



BIOBORD
PLATFORM

ONLINE BENCHMARKING

RDI2CluB – September 2020

28.09.2020 Riikka Kumpulainen -

JAMK University of Applied Sciences with the assistance of

Enni Huotari - Regional Council of Central Finland, Tiina Kuisma - SSYP Kehitys Ltd, Ola Rostad

and Ingrid Hvidsten Gabrielsen - Tretorget Ltd, Joanna Zgórska - Marshal Office of the

Świętokrzyskie Voivodeship, Ewłina Piotrowska - PRO Civis,

Santa Vitola - Vidzeme Planning Region and

Øyvind Nordstrand Inland County Council



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1. Introduction

Current world state has put to a test everyone's working and learning methods. RDI2CluB-project has not been an exception. Original plan in the RDI2CluB was to conduct benchmarking in Latvia, April 2020. Few weeks before departure global pandemic bursted and plans were cancelled. Alternative plan was to combine benchmarking to project's final seminar in Central Finland in September 2020. This plan was also forced to cancel because of ongoing pandemic. Luckily, lead partner JAMK University of Applied Sciences was prepared with an alternative plan. The idea of online benchmarking was born in spring 2020 and further evolved in following autumn.

Benchmarking is defined as a process where an organization identifies, understands, and adapts practices of another organization to improve its own performance. Usually benchmarking is performed towards a company that is significantly better than yours to learn from it. Wide understanding of your own business, its environment on practices is crucial for adapting new practices. (Tuominen 2016,6,9).

Benchmarking is for:

- Developing central issues of your business
- Understanding of your own processes
- Target setting by examples
- Provides a systematic development process

When benchmarking has been done successfully, it can lead to breakthroughs and improvements of the products, processes and services of the organization that is conducting benchmarking. Thus, it may offer new and better business processes and best-practices. (Tuominen 2016, 76-77).

In this report we will describe the goals of RDI2CluB-project benchmarking, implementation of it and reached results. Described benchmarking has been the final benchmarking within the project. Earlier benchmark trips have been conducted in Biobased Delta, Netherlands, in Inland, Norway & Värmland, Sweden and lastly in Świętokrzyskie Voivodeship, Poland. Previous benchmark reports can be found from RDI2CluB website: <http://rdi2club.eu>.

RDI2CluB-project (Rural RDI milieus in transition towards smart bioeconomy clusters and innovation ecosystems) has been a three year project funded by EU's development funding programme Interreg Baltic Sea Region, under the Priority 1 'Capacity for innovation' that is dedicated to actions strengthening the ability of the Baltic Sea Region to create and commercialize innovation. The main goal of the project has been to connect bioeconomy developers around Baltic Sea Region to solve regional and global challenges through new innovations.

2. Benchmark goal

In the RDI2CluB -project the aim for all four benchmarking trips has been to boost the development of bioeconomy clusters and innovation ecosystems in the partner regions. Partner regions are Central Finland, Inland Norway, Świętokrzyskie Poland, Vidzeme Latvia and Estonia. Boosting transnational bioeconomy co-operation has also been one goal of these benchmarking trips. Previous benchmark trips have succeeded splendidly in this.

Problem behind the action has been organizationally thin rural partner regions which need thicker and more complete regional innovation systems to support business development in order to create higher added value products and services. In a long term this creates more jobs and grows the regional economy, as well as the whole Baltic Sea Region. Local authorities, business sector and R&D sector have been the target groups of benchmarking. Special focus has been within SMEs of partner regions.

3. Process

RDI2CluB's final benchmarking, Online Benchmarking Experience, had several steps to full fill goals of boosting regional bioeconomy clusters/innovation ecosystems and transnational co-operation. Process was led by lead partner JAMK University of Applied Sciences.

