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Please cite the original version: Meristö, T. ; Laitinen, J. & Ahola, A. (2014) Future Sustainable Innovations - a Competitive Advantage or a Must? In Eelko Huizingh, Steffen Conn, Marko Torkkeli, Iain Bitran (Eds.) The Proceedings of XXV ISPIM Conference - Innovation for Sustainable Economy & Society. Manchester: International Society for Professional Innovation Management.

Future Sustainable Innovations – a Competitive Advantage or a Must?

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Abstract: The aim of our paper is to figure out the key actors in the field of sustainable business and to build up their ecosystem in the form of cluster in Western Uusimaa region. The motivation for the project is that Western Uusimaa region and its business structure is in transition: many of the traditional industries do not operate there anymore and new businesses are more than welcome. As a framework, we have used the so called Balanced Triple Helix model which combines the Triple Helix context to the sustainability concept. As a result we introduce the cluster of sustainable business in Western Uusimaa, core competence tree, alternative future scenarios for the cluster of sustainable business in Western Uusimaa and give recommendations for triple helix actors in alternative scenarios.

Keywords: Sustainability; cluster, SME, regional development, innovation, Triple Helix, future; scenario

1 Introduction

According to Brundtland (United Nations 1987) sustainability means development with an economic, social and ecological balance not only today but for the future generations. Brundtland's viewpoint was given in a global level but it is like fractal based structure working also on the regional level, as applied in this presentation.

Our paper is based on an ongoing project. The aim is to figure out the key actors in the field of sustainable business and to build up their ecosystem in the form of cluster in Western Uusimaa region. The motivation for the project is that Western Uusimaa region and its business structure is in transition: many of the traditional industries do not operate there anymore and new businesses are more than welcome. Green industry, cleantech and responsible business models are the elements of the renewal needed for the future.

We are dealing with a cluster not yet well-defined, i.e. a sustainable business ecosystem, and its opportunities for the future. The ecosystem that we are constructing, consists of core business actors, supporting and related business actors as well as enabling actors in the field of sustainable business cluster, i.e. the innovation management problem in this presentation can be seen not only related to one company, but the whole business network. This means future-oriented innovations through the whole cluster including all industry branches. We have good examples from larger companies being in a leading position in the ecosystem of their own, when dealing with sustainable innovations, e.g. from technology industry so called cleantech solutions. The awareness about sustainable opportunities is arising among all companies but especially SMEs (as part of a cluster) don't recognize the advantages they can get from sustainability to their business or even if they recognize, they don't have practical tools for managing the required transformation towards sustainable innovations and new type of business models.

The sustainable transition has to be made as easy as possible for everyone involved. SME's have limited resources and therefore they need simple and convincing reasons for improving sustainable solutions, e.g. payback time calculations are one way to illustrate and motivate SME's. To improve sustainability, the region has to find a way to reduce the fears and risks that are connected to the sustainable transition of local businesses as well as the ways to support companies in their sustainable business development activities. Regional developers and a public sector can support companies in many ways: giving information about opportunities, promoting existing successful solutions, improving regional infrastructure towards sustainability or even giving financial support or tax reduction concerning sustainable investments.

We have started to create a cluster of sustainable business that helps companies and other actors to connect with each other and work on new business models that will take sustainability into account. The cluster helps companies to be more innovative through networking and cooperation and it also reduces risks and required resources because they are shared with others. It is also worth noting that the cluster is not trying to bring together actors from a specific field of business, but everyone that are connected to sustainability. The integrating theme is sustainability itself. We have also interviewed SMEs and examined the current state and future aspects of SME's concerning sustainable business and increase the awareness of opportunities in the field of sustainability among SMEs in Western Uusimaa region.

2 The aim and research questions

The aim this presentation is to showcase our case cluster in the Western Uusimaa region and how it is constructed. It also gives a detailed picture of the advantages it has created

for the businesses and illustrates how the public sector support via the cluster and other means can accelerate the innovation process in the local businesses.

