Kivistö et al. 2012, 7.

¹⁰¹ Vaasa Energy Institute 2012.

¹⁰² Sinervä 2012, 4 – 5.

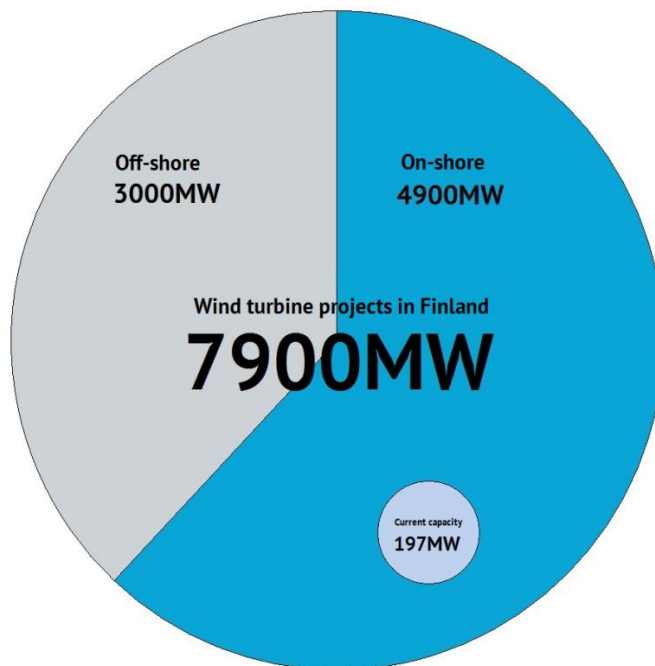


Figure 6. The current situation with wind energy projects by megawatts in Finland.¹⁰³

5.3.3 Feed-in tariff and the regional land use plan

Feed-in tariff (FIT) is a political mechanism that could have a rapid impact on advancing renewable energy production. In a nutshell, FIT is a premium price guarantee, for some period of time for a renewable energy producer, provided by the government¹⁰⁴. Usually feed-in tariffs are implemented when a government chooses to develop the renewable energy sector. In Finland, FIT can be granted for companies under special conditions: if the project is new and the company has not received state aid, and if the total power of turbine or turbines is at least 500 kilowatts.¹⁰⁵

FIT is the key tool for increasing the level of investments in wind energy in Finland. Since 2011, FIT has been the main reason for foreign investors to start implementing wind energy projects¹⁰⁶. The current situation in the wind energy market shows a significant rise in investments: there are almost 200 new projects going on in total. As a result, if every

¹⁰³ Source of data: Finnish Wind Energy Association and Kauppalehti 22.5.2012.

¹⁰⁴ Peters & Weis 2008, 1 – 4.

¹⁰⁵ 1396/2010 Act of Production Support for Renewable Energy Electricity.

¹⁰⁶ Sinervä 2012, 4 – 5.

project will be successfully accomplished, about 8,000 MW of wind energy will be constructed¹⁰⁷.

The total value of national wind energy business will be approximately 4 billion euro in 2020¹⁰⁸. This means huge investments in new projects and implementation during the next few years. If it would be assumed that the investments are spread evenly during this period, the total investment per year is 500 million euro. The last financial crisis in 2007 has been cooling off the economy all over the world¹⁰⁹. In this context, massive investments into a historically under-developed industry can create positive growth in economy.

An important process which encourages the successful implementation of wind energy projects is called **the regional land use plan**. The regional land use plan is currently under construction and it shows the windiest places in each region in Finland. The regional land use plan is based on the Finnish *Tuuliatlas* information about places with good wind conditions. The Ministry of the Environment published a summary about the regional master plan and according to that in total of 289 areas are suitable for wind power production. These areas could contribute to wind power capacity for about 12,600 MW¹¹⁰. However, the regional land use plan does not guarantee project permission, but each project will be evaluated as a whole in the building of permission process. In some regions, such as in Leppävirta in Eastern Savonia, **the local master plan** shows places for turbines and it is implemented simultaneously with the regional land use plan. If a turbine project will be implemented, it will create new jobs and speed up investments in the rural regions in Finland.¹¹¹

5.3.4 The fixed support system for renewable energy

Where a feed in tariff system supports new projects, the fixed support system for renewable energy can be granted for already existing projects. A law of production supports the electricity produced with renewable energy. This law came into force in 2011. A company can access the support if it has not received any state aid, if the turbine or

¹⁰⁷ Paakkari & Pitkänen 2012, 4 – 5.

¹⁰⁸ Ruohonen 2012, 10 – 11.

¹⁰⁹ Taloussanomat 2011.

¹¹⁰ The Ministry of Environment 2011, 1 – 2.

¹¹¹ Pohjois-Karjalan Maakuntaliitto 2012, 47 – 48.

turbines are new, if they do not include second-hand parts and if the total power of generators is at least 500 kilovolt-amperes. The fixed support is intended for companies which do not have access to feed-in tariff or have not previously participated to the support system.¹¹²

5.3.5 Market entry barriers

The biggest entry barrier is found unexpectedly from the Finnish Defence Forces: some radars are in such poor condition that they are setting limits for wind park locations. The poorest situation is in the coastal areas, where there are projects with a total value of over million euro stuck and, at least temporarily, not moving forward. That is because of a negative statement by the Finnish Defence Forces during the wind park permission process.¹¹³ In a nutshell, a radar system usually operates based on collected information from three radars. However, the Finnish Defence Forces do not have enough money to repair all radars; because of this in some areas there are only two radars currently operating. Thus a wind park can create dead spots on a radar system, and therefore a building permit cannot be granted.¹¹⁴

According to Minister Tarasti, other serious barriers to entry to the wind energy market are legislation and barriers connected to the government. A wind turbine permit procedure is rather long, but not necessarily longer than in other similar industrial projects in Finland. The environmental impact (YVA) procedure is carried out if the number of individual wind turbines is at least 10, or the total power of generators is 30 MW or more. If there is the possibility for significant adverse environmental impacts in smaller cases, the Centre for Economic Development, Transport and the Environment (ELY) can decide that the project's environment impact must be assessed with the help of the YVA-procedure.¹¹⁵

Other barriers which can affect the implementation of wind turbine project are local acceptability, air traffic barriers, the noise from turbines, roads and lanes near the wind park and wind turbines' effects on birds. These are taken into account in the building permit procedure or in the YVA-procedure, and any of these can lead to the cancellation of

¹¹² 1396/2010 Act of Production Support for Renewable Energy Electricity.

¹¹³ Yle Uutiset 17.10.2012.

¹¹⁴ Tekniikka & Talous 9.11.2012.

¹¹⁵ Tarasti 2012, 4 – 14.

a project. For instance, local acceptability has to be based on the approval of the local municipality. It is important that the wind turbine project is discussed in the municipal council.¹¹⁶ According to Tarasti, factors affecting the local adaptation are as follows:

- appropriately selected location of a wind park area
- information about the project from the beginning
- participation of local residents in the project planning
- transparent procedure for implementation of the project and economic factors.

Local approval is rarely unanimous, but there has to be a general acceptance of the construction of wind power in the municipality. If a company does not communicate with local residents, the resistance by a local community can negatively affect the implementation of a wind energy project. An example of this can be seen in Posio.¹¹⁷ Minister Tarasti's group of experts is currently working and its goal is to remove some of the entry barriers.¹¹⁸

6 INVESTING ON WIND TURBINE PROJECT

The wind energy industry is a capital intensive business, which means that the initial investment is large and requires a lot of capital to start the energy production. One of the significant benefits of wind power is that the fuel is free, so the prices of coal, oil or gas do not affect the cost of wind energy production. A wind turbine's lifetime is somewhere around 20 – 30 years, depending on climate and installation location.¹¹⁹

The first investments in the new project are usually made without total guarantee about project implementation. For instance, permit application preparation can cost a lot of money, and the author can still withhold the building permit. However, an investment to wind energy can be profitable, and a required investment level is reasonable when compared to e.g. nuclear energy. A wind turbine's production costs are also less than those

¹¹⁶ Tarasti 2012, 13

¹¹⁷ Yle Uutiset 12.12.2012

¹¹⁸ Tarasti 2012, 24 – 26.

¹¹⁹ Awerbuch, Krohn & Morthorst 2009, 24 – 28.

of nuclear power: for example when calculating 8,000 hours of full load operating time, the production cost of a nuclear power is 57.9 euro per MWh and with 2,200 hours of full load operating time cost an on-shore wind park is 52.7 euro per MWh¹²⁰.

6.1 Project permits in Finland

The new modified version of the Finnish Land Use and Building Act came into force in 2011. It specifies all needed permits for wind energy projects. Its aim is to clarify the land use and construction related provisions in such a way that the wind turbine projects can get the building permit based on the master plan. Wind turbines always need a building permit or an operation permit, the latter mainly for small private household wind turbines. In addition, wind power may also draw up the question of an environmental permit and a water permit, when the turbine is located on a lake or at sea¹²¹. Permission bureaucracy is complicated and takes a long time. Actually the Finnish procedure is the most complicated of all European countries, because of multilevel decision making in the government offices¹²².

6.2 Division of investment

According to Krohn et al. approximately 75% of the total cost of energy for a wind turbine is related to upfront costs such as the cost of the turbine, foundation, electrical equipment and grid-connection. Table 1 shows a division of costs in typical on-shore wind turbine project in Europe. Total investment is 2,456,000 euro per 2 megawatt turbine. A typical wind park contains more than 5 turbines, so the total investment can be more than 10 million euro.¹²³

¹²⁰ Kivistö et al. 2012, 28.

¹²¹ Paakkari et al. 2012, 4 – 5.

¹²² Sinervä 2012, 4 – 5.

¹²³ Awerbuch et al. 2009, 8 – 9.

Table 1. Division of costs of typical 2 MW on-shore turbine in Europe.¹²⁴

Component	Investment (€ / kW)	Share in total investment
Wind turbine	928	75,6 %
Grid connection	109	8,9 %
Foundation	80	6,5 %
Land rent	48	3,9 %
Electric installations	18	1,5 %
Consultancy	15	1,2 %
Financial costs	15	1,2 %
Road constructions	11	0,9 %
Control systems	4	0,3 %
Totally	1228	100,0 %

6.3 Project management and administration costs

The project planning period can be quite long: from three to seven years including the permit process. However, this period can be even longer, up to ten years¹²⁵. Thus the most significant costs during this period are the salary costs of employees, permit costs and organizing public events. Investments do not depend on the capacity of the wind turbine or on the number of the turbines: actually planning a small project can take almost the same amount of resources as planning of a big one.¹²⁶

6.4 Construction and logistics costs

Construction costs vary depending on the location of the wind park. The biggest costs are the road construction, 200,000 – 300,000 euro per kilometre and the grid-connection, usually 150,000 – 250,000 euro per kilometre, but the amount can be over 400,000 euro per kilometre, if the wind park is wide. Foundation costs are typically about 6% of total investment depending on the structure of soil. Logistic costs are impossible to estimate, because they depend on quantity of turbines and the distance between the nearest harbour and the wind park.¹²⁷

¹²⁴ Awerbuch et al. 2009, 9.

¹²⁵ Sumituuli Ltd. FAQ.

¹²⁶ Vaasa Energy Institute 2012.

¹²⁷ Vaasa Energy Institute 2012.

6.5 Land rent

Land rent is usually the most significant cost during the wind park life cycle. Rent can be between 15-20% of the operation costs. A company rents a wide area of land for wind turbines. Normally a turbine needs 400 to 600 meters space around it, so this area has to be rented also for the company¹²⁸. Land rent is a current topic in public debate, and for instance The Central Union of Agricultural Producers and Forest Owners in Finland requires that the annual rent must to be divided equally amongst land owners, based on the surface area¹²⁹. The same conclusions were made in the publication of Minister Lauri Tarasti, where he had surveyed the tools of wind project development in Finland. Some companies have started to follow these requirements: Voimavapriiki Ltd. and Voimamyly Ltd. have decided to pay compensation to the neighbouring landowners in their wind park areas¹³⁰.

6.6. Operation and maintenance costs during the project life cycle

Some of the operation and maintenance costs can be easily estimated in advance. For instance, insurance and regular maintenance costs can be covered with a standard contract for the wind park's total lifetime. However, the costs connected to repairs and the needed spare parts are more difficult to predict. Costs are typically rising during the turbine lifetime. Based on experiences in Germany, Spain, the UK and Denmark, O&M costs are generally estimated to be around 12 to 15 euro per MWh. About 40% of that is split equally between insurance, land rent and overheads.¹³¹

6.7 Profitability calculations

The profitability of wind power project is consists of the investment cost, as well as the following three main components:

¹²⁸ Vaasa Energy Institute 2012.

¹²⁹ Maaseudun Tulevaisuus 14.5.2012.

¹³⁰ Voimapriikki & Voimamyly 2012, 1 – 2.

¹³¹ Awerbuch et al. 2009.

