

ECOLABNET



GAPS OF EXPERTISE IN ECOLABNET NETWORK

Internal report about lack of expertise required by SMEs
and IOs and services provided by EcoLabNet

Vilnius University team:

Prof. Mangirdas Malinauskas, Dr. Sima Rekštytė, Edvinas Skliutas

ECOLABNET

Network of service providers for eco-innovations in manufacturing SMEs

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Research / development team

- Prof. Mangirdas Malinauskas
- Dr. Sima Rekšytė
- Edvinas Skliutas

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1. INTRODUCTION

ECOLABNET IS A PROJECT FUNDED BY THE INTERREG BALTIC SEA REGION, AND AIMS TO CREATE A NETWORK OF SERVICE PROVIDERS FOR SUPPORTING ECO-INNOVATIONS IN MANUFACTURING SMES IN THE BALTIC SEA REGION.

ECOLABNET aims to create a network of service providers for supporting eco-innovations in manufacturing SMEs in the Baltic sea region. To do that, two important requirements must be met:

1) the needs of the SMEs have to be well understood and 2) services to fulfill these needs should be provided.

As an already existing, albeit still small, network the ECOLABNET must already evaluate its ability to answer various enquiries from the SMEs. In order to be able to guide them towards eco-future the network has to identify any existing gaps of expertise so new partners capable of filling these gaps could be found.

This report was prepared with a purpose to determine the shortcomings of the already existing ECOLABNET network in responding to the needs of manufacturing SMEs working (or interested in working) with eco-innovations. It is based on the internal reports summarizing the survey answers provided by the SMEs and Intermediary organizations, dealing with SMEs needs in relation to their work and future development with eco-innovation in the business and in its production. Following that an internal questionnaire was compiled and distributed to the 7 partners in ECOLABNET (Lithuanian Business Confederation (LBS), VIA University College, Kaunas University of Technology (KTU), Centria University of Technology, Design Center Muova, Czestochowa University of Technology (CUT), and Vilnius University (VU)) in order to gather information about their expertise areas and ways that they are able to answer the needs of the SMEs that were revealed by the survey answers.

In the following sections main factors that are influencing the SMEs view on and willingness of taking up the path to eco-innovation implementation in their businesses will be summarized and the partners' ability to help overcome these factors will be presented.



2. MAIN BARRIERS FOR ECOINNOVATION

Analysis of the data gathered from the surveys showed that the four main barriers for eco-innovation as seen by the SMEs were lack of capital, lack of alternative materials, certification costs and uncertain return on eco-investments. These were deemed to be the most urgent by the surveyed companies. Two of them (uncertain return on eco-investments and lack of capital) were also indicated by the intermediaries as the biggest barriers faced by the SMEs., we asked the current partners of Ecolabnet to provide some insight how each of them could satisfy the beforementioned barriers by filling out the questionnaire.

In addition to that, we took into consideration the fact that the vast majority of companies would consider support in development of eco-innovation thus are in need of external expertise in order to enhance eco-innovation. So, we also included two other areas into the questionnaire, namely lack of knowledge/experience and limited access to external knowledge. Although these barriers were not ranked very high by the SMEs, they are directly connected

with what a network of service providers is best suitable for - providing knowledge/experience made available by having partners of different areas of expertise. This makes it important to test how well Ecolabnet is prepared to do that and look for possible gaps in these areas.

The results of how well the partners are prepared to help the SMEs to overcome the beforementioned barriers are presented in the Table 1 and Table 2. Unfortunately, the four main barriers are not very well covered by the network. In terms of lack of capital two the partners (CUT and Muova) indicated that they can both help companies to acquire financial resources by directing them to the information about different external funding sources. Other barriers only got one response each.

Lack of knowledge and limited access to external knowledge are covered a bit better by the network, with 4 and 2 answers, respectively. However, it is still clearly not enough as the offered knowledge is more technical, and SMEs need more info about the market itself.