From the perspective of innovation management, the cluster of sustainable business is interesting because it includes companies and actors from various fields of business, and thus offers a wide range of new opportunities for new innovative products, services and business models. The key themes of the sustainable business cluster in Western Uusimaa are energy, waste and water, from which especially the last mentioned is the focus of sustainability there. It is a remarkably interesting theme for everyone because of its global importance.

In addition to figuring out the cluster of sustainable business in Western Uusimaa we have the following sub-questions to be answered: 1) What are the core competences needed in the sustainable business? 2) What kind of alternative scenarios there might be for the cluster of sustainable business? 3) What actions should different Triple Helix actors do in alternative scenarios in order to be successful?

3 Research design

3.1 Framework

As a framework, we have used the so called Balanced Triple Helix model (Meristö & Laitinen 2013) which combines the Triple Helix context to the sustainability concept, i.e. all the three dimensions of sustainability have to run through all the actors as a part of triple helix. The creative renewal arises within each of the three institutional spheres of university, industry and government, as well as at their intersections (Etzkowitz & Leydesdorff 2000). In balanced Triple Helix Model, university, government and industry have to adopt sustainability as a living part of their everyday activities. However, each actor can concentrate on its own strengths and as a result, the region is in balance in terms of sustainability.

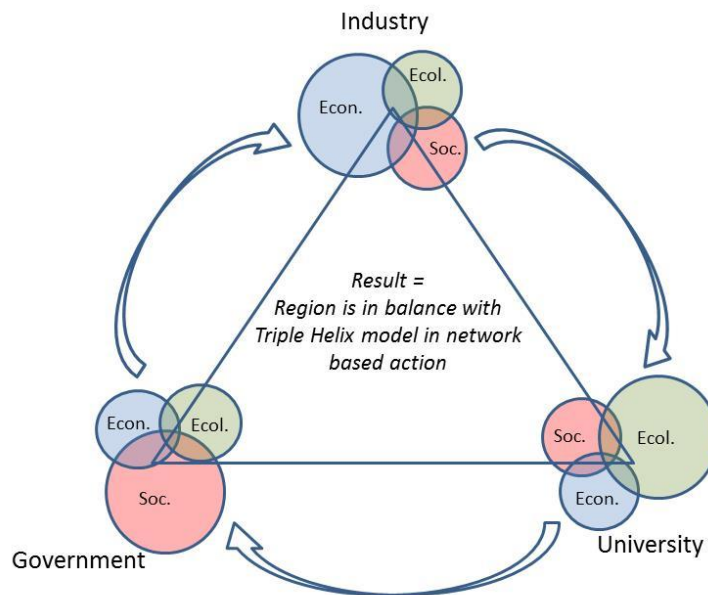


Figure 1 Balanced Triple Helix Model combines Triple Helix actors to the sustainability concept.

3.2 Methods and research process

During our research process we have used various different methods (Figure 2). The research process was started with a literature review concerning definitions of sustainability and different industry branches. The work continued with concept definition and analysis and based on them we created a tool for interviews covering all the dimensions of the sustainability. The essential method in the process has been interviews for SMEs. Based on the literature review and interview results we have figured out the sustainable business cluster with core competence tree and cluster design adapted from Porter's (1990) cluster definition. In addition, we have used many futures research and strategic planning methods including scenario analysis, SWOT analyses and offensive/defensive strategic actions.