- Average operating costs during a wind turbine's life cycle
- Annual depreciation
- The requirement for return on investment (usually from 5 to 10%)

Costs during a turbine life cycle have to be taken into account. Estimated operation expenses are 10 – 15 euros per MWh during the first years. A wind turbine's economically sound using time is approximately 20 years. After ten to twelve years, expenses increase as the warranty expires. When taking into account inflation, the average lifetime expenses may be formed closer to 30 euro per MWh¹³².

7 METHODOLOGY

This chapter describes the selected research and analysis methods. This thesis is based on the methods of qualitative research. According to Hirsjärvi et al. (2000), qualitative research is based on an inductive process, and a peculiarity of the method is that usually qualitative research is descriptive. When using the qualitative research method, a researcher does not necessarily create any hypothesis, but rather the research structure is moving from idea to data and conclusions. Qualitative research assumes that variables are complex, intertwined and difficult to measure. The research begins from the general level and the target becomes clarified during the study. The researcher reviews an emerging process and seeks regularities and diversity.¹³³

7.1 Research methods in theoretical section

Theoretical source material is collected from different sources from previous publications, articles and books. The source material and its validity were evaluated beforehand and selected references are academic researches, articles from newspapers, or published books. Several databases were accessed, for instance that of the Register of Work Integration

¹³² Vaasa Energy Institute.

¹³³ Hirsjärvi & Hurme 2000, 25 – 27.

Firms by the Ministry of Employment and the Economy and the Company register of Finnish Taloussanomat. All collected secondary data is gathered from the statistics of European Statistical Centre.

7.2 Research sample

The research part of the thesis consists of two categories. First, the development of social economy in the national level has been discussed and analyzed through interviews of experts. Secondly, one example of Finnish social enterprise operating in the wind energy industry, Lumituuli Ltd., is presented as a case study example.

The primary data was collected through personal interviews. The interviews were semi-structured, with a duration ranging from 45 to 70 minutes. The aim of the interviews were to create an in-depth understanding on the field of social economy and social enterprise development in Finland. The second objective is to create an overview on social enterprise functions in the wind energy industry accordingly to the needs of the SECRE project and with the help of SECRE Database.

All together, ten interviews were carried out between October 9th and November 23rd 2012. The majority of them, nine interviews, were conducted during face-to-face meetings. One person was interviewed by email, and furthermore two face-to-face interviews were clarified afterwards by email interviews. The interviewed persons were chosen on the grounds of having expertise from social entrepreneurship. Thus selected interviewees represented an extensive knowledge of social economy or the wind energy industry in Finland. For instance, three out of ten interviewees took part in the Ministry of Employment and Economy's work on social enterprise business model development. Two persons are working as Chief Executive Officers in social enterprises. The interviewees represent the following institutes or companies, and each of these organisations has an important role at the national level in social enterprise and in wind energy development:

Government agencies

The Centre for Economic Development, Transport and the Environment: the centre's task is to support new enterprises by dividing information and providing business development assistance for investments and other development measures. The Centre for Economic

Development, Transport and the Environment took part in YTYRI work in 2010 – 2011. The interviewed person from the institute is a Specialist of Project Activities, Mr. Terho Sirviö from the North Karelia Centre for Economic Development, Transport and the Environment.

The *Finnish Innovation Fund SITRA* is a fund institute supervised by the Finnish Government. SITRA aims to build a successful future in Finland with the help of development projects and corporate funding. SITRA is interested in future trends and thus it has been one active player in social economy sector in the last few years. Experts from SITRA took part in YTYRI work in 2010 – 2011. The interviewed persons are Senior Lead of Eco-efficiency Mrs. Karolina Auvinen (KA) and Leading Specialist of Renewal Mrs. Jonna Stenman.

The *National Institute for Health and Welfare* conducts the public health and welfare researches and studies new organizational models for social services and health care. It also surveys good practices to promote health and well-being. Experts took part in YTYRI work in 2010 – 2011. The interviewed person is Development Manager Mr. Ville Grönberg.

Leppävirta Municipality is one of the pioneer areas in the Finnish mainland in the development of wind energy projects. The regional land use plan is currently under construction in a favourable atmosphere among the decision-makers as well as local residents. The interviewee is Planner Mrs. Suvi Nenonen.

Non-Governmental Institutes

The *Social Entrepreneurs' Association of Finland* is the trustee and network of social economy in Finland. It organizes SYY Academia, which educates social entrepreneurs in different ways. The Interviewee is Chairman of the Board Mr. Janne Lemettinen.

The Association for Finnish Work has promoted national work, as well as an increased appreciation for innovation and entrepreneurship already for a hundred years. It grants the certificate for social enterprises. The Interviewee is Development manager Mrs. Saila Tykkyläinen.

The Finnish Wind Power Association aims to create better conditions for wind energy industry development in Finland. According to the strategy of FWPA, this is to be accomplished by mediating knowledge, participating in discussions and collaborating with authorities, organizations and industry. The interviewee is a Member of the Board, Mr. Sampsa Hario.

Projects connected to social entrepreneurship

The *Yhteinen yritys* –project aim was to provide information connected to the social enterprise establishment and the operating conditions in Finland. The project was funded by the Ministry of Employment and the Economy and European Union Social Investment Fund. The interviewee is Mr. Ville Grönberg.

The *Social Enterprise Living Lab* project's main objectives are to promote awareness of social entrepreneurship and the development of support structures for social enterprises. The project produces researches and collects information. One aim is to support the development of the FinSERN research network. The Interviewee is Project Manager Mrs. Elina Vanhapiha.

Social Enterprises

Lumituuli Ltd. is at the moment the only social enterprise in wind energy production in Finland. The wind turbine is located in Lumijoki, and the idea behind the company is created by the local community. The interviewee person is the Chief Executive Officer Mr. Sampsa Hario.

The *Suomalainen Hyväntekijä* Cooperative is operating in retail business. It delivers goods made by disabled people for customers via an internet shop. The interviewee is the Chief Executive Officer, Mrs. Riitta Nyberg, and the interview was carried out via email.

Syfo Ltd. helps to develop the business and working community. It provides businesses, public bodies and third sector consultancy, training, and tools for increasing corporate responsibility. The interviewee is Specialist Mrs. Elina Vanhapiha.

A semi-structured interview was divided into four themes. First, the significance of social economy in Finland was discussed; secondly, the current situation of social

entrepreneurship in Finland was addressed; thirdly, the interview shifted to the future development of social economy at the national level; and fourthly, the projects' implementations in the wind energy industry in Finland were covered. During semi-structured interviews these themes were discussed with the help of support questions, which are found in Appendix 2. Because of the different field of expertise, not all of these supporting questions were asked from each person. A respondent may have also had discussed the matter in the previous reply.

Interviews were recorded and transcription was concluded as soon as possible after the interview. Thus meanings and messages were still fresh in the memory of the interviewer. The transcription strictly follows the language structure of the respondents. The total number of transcribed pages is 64.

The analysis was made in the form of content analysis. This analysis method tended to echo slightly and the most important used tool was the structure of analysis. The transcribed data was read and analyzed many times, and after that the final themes were constructed. Each theme was analyzed and the final conclusions are based on this information.

Each interview was conducted in Finnish language. In the Findings section all citations are presented and were translated to English. Thus, original nuances and meanings can be slightly changed. However, the content of each interview still exists and a reliable evaluation has been carried out.

7.3 Analysis methods

Firstly, the primary data collected through semi-structured interviews of experts is analyzed with the help of *the Domains of the Entrepreneurship Ecosystem* model by Daniel Isenberg combined with a *SWOT analysis*.

The Domains of the Entrepreneurship Ecosystem is developed by Professor of Management Practice Daniel Isenberg, and it shows different aspects that affect the company's operation. The basic model is added in Appendix 3. According to Isenberg, The entrepreneurship ecosystem consists of six domains which are: a conducive *culture*,

enabling *policies* and *leadership*, availability of appropriate *finance*, quality *human capital*, venture-friendly *markets* for products, and a range of institutional and infrastructural *supports*. This tool helps to understand different levels of operation environment of enterprise¹³⁴

A SWOT analysis is a basic tool to conduct a market analysis. The letters of SWOT come from words strengths, weaknesses, opportunities and threats. A SWOT analysis is called a four field analysis. SWOT is helpful when a company or researcher wants to identify the areas of development.¹³⁵

With the help of these previous tools the author has created a new model for analysis: a combination of the Domains of the Entrepreneurship Ecosystem and SWOT. Basically, this analysis method is based on the Entrepreneurship Ecosystem model and each domain is analyzed separately by SWOT. The aim of this analysis is to find out how these different domains are developed. The target businesses are the social enterprises in general and the social enterprises' wind energy production in Finland.

Secondly, the collected data of Lumituuli is presented as a *case study* example. A case Study is a typical research strategy especially in business science. The subject matter can be an organization or a part of it. The aim of a case study is to create in-depth and detailed information about the topic of the study. The most important issue is to get as much information as possible from a very limited number of subjects. The number of subjects in a case study research is small: usually only one target organization or phenomenon. A typical feature of a case study research is that by utilizing diverse research methods a researcher is creating a thoughtful and a comprehensive picture of the subject. Data is collected from secondary sources, which can be, for instance, annual reports. From primary sources data is collected with the help of interviews, e.g. semi-structured interviews or themed interviews.¹³⁶

Thirdly, the information collected through a case study example and semi-structured interviews is presented in the *Business Model Canvas*, which allows one to analyse existing business models, as well as to develop new models. According to Osterwalder, a

¹³⁴ Isenberg 2012.

¹³⁵ Hytönen, Isoviita & Lahtinen 1995, 160 – 162.

¹³⁶ Moilanen, Ritalahti & Ojasalo 2009, 52 – 55.

business model describes the rationale of how an organization creates, delivers, and captures value and the Business model Canvas is visual tool for creating of business model. Thus, the used analysis method is a visual way of presenting a wide range of source material.¹³⁷

8 FINDINGS

This section presents findings of the study, including an overview of the collected data, which has been translated from Finnish to English. The most important findings are connected to the development of the social entrepreneurship phenomenon, the future development of social entrepreneurship and people's attitudes towards wind energy projects.

8.1 Theme 1: Significance of social economy in Finland

The aim of Theme 1 is to find out how interviewees see the development of social economy in Finland. The first theme starts with a question on how co-operatives have affected the development of the Finnish economy. Each interviewee mentioned that the co-operatives have quite much affected the economic development during last century.

Sirviö: "The significance has been crucial, because today the big cooperatives, like dairies, banks and shops are established originally in countryside and they go back at least a hundred years. These cooperatives were established to respond to local needs, and in the beginning they were quite small but over decades they started to grow and develop. The effect on local economy development has been important, because the aim of the cooperative is not to maximize profits but increase the welfare of local residents. Nowadays, these big cooperatives or companies, which are founded as a result of cooperatives like Valio Ltd, are very important enablers of different development projects. These companies are directing money to the development projects of their industry."

The first cooperatives were founded in the 19th century. During the last century the development of the market economy has been strong and cooperatives have needed to adapt to this development.

¹³⁷ Osterwalder 2010, 14 – 15.

Stenman: “Working together towards a common goal and community spirit have long traditions in Finland. For instance, Cooperative Bank is originally based on this idea. However, when the market economy has developed, and thus the new perspectives have formed, maybe these traditional values have been marginalized. Notwithstanding, the new age of community spirit can already be seen. For this purpose, cooperative business models are very suitable.”

The next topic is connected to people’s attitudes towards social economy and cooperatives in Finland. The purpose of this question is to clarify what kind of attitudes the experts have encountered. Two interviewees see that cooperatives have a positive image.

Sirviö: “Cooperatives have a positive image, and nowadays labour cooperatives are quite popular. However, cooperatives are criticized because of the growth: maybe the leverage of a single member has been decreasing for the result of growth. On the other hand, the growth of these cooperatives has been forced because markets and business have been developed.”

Lemettinen: “Generally the attitude is positive in Finland. One challenge is the general awareness, because some people or organizations do not perceive cooperatives as businesses.”

Long history and traditions may have affected people’s attitudes also on a deeper level. During recent decades, cooperative businesses have experienced even political colouration. The following comments clarify this attitude. Sometimes attitudes are depending on an industry.

Stenman: “Of course people’s attitudes are different. There can be a very critical attitude because of a different political perspective. On the other hand, the younger generation and their community interests are different, and for this purpose the cooperative model is very good.”

Auvinen: For example in the energy sector attitudes have been traditionally quite poor, because cooperatives which have been operating in this sector have been poorly managed and un-professional. Also the support funds for the energy sector by the Ministry of Employment and the Economy do not cover cooperatives. So cooperatives have been excluded. Maybe this will change in the near future.

The last topic of Theme 1 aims to clarify how a long history of social economy could affect social enterprise development in Finland. The question is: could the long history of cooperatives and social economy enable the development of social enterprises? First

interviewees see a correlation between social enterprise development and cooperative history. These findings are similar to Koto's master thesis research¹³⁸.