TABLE 1. COMPETENCIES AND EXPERTISE IN SOLVING BARRIERS ISSUES OF SMES. PARTNERS, WHO ARE ABLE TO HELP SME'S TO OVERCOME EACH BARRIER.

LACK OF CAPITAL	LACK OF ALTERNATIVE MATERIALS	CERTIFICATION COSTS	UNCERTAIN RETURN ON ECO-INVESTMENTS	LACK OF KNOWLEDGE/ EXPERIENCE	LIMITED ACCESS TO EXTERNAL KNOWLEDGE
CUT, MUOVA	CUT	CUT	CUT	CUT, KTU, MUOVA, VU	CUT, MUOVA

TABLE 2. COMPETENCIES AND EXPERTISE IN SOLVING BARRIERS ISSUES OF SMES. SUGGESTIONS, HOW PARTNERS CAN HELP TO OVERCOME THE BARRIERS

PARTNER NAME	LACK OF CAPITAL
CUT	Counselling in the scope of acquiring external resources, facilitating access to information, who can ensure financial resources for SMEs, venture capital, business angels
MUOVA	Informing companies about funding opportunities, co-creating project plans with companies
	LACK OF ALTERNATIVE MATERIALS
CUT	Cooperation with research centres, institutes, development centres, technology transfer centres, developing alternative materials; enabling contact with for SMEs with partners that produce and design such materials
	LACK OF KNOWLEDGE/EXPERIENCE
CUT	Counselling in the scope of benchmarking, direct support in the scope of eco-innovations, bio-degradability, recycling, prosumer energy, low emission reduction, energy savings, waste treatment
MUOVA	Demonstrations will give knowledge and experiences will be shared
KUT	We provide knowledge and experience in biopolymers
VU	We provide knowledge and experience in optical 3D printing
	CERTIFICATION COSTS
CUT	Counselling in the scope of diversifying costs related to implementing innovations among a group of recipients
	UNCERTAIN RETURN ON ECO-INVESTMENTS
CUT	Counselling in the scope of preparing business plans and innovations, identifying risks and methods of limiting them
	LIMITED ACCESS TO EXTERNAL KNOWLEDGE
CUT	Rendering direct services in the scope of information and knowledge, transfer of Partner's expert knowledge, assistance in access to external knowledge, search for and matching external experts and SMEs that need knowledge in a given scope (e.g. in the scope of eco-innovations, bio-degradability, recycling, prosumer energy, low emission reduction, energy savings, waste treatment)
MUOVA	After the project MUOVA knows more about technical expertise and facilities as well as ways to collaborate with them

3. NEEDS FOR EXTERNAL EXPERTISE

Another topic that was investigated was how Ecolabnet can answer the urgent and long-term needs for external expertise.

The top urgent needs as specified by the survey answers of SMEs were materials, certifications, financial aspects, and legislations. The view of intermediaries differed from that a bit. When asked about how important it is to support the SMEs in various areas of eco-innovation, financial aspects took second place falling under the category of “extremely important” – a high place overlapping well with the answers of the SMEs. However, various materials fell to the lower end of the scale as less important, although that might have happened because they were divided into different groups (bioresins, biocomposites, and other alternative materials) so every individual one might not seem very important to the intermediaries (as definitely not every SME would be interested in the same material), but as a whole they should take a quite important place. Finally, legislations have fallen into the neutral zone and certifications were ranked extremely low thus

excluding them from our survey to the partners.

As for the long-term needs (next three years), the SMEs answered that product design, branding and communication, and material efficiency are the top three areas that they would need external expertise in. The intermediaries, on the other hand, did not rank these three as particularly important areas. That could be explained if the intermediaries are more often contacted by the SMEs about their most urgent needs or SMEs think that their long-term needs cannot be fulfilled by the intermediary organizations and they turn to other experts.

How Ecolabnet is prepared to answer the urgent and long-term needs is presented in Table 3 and Table 4. Again, although all the needs have at least one partner capable of offering something to the SMEs, that is not sufficient to claim, that they are well covered by the network. Most answers were given for material efficiency – three partners marked that they have something to offer in this area; financial aspects, and branding and communication were chosen by two partners and all other areas only got one answer each.