Steps were:

1. **Planning and producing video tour to Central Finland's bioeconomy**
2. **Introduction of Central Finland's innovation ecosystem**
3. **Thematic discussions between Central Finland's SMEs and RDI2CluB partners**
4. **Continuously discussion on open forum of Biobord-platform**

3.1 Video tour

RDI2cluB's lead partner JAMK produced video tour to Central Finland's bioeconomy together with PP2 Regional Council of Central Finland. PP3 also assisted in the process. The aim of the video tour was to showcase the regional bioeconomy strategy of the region, R&D functions as well as introduce some of the local bio-businesses to the transnational team. Idea of the video came from PP1 and initially it was planned to support RDI2CluB's Joint Action Plan.

Planning started with the lead of PP1 in April 2020 between RDI2CluB's partners from Central Finland. It was jointly agreed that PP2 Regional Council of Central Finland would be the most suitable coordinator for the project due to their role as the local authority and strategic planner of the region.

First step was to form a script for the video and mutual idea was to emphasize business sector in the video. The story if the video goes along with business presentations and with the regional bioeconomy strategy. Before finalizing the script, it was important to know what kind of business representatives there would be involved.

Second step was to collect local businesses and R&D representatives to be introduced in the video. An open call was established for the collection and it was disseminated widely in the communication channels of RDI2CluB, Regional Council of Central Finland, Bioeconomy campus of JAMK, city of Saarijärvi and in the communication channels of regional development companies. 13 organizations were selected (all that responded the call):

- Regional Council of Central Finland: local authority and strategic planner
- JAMK Institute of Bioeconomy: 3rd level bioeconomy education
- POKE Vocational College: 2nd level bioeconomy education
- BioPaavo: bio-business accelerator
- University of Jyväskylä: Wisdom natural sciences network
- VTT: Finnish state-owned research centre
- Metsä Group: Finnish forest giant and Bio-product mill owner
- Hyötlä Engineering: UAV measurements for sawmills
- Epira: new types of bio-products
- Siparila: wood building
- Wilawood: wood design
- Niemelä's farm: organic sheep farm
- Farm Uusi-Yijälä: local food and rural tourism

Later in this report, we will describe the results reached in the next phases with some of these companies.

After the open call we had discussion with the organizations to see what they think is essential in their business and if there is something that should be emphasized in the video. This gave more content for the script of the video. One could say that business sector was heavily involved in the making process. Final video script included five themes: forestry, agriculture and food, co-operation between different stakeholders, importance of new innovations and global aspect.

Fifth step included a bid-at-three procurement for the external video producer. PP2 received two offers and selected company was a local video produce Video Ville Ltd. Starting meeting was in May 2020. Co-operation was very successful, as well as the result.

Before filming PP1 and PP2 designed a questionnaire for the organizations to be filmed, to receive best possible interviews for the video. Questionnaire included basic questions of a perception of bioeconomy

and sustainability. It also included sector specific questions and questions related to usage of new innovation and global markets.

Filming was conducted in June – August 2020 in Central Finland. PP1 and PP2 assisted in the filming by interviewing participants. Video Ville compiled and edited the final video. Shorter video clips for social media and dissemination were also produced.

Ready video takes external viewers to a thirty-minute tour to Central Finland's bioeconomy. Video has been disseminated in Central Finland's regional channels, as well as in RDI2CluB social media channels. It will be also utilized in educational purpose and in the promoting of bioeconomy. It manages to serve a wide glimpse of region's bioeconomy to external viewers. Video can be found from Biobord: <https://forum.biobord.eu/t/bioeconomy-in-central-finland/1713/2>. Video was presented to RDI2CluB partners and other external participants in the online final seminar of RDI2CluB 10.09.2020.

3.2. Thematic Discussions

Some of the SMEs presented in the video also took part to the next steps of the RDI2CluB Online Benchmarking Experience: Hytölä Engineering, Niemelä's Sheep Farm, Suomen Hampputuotteet, Wilawood and Siparila. Other SMEs were already familiar from the video, but Suomen Hampputuotteet was familiar for RDI2CluB as the original participant for the cancelled benchmarking trip to Latvia. In next sub-chapters, we will describe discussions and results held between Central Finland's SMEs and RDI2CluB partners. Next, we will describe what kind of results discussions created.