Sirviö: "Values of cooperatives and social enterprises are undeniably close to each other. From this point of view I could imagine that social entrepreneurship has social demand especially in those sectors, where hardcore business functions do not typically fit. On the other hand, the current situation in the non-profit sector is quite complicated because of one main funder, Finland's Slot Machine Association (RAY), changed its rules and they do not support organizations which have business objectives anymore. The reason is changes in Competition Law of the European Union. Thus the business model of social enterprise could work very well in this case, where a non-profit association, like the Mannerheim League for Child Welfare or the Finnish Red Cross, wants to operate in the business sector."

Lemettinen: "Yes, I think that the long history enables further development, because both of them have the same basic idea: responsibility and other issues are shared and the aim is a common good. And when looking at the values or business models of a Limited Company, which is a social enterprise, it has created similar elements which are traditionally linked to cooperative business models."

The long history can also reduce prerequisites in an operating environment and its appreciation. Some existing cooperatives are rather too wide and thus people have problems in understanding a cooperative as a part of social economy.

Stenman: "I do not see that it would be possible, that these old cooperatives would arise interest, but this kind of "new wave" of cooperatives is needed. So people could try to find fresh perspective to this business model and they could start to use this in a new way. In a sense, it is defined new and fit for this era. There is too much political-ideological background in these old cooperatives and that is old-fashioned."

8.2 Theme 2: The current situation of social entrepreneurship in Finland

This theme aims to clarify what the current situation of social entrepreneurship at the national level is. The purpose is to find the most important milestones so far. The first question is how well the concept of social enterprise is known in Finland. The first interviewees pointed out that social enterprise is often misunderstood as a work integration social firm.

Tykkyläinen: "Poorly. First of all, the word pair social enterprise is so new, and the word "social" is not very easy or concrete anyway. The concept is very messy, at least with the following stories: charity, social responsibility and work integration social firm."

¹³⁸ Koto 2010, 57 – 59.

Nyberg: “The concept is still unknown. The concept and legislation of work integration social firm are leading to this confusion. Notwithstanding, the social enterprise concept is wider and it has a deeper meaning. At the same time it can be hard to understand.”

Some positive development has happened during the last few years. One interviewee pointed out her own experience connected to development in educational sector knowledge.

Stenman: “Surely it is better known than two years ago, for instance. Still it is easily mixed up with a work integration social firm. Anyway, nowadays some business schools have started to speak about this concept at some level.”

The second question covers the most important milestones so far. The aim of this question is to clarify how the experts have experienced the recent development. The first answers are quite similar and the Social Enterprise Certificate is the most important milestone.

Lemettinen: “The most important achievement is the Social Enterprise Certificate by the Finnish Association of Work, which dated back to the work of the Ministry of Employment and the Economy. It was defined there, and The Ministry handed over the mandate to the Finnish Association of Work. Of course we, the smaller players, have worked with the concept. It has been important work, because it ensures knowledge, that this is a broader concept, not only activities in Social and Healthcare sector.”

Stenman: “The certificate is very important. And I would say that the work of the YTYRI team in the Ministry was very important, too. It was great that we had a heated debated about these topics. Of course the facts show that players like us have a positive approach to this phenomenon. Even if we do not have a project connected to social enterprises going on, in the role of experts, we are still interested in the phenomenon.”

Tykkyläinen: “Of course our certificate is the most important. And when looking at the work of the YTYRI team, it was an important step which leads to establishment of the social enterprise certificate. Another important enabler is the Structural Funds of the European Commission. For instance, Syfo Ltd. has exploited those and of course those have a significant role in the development.”

Previous interviewees pointed out the YTYRI team work and its particular impact on national development. The following interviewees go deeper into their answers and they think that co-operation between sectors is important.

Vanhapiha: “Good achievement is multilevel work, and that has allowed a rapid spread of the knowledge. People at different levels have been working actively. People in the Ministry have worked actively; we have utilized Structural Funds in different projects and on the other hand, people at the grassroots level, entrepreneurs and active players have been creating networks among each other. In summary, when these three levels are

working together, this phenomenon has received bigger leverage than if each level had operated alone. And that is one sign of national interest that all these levels exist in the operation.”

Tykkyläinen: “Also it is significant that these different levels are able to work together. Especially these existing social enterprises and their common networking, it is very important. When we can work together, it is wonderful and if we think about Social Enterprise Super Day tour, for instance. No one can do that alone, not even the Finnish Association of Work.”

Stenman: “And the establishment of the Finnish Social Enterprise Research Network was a great step. Through FinSERN we will receive important knowledge about positive social impacts, for instance. This information can only be obtained through an academic research. The Social Enterprise Certificate is good for presenting success stories, but the evidence based information will come through the FinSERN research network.”

These previous experts have worked actively with social enterprises in different networks. However, one interviewee has not seen any recent development so far.

Hario: “I would almost ask that, what recent development? I have not seen any good examples of growing social enterprises.”

The third question straightens out how the knowledge of social entrepreneurship could be augmented. During this question interviewees gave a great number of answers. First of all, public debate was pointed out.

Sirviö: “Political debate and the political atmosphere in profit maximizing vis-à-vis maximization of social good. For example in the social and healthcare sectors there is time for public conversation and the topic is how the companies can use profits. Some companies do not pay any taxes to Finland. The share of the social and healthcare sector is 60% of a municipality’s total annual budget; it is a huge amount of money and if those companies operating there do not pay any taxes, it really has an impact on the national economy. This is a question of social morality, and the solution is public conversation.”

Tykkyläinen: “The public conversation has been increasing recently and for instance the Minister of Finance highlighted companies which are registered in a tax heaven.”

One issue that has been mentioned by few interviewees was stories about social enterprises. That can be one solution for the promotion of the social entrepreneurship concept.

Hario: “The need for this phenomenon exists, and we need good examples and real success stories about social enterprises. That is why Lumituuli is a very good example, because we are utilizing this concept quite well and we are turning the social mission to our strength.”

One interviewee told about the significance of the public sector and how top-level decision makers can affect the development of social entrepreneurship.

Stenman: “A national strategy for social enterprises is needed. Focus should be on the image of social enterprises and how to increase awareness. Educational organizations should bring forward this concept in their business and entrepreneurship studies. Also knowledge should be distributed through bodies, which advise new entrepreneurs. This requires that each local Centre for Economic Development, Transport and the Environment and other Entrepreneur Counselling Centre knows the concept.”

Stenman: “Also lobbying at the political level is needed. It aims that politicians and officials have the knowledge of what it is about and they know the difference between the terms of social enterprise and work integration a social firm. They should also know that this phenomenon is very large in Europe. European Commission investments in the development, new tools and equipment are under development.”

Also the Social Enterprise Certificate and its significance emerged from the answers. The certificate has gained a lot of interest in a very short time. Again, success stories were pointed out.

Grönberg: “The Certificate and the information sharing related to that are important tools. The positive examples in publicity are also increasing awareness. Education and new projects related to social enterprises can increase awareness and public knowledge.”

The utilization of different communication channels is a good way to promote some interesting phenomenon. Media is a very important channel for the creation of public image and thus few interviewee mentioned that media is an important channel for communication.

Nyberg: “Now is a good time to talk about this topic. The media is interested, and most importantly customers want to favour social entrepreneurship. Thus the concept will be noted in a few years and for this purpose the most important tools are the social enterprise certificate and companies using it. And companies can increase awareness by networking also globally, because caring and common values of social enterprises are similar all over the world.”

Tykkyläinen: “The most effective channel properly used is the media. It is a good way to reach the general public (awareness and image building) as well as specific target groups, such as the potential social enterprises, municipal decision-makers, researches, potential funders etc. Particularly for the general public, media communication is possible through concrete and illustrative company examples.”

8.3 Theme 3: The future development of social economy on a national level

The aim of Theme 3 is to find out how social entrepreneurship could be supported in the future and on the other hand, how the experts see the future development of social economy in Finland. The first question is how social entrepreneurship could be supported in Finland. The first answers were connected to financial services.

Stenman: “Social enterprises should focus on increasing customer orientation. In addition we have to ensure that there is enough information available and to develop funding models. We have been considering different stakeholders, how we can create this kind of institute, which should be a long-suffering investor. Actually we conducted a research with Eera Ltd. which aims to create a fund institute for social enterprises. Because of the current economy situation, we are not able to start this project now. So we decided to postpone the project.”

Auvinen: “One possible scenario could be projects like Bank 2.0 or Green Funds, where people can invest their money and get a slightly better return than from a bank account.”

The following interviewee pointed out different aspects which are creating prerequisites for a profitable business environment.

Lemettinen: “Tax reliefs, for instance with a value added tax, but maybe these reliefs should be target to all small- and medium size companies. But then the establishment of funds would have to move onwards. We will need funds which are looking at specific criteria like social responsibility or social impact, and the help of criteria will provide support development funds or loans to social enterprises.”

Lemettinen: “Social Impact Bonds are available in the United Kingdom, and this model could be one possibility in Finland. An investor will get different possibilities; on the other hand, the expected return on investment but also the expectation could be the social impact. If the social impact will increase, that is enough for an investor. Naturally, a profitable business needs an ecosystem, which supports business activities and creates conditions for business. For instance, bank services and accounting are an important part of the ecosystem. And it is important to notice social enterprises and thus support activities of entrepreneurs.”

Support structures were pointed out also in the last answers. In addition, importance of the EU was mentioned, and especially structural fund programmes have an important part in the economic development of social economy sector in EU.

Vanhapiha: “Business support, which understands social enterprises, is needed, in addition to more transparency and openness in the discussion. So people’s willingness

to debate this phenomenon without bias and understanding comes through practice. And more quickly growing social enterprises and co-operation between companies. There is huge potential, and hopefully we can focus on these in the future.”

Grönberg: “Practically the next EU Structural Fund period will certainly come and there is some amount of money available. Maybe these funding institutes will develop with the help of the structural fund. But this is the tool to be utilized, if some positive development is wanted.”

The second question connected to Theme 3 is: should the position of social enterprise develop through legislation? Four interviewees are against of the definition of the term in legislation.

Lemettinen: “I do not believe that legislation could help social enterprises in any way. The purpose of legislation is more so to limit than to permit. Definitions of social enterprise could come from somewhere else.”

Stenman: “A YTYRI team aims to leave enough space in the definition. We did not want that the social enterprise concept to be written on some article or law. We did not want that the definition would be too specific, but the aim was to increase innovation and enable new ways to start an enterprise. But the legislation is not deliberately developed.”

Grönberg: “My answer is no, and if we look at back in the YTYRI work, the idea was to start an overview of social enterprises separately from work integration social firms. So the Act on Work Integration Social Firms remains, and a new business model will develop.”

Two interviewees are positively on behalf of the legislative development. However, they are not in agreement that the social enterprise concept should be defined in legislation.

Tykkyläinen: “If the question is formed this way, then my answer is yes, because we have a lot of different laws which are affecting social enterprises. For example, the Act on the Public Contracts or the Act on the Discretionary Government Transfers includes a lot of elements which are affecting the development of social enterprises.”

Vanhapiha: “And in the EU’s legislation articles are connected to the Service of General Economy Interest and other similar procedures. My opinion is that social enterprises should be examined with the help of existing legislation and possible changes or refinements will be made there. Taxation could be one example.”

The third question is connected to the measurement of social impact. This is a very important topic on the national level. The question is how social impact should be measured in the future. The first answer pointed out that a different sector should have different measurement methods.

Stenman: “Would say what depending on industry. The first is an evaluation of a business idea, which sector it operates in and what could be the meaning of social good in that sector and how it is described. After that, other dimensions from the social enterprise certificate should be evaluated. That means social sustainability, organization, employees. And of course economic value: logic that the company does not need any continuous financial support.”

Vanhapiha: “Social impact measurement is a very important topic, and we are continuously returning to this issue. Methodologically, common decisions about the first steps are needed. So on which level will measurement start? Because the worst scenario is that it will take a lot of resources and it can be very complicated.”

Vanhapiha: “We are very much so in the beginning of the process in Finland, so we do not have any concrete manner or knowledge base on the national level. I would say that through small steps and concrete examples we will start to build this, and the results will be evaluated in the future. In the beginning it is not necessary to scan the whole history of a company or all data from the previous ten years, but it will become concrete through small steps.”

Basic knowledge should be gathered, and after that the learning process can continue and different methods can be utilized. Also, the scale of measurement has to be chosen carefully.

Vanhapiha: “After the learning process we can start by looking at how to measure and there is existing tools like our own service by Syfo, called Sofia, which combines Social Return On Investment with Social Accounting.”

Grönberg: “Its scale should be simple so on the same level with the operation of a company. If the volume is small, the measurement cannot be in-depth research, and especially because the impact can be so relative. In a simple way but during a long time period and results should be simple too.”

8.4 Theme 4: Project implementation in the wind energy industry in Finland.

The aim of theme four is to clarify the national situation in the Finnish wind energy industry. The first question is connected to permit procedure in Finland.

Auvinen: “The procedure is too long and complicated. So there is too many phases and the procedure should be united. Nowadays it can easily take even seven years, but three years in the minimum. When a company tries to complete this procedure it takes all mental resources, and the company does not have any energy left for communication with the local community. That is why some firms are using the takeover tactic and observation of the local community needs and wants has been poor during first projects under this new feed-in tariff.”