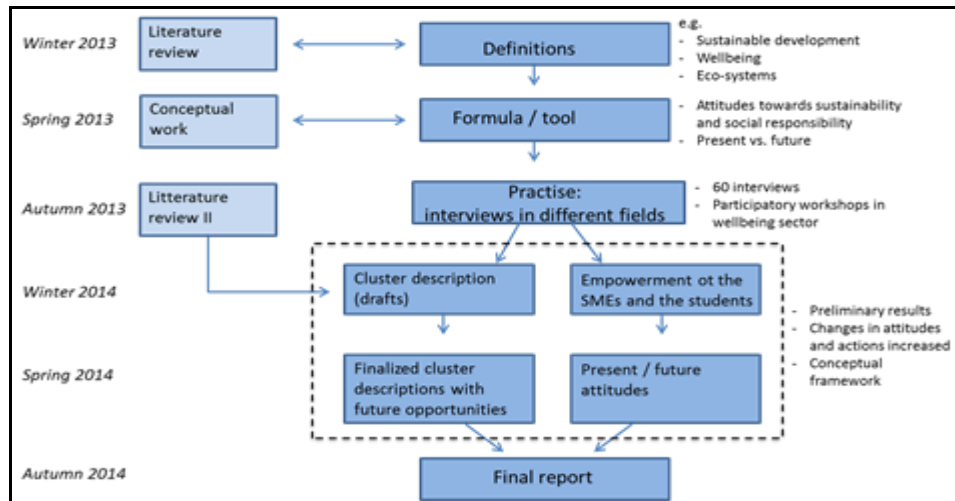


Figure 2 Research process.

4 Results

As a novel contribution, we present a cluster of sustainable business in Western Uusimaa, which includes not only cleantech companies, but companies throughout all business clusters. According to Porter's (1990) cluster definition we have divided the actors in three positions: core business field, supporting & related businesses and enablers (Figure 3). We have develop Porter's module further, e.g. in the core we define the business through the definition of our own. The competitive solutions are a combination of three elements: services, physical elements and skills & know-how. The more the focus is on service and know-how, the more sustainable is the solution. Also, the more eco-efficient is and using renewable/recycled materials, the more sustainable is the solution.

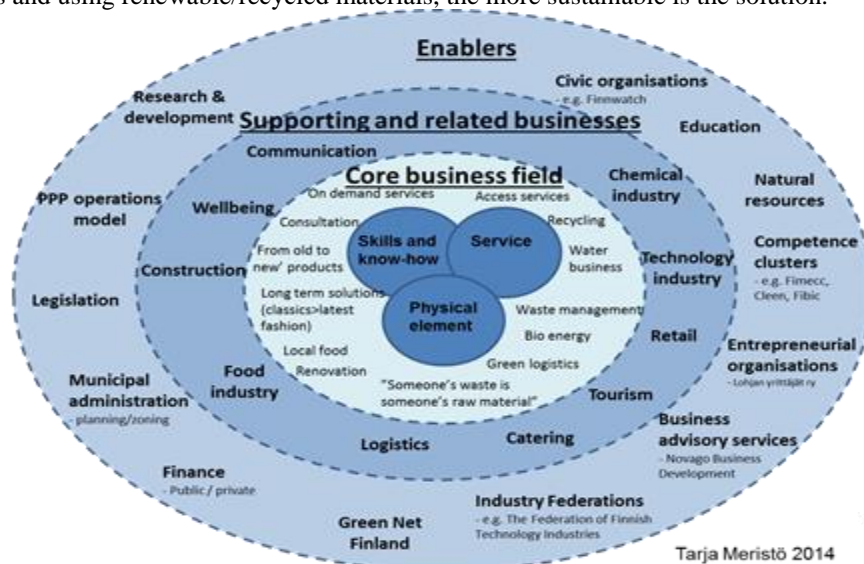


Figure 3 The cluster of sustainable business in Western Uusimaa.

In Western Uusimaa, we have recognized and interviewed companies mostly from core and supporting & related fields, but also from enablers' field; and in that way this work is partly action research oriented by nature. Also our partner in the project (Novago Business Development) is from the group of enablers.

We have described the sustainable cluster in Western Uusimaa also with the core competence tree concept (Figure 4), which was originally presented by Hamel & Prahalad (1996). We have developed it further especially focusing on more detailed definition of roots, i.e. competences. Knowledge and skills, values and attitudes as well as contacts and experiences together form the set of core competences which are necessary in every project (Meristö 1993, Kamensky 2008).