3.2.1. Hytölä Engineering

First thematic discussion was held between PP1 JAMK University of Applied Sciences – Institute of Bioeconomy, PP4 Inland University of Applied Sciences, PP6 Tretorget, PP11 Institute for Environmental Solutions and a local SME Hytölä Engineering. New possible solution was reached through this discussion.

JAMK University of Applied Sciences – Institute of Bioeconomy is a modern educational institute that is part of Bioeconomy Campus Tarvaala. The Bioeconomy Campus can serve as a concrete meeting place for industry entrepreneurs, investors, researchers, developers, and students. Company and education requirements form the starting point of the area development - the goals are to illustrate the structures and functions of a future bioeconomy society and to offer the opportunity to test new solutions.

Inland Norway University of Applied Sciences, Faculty of Applied Ecology, Agricultural Sciences and Biotechnology is focusing sustainable management and development in wildlife, fish, forestry, plants, and livestock - including products and services originated in nature and biological material. The Faculty offers R&D within our disciplines and education on bachelors-, masters- and PhD-level. Department of Forestry and Wildlife Management is part of the Norwegian Wood Cluster (NWC). NWC is an expanded collaboration in the value chain forest, industry and construction that will be developed into an

internationally leading business cluster for industrial, sustainable wood construction. (Inland University of Applied Sciences 2020).

Tretorget is a private consultant company established in 2001, working for more and more efficient innovations in sustainable businesses. Tretorget is deeply involved in renewable energy, environment, and sustainable construction. Several projects are Triple Helix (interactions between academia, industry, and governments). Their mission is to make the innovation process for the holders of any new, green business idea more efficient. They help establish new businesses and improve the performance of existing businesses. They cooperate with several clusters in Norway like the Norwegian solar energy cluster, Norwegian Wood Cluster and Wood Works. (Tretorget 2020).

Institute for Environmental Solutions (IES) is a non-profit research organization in Latvia that utilizes airborne remote sensing technologies and creates multidisciplinary teams to design and develop innovative environmental solutions. Member of the EU Copernicus Relays and Copernicus Academy Networks - the Earth's most ambitious observation programme to improve the management of environment, understand and mitigate the effects of climate change, and ensure civil security. (IES 2020)

Hytölä Engineering is a technology company from Central Finland that offers UAV-measurement for businesses of different fields, for example to sawmills and to construction sites. It is a one-man company and basic principle is that data is moving – not people.

Problem

Company's wish is to move more to global markets, but current business idea is hindering expansion. They need more workforce, but the calculation method used in the UAV-measurements is too sensitive to be shared. The result of the mapping is very sensitive for the customers.

Possible solution

Instead of selling measuring and measuring results, Hytölä Engineering could sell a software that does calculation on behalf of customer. Manual calculation or more extensive calculations would be additional service. Building trust with customers could then be the challenge for each user of the software.

Things to consider

- Needs and requirement of end-users (sawmills)
- Different measurements units in different countries
- Clear service portfolio
- Legal consultation

Opportunities

- ConnectedByBiobord-project
- Rosewood 2.0 project
- Tretorget's connections

Hytölä Engineering saw this transnational discussion very useful and started to plan alternative business model. Transnational discussion will continue on Open Biobord: <https://forum.biobord.eu/t/case-hyola-engineering/1740>

3.2.2. Niemelä's Sheep Farm

Second thematic discussion about profitability of sheep industry was held between JAMK University of Applied Sciences, Marshal Office of the Świętokrzyskie Voivodeship, SEI Tallinn and a local sheep farm Niemelä's farm.

JAMK's presentation can be found from chapter 3.2.1.

Marshal Office of the Świętokrzyskie Voivodeship is a local authority that aims to develop region and has wide networks behind it. Marshall office also included the director of the Department of Agriculture and Rural Development, as well as The Complex of Świętokrzyskie and Nida River Landscape Parks -project.

SEI Tallinn carries out applied research, stakeholder engagement and capacity building in the Baltic Sea Region and the EU. Areas of expertise include environmental governance, policy impact assessment, nature conservation, urban biodiversity, bioeconomy, climate adaptation, renewable energy, transport, resource efficiency, waste management, sustainable consumption, and production pathways. (SEI Tallinn 2020).