Auvinen: “We should have a look at examples from Denmark and Germany, how these have focused actions on bureaucracy, profitability and funding, in a way to take care of the whole chain. These countries have lot of experience at the lead of wind energy markets.”

Hario: “Bureaucracy is not complicated; it is emitted by filling out all necessary documents carefully. But this appeal procedure is nonsensical. So if someone complains unduly, there should be liability for damages or at least some fee, which is returned if the appeal is justified. And if the appeal moves to an Administrative court the normal treatment time is one year, because they do not have enough resources. But anyway, a normal permit procedure takes at least two years if the project is simple. It is a really lousy situation.”

The second question is connected to common opinion and why people are resists wind energy projects. The opinion of the local community can affect the operation of a wind energy company.

Nenonen: “Properly speaking the noise of turbines evokes questions. So what is the noise level and how far can it be heard? Then questions like how the turbine flickers and could it tumble down. But in general noise and visibility are the biggest questions. In our briefing, the attitudes of local people were very supportive and one gentleman noted rather wind turbines than a nuclear plant.”

Auvinen: “The utmost are landscape and noise nuisance. But also the atmosphere is against to these huge energy corporations in Finland. These companies are considered as self-seekers: people have an attitude that these companies are coming to our land and they are making profits with the help of taxes we had paid.”

A supportive atmosphere in a local municipally and community is very important. The third question is how the atmosphere or the people’s attitudes towards wind energy may be altered.

Nenonen: “With the help of good preparation actions in advance, complaints arriving during the planning or permitting procedure can be prevented. Like we did in our case that we had clear images of turbines set to landscape so people could watch and see how turbines settle in the landscape.”

Auvinen: “We have this project in Sitra, which one topic is how we will move out from NINBY (Not In My Back Yard) to YIMBY (Yes In My Back Yard), and one possible scenario would be locally owned wind turbines or partly-owned wind turbine parks. During the project we have promoted understanding and encouraging wind energy companies to communicate and implement decisions in more participatory way. And if possible to utilize crowd sourcing tools and business models, which can create economic benefits to the local community.”

Auvinen: “National development should move towards the utilization of community owned wind parks. If some huge corporation will construct a wind park, it should sell

one part or at least one turbine to a local community. There are a lot of academic researches done which are supporting this kind of model; if at least one turbine would be locally owned, it can create “a sense of ownership”, and thus the corporation can achieve local approval.”

Hario: “Our mission is the fact that anybody can be a stakeholder of Lumituuli. So we are not maximizing the profits of a small group of people, but anybody can be stakeholder. And because we are a social enterprise, our mission is bigger than just make profit. I think that that is the reason behind it. And of course it is important to note what the level of local identification is; how much the local community feels that this is our story and our turbine. And how much they are with this. In my opinion from a general acceptability point of view, local people should be involved in these projects.”

Some issues are very important to take into account when planning a new project. The fourth support question is: what is the importance of involving a local community to a project as early as possible?

Auvinen: “It is an essential issue, particularly when the first idea to go somewhere arises. Unfortunately, right now companies do not have enough expertise for communication. Communication is important with the public sector as well as with the local community.”

Auvinen: “As well as the public sector, wind energy companies are following timetable regulations defined in legislation: when it is time for public statements or other issues. But those are coming too late, and it in particular this generates resistance, if they are following the process of inclusion defined in legislation. Communication efforts should be done at a very early stage, based on the needs and wants of the local community and its residents.”

Nenonen: “What makes our regional land use plan and local master plan processes so successful is the fact that at a very early stage we had a public event. And consults produced different illustrations and then we had these flicker estimations. So we could really clearly show that this is how the wind park would look like. As a conclusion, the earlier the local community is involved, that better. It is the most important issue, if something is wanted to be accomplished without resistance.”

9 CASE STUDY: LUMITUULI – A COMMUNITY OWNED WIND ENERGY COMPANY

The aim of this paragraph is to introduce a Finnish community owned wind energy company as a case study example. The company is called Lumituuli Ltd. and it is, at the moment, the only social enterprise operating in the wind energy industry. The information of this paragraph is gathered with the help of primary and secondary research methods;

basic information in section 9.1 is gathered from Annual Reports and Lumituuli's webpage. Why Lumituuli was the first social enterprise in wind energy sector and how it all happened is addressed. The aim of this section is to clarify answers to these questions.

The primary research was organized via a semi-structured interview with the Chief Executive Officer, Sampsa Hario. Questions are based on the SECRE database, and the purpose of the questions is to clarify how a company's business has been developed, how social enterprise values are affecting a company's operations and how successful the business is. These themes are presented under the following paragraphs from 9.2 to 9.9, and the perfect lists of the questions from the SECRE database are in Appendix 4.

9.1 Company introduction

Lumituuli Ltd. is a privately owned wind energy company, and the head office is located in Helsinki. The company was founded in 1998, and it was the first consumer owned wind energy company in Finland. Nowadays, over 1,000 private people own Lumituuli's shares. According to Lumituuli's website, the company operates ethically and responsibly and takes all impacts of its activities on the environment and society into account.¹³⁹

Lumituuli is a small company, and it has only one employee, CEO Sampsa Hario. Lumituuli owns one wind turbine which is located in Northern Finland, in Lumijoki. The turbine is made by Danish Vestas and its capacity is 660kW. Electricity generation started in 1999, and since that Lumituuli has generated more than 17,142,469 kWh of wind electricity.¹⁴⁰

Lumituuli's turnover was 60,834 euro and the net income was negative -144,786 euro, in 2011.⁷⁹ According to the Balance Sheet of 2011, the financial situation is very stable because its own equity is 751,094 euro, the level of interest-bearing liabilities 89,612 euro and the amount of liquid cash 48,922 euro. What this all means is that the net gearing is 5.4%, which is an outstanding value.¹⁴¹

¹³⁹ Lumituuli 2012.

¹⁴⁰ Lumituuli 2012.

¹⁴¹ Lumituuli – Balance Sheet 2011, 2 – 5.

9.2 Business idea

Lumituuli's original business idea was born in Lumijoki sometime in the beginning of the 1990s when the local people wanted to establish their own wind turbine project. Thus from very beginning this was a community based project. Lumijoki was however a very small municipality; only 2,000 people were living there, so they did not have enough resources to bring the idea forward. Then the environmental association Dodo got interest in the project and they brought the idea to a national level. About half of the active charter members came from the Dodo Association. Hario: "So those people organized an issue of shares in 1998 and thus Lumituuli Ltd. was founded. I bought my first shares in 1998 and in the beginning I was one of the shareholders. And in 2007 I started to work as a CEO of Lumituuli."

Each existing successful company has had some prerequisites for operation. In this case, changes in legislation allowed the establishment of Lumituuli. One reason why this project was started in the late 1990s was the opening of national electricity markets. So "green electricity" products were innovated at the end of 1990s. Hario: "And one reason behind Lumituuli was the idea that people could buy wind electricity. Maybe during that period markets and people were waiting the first boom of wind turbine projects. But as we know now, it did not come."

The idea was born, but the company encountered some barriers in the beginning. However, the community achieved their goal with the help of co-operation.

Hario: "So the local community prepared the project and they established a company called Electricity Cooperative Lumi at the beginning of the 1990s. They got some start-up funds to the project but it did not achieve its goals. After that the Dodo Association came in and it took about a year when they were already in the construction phase. The local municipality was involved in the project and their attitude was, and still is, very positive."

Without a supportive environment no company can operate. In this kind of a project, the support of a local community seems to be extremely important. Definitely important factors affecting successful implementation in the beginning were those changes in electricity legislation, so in a sense it created good conditions for a wind turbine project implementation. Financial support was also available: The Ministry of Trade and Industry provides 30% of funds to start-up investments. Hario: "But maybe the most important fact

was the local support by local community and municipality. And still nowadays people have positive attitudes towards our company.”

However, in each project there is something that could have had been accomplished better. In this case it is the experience of founders.

Hario: “Of course there were moments of adversity, too. Because these founders were quite inexperienced they had problems connected to the basic operations of the company. Some discussion connected to the turbine size, maybe some people wanted a bigger turbine in the beginning. And there were some slight problems in the construction phase, too.”

9.3 Stakeholders

Stakeholders are the most important network of a company. The aim of this paragraph is to describe how Lumituuli created networks with its stakeholders.

Hario: “Because this project was originally implemented among the local community, there were no problems involving the local people in the project. So in the beginning they knew what was going on and we have continued that with the help of transparent communication. And still today we are using local companies for maintenance or control works.”

Even if Lumituuli’s turbine is located in a small city, they needed communication channels to reach people who might be interested in buying shares. During the first issue of shares, Lumituuli used methods of civil activism, because they had no money for television commercials. So customers and shareholders were reached by flyers and posters. And because the turbine is located in a very small village where there are only a few hundred people living, word-of-mouth communication was very effective.

Active work towards a common goal can provide a good outcome. Often entrepreneurs have to work without salary in the beginning. Hario: “Why Lumituuli and our first wind turbine project was so effective is because all people were committed to this project, and in the beginning they were working for free. So their attitude was really enthusiastic and unyielding. On the other hand, that local support was really important in the beginning, too.”

A wind energy company needs different stakeholders from different sectors of business. Even if the company is relatively small, some important players are needed. The other stakeholders in the beginning were the municipality and a bank. Later on a company called Ekosähkö took part in the project. Hario: “They buy electricity that we generate; after that they sell the electricity to our shareholders. But maybe because of limited profits the number of stakeholders is also limited.”

9.4 Resource and technology evaluation

The purpose of this paragraph is to determine if the company had a clear idea of what they could expect from the project, and how reliable the assessment proved to be. A wind turbine is a long-term investment, and careful evaluation of technology should be done. The first turbine was selected based on tenders. One member of board had worked in an electricity company and he had some experience with wind turbines. One limitation for the turbine was the land area: the turbine was planned to be built in an artificial island. And another limitation was the amount of start-up capital.

Hario: “Of course some evaluations were conducted, but I guess that there was not enough time for any kind of deeper analysis. But anyway, one board member had worked with wind turbine projects before, and his professional experience was utilized. Mainly members of board were working in this phase and they did a lot of voluntary work.”

A bank loan is a necessary financial tool for companies. Such as in this case, limited profit distribution has affected the amount of debt, and nowadays Lumituuli only has a limited amount of debt. Hario: “This phase was financed by an issue of shares and a bank loan. Then after few years, Lumituuli made a new issue of shares and paid back the loan. So the company is almost debt-free.”

9.5 Obtaining funding

From this subsection forward there is information about the current situation of the company. It is important to determine how difficult it was for the company to get the first offer of funding. Lumituuli is planning to replace their old turbine, and thus financing of the project is again a current topic. Banks are trying to decrease risks in their investments, which is understandable. This may affect small companies’ operations.

Hario: “Still today access to capital is very hard, especially for companies like us, who do not have any bigger organization behind them. But it is not the hardest part in the project. I mean that if the place is good, enough development in the area is done and all needed profitability calculations are done, then banks will usually be interested. But still for banks it is not easy to trust this business, maybe because they have not seen wind turbines. We have a very small number of projects in Finland, so banks do not have enough experience. However, nowadays this business is very safe, because feed-in tariff gives a guaranteed price for electricity. But maybe banks do not know that yet. As usual, the financial sector notices these kinds of issues just when the situation is stable and everything is already done.

Sometimes new and innovative methods are needed when a company wants to collect money from private persons.

Hario: “Our aim is now to replace the old turbine with a new, bigger one. Actually we negotiated with one turbine producer for about half a year and then they said that the delivery would be impossible. So we are now back at the starting point, but we had time to collect capital from an investor, which is now returned. Anyway, we collected money for investment by issuing shares and a debenture loan. Altogether the collected capital is almost 1 million euro. An instruction of bank is that if own capital is 30% then 70% can be loaned from bank, if the project is easy and good. But our project is not easy because the turbine is located in an artificial island. However, we had used a bank loan, a debenture loan and issuing of shares as financial tools.”

Lumituuli provided profitable investment object for customers. A stable financial situation enabled payment of high interest. The purpose of this last issue of shares in the beginning of 2012 was to increase investments to Lumituuli. Earlier Lumituuli had not divided any profits to shareholders, because they have limited profit distribution mentioned in the company rules and all profits have invested to development projects. Hario: “Thus we wanted to pay some money to our investors and that is why we created the debenture loan. Its annual interest is 6% and it has been really popular. However we returned all money, because replacement was postponed in the future.”

Access to capital is a huge barrier for small- and medium size companies. Small turnover limits amount of debt, and that is the situation also in this case.

Hario: “Of course capital is very important for these kinds of projects. And it is the biggest barrier for us, if we want to establish bigger projects; we do not have access to the capital. Even when the market situation is very good; turbines are cheap and money is cheap but the availability is not good.”

Effective communication and utilization of different marketing tools can lead to success. Lumituuli used quite a diverse range of different marketing channels.