URGENT NEEDS			LONG TERM NEEDS		
MATERIALS	FINANCIAL ASPECTS	LEGISLATIONS	PRODUCT DESIGN	BRANDING AND COMMUNICATION	MATERIAL EFFICIENCY
CUT	CUT, MUOVA	CUT	CUT	CUT, MUOVA	KTU, CUT, MUOVA

TABLE 4. COMPETENCIES AND EXPERTISE IN SATISFYING SMES NEEDS. SUGGESTIONS, HOW PARTNERS CAN SATISFY SME'S DEMANDS.

URGENT NEEDS

PARTNER NAME	MATERIALS
CUT	Contact with research institutions, competences of intermediary
	FINANCIAL ASPECTS
CUT	Counselling in the scope of acquiring resources from external sources
MUOVA	Muova knows Finnish funding possibilities
	LEGISLATIONS
CUT	Contact with legal adviser, law firm

LONG TERM NEEDS

PARTNER NAME	PRODUCT DESIGN
CUT	Composability of organic materials, designing energy installations systems
MUOVA	Muova can do industrial design and needs to cooperate with mechanical designers. Other industrial designer agencies work on the same way
	BRANDING AND COMMUNICATION
CUT	Preparing market research, marketing research of the market, identifying potential customers of the product, chances and threats regarding product introduction to the market
MUOVA	Muova can do branding and communication and there are a lot of design agencies doing the same thing.
	MATERIAL EFFICIENCY
CUT	Optimisation of manufacturing processes, optimisation of resources consumption, profit maximisation, selection of materials
KTU	Plant-based polymers are alternative to synthetic polymers
VU	Additive manufacturing is considered as an efficient material processing method

4. CONSULTING REQUIREMENTS OF SMEs

TABLE 5. COMPETENCIES AND EXPERTISE IN SPECIFIC EXPERTISE AREAS WITHIN THE PARTNERSHIP. “-” MEANS, THAT PARTNER IS NOT ABLE TO PROVIDE SUCH TYPE CONSULTING SERVICES FOR SMES, “+” – IS ABLE.

PARTNER NAME	ACCOUNTANT	UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS	LEGAL CONSULTANT	INDUSTRY ASSOCIATIONS	LOCAL BUSINESS COUNCILS	NATIONAL BUSINESS COUNCILS
MUOVA	-	-	-	-	-	-
KTU	-	+	-	-	-	-
CTU	-	+	-	-	-	-
VU	-	+	-	-	-	-
CENTRIA	-	+	-	-	-	-
LBS	-	+	-	-	-	-
VIA	-	+	-	+	+	-

Table 5 presents the Ecolabnet's ability to satisfy the SMEs need for consulting services from external experts. Although six types of services were given to choose from for the SMEs in surveys, three of them were mentioned as most often used and thus are obviously the most relevant. These are (in declining order) accountants, universities and other educational institutions and legal consultants. It is encouraging to see that Ecolabnet is capable to satisfy the second most needed consulting service – provided by universities and other educational institutions. It is not very surprising, as a big part of the partners are educational institutions themselves

and others clearly take part in projects like Ecolabnet which indicates that they work with novel topics. These come with some research requirements and that is an integral part of most educational institutions. What is most encouraging is that this need for consulting can be fulfilled all over the network – meaning in all participating countries.

However, the other two most relevant consulting services (by accountants and legal consultants) were not marked by either of the partners which means that they are not at all covered by Ecolabnet at its current capacity. This creates a clear gap in the expertise of the network.