Niemelä's Sheep Farm is a family business in Laukaa, Central Finland. It was established in 2011, but its activity runs back to 1886 when Niemelä's farm operated as a dairy farm. Nowadays, their income comes from lamb meat production and from wool and leather that they sell in their own farm boutique. They have grown their business from 20 sheeps to 100. Their lamb breed is a rare Finnish landrace of Kainuu Grey and it is under a national conservation program. Niemelä's farm production is organic, and they are continuously moving toward more ecological, profitable, and humane production. The main goals for the farm are saving the Kainuu Grey-race and working in harmony with nature.

In the whole sheep industry, it has been acknowledged that measures need to be taken to make industry profitable. RDI2CluB, its experts and our SME representative collected few points to consider. Finland, Poland, and Estonia had all joint challenges regarding his theme.

Problems/ Challenges

- How to make sheep farming profitable?
- How to encourage the consumers to use sheep products?
- How to reach wider markets (national, BSR, global) with sheep products?

Strengths

- Lamb as a very healthy product, compared to other types of meat
- Possibility of connecting environmental protection and sheep keeping (sheep as natural grazers for protected areas)
- Possibility to obtain additional financial support (EU, national, etc.) to keep certain breeds

Weaknesses

- Cost-efficiency of sheep keeping for the farmers (low selling opportunities)
- Breed choice vs. profitability (e.g. sheep-breeding is mostly based on conservative breeds; financial support for conservative breeds guarantees the profitability of the production - breeds of high productivity and dressing percentage are being gradually eliminated due to lack of financial support and low profitability)
- Low demand for sheep products (lamb is not very popular around the BSR, compared to other types of meat)
- Almost no bigger distribution channels (mostly individual selling)

Possible solutions

- Branding the sheep products: wool and meat (e.g. lamb & sheep cheese as healthy products)
- Usage of local products in the local restaurants (serving as an example for sheep products recipes). Presenting lamb products to the public during events that are held in restaurants (during cooking shows & courses - model from Estonia)
- Promoting lamb as a product typical for a given national festival (model from Finland)
- Support from local authorities, educational institutes, and R&D, for example, in a project form (Polish LIFE+ project connecting environmental protection and sheep keeping in the Świętokrzyskie voivodeship)
- Educating farmers and consumers on sheep products' qualities during public culinary events and awareness raising, e.g. within an all-national social campaign
- Enhancing co-operation between sheep farmers, e.g. via promoting Biobord sheep group (to facilitate product's development and joint selling (by gathering individual products to become more competitive on the markets)

Sheep discussion has also been acknowledged in RDI2CluB's Joint Action Plan in action 1.2.1: *Renewing operations of traditional bio-based SMEs with new business and cooperation models*. For this, Finnish and Norwegian RDI2CluB partners have established a thematic transnational discussion group on the Open Biobord forum. Forum is open for all who are interested to develop industry:

<https://forum.biobord.eu/c/lets-talk-about-sheep-business/70>

Discussion may also continue on the Open BioBord forum, where SMEs are also invited:

<https://forum.biobord.eu/t/summary-of-the-15-09-20-discussion-with-niemela-s-sheep-farm-fi-part-of-the-rdi2club-online-benchmarking/1761?u=riikkakumpulainen>

3.2.3. Suomen Hampputuotteet Ltd

Third transnational discussion between RDI2CluB partners and one small-scale business from Central Finland was held with JAMK University of Applied Sciences, Regional Council of Central Finland, and PRO Civis from Poland. Unfortunately, Polish partners were unable to join, so third discussion was focusing development on a regional level. However, discussion results have great possibilities for transnational expansion.

Suomen Hampputuote Ltd is a SME from Central Finland producing food products from hemp. Hemp is an old crop coming again to cultivation in Finland. Besides food products also e.g. construction materials and textile fibers can be produced from hemp.

JAMK University of Applied Sciences is presented above.