Hario: “We utilized experts from the banking sector when we created our financial plans. These actors enabled contacts for private investors and it has been very useful. Other contacts to investors were made via advertising: we had advertisements in Helsingin Sanomat, Facebook and in iPad. Also we delivered posters to Ekoshops and we sent letters to all people living in Lumijoki. Then we created a letter campaign for our shareholders; we sent three posters for each shareholder and we encouraged them to deliver one to a person who likes wind power and one to a person who does not like it. So we utilized quite many different marketing channels during this latest issue of shares.”

9.6 Project Implementation

A limiting criterion for the new turbine is the electricity grid in the area. As usual in the coastal area of Finland the grid is quite weak. So that is why the maximum size of the turbine is 1.65MW.

Another limiting issue is the island and how the turbine will be transported there. Now the plan is to build the new turbine at the same time as taking down the old one. Hario: “Now a permit procedure is going on, and one owner of a summer cottage appealed. That is why the permit for land use is now in the Administrative court, and hopefully it will be admitted next spring. But as mentioned earlier, this procedure of appeals is poor in Finland.”

9.7 Running and monitoring the company

Lumituuli’s organizational structure is very simple, because the CEO is the only employee. As usual in Limited Companies, the top level decision-making body is an annual meeting. The company has over 1,000 shareholders, and usually the annual meeting is organized in Helsinki and there the Board of Directions is selected.

Small companies have little effect on the operation environment. Anyhow, some positive aspects can be seen. Hario: “The employment impact at the local level in Lumijoki is quite hard to estimate. But I think that our activities have created some stimulating effect to the

local community.” Even if Lumituuli is a relatively small player in the wind energy markets, it can show something which is already existing: its own turbine.”

Hario: “Our profitability without any development investment could be positive. But now we have been doing project development in new wind turbine parks, and that is why our operation result is negative. But maybe this result is not as it was estimated in the beginning, because original calculations do not contain any project management costs. So those original calculations were unrealistic. But anyhow it is important that we have this turbine which has been producing electricity already for quite a long time and thus it enables our business’ further development. And that also affects other organizations’ attitudes; other players will take us more seriously and we will get offers more easily.”

9.8 Using the profits

One key issue in the social enterprise concept is the limited profit distribution. Another important definition is the social goal of the company. This paragraph focuses on those definitions and the decision-making process. Also, how effective it is to distribute money this way should be considered. Hario: “It is printed in the Articles of Association: we are not distributing profits, and all profits are used towards new wind energy investments. Thus we had worked so far towards the purpose of developing new wind turbine areas.”

Lumituuli has been profitable and it has invested profits in other wind energy companies. Thus other small players have benefited from Lumituuli’s operations. Lumituuli has also invested profits in other small wind turbine companies. For instance, they have a few shares of Ålands Windenergy Cooperative and Larsmo Vindkraft Ltd. During the last few years the company has saved all profits to the replacement project of the turbine. Hario: “Our investments have had a significant role in the project development of Larsmo Vindkraft. Our investment guaranteed that the company can build a wind turbine in the village of Larsmo. We bought electricity from Larsmo, and thus our investments have been a positive effect on profitability of the company.”

Currently Lumituuli has only one wind turbine. The expansion of the business operation is a clear aim in the future. Hario: “Our aim in the future is to develop a new wind project in Finland. We will build new turbines and thus it reduces risks, because now we have only one turbine and it is not enough when thinking long-term.”

9.9 Community acceptance of the scheme

Good companies create positive development for their stakeholders. Lumituuli was a pioneer company in the wind turbine and renewable energy businesses.

Hario: “The environmental association Dodo has been growing and has quite a positive image because of Lumituuli. But also in Lumijoki, our company has been noticed as a good example and they are using our turbine in their webpage’s first page’s top banner. So they have taken this project as their own. I have visited a traditional autumn market three times in Lumijoki and there I could sense a very strong community spirit. So I think that one possible impact on community can be our turbine, which creates that community spirit in a city.”

People who are working on Lumituuli’s board of directors are nowadays valued experts, and their opinion is important when inspecting the national level.

Hario: “I am a board member of the Finnish Wind Power Association and I represent small wind companies. We give comments on new legislative proposals, for instance. Maybe that can have effects on the national level. And earlier when wind turbine projects had not yet achieved this investment boom, there were operating people in Lumituuli who took part in preparation of feed-in tariff legislation in Finland. So I would say that operation of Lumituuli has had a very positive impact on national development of wind energy industry.”

9.10 Final evaluation

The aim of this paragraph is to make conclusions about the case of Lumituuli. First of all good practises during the company’s history are evaluated.

Hario: “It is quite hard to see this good practice from inside the box. Anyway I would say that the utilization of openness in communication and transparency in business can be good for the practices of Lumituuli. I have noticed that in those projects which are not transparent, questions and resistance can increase quite easily. Rather all documents should be published and have annual reports on the internet and send information about what is going on all the time.”

In this case original calculations were made without fully understanding them. Lumituuli is a company which utilizes renewable energy as a source of electricity. Thus an important point is limited impacts on the environment, and that is one strength of the company.

Hario: “If something should have been done differently, I would say it would be those first estimations. So some costs about project management should have been calculated.

And if the original turbine would have been higher and bigger, that can positively affect our turnover.”

Hario: “Green values are utilized very carefully in our marketing, because it is one key issue of our operations. One target group of customers is those people who have some kind of ideological background like “green energy” or something else.”

In a small company, the entrepreneur or the CEO needs various numbers of different skills. Also the CEO of Lumituuli mentioned that different skills are a requirement for successful business.

Hario: “A lot of skills are needed and I have learned many new subjects during these five years. Shortly basic knowledge about wind energy and project management skills are important. Then administrative skills of CEO and financial skills are needed. And of course some knowledge connected to marketing and technology. Thus wide ranges of skills from different business areas are needed. If you want to collect that kind of team from commercial purpose, you will need about 500,000 euro per year for wages.”

Lumituuli is a good example of social enterprise. It has constructed confidence capital and relationship to community for over ten years.

Hario: “Anyway, because we are a social enterprise, values are very important for us. For example, we developed a new wind park in Oulunsalo-Hailuoto area in Oulu. There we did not get an environmental permission, because nature values are extremely important in that area. Our aim is not to challenge those nature values: the regulations exist and that is it. Corporate responsibility for us means that we are treating other players fairly. And as I mentioned earlier our mission is bigger than to only make profit. We want to take care of the environment and give advantage to the local community.”

10 SOCIAL ENTERPRISES IN WIND ENERGY PRODUCTION

The aim of this paragraph is to analyse the collected interview results. This paragraph consist of two phases: first, the data collected via semi-structured interviews is analysed and second, a business model for social enterprise in wind energy production is presented.

10.1 Domains of the Entrepreneurship Ecosystem and SWOT analysis

This analysis is based on information collected via semi-structured interviews, as well as that already presented in the theoretical parts of the thesis. The analysis is presented in

visual form in Appendix 5, and as mentioned in subsection 7.3, the analysis method is a combination of the Domains of the Entrepreneurship Ecosystem model and the SWOT analysis method. All characteristics of the ecosystem model have been analyzed with the help of SWOT analysis.

Because the subject of the work is social enterprises in wind energy production, both areas are discussed in this analysis. One important note connected to the analysis and a conclusion presented is that this is not a perfect overview of these sectors in Finland, but these findings have emerged during interviews or from theoretical backgrounds.

10.1.1 Enabling leadership

The first domain of the Entrepreneurship Ecosystem is called policies. In the leadership domain, the most important strength is social economy management. We have long traditions and good knowledge about social economy; especially the cooperative model has been utilized since 19th century. Thus we have a lot of expertise in the leadership of social economy. Other strength is the growing knowledge of social responsibility management in Finland. First companies have started to create a new image and improve their social responsibility, and if this phenomenon continues to grow, knowledge of this area will grow in the future as well.

One weakness in leadership skills is nowadays the lack of knowledge connected to wind energy project leadership. Especially when observing the local community during permit procedure. This weakness was recognized earlier by the researcher Minister Tarasti but also emerged during the interviews. Maybe with a little help from education on company management, this weakness could be diminished.

Another opportunity is to utilize the expertise of social economy on the education of social entrepreneurs and their networks. This has been done already in the cooperative education in the Common Entrepreneurs project, where these concepts of cooperatives are presented together with social enterprises. Those educations have been very popular, and people from different organizations from the public and private sectors, have been eager to participate. Maybe this kind of leadership education will continue in the future, and thus more

information about social enterprises can be shared from actors to public sector entrepreneur advisors.

One threat can be a lack of social enterprise knowledge in educational organizations. This can affect the quality level of leadership education. It is very important to ensure that social enterprises are one part of leadership education in Finland in the future. Positive development has been seen, and this development should be ensured by active communication.

10.1.2 Government

The second domain is called government. Strengths are connected to wind power and political support mechanisms. A feed-in tariff is very important and the number of investments will increase rapidly during the next few years. As mentioned in the theoretical sections, an estimated market value of the Finnish wind energy industry will be approximately 4 billion euro in 2020. Feed-in tariffs, political support and European Energy Policy have created conditions for this positive development. The most important strength connected to social enterprises is obviously the work done in the Ministry of Employment and the Economy's YTYRI team during 2010 - 2011. This enabled the development of the Social Enterprise Certificate and also created a lot of other positive impacts on the national level.

Weaknesses in the government domain are connected to the recent political atmosphere related to social enterprises. Even if very important work was made in the YTYRI team, the development at the political level has stopped. The current situation at the Ministry level for instance is ambiguous. One reason can be the attitude of the previous Minister of Economic Affairs, an attitude that was against social enterprises. This could be one reason why social enterprises were not written in the Government Programme. However, the Minister of Economic Affairs changed in November 2012, and that is why the political atmosphere is still ambiguous. A second weakness is connected to previous one: politicians and officials may not know very well the concept of social enterprise, and that can affect the work of public entrepreneur advisors. Thus knowledge can be deficient, for instance in the Centre for Economic Development, Transport and the Environment, which are important national entrepreneur institutes. The third weakness is entry barriers to the

wind energy markets. As illustrated in the theoretical part, existing barriers are connected to long permit procedures and legislation, for instance. The topic of complicated bureaucracy also emerged during the interviews.

One opportunity can be found from the next European Union Structural Fund period, which will start in 2014. The Social Business Initiative in European Commission level could also be one possibility for Finnish social enterprises in the future. A few interviewees pointed out tax reliefs for social enterprises, and that those could increase the interest in the concept. However, that would need a long political procedure as well as the development of legislation. According to the interviews, good ways to affect the political atmosphere include lobbying and public debate. Also multilevel work between Ministry level and organization level could be implemented through national social enterprise strategy.

The threat in the government domain is the unclear definition of social enterprise, which can lead to misunderstandings. As mentioned in the theoretical section, the unclear definition of the concept is an international problem, because a common definition in the EU level does not exist. On the other hand, as mentioned by interviewees, current legislation connected to work integration social firms can be one reason for misunderstandings. However, according to interviewees, a definition of social enterprise should not be procured through legislation, so maybe lobbying and continuous communication between different sectors can be one solution for future development.

10.1.3 Financial capital

The third domain is financial capital. The most important strength of this domain is the existing start-up funding in Finland. A new entrepreneur has different possibilities to cover start-up costs. For instance, a start-up loan of Finnvera is one possibility and another is a start-up fund of the Centre for Economic Development, Transport and the Environment. These kind of funding possibilities are very important for start-up entrepreneurs.

Weaknesses at the national level are micro-loans and crowd funding tools, which both are minimally utilized in Finland. One reason for this is limitations in legislation. Furthermore, social enterprises and small wind energy companies have significant difficulties accessing

capital. Especially wind power projects are capital intensive in the beginning, and needed start-up money can be easily over three million euro. The payback time of wind turbine investment is quite long, and maybe that is the reason why the Finnish banking sector is not interested in financing these smaller projects. The same situation is also found with social enterprises; the payback time is long because of limited profit distribution.

Opportunities are connected to own funding source for social enterprises. As illustrated in the theoretical section, Sitra and Eera researched the topic, and maybe in the future new funding possibilities will be established in Finland. Also the interest of angel investors can be achieved through new financial tools. Another important point is social impact bonds, which were mentioned during the interviews. Maybe the development of that financial tool can positively affect social enterprises. The banking sector's attitudes towards social enterprises and small wind energy companies are currently more negative than positive, because of the reasons mentioned in the previous section. Thus it is extremely important to expand the knowledge of actors in this sector. This may be carried out by utilizing the following domain: success stories in public communication. My opinion as an author is, that the most important issue, in the future, is to develop supportive financial instruments for social enterprises as well as small and medium size wind energy companies. It is a huge challenge, but actually the first steps have already been taken by Sitra.

Weak economic situation was one reason why Sitra's funding tool for social enterprise was postponed. For the same reason the banking sector may not be interested in the very risky investments. Thus the current economic situation is the biggest threat to the future development of social enterprises and wind energy companies. Profit maximization is the most important aim of traditional companies. However, for social enterprises making profit is just a prerequisite of business operations, whose aim is to achieve a social goal. If the financial sector does not understand this difference, the social enterprises can have difficulties in getting loans, and that is a major threat to those companies.