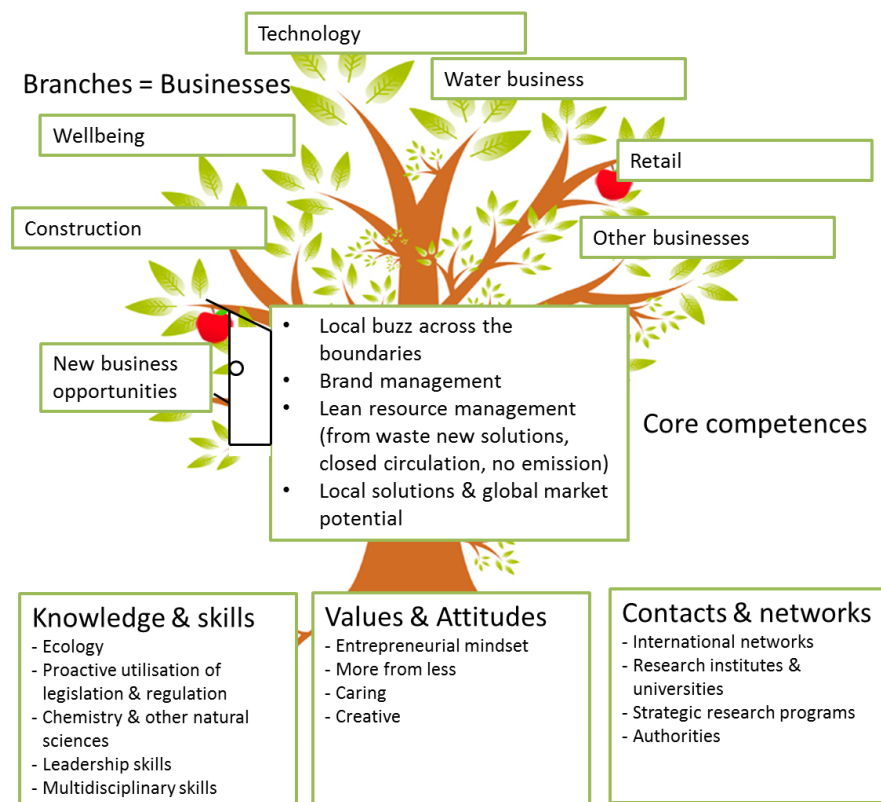


Figure 4 Core competence tree (adapted from Prahalad & Hamel 1990, developed further, see e.g Meristö 1993, Kamensky 2008).

We also introduce alternative future scenarios for the cluster of sustainable business development in the long run. As driving forces for future development we recognized on one hand market orientation vs. regulation as well as focus on selected businesses vs. businesses including to the strategic work in the region. From these drivers we get four scenarios in the long run, next 20-30 years. These scenarios are 1) Branded niche for

global market, 2) Competitive advantage from proactive innovations, 3) Develop or die and 4) Local train, which are in the form of scenario axes in Figure 5.

Alternative scenarios include more or less opportunities for all businesses in Western Uusimaa. To understand their strategic meaning for the whole region, we have to analyse them more deeply from Triple Helix viewpoints and give recommendations to actors in all sectors, i.e. governmental, business and university dimensions.

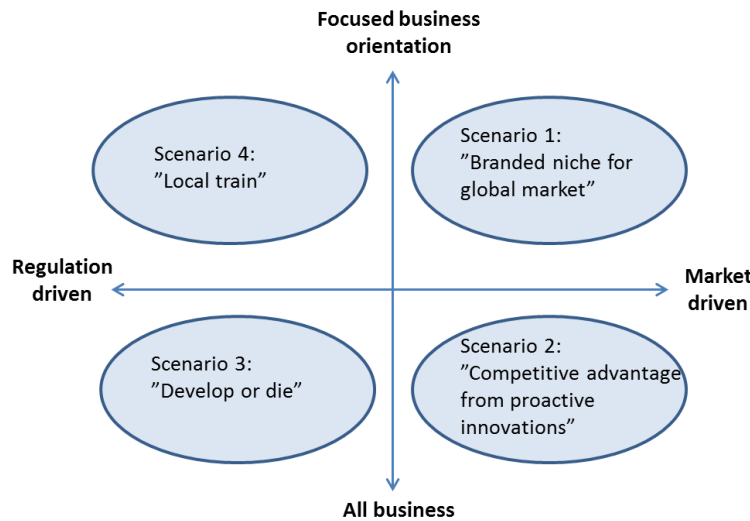


Figure 5 Alternative future scenarios for the cluster of sustainable business in Western Uusimaa.

Based on these scenarios we suggest action proposals for different triple helix actors which could help to develop and exploit business opportunities in a sustainability field.