Regional Council of Central Finland is a joint municipal authority in charge of regional development. Their goal is to create wellbeing of the citizens, business, and environment in Central Finland. (Regional Council of Central Finland 2020.)

The problem discussed was the pretreatment method for hemp production. In Central Finland there is only one big factory separating hemp fiber from hemp hurt. Big, centralized refineries require big investments and cause dependency to one service provider. In Finland, hemp farms are small, and geographically distributed. To help little hemp farmers in their production, there should be a farm-scale machine to separate the hemp fiber from the hemp hurt on field. This machine could be additional to harvester or some other farming machine. As the problem is crucial and should be solved to get the hemp farming more attractive for farmers, this is a perfect case for the open co-innovation process. The idea is that finally there could be a manual about how to build the pretreatment machine to be included to your harvester.

RDI2CluB partners created a brief SWOT-analysis of the theme:

Strengths:

- Some farmers exist and some hemp is produced.
- A lot of development work is going on.
- Can be used in production of food, construction materials, textiles etc.
- Can be grown also in less-quality fields

Weaknesses:

- At this point no possibilities for farmers to separate the hemp hurd from hemp fibre.
- Wrong image of consumers when talking about hemp.
- Only a few farmers and users of hemp
- Development work, including separation technologies, mostly developed abroad, not in Finland.

Opportunities:

- Nutrient rich plant
- Can be used in production of food, construction materials, textiles etc.
- The need for new sustainable materials and solutions worldwide.

Threats:

- Approach and decisions of authoritative.
- No money and people for developing solutions to get the production profitable
- Wrong images of hemp

Discussion was rich and fluent between RDI2CluB partners and Suomen Hampputuotteet Ltd. Two starters for a solution were recognized:

1. **National or transnational development project** for the creation of prototype for producing hemp building material: Tarvaala Bioeconomy Campus has wide testing facilities and some expertise around it. Also, Biobord Network makes transnational aspect possible. Idea has been presented for JAMK – Institute of Bioeconomy, and hopefully next steps will be taken.
2. Idea is also presented for Biobord Network and **transnational discussion** may continue Biobord. Suomen Hampputuotteet Ltd has also registered on Biobord.

3.2.4. Wilawood

Fourth transnational discussion was held between JAMK University of Applied Sciences, SSYP Kehitys Ltd, Foundation for Education and Social Dialogue PRO CIVIS and a regional SME Wilawood Ltd.

JAMK's presentation can be found above.

SSYP Kehitys Ltd is a business development company of Saarijärvi city which provides free of charge services to all its region's companies. It is a partner to the companies that helps beginning entrepreneurs, supports the development of companies and promotes local expertise. The development company wants to help entrepreneurs from the beginning and to support local business to develop their operations both domestically and internationally. They support varying fields of industry as well as the cooperation between them. Entrepreneurship is vital to Saarijärvi where important industries are agriculture, metal industry, wood processing, tourism, and service industry. The development company has large networks

not only with enterprises but also public sector. Thus, it is capable to arrange various vital business contacts between companies, financial and public sector. (SSYP Kehitys Ltd. 2020).

Foundation for Education and Social Dialogue PRO CIVIS is a non-governmental, non-profit, independent organization integrating business and academia. Its mission concerns taking up initiatives for the support of cross-sectoral dialogue i.e. through initiation of partnerships between various entities. The Foundation works on the development of the society and economy through popularization of knowledge and sustaining the growth of entrepreneurship, especially in the fields of smart specialization and key enabling technologies. “Pro Civis” also realizes social innovations projects. It supports the initiatives serving the development, testing, and implementing innovative tools and methods of technics and technology management. The Foundation is particularly interested in the research and implementation projects helping overcome social and economic challenges of the 21st century. The Foundation for Education and Social Dialogue “Pro Civis” is an associated member of BIC Bio-based Industries Consortium. The Foundation is actively engaged in the popularization of bio-based and circular economy. It works for the development of Europe’s technological potential considering the efficient use of natural resources. (PRO Civis 2020).