10.1.4 Success stories

The fourth domain of the Entrepreneurship Ecosystem is success stories. This domain contains different examples which can create a positive image of some phenomenon. Based on interviews, the first strength, and at same time an excellent opportunity, can be

those social enterprises which have achieved the Social Enterprise Certificate. Based on the information of these companies, real success stories can be carried out. One such instance is the Children's Day Foundation and its Linnanmäki Amusement Park. Another example is the new cooperation between the Mänttä-Vilppula Municipality and Pihlalinna Ltd. These parties are planning to establish a social enterprise to social- and healthcare sector, which is a unique project in Finland. The third example, which is actually quite well known already, is the ice hockey team called Ice Hearts. The team aims to prevent the marginalization of young people. The final example is Lumituuli Ltd., which is probably the best known social enterprise from the renewable energy sector. As mentioned by interviewees, the utilization of success stories is one key element of future activities, and with the help of knowledge expansion, such success is possible.

Weaknesses are connected to visibility. First of all, the social economy sector is still quite small and unknown even at the EU level, as illustrated in theoretical section and in the findings. Even if the estimated number of social enterprises is somewhere around 5,000 companies in Finland, the majority of those are still unidentified. This is why the visibility at the national level is nowadays truly minor. Another weakness is a lack of multinational corporations in the field of social economy. Of course there are good examples such Grameen Bank by Muhammad Yunus¹⁴², but these kinds of corporations do not exist in Finland.

An opportunity which was mentioned during the interviews was the utilization of the media. As one interviewee mentioned, now is a good time to talk about social enterprises. Maybe one good opportunity is to continue the organization of the Social Enterprise Super Days. The media has been interested in these events, and through the media these success stories can be highlighted. Another opportunity mentioned by interviewees is to bring international success stories to Finland. These could expand knowledge and thus create more interest towards social entrepreneurship. Maybe though great success stories, some people who are not interested in entrepreneurship could find new opportunities to start an enterprise.

¹⁴² Muhammed Yunus is known as a founder of the microloan business. He established a financial institute, Grameen Bank, in Bangladesh in 1975. He was awarded with the Nobel Peace Prize in 2006. Yunus is often called the first social entrepreneur. Laitinen 2012, 127 – 138.

A threat connected to success stories is again the media. According to one interviewee, the utilization of media is very complicated, and sometimes it is very difficult to get the media's attention. Another main threat is the lack of national examples. As mentioned in the theoretical part of the thesis, currently about 30 companies have the right to use the Social Enterprise Certificate. The same situation is in the wind energy sector, where Lumituuli is at the moment the only social enterprise. However, the Association of Finnish Work will continue granting the certificate, so more success stories will be built in the future.

10.1.5 Societal norms

Societal norms have been developed during the last few hundred years together with the market economy. The creation of wealth has been one key target of traditional businesses, and usually these companies are creating wealth through profitable business operations. However, as can be seen in Europe, over the last few decades a new wave of enterprises has been emerging. Social enterprises and their purpose to create social good and wealth has become more and more popular all the time. In Europe, social enterprises are very innovative and they have multiple existing social goals. This same development has happened in Finland, just on a smaller scale, and that can be seen as a strength.

Weaknesses are connected to people's attitudes, which can be against social economy, especially cooperatives. A few interviewees mentioned that existing cooperatives are too wide nowadays, and maybe their values are not similar to what they have earlier been. That could be the reason why a normal citizen has a negative attitude towards a cooperative. Some problems have emerged from the wind energy sector connected to communication between a wind energy company and the local community. As mentioned in theoretical section as well as in the findings, the observation of a local community and their opinions is very important when a company wants to create a successful wind turbine project. Maybe this issue is now unclear for some companies, and that can generate resistance.

Opportunities in the societal norms domain are innovation, the development of social entrepreneur status and a new wave of community owned companies. As illustrated in the previous section, social enterprises are very innovative at the European level. One reason is because social enterprises are traditionally operated in sectors, where normal for-profit

businesses are not interested. Thus social enterprise should be innovative so that it can create good conditions for its business operations. As mentioned by the interviewees, a new wave of community owned companies can be seen, and that can positively affect the common opinion and the status of social entrepreneurs. As one interviewee mentioned, community owned wind turbine projects can be one solution, when common opinion is moving from NINBY towards YIMBY. Furthermore, a locally owned wind turbine company can create wealth for a community. Another solution for lowering barriers is to pay rent for a bigger number of landowners, and as mentioned in the theoretical section, some companies have started to utilize this compensation.

Threats are also connected to the previously discussed topics. If community opinion is against wind turbines, it is very hard for a company to operate in the markets. That is also one important entry barrier mentioned in Minister Tarasti's report. Today just a limited number of wind turbines are located in Finland and, as usual, new innovations can provoke resistance.

10.1.6 Non-Government Institutions

The sixth domain is non-government institutions. A wide range of actors are operating there already, and this is a strength. Institutions such as the research networks the Finnish Social Enterprise Research Network and the international EMES are important players. According to one interviewee, academic evidence of social enterprise wealth creation, for example, is conducted via these research networks. Of course national trustees such as the Social Entrepreneurs' Association of Finland, the Association of Finnish Work and the Finnish Wind Energy Association are significant players, and they are actively organizing events like Onnistamo and the Social Enterprise Super Day.

Weaknesses in this domain are connected to resistance, which has been emerged among the Federation of Finnish Enterprises, for instance. Some people working in the Federation are thinking that social enterprises are trying to be ethically better than "normal" enterprises. According to a few interviewees, arguments like "each enterprise is social enterprise, when they are paying taxes in Finland" have been heard. This may be due to ignorance. The same kind of ignorance exists among Finnish Enterprise Agencies.

Previous weaknesses can be turned into opportunities through continuous open discussion among different actors. As mentioned by interviewees, each party should be open-minded and not judge the phenomenon without fully understanding. Networking between different sectors is another opportunity in addition to new development projects.

Maybe the most significant threat right now can be the constant resistance of different Enterprise Associations in Finland. If these associations are not interested in understanding the social enterprise phenomenon, it can negatively affect for the future development of the sector and companies operating there.

10.1.7 Support organizations

The seventh domain of the Entrepreneurship Ecosystem is Support Organizations. These organizations are operating in different industries and their contribution enables successful operation environment for enterprises. From a social enterprise point of view, a few very important support organizations are operating in Finland. First of all, the Finnish Innovation Fund, SITRA, has been an active player during the last few years with social enterprises but also in the renewable energy sector. Other existing organizations are banks such as Mercury Bank, which has granted debts for community projects and Tiederahoitus, which can be one possibility when thinking of future activities. As mentioned by interviewees, the Association of Finnish Work is of course a very important part of the support organization network. Also Syfo Ltd. and its Sofia tool for social impact measurement is one excellent example of support organizations.

Weaknesses are very similar to the section on financial capital. The banking sector is the biggest weakness and it limits the future development of social enterprises and small wind energy companies. Another weakness is the missing methods of social impact measurement. According to the interviewees, those are not yet developed on the national level.

The future of support organizations can be based on the development of different measurement tools connected to the Social Return of Investment (SROI) and Social Accounting. Projects in the banking sector are also extremely important. As interviewees mentioned, projects like Bank 2.0 or tools like Social Impact Bonds will create

opportunities for social enterprises. Cooperation and researching of models on the European level could be another solution.

Threats are again linked to the global recession. The development of Social Impact Bonds or funding opportunities need capital, and in this economy it is a hard task to start a new funding institute, as mentioned by one interviewee.

10.1.8 Infrastructure

The eighth domain is called infrastructure, and in this case the most important findings are connected to wind energy projects. First of all, one strength in the Finnish infrastructure is the quite good condition of the road network and thus there is an excellent possibility to transport wind turbines to a target area. Ground contours are also moderate, which means that problems with too high hills or mountains do not exist. A few wind turbine manufacturing companies are located in Finland, which means that logistical costs are reasonable. Networks like Vaasa Energy Cluster are also important technological innovators.

Weaknesses are mainly connected to three issues: transportation costs of imported wind turbines, the conditions of radars and an electrical grid. Finland is located very near some large wind turbine manufacturers, so generally transportation costs are low. However, Chinese companies are also big players in the global wind turbine markets, and if a Finnish wind energy company wants to order Chinese turbines, the cost of transportation is quite high and it may vary depending on oil price. The price of the energy directly affects the profitability of wind turbine companies, even if a feed-in tariff creates a stable situation in the first few years. The electrical grid in the coastal area can be too weak for bigger wind parks, as illustrated in Lumituuli case. According to a previous research by Minister Tarasti, maybe the biggest entry barrier right now is the radars of the Finnish Defence Forces, as mentioned in theoretical section.

Opportunities are connected to lowering these entry barriers, which is also the aim of Minister Tarasti's team. First of all, replacement or preparation of radars should be done, and after that a new wind turbine project is possible to implement in the coastal area. The conditions of the electrical grid should also be researched.

Threats are also linked to the radar system and its poor condition. During the last few years the budget of the Finnish Defence Forces has been reduced, and that is the reason why the conditions of the radars are so poor. Additional funding is needed, but maybe the government does not have the interest or the money to increase the budget of the Defence Forces. Another threat is the increasing logistic costs, which can affect the profitability of the wind turbine companies.

10.1.9 Educational institutions

The ninth domain is Educational Institutes. As can be seen from the previous researches and their publication places, few actors have already found the social enterprise phenomenon. For instance, the Social Enterprise Living Lab project by Diakonia University of Applied Sciences and Aalto University or the Social Enterprises in Community Renewable Energy by Karelia University of Applied Sciences and Savonia University of Applied Sciences are an important project in the national level. Lappeenranta Technical University for instance has been specializing in wind energy markets. One important educational institute is SYY Academia by the Social Entrepreneurs' Association of Finland.

Even if some educational institutes are very active in social enterprise research, the majority of business schools or entrepreneur educational institutes are not familiar with this concept. This is a clear weakness right now. However, according to one interviewee, the number of institutes which are providing entrepreneur education and mention social enterprises during the education are increasing.

Opportunities are connected to previous issues. Expand of knowledge through public debate can be one opportunity. Another can be the expansion of social entrepreneurship training. Nowadays SYY Academia is operating in Helsinki, so maybe the licensing of the concept to other cities can create more possibilities to entrepreneur to join in the education. The next SYY Academia in 2013 will be organized in English, and that is an excellent opportunity to create networks with foreign entrepreneurs.

Threats are linked to the quality level of education. Even if the Finnish basic education is ranked in the top level globally, decreasing budgets of municipalities and the Finnish government can affect negatively in function of educational sector in the future. This may reduce the level of knowledge in educational institutes and thus decrease the quality level of the educational sector. Decreasing budgets can also affect entrepreneurship education in different institutes.

10.1.10 Labour

Domain number ten is called Labour. As illustrated in the section above, the quality of the Finnish education system is at a good level and this guarantees the supply of skilled employees to labour markets. Finland has been traditionally well-known for heavy machine industry companies such as Kone, information and communications technology companies such as Nokia and forest companies such as Stora Enso and UMP-Kymmene. The Finnish export sector has lost its competitiveness during the last few years. Because of economies of scale, these multinational corporations have outsourced their functions to other countries. Thus a number of skilled employees have increased in the free labour markets, and many engineers from Nokia have started their own businesses during last few years. That is why good level of basic education and on the other hand professional education is the biggest strength of labour domain.

Traditionally the Finnish wind energy market has been undeveloped. That is why one important weakness of the labour domain is a lack of knowledge of wind power project implementation. Simply we do not have enough skilled employees for each wind energy project now under planning. That probably can affect the quality of the projects and through that the common opinion of citizens. The same situation is in the project management, as mentioned in subsection 10.1.1.

Thus one opportunity is further education. Because of the reasons mentioned in the strength subsection 10.1.10, further education of the former employees of Nokia or Stora Enso to wind energy professionals could be an effective way to utilize their expertise. The development of education systems should also be made together with important industries, and maybe the wind energy sector will be a quite important employer in the future.

As already mentioned in the weaknesses subsection, a lack of skilled labour is also the biggest threat. Without skilled employees the implementation of wind energy projects is impossible or at least the result of the projects would greatly depend on the quality of work. The same situation is also in the social enterprise sector, another area where a significant amount of skilled labour is needed in the future. However, the situation there is better because social enterprises are operating in different industries, and the amount of labour is therefore also bigger.

10.1.11 Networks

The eleventh domain is called networks and it is an important part of the entrepreneur ecosystem, because through networks an entrepreneur can share information and collect feedback or ideas. From a social enterprise point of view, networks have started to expand during the last few years. The Social Entrepreneurs' Association of Finland was founded in 2010, and since that it has been an important link in cross-sector communication. Another important network, especially in the early stage of the national social enterprise concept development, is the Social Business International and its owners Jonathan and Anne Bland, who have been active consultants. Also both their role at the Finnish London Institute and their first researches connected to social entrepreneurship have been widely affective on the national level. Of course, each player mentioned in this analysis has had an important role in the recent development of the social entrepreneurship concept. Hence, according to interviewees, an obvious strength is this cross-sector communication and well-formed networks among different players.