5. MAIN GAPS OF EXPERTISE IN ECOLABNET

The data provided in the previous sections is summarized in Table 6 where the main requirements from SMEs are compared with the capabilities of Ecolabnet clearly indicating the existing gaps of expertise within the current network. The network is strong at most of the requirements, set by SME's, thus it can satisfy their needs or help overcome arising barriers. Unfortunately, the network is not able to cover all the demands, mostly due to the limited variety of partners at its current capacity. The Ecolabnet is missing stakeholders to provide funding to SMEs, which is incredibly important to attract them to ecoinnovations fields and become competitive

as it requires a lot of investments. The network is limited by the number of partners and experienced professionals to share knowledge about eco-innovations in different fields. Current partners have insufficient ability to answer all the SMEs knowledge requirements both in terms of their topics (e.g., materials and their efficiency, efficient material processing methods) as well as geographic distribution of the inquiries. Also, the lack of information about legislations of eco-innovations is a bottleneck at the present state, thus the members of the network cannot provide consulting services from accountants and legal consultants.

TABLE 6. GAPS OF EXPERTISE IN ECOLABNET NETWORK.

REQUIREMENTS FROM SME'S	CAPABILITIES OF THE ECOLABNET NETWORK	GAPS OF THE ECOLABNET NETWORK
Primary funding or capital to start eco-innovation	Ecolabnet is a network, which can inform companies about funding sources, or find partners to co-create project plans with companies	Ecolabnet is not a source of funding/stakeholder
Alternative materials for the eco-innovation and their efficiency	There are partners in the network, who provide services for development of eco-materials (bioderived) and efficient material processing methods	Currently the number of such partners is minimal.
Less challenges with certification cost for developing eco-innovation	Counselling in the scope of diversifying costs related to implementing innovations among a group of recipients	The network is not able to reduce the certification cost

CONTINUES ON THE NEXT PAGE

REQUIREMENTS FROM SME'S	CAPABILITIES OF THE ECOLABNET NETWORK	GAPS OF THE ECOLABNET NETWORK
Reduction of the risk of the uncertain return on eco-investments	The network can promote eco-investments and increase the visibility of it	The network is not able to stabilize the risk of the investment into the eco-innovation
The need of more information / research / studies that could help to know more about eco-innovation development	The network will be able to provide such type information while connecting various partners	Digital collaboration tool is needed to be finalized for full functionalization
Knowledge and experience within eco-innovation (new processes, expertise and professionals)	The network will guide SME to required RDI, arrange workshop to spread the experience between SME and RDI	More partners with experienced professionals are needed
Legislation: the laws or regulations regarding sustainability are not prepared	The network can contact legal adviser, law firms	The network has no information about current legislations
Product design, branding and communication	The network is able to perform market research, identifying potential customers of the product, chances and threats regarding product introduction to the market	More partners of design and marketing agencies are needed
High demand of consulting services	The network can satisfy the consulting service provided by universities and other educational institutions provide	Consulting services by accountants and legal consultants are not at all covered by Ecolabnet

6. FINAL WORDS

To summarize this report, we would like to stress that the determined gaps must be taken into consideration when expanding the network to ensure that the missing expertise requirements will be fulfilled in the future. The first step should be making sure that there are at least one or two partners for each of the current gaps. The long-term goal is to attract enough partners from different regions so that the experts for fulfilling the main needs/expertise requirements of the SMEs would be distributed geographically simplifying the way for the SMEs to connect and make use of their services.



Competencies and expertise in specific expertise areas within the partnership
Competencies and expertise in Biobased Materials...

Partner name	Type of service	Specific knowledge and/or know-how (e.g. specific material, specific tests for applications, etc.)			Number of staff able to provide service	Current infrastructures (e.g. list of tools, analysis equipment, specialized software, etc.)		Main results, achievements and references (e.g. what innovative research were conducted, what technologies/products or services have been developed in the last 5 years)			Relevant networks and cooperating organisations outside ECOLABNET (academic, industrial, citizen)
		Type of material (Origin)	Type of material (Use)	Description of expertise		Name of equipment and purpose	Description (specification, scale, etc.)	Publications, patents	Eco-innovative projects/activities	References from industry	
Other	Other	Other	Other		1-3						
Other	Other	Other	Other		1-3						
Other	Other	Other	Other		1-3						
Other	Other	Other	Other		1-3						

7. ANNEX



ECOLABNET

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Baltic Sea Region



EUROPEAN
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