Wilawood - A family business located in Saarijärvi, Central Finland, founded in 2018. A company produces handcrafted design products of curly birch and other Finnish wood species like rowan, flame birch and grey alder. The main raw material is curly birch, which is a Finnish specialty and a genetic variant of silver birch. It is grown in PEFC-certified forest on our family’s homestead in Central Finland, in the city of Saarijärvi. Wilawood product range includes for example jewelry, serving trays, chopping boards and vases combining wood and mouthblown glass.

Strengths

- Unique products, material, and brand
- Small products are suitable for web shop and shipping
- Finland is internationally well known of our clean and beautiful nature, which is a good asset for marketing
- Possibility of using big trees as raw material in plywood production and the markets for that are mostly in Central Europe- also possible to sell small diameter curly birch raw material

Weaknesses

- Cost-efficiency of production methods
- Small diversity of distributions channels
- Difficulties in shipping

Challenges and possible solutions

- How to get to the global markets with Wilawood's products? How to get to the global markets with curly birch raw material? → **Improvements of the product range so that is suitable for global markets and for shipping. Strengthening the production chain by expanding retail channels: exhibitions might be a possibility or other event when regional products are presented. New product development and development of production methods**

At this moment, the best concrete advice for Wilawood was to register on Biobord-platform and to seek help from Biobord Network. On-going discussion can be found here:

<https://forum.biobord.eu/t/summary-of-discussion-with-wilawood/1743?u=riikkakumpulainen>

3.2.5. Siparila

RDI2CluB's fifth and final thematic discussion was held between JAMK University of Applied Sciences, Tretorget Ltd, Vidzeme Planning Region, Inland County and a local company called Siparila Ltd.

JAMK's and Tretorget's presentations can be found above.

Vidzeme Planning Region, also known as VPR, is a regional administrative authority working under supervision of the Ministry of Environment Protection and Regional development of Latvia. VPR ensures regional strategic and spatial planning and develops and implements cooperation projects between municipalities, governmental institutions, entrepreneurs, R&D organizations, and NGO's to reach the strategic targets in the region. VPR is active, experienced, and reliable consortium partner in more than 40 international projects in INTERREG, Horizon 2020, COSME, ERASMUS + programmes. (VPR 2020).

Inland County Council is a public regional development department. The Council are responsible for important social tasks in higher education, transport, community planning, climate and the environment, cultural heritage, business development, culture, dental health, and public health. Their vision is to be a county with strong roots and big dreams, with a leading position in technology, industry, agriculture, and tourism. (Inland County Council 2020).

Siparila is a Finnish company, located in Vaajakoski, Central Finland. Siparila focuses on sustainable wooden buildings, with responsibility for environment and society and produces interior panel and outdoor cladding for both Finnish market and export. The raw materials come from PEFC/FSC certified Finnish forests (and imports larch from Siberia) and no harmful treatment agents, the end-matching of panels and claddings allows for flexible joint placement and thus reduces short cut-offs that cannot be used, all packaging are recycled, and they sell residues and by-products from the production cheap to avoid creating waste. The design is made of Finnish designers.

Although Siparila have a well-thought-out production and a focus on sustainability, they still have some challenges.

Strengths

- One of the main strengths is their business model. Providing building materials, meanwhile collaborating with designers for the tailor-made solutions, and following circularity principles.
- Well established brand in their region, and partners and potential buyers find them fast
- Company is specialized in their working area – quality building materials.
- Differentiated services – provides materials with coating upon request that saves time for the customers.
- Collaboration with designers makes them be more visible in the new, innovative, and unique solutions, that makes them more recognizable.
- Their ability to produce design products from the wooden leftovers.
- Strong local network with collaboration partners, both suppliers and buyers.
- Experience in building projects for “smart villages” and “smart building”.

Weaknesses

- There are still non-biobased materials used in their production cycles – for coating and packaging.
- Collaboration networks in many, also very close ones (i.e. Baltic countries), markets are not established due to price level.
- Expanding business in various European markets are limited due to different conditions and requirements for timber production which are not easily customizable.