One weakness is a lack of international events. As mentioned in the theoretical section of the thesis, the Onnistamo event for social entrepreneurs and networks is organized annually, but that is the only large scale exhibition in Finland. The same situation is in the renewable energy sector, where exhibitions like the Energy Exhibition are organized too rarely. Nonetheless, international events and exhibitions are a very important place for networking and sharing information with similar companies from around the world.

Thus one possible opportunity for further development could be networking on the international level, as mentioned by one interviewee. Social entrepreneurs, as well as wind energy companies, could start to establish networks abroad, one way to develop their

businesses and mentality. Already existing networks such as FinnSERN can be a help for this purpose.

Future threats are connected to resources. The lack of mental resources can affect the establishment of new networks: the need and want to make networks by social entrepreneurs is absolutely important, and sometimes during busy days it can be difficult. Another resource affecting networking is of course money. During a recession period of economy, companies are trying to save money, and the first place to do that is “extra costs” such as exhibition and marketing. That is why a lack of financial resources may prevent participation in exhibitions, for example.

10.1.12 Early customers

The last domain of the Entrepreneurship Ecosystem is called early customers. The strengths of this domain are connected to the industrial growth rate of the wind energy business. As illustrated in the theoretical section, the wind energy market will grow very fast in the following seven to eight years; hence that the market value will be about 4 billion euro in 2020. As an outcome this tells that there is a lot of potential in the markets and there may be a huge number of those early customers who are willing to buy wind electricity. From the social enterprise point of view, the first reviews by the media have been positive, and throughout more good stories will be published. One of the latest examples is from Kauppalehti, where cooperation between the Mänttä-Vilppula Municipality and Pihlajalinna Ltd. was presented in the end of November 2012.

As mentioned by interviewees, customers’ preoccupations should be switched over from action to impacts. That is why one weakness right now is the customer knowledge of social responsibility products. More or less, customers are buying where they get the cheapest price. Simultaneously, some positive signals can be seen. For instance customers interested in Fair Trade products and organic food stuff can predict an increasing interest in social responsibility products in the future. That could be a good signal for social entrepreneurs, and they should highlight their social responsibility more and more in the future.

Opportunities in the wind energy sector are linked to community owned wind companies. As mentioned by one interviewee, those business models are utilized successfully in Germany and Denmark. Those are lowering entry barriers such as resistance in local

community. That is why one possible scenario for the future can be the utilization of community owned projects also in Finland. Lumituuli is a very good example of this kind of pioneer work, which has been already done on the national level, and thus interesting information connected to the community owned business model has been collected in this thesis for instance. Lumituuli has attracted more than one thousand individuals to invest in a wind turbine project since 1998. Those early customers are still very unique on the national level. Another possibility mentioned by interviewees is utilization of crowdsourcing tools for reaching potential early customers. Maybe with help of these tools the wind energy industry can lower market entry barriers in the future.

As illustrated in findings section 8.1, the long history of cooperatives has been affecting people's attitudes. In the energy sector the image of cooperatives has been weak because of unprofessional cooperative companies in the past. This may still affect customers' attitudes nowadays, and that is why reaching potential early customers may be hard to do for a cooperative. Thus reputation of cooperatives can be a threat for companies operating in the wind energy sector.

10.2 Business Model Canvas

The business model is presented with help of the Business Model Canvas and that can be found in Appendix 6. The canvas collects information from the theoretical sector and from interviews and presents possible business models in a visual way. The most important topics of the canvas are presented below. Because the target is not to create a specific business plan for investors, the idea is just to give a short overview of a possible business model scenario and not to create a perfect business plan with calculations or risk analyses.

The wind energy business is a capital intensive in the beginning. That is why it is crucial for a new company to get significant start-up capital. For this purpose, a company form should be selected very carefully and maybe the best options in Finland are cooperative or limited company. These company forms are quite similar from a legislative point of view. However, the biggest difference is the decision-making power, which in the case of a cooperative means one person one vote, and in a limited company one stock one vote. Thus the cooperative is a more equal corporate form. The needed start-up costs are also different, because the establishment of a limited company requires at least 2,500 euro in

capital, but a cooperative does not have such start-up capital requirement. As illustrated in the findings section, the cooperative form has a poor reputation in the Finnish energy sector. Another complex question is the current energy support by the Ministry of Employment and the Economy. It cannot be granted to a cooperative. For those reasons might be better to avoid this company form until further notice. However, shares can be sold to private customers and thus a local citizen can participate in activities of the social enterprise.

The level of a start-up investment is very high. The cost per turbine kilowatt is approximately 1,228 euro, which means that total start-up costs of 1 MW turbine project is 1,228,000 euro. Because of the quite huge amount of money, capital should be collected from financial markets by organizing issue of shares and by bank loan or investment loan of Finnvera. However, collecting of the start-up investment can be complicated because of the risk level, and good connections to the capital markets are needed.

The target group of the social enterprise in wind energy business could be people who are interested in environmental issues and the development of the renewable energy business. Another motivation to invest on the company could be the lower price level, such as in the Lumituuli case, where the average selling price of wind electricity is lower than “normal” electricity. Feed-in tariff guarantees price level of 82.5 euro per MWh up to year 2023. Operation costs can be estimated, and as mentioned in theoretical section, a good starting level is 52.7 euro per MWh.

The most important stakeholders are presented in the Business Model Canvas. The company should create networks with different actors and apply the Social Enterprise Certificate as soon as possible. A potential electricity dealer is also an important stakeholder, and one possibility could be Ekosähkö, which is dealing renewable electricity from producer to customer. Another important stakeholder is the local municipality, which is responsible for planning and permit procedures, for instance.

The value proposition of the company could be linked to values of social enterprise and environmentally friendly production of electricity. The company uses transparency in its operations and publishes all necessary data and reports on a webpage. It also has limited profit distribution, which means that over half of the profits are used to fulfil a social goal,

which in this case could be increasing welfare through new wind energy projects. As illustrated in the theoretical section and by interviewees, an important tool for social enterprise value measurement is SROI, and that could be taken into account in the operations of the company.

Good connections with the local community and municipality are extremely important if a company wants to operate successfully. As mentioned by interviewees, transparency and open communication are key elements for local acceptance of wind energy project. The company can promote its activities by utilizing crowdsourcing methods and also via social media and exhibitions.

11 DISCUSSION AND CONCLUSIONS

The aim of this paragraph is to create a short overview of the themes of the study and evaluate the validity of the used methods and collected data.

11.1 Conclusions

Social enterprises in the European level have developed since the early 1990s. In Finland this same development started just a few years ago. This phenomenon is interesting and provides people new possibilities to become an entrepreneur. A new and fresh way to utilize community power and thus create new business models provides several possibilities in the future.

Social entrepreneurship is a solution for a more sustainable business, and as mentioned in the findings section, taking care of the local community and its people is extremely important when a company wants to operate in the area. Social enterprises have their strong values, and they are working for the purpose of creating social good. When used correctly, social aim and a transparent business can reduce resistance and thus contribute to the achievement of the local approval.

Since 2010, the Finnish social enterprise network has developed in small steps. The important players already exist, but something is still needed. As mentioned in the analysis section, weaknesses in the banking and funding sector, as well as a lack of knowledge in the Ministry level prevent the fast growth of social enterprise knowledge in Finland. However, with the help of multilevel co-operation and communication, the knowledge of social entrepreneurship will be expanded in the future.

From the wind energy industrial point of view, the very complicated permit procedure and the lack of the technological resources of Finnish Military Forces are the biggest market entry barriers. Nonetheless, the Ministry of Employment and Economy has noticed these problems and is aiming to eliminate them using Minister Tarasti's team as help. Social entrepreneurship can be one solution for the lower resistance to wind turbine projects in Finland.

11.2 Limitations of the study

The thesis was conducted in Finland, and that is why the results are most likely to be valid in Finnish context. The subject of the thesis is an important and current topic from an international point of view. The social enterprise phenomenon in the EU for instance has been expanding over the last few years. Unfortunately, it was not possible to conduct an international case study research during this thesis. However, the collected data is one part of the future activities in the SECURE Project, and thus the data will be used in an international context later on.

The secondary data and reference publications are reliable and from well-known sources. The secondary data from publications has been compared with Eurostat information. Only original sources of information have been accessed, which increases the reliability of the study. The number of interviewees was relatively high, which increases the validity of the research. Also the expertise of the interviewees was capable of supporting a reliable research. The interview situations were carefully planned, and thus the interviewees had the possibility to focus on questions and were able to provide reliable answers. The answers provided interesting information and mainly they were very similar. Of course people see things from different points of view, and that is why the dispersion of responses was present.

11.3 Suggestions for future research

The study topic of social enterprises and the wind energy industry is wide, and during the study a lot of different interesting ideas for future research emerged. First of all, a research connected to Social Return on Investment methods on an international level could be important for social enterprises' future development in Finland. This theme was discussed during the interviews and, it is an extremely important and current topic. A second research topic could be an evaluation of different international funding methods for social enterprises. National banking sector needs more information on social enterprises, as mentioned by the interviewees.

11.4 Summary

In summary, the study topic of the thesis is quite unique because it combines two current topics; social enterprises and the wind energy industry. The aim of the thesis was to create a business model for a social enterprise operating in the wind energy industry, and that aim was achieved successfully. Through interviews of experts important information was collected, and they allowed the successful implementation of the thesis.

The thesis was carried out during autumn 2012. During that time I visited four different educational days which were connected to the establishment of cooperatives and social enterprise, cooperative education for business advisors and the Super Day of Social Enterprise. I interviewed ten experts from different institutes and accessed dozens of different publications and databases. This four month period was intensive and very rewarding. I would like to thank each person who supported me during this work and took part in the interviews. Without their contribution this study would have been very different and probably impossible.

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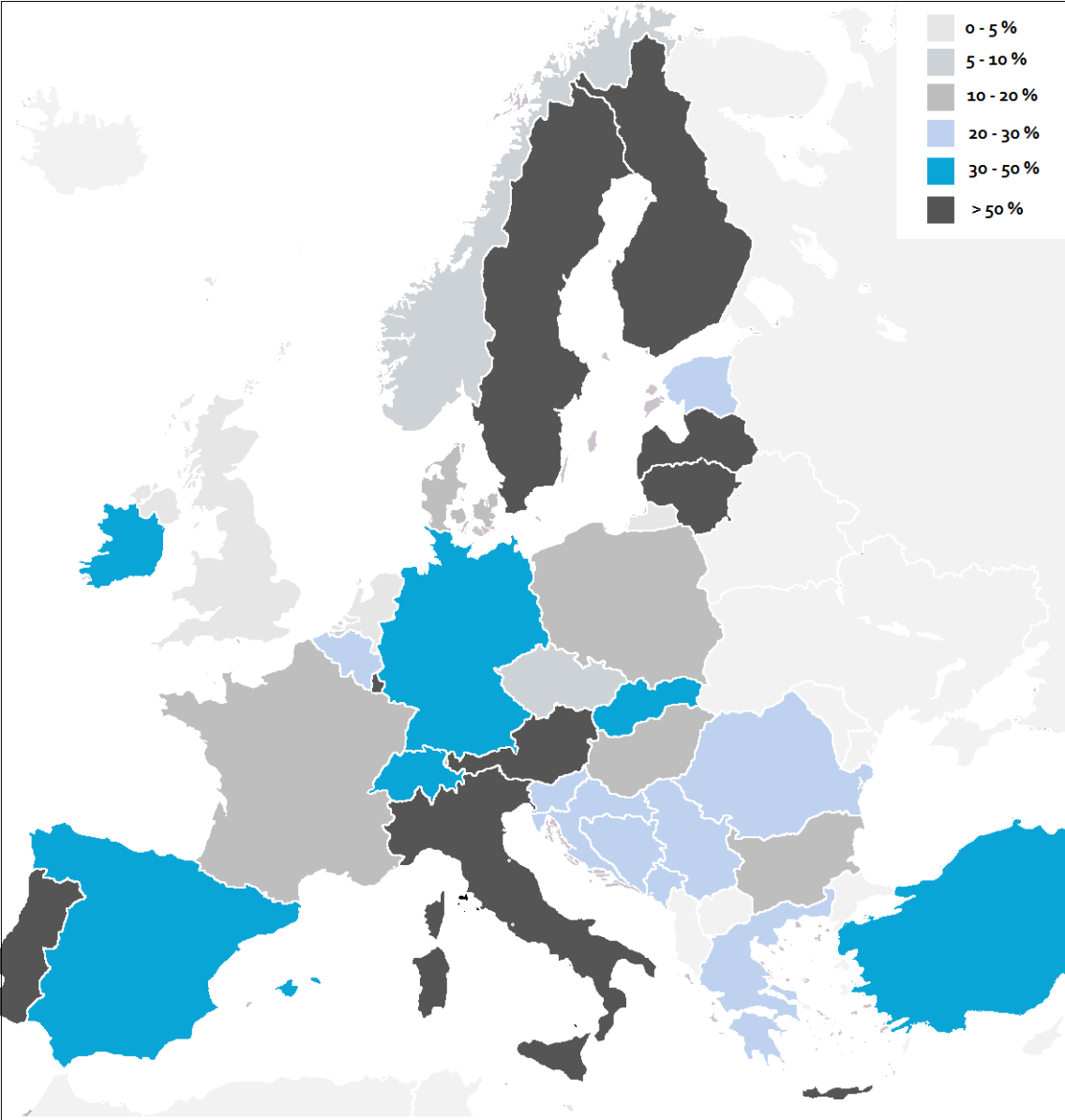
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PRIMARY ENERGY PRODUCTION IN EUROPE: SHARE OF RENEWABLE ENERGY.