Table 1 Recommendations for triple helix actors in alternative scenarios.

<i>Scenario</i>	Government	Universities	Businesses
1. Branded niche for global markets	Shared strategic vision	Niche-orientation	Active partnering
2. Competitive advantage from proactive innovations	To be pro-active and open-minded	Networking, multidisciplinary research	Awareness and agility
3. Develop or die	Broad awareness of future regulations, communication with local community	Joint effort with SMEs, impact analysis	Active development work, exploitation of analogy models from different industry branches
4. Local train	Lean procurement	Focus on regional development in that specific field	Public-private partnerships and other networks in the region

In addition, we also introduce our suggestions how companies could turn vision into action concerning sustainable business opportunities and create operational action in grassroot level. As an example, we present here SWOT analysis (see e.g. Meristö et al. 2007) of one scenario (2. Competitive advantage from proactive innovations) and describe also the practical action alternatives at grassroot level, both for offensive and defensive strategies (Figure 6). Generally, for the companies it is useful to be future-orientated and react quickly to the changes of operating environment when developing successful business (Kettunen & Meristö 2010; Kettunen 2008; Meristö et. al 2011).

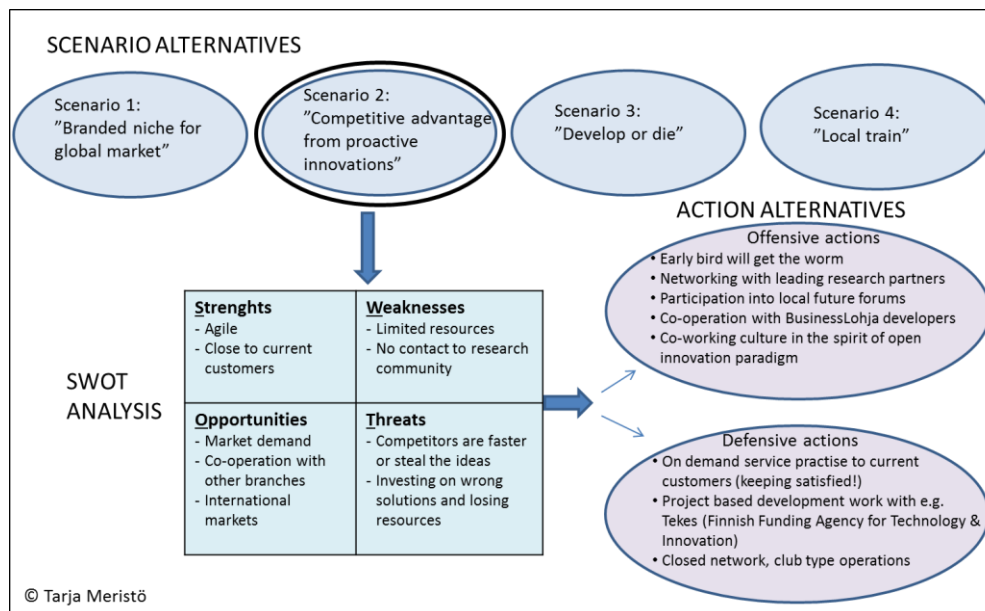


Figure 6 Illustrative example of SME's SWOT analysis in scenario 2 and action alternatives based on that (developed further by Kettunen 2005).

4 Conclusions and practical implications

According to our interview results, most of the companies at least recognize the importance of the sustainability and its role in the business. Thus, there seems to be a real need to inform companies about the possibilities created by the sustainable solutions. When considering the cluster of the sustainable business, it looks like the field is very wide consisting of different branches and so far not well organized. Thus, networking and finding the right partners in the spirit of open innovation (see e.g. Chesbrough 2003) are essential when developing sustainable business. It also seems useful to have actors from all Triple Helix dimensions when developing business within regional sustainability cluster.

This paper is based on the ongoing process so some of result are only preliminary and they will be supplemented later. In the later stages of the project we will complete the results with more company interviews and present the final report in autumn 2014. In

addition, using of visionary concept design based on offensive defensive action alternatives will give concrete solutions for individual companies, too.

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