Opportunities

- To collaborate with partners to produce more biobased coatings (i.e. ALINA from Latvia) and packaging materials (i.e. from sawmill waste?)
- To expand their client networks over the Baltic Sea Region, as the Smart solutions for housing are more and more requested. Smart villages are built, smart, energy efficient housing is requested for educational institutions, day cares etc. public buildings.
- More and more clients are asking for companies to be sustainable, and SIPARILA still have a good potential to become more sustainable.
- Opportunities to collaborate with clusters, research institutes to develop more sustainable and innovative solutions.
- They have sawmill side products / waste that can be sold to others.

Threats

- Market is limited due to price level of the products and limited opportunities to customize production for different conditions and requirements.
- Demand for current side-production of pallets are decreasing
- Their biggest supplier is METSA group, which is large company, therefore it is a threat, as they might set their own conditions, or stop the collaboration.

Challenges and possible solutions

- The paintings used in the wooden panels are not sustainable or biobased → **A Latvian company which makes paint from clay was mentioned; <https://alina-premium.com>**
- Bio-based packaging: the panel and cladding needs to be covered to avoid moisture, but is there any better ways of doing it than using plastics? The plastics used today are both recycled and recyclable, but a biobased packaging would be the best alternative. → **Several clusters are working with this for food packaging; <https://packbridge.se>, <https://www.packagingcluster.com> OR turning sawdust or any other by-products from the production into packaging**
- Siparila faces some challenges to increase their export; wood is not a well-known construction material in many countries, so the skepticism about the material is partly great. → **Both improving the materials and increased information is needed.**

Siparila has done a great job on sustainability, and there are a lot of opportunities for the company. More information on wooden buildings and constructions is needed, especially for the export market. The RDI2CluB network had some ideas for possible solutions on paintings and packaging, maybe other Biobord members have more ideas. Discussion is ongoing on Biobord-platform: <https://forum.biobord.eu/t/case-siparila/1746?u=riikkakumpulainen>

3.3. Introduction to Innovation Ecosystem

Central Finland's Innovation Ecosystem was also presented for RDI2CluB partners in the online final seminar 10.09.2020 by PP1's Innovation expert Markku Paananen.

Presentation can also be found from Biobord: <https://forum.biobord.eu/t/bioeconomy-in-central-finland/1713/3?u=riikkakumpulainen>

Central Finland's bioeconomy innovation ecosystem consists of two main elements: forest and water. Region's surface is 20 000 km², of which 16% is water and approximately 80% forest. Area is known of its strong knowledge in utilization of renewable raw materials. Region's forest industry has developed from tar-burning pits to modern technology bio-product mills. One can find from Central Finland pulp and paper mills, plywood mills, sawmills, logwood-house factories etc. Annual timber consumption is over 9 million cubic meters (m³) and bioenergy production over 10 kilowatt-hours. Some of the biggest and most well-known actors from Central Finland are for example Valmet, Metsä Group and Honka-buildings. Bioeconomy Campus of Tarvaala, Finland is known to be the meeting place for local bioeconomy businesses, R&D and local policy makers. Campus consists of two educational institutes JAMK University of Applied Sciences – Institute of Bioeconomy and POKE Vocational College, and of City of Saarijärvi. Campus offers bioeconomy training programs, idea generation process, idea calls, bio-business accelerator, start-up and business societies, R&D-projects – to mention few things. (Paananen 2020).

4.0. Conclusions and Lessons Learnt

How to benchmark in a transnational context if travelling is restricted? This was a big question for RDI2CluB. In total four benchmark visits were conducted in the project to boost the development of bioeconomy clusters and innovation ecosystems in the partner regions as well as transnational bioeconomy co-operation in the Baltic Sea Region. Fourth and final benchmark trip was planned for 2020, same time as ongoing global pandemic.

Our experience was that to get a deeper understanding of regions bioeconomy sector, more than just a presentation was needed. Our online benchmarking started with a video tour that introduced different bioeconomy sectors of Central Finland through regional strategy and business presentations. Each business representative was interviewed before filming to see which aspects were most valuable in their business for the transnational audience and which aspects would provide new knowledge. In other words, the organizations presented in the video were involved in the planning process.