Source of data: Eurostat

SEMI-STRUCTURED INTERVIEW: THEMES AND QUESTIONS

Theme 1. Significance of social economy in Finland

How have the co-operatives affected the Finnish economy development?

What are people's attitudes towards social economy or cooperatives in Finland?

Could the long history of cooperatives and social economy enable the development of social enterprises?

Theme 2. Current situation of social entrepreneurship in Finland

How well the concept of social enterprise is known in Finland?

What are the most important milestones so far?

How could the knowledge of social entrepreneurship be augmented in the future?

Theme 3. Future development of social economy in national level

How could social entrepreneurship be supported in Finland?

Should the position of social enterprise be developed through legislation?

How should social impact be measured in the future.

Theme 4. Project implementation in wind energy industry in Finland

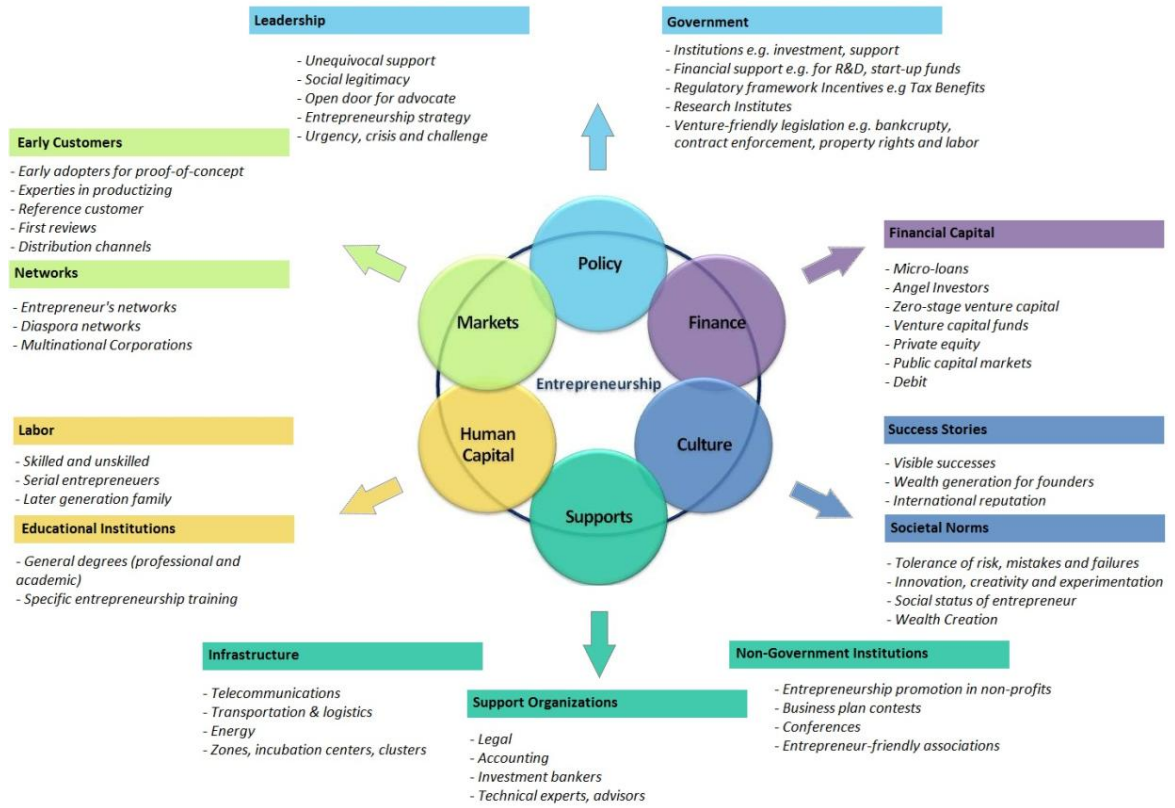
How complicated or simple is the permit procedure in Finland?

What are the questions that people usually ask about wind turbines?

How could the attitude of people towards wind turbine projects be changed?

What is the importance of involving a local community to a project as early as possible?

DOMAINS OF THE ENTREPRENEURSHIP ECOSYSTEM



Source:<http://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/>

CASE STUDY THEMES AND QUESTIONS FROM SECRE DATABASE

The Idea

Where did the original idea come from?

What were the main objectives when it was decided to embark on the project?

Were there external factors that significantly affected the decision to follow up on the idea?

How long was the incubation period (idea to action)?

Describe what happened between the idea being first mooted and a decision taken to proceed: Positive drivers / Negative drivers.

Engaging with Stakeholders

What was the initial response in the community when the idea was presented?

How were surrounding communities involved with the project?

What measures were taken within the community to explain the development(s)?

How long did it take to sell the idea to the community?

Explain what made the measures effective or ineffective.

What was the community position following consultation?

Which external stakeholders were involved?

How was this phase funded?

Resource and Technology Evaluation

How was the potential benefit determined?

What costs were considered at this stage?

What risks were considered?

Which of the following were completed/achieved by the end of this phase?

Did any of the following affected the scope and scale of the project?

What was the effect?

How long did it take to conclude this resource and technology evaluation phase?

What external expertise was used?

Who in the community was involved in the resource and technology evaluation process and what was their contribution?

How did this affect the project?

How was this resource and technology evaluation phase funded?

What impression does the community now have concerning this resource and technology evaluation phase of project?

Obtaining Funding

Which sources of funding were investigated?

Which sources of funding were eventually obtained?

Which factors significantly affected funding decisions?

What was the effect of final funding levels on project plans?

Specify the final funding package?

Who in the group was responsible for obtaining the funding?

Was the expertise available appropriate?

What lessons were learned?

Was the help available for looking for funding adequate?

What plans were in place at this stage for managing profit?

How was this phase funded?

Implementation Phase

Were there any issues with obtaining consents and permits?

Which of the following factors became relevant to the project?

What activities were associated with equipment procurement, contractor selection and specific technology choice?

Which of the following is True of the construction/installation/implementation work?

How long did it take from funding approval until system operational?

What lessons were learned from the tendering and purchasing process?

Should anything different have been done in relation to installing the technology?

Were there any difficulties using or distributing the energy produced, and how were these overcome?

Running and Monitoring the Project

Which day-to-day operational duties require to be organised?

Who is involved in decision-making?

Who does the day-to-day work?

How does the group ensure workers are motivated and effective?

How is energy production/savings monitored?

What is currently the profitability of the project?

How long has the facility/scheme been operational?

Describe the management and staff organisation?

Detail the employment policy?

How many people are directly or indirectly employed as a result of the project?

How does the income and profit meet with expectations?

How could the operation be analysed in order to enhance profitability, and is this being done?

Are the project results disseminated, to whom, and how?

Using the Profits

How is the revenue used?

Who are involved in processing requests for grants from project profits?

How fair is the process of allocating funding considered to be?

Within the community, what is considered the impact of community payouts?

For grant applications, does the fund pay all or only part costs?

Are there clear selection criteria, and how are they determined?

What skills do the selection panel members possess?

Is the use of funds considered effective?

How is feedback about the selection process and benefits obtained and evaluated?

How could the project profits be better used?

Community Acceptance of the Scheme

Which clear positives have emerged from the project?

What are the strong negative aspects of the project?

Which factors determine how particular individuals within the community perceive the project?

What significant events altered opinion over the course of the project?

What were the key decision points?

What decisions are now seen to be mistakes?

Are there plans for more RE projects?

Are people in the community using energy more efficiently?

Are people more socially aware?

Final Evaluation

Would you encourage other communities to do something similar, and why?

Over the whole project, what would you consider to have been examples of good practice?

What were the things, with hindsight, that should not have been done? How could these things be done better?

What skills are necessary and what training would be useful for people engaged in similar projects?

Can the project as it stands run better (rationalisation, cost trimming, more use of internal skills, different management, etc)?

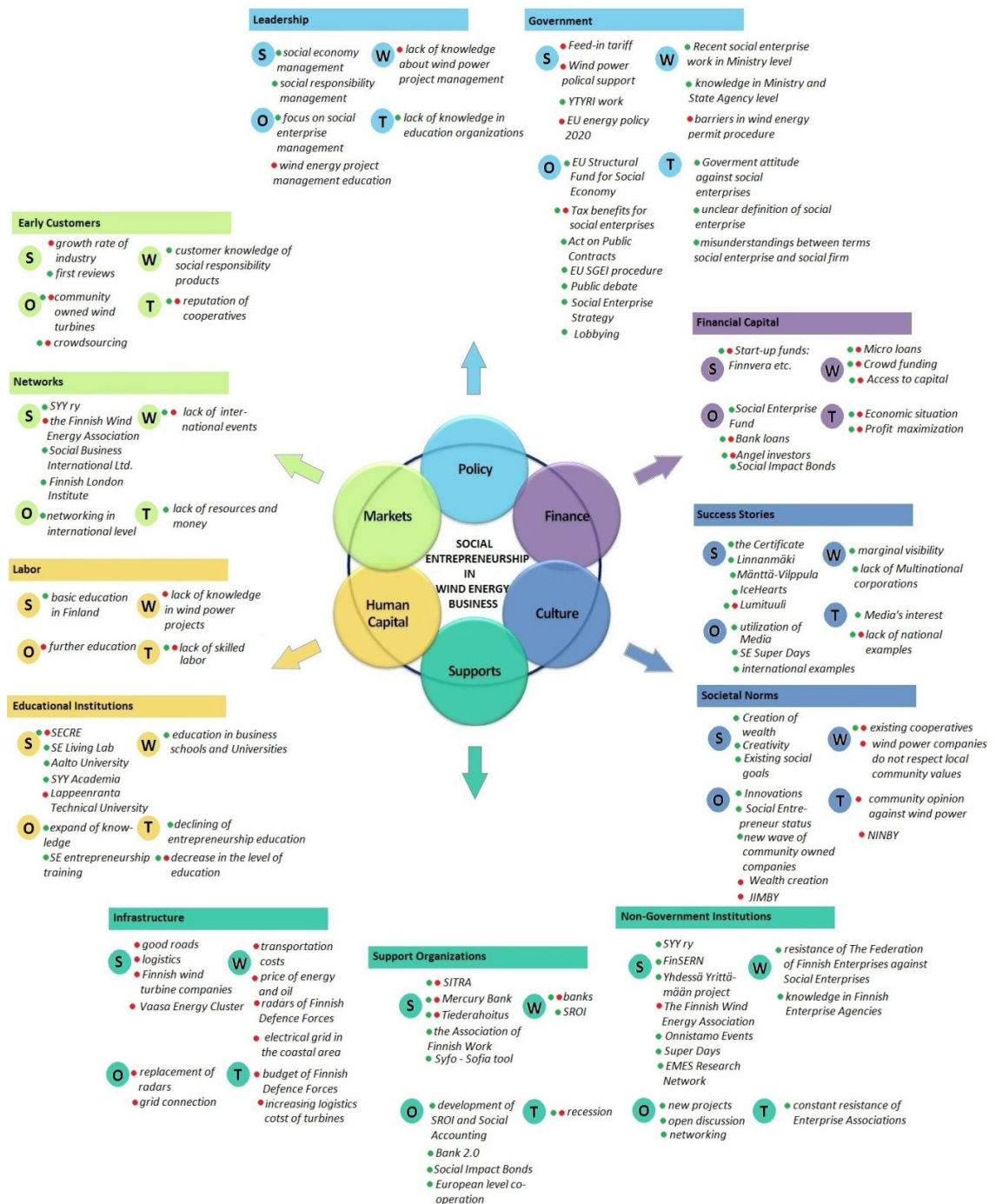
Should the project be abandoned?

Should the revenue be used in a different way (shared with neighbouring communities, more transparency, etc)?

What should the next step for the community be?

SOCIAL ENTREPRENEURSHIP IN WIND ENERGY BUSINESS

Green coloured dot in the figure before the text means, that the text describes topic connected to social entrepreneurship in Finland. Red coloured dot means, that the text is connected to wind energy industry in Finland. If both, red and green coloured dots are before the text, it means that both terms exist.



SOCIAL ENTERPRISE IN WIND ENERGY PRODUCTION: THE BUSINESS MODEL CANVAS

The Business Model Canvas

Designed for: Social Enterprise.