- *When planning a video tour, frame the topic. And pay lots of effort to planning. What is special (for example in your region)? What do you wish to showcase? Can everything fit to the video? For whom video is made for?*
- *Reserve time and resources to produce informative and high-quality video tour. Filming a wide scale presentation of a wide subject, such as bioeconomy, takes time and money. For RDI2CluB, the whole filming project took 6 months. Also, high quality video producer requires more budget. But the result is worth it.*

The next step of the Online Benchmarking Experience was to see the innovation ecosystem of Central Finland as a whole. The participants of the Online Benchmarking Experience were particularly interested of the regional innovation ecosystem, and it was originally planned to be part of the benchmarking. Traditional presentation was seen to be the best solution for describing.

- *Separate, more in-depth presentation of the key aspect of the benchmarking is needed. It could also be part and theme of video tour. In our case we wanted to provide more wide presentation of the region on the video.*

Thirdly, to ensure transnational discussion between different actors of our benchmark participants and regional bioeconomy actors presented on the video, we held thematic webinars. We had five thematic webinars between five regional bioeconomy SMEs and RDI2CluB partners. The idea was to, once again, go more deeply into the subject. Regional SMEs presented a topic for the thematic discussion, for example a challenge they are facing or solution that they would like to further develop. RDI2CluB partners had a change to select a thematic discussion/discussion they would have most to give for. Our thematic discussions were:

- How to develop highly sensitive technology business without sharing the main idea behind it.
- How to make sheep farming more profitable?
- How to further develop and test a farm-scale machine to separate the hemp fiber from the hemp hurt on field and to be used as a construction material?
- How to move to the export markets with Finnish wood design products?
- How to make products even more sustainable?

All thematic discussions started with presentations of each organizations present. This gave a good understanding of their expertise and knowledge. Thus, the local SME also presented their business again, more in-depth, and shared the challenge they are facing. After that there was time for questions and open discussion. Open discussion included examples of same types of businesses from different regions and their best practices. It also included examples from other sectors, sometimes it is beneficial to think outside of the box. When potential solution or idea of next steps where formed, discussion host steered the discussion by utilizing SWOT-analysis. What are the strengths, weaknesses, opportunities, and threats of the solution?

- *Announce the theme of the discussion on beforehand, so all participants have time to prepare.*
- *Reserve at least two hours for the discussions. Tight timetable does not leave room for creativity and for new solutions.*
- *Have a discussion host included that will steer the discussion if needed and take care of the timetable. Clear instructions and clear process are important.*
- *Include as many representatives from the same field of business as possible to offer wide and potentially global glance to the business and to potential solution.*
- *If possible, record discussions and share the recording as well us summary afterwards somewhere, where discussion may continue. In our case we utilize Biobord.eu -platform.*

Last step was to summarize the discussion and find a joint place to carry on joint development. For RDI2CluB this is Biobord-platform that has been developed in the project and widely used in the project implementing. Thus, SMEs were invited to register on the platform. Summary, organization presentations and the video recording of the webinar were shared on the Open Biobord, where anyone interested in the

topic can join the discussion. Hopefully, new solution is found through that, now as the base has been established.

Overall RDI2CluB's Online Benchmarking Experience was successful. The basic principle of benchmarking is to learn from other experts of a particular field of business and to implement lessons learnt to their own business. From RDI2CluB's online benchmarking SMEs received practical advice to further develop their businesses, as well as found new contacts and new ideas. Thus, RDI2CluB partners received a wider view of that field of business and its challenges. They also received new methods and information to be shared for their region's businesses. Open Access is a key principle of RDI2CluB and Biobord-platform. The video tour produced for the Online Benchmarking Experience will also be a useful tool to showcase the benefits of sustainable businesses and what all is counted to bioeconomy. It may also be used in educational purposes and in region's marketing.

- *Make result durable and multipurpose*

RDI2CluB partners will carry on thematic discussion on Open Biobord -forum, and hopefully new solutions are being found.

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