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STRATEGY PLANS OF RDI ACTORS

Internal development for supporting eco-innovation in manufacturing SMEs



ECOLABNET

Network of service providers for eco-innovations in manufacturing SMEs

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1. INTRODUCTION

The report describes the internal development of RDI actors in the ECOLABNET project. The internal development programs focused on improving cooperation with small and medium-sized enterprises and developing eco-innovative initiatives to the current and future needs of SMEs. It utilized the results of the ECOLABNET project: the service design process, needs of manufacturing SMEs and the identified gaps of expertise in ECOLABNET.

Internal strategy development is a complex process that aims to keep organizational objectives and resources in the balance in the changing environment. The strategy sets out guidelines for decisions or actions regarding resources and time frames in a coordinated manner. Each strategic management process addresses the following questions:

- Where is the specific organisation is at the moment?
- Where would it like to be and what does it want to achieve?
- How does it want to get there?

The methods and techniques of strategic management express the basic assumption that the organisation interacts with its environment. The environment is a source of both threats and development opportunities, especially in the context of improving the cooperation. In ECOLABNET project, the partners searched for development initiatives to improve the cooperation with SME sector according to their needs, both current and future.

The strategic analysis of participating RDI actors in ECOLABNET project created a basis for determining the strategic objectives and the possibilities of their implementation. It should be noted that the analysis was carried out autonomously and it needed to take into consideration the organizational boundaries. Therefore, the strategy was influenced by the general strategy of the partner organization, business strategies of the RDI unit, and functional strategies of the organizational functions.

Bearing in mind the autonomy of individual partners in the strategy process, CUT produced a template for creating internal development plans. This so-called Etalon of the Development Strategy aimed at improving cooperation with SMEs and developing eco-innovative initiatives. The template was reviewed and analysed by project partners and CUT modified it based on the feedback. The Etalon enabled project partners to develop unique internal development strategies, which were expanded and adjusted to their own needs, possibilities and limitations.

Following assumptions guided the development of the Etalon for the development strategy:

1. The strategy coordinates science, research and economical activities. The scope was limited to the reduction of the environmental impact of production through eco-innovative RDI activities. Eco-innovative activities serve environmental protection, ecological and social responsibility in the use of natural resources.

2. The strategy responses to new forms of networks and cooperation between research and development units and intermediary organizations in order to improve eco-innovative services and products of SMEs, thus responding to the current and prospective needs.

3. The strategy is a part of innovative and sustainable development that regulate European, national and regional initiatives including:

- Ministry of Economy. Europe 2020: A Strategy for Smart and sustainable and inclusive development. www.gov.pl/web/rozwoj-praca-technologia/strategia-europa-2020
- Ministry of Funds and Regional Policy (2017): Strategy for responsible development until 2020 (with a perspective until 2030). www.gov.pl/web/fundusze-regiony/informacje-o-strategii-na-rzecz-odpowiedzialnego-rozkieta
- The European Green Deal - a set of policy initiatives by the European Commission with the overarching aim of making the European Union (EU) climate neutral in 2050
- Biodiversity strategy for 2030

4. Creation and implementation of the strategy need to be related to the preceding activities in order to create a coherent development progress. The strategy process proceeded in following manner:

- Definition of the goals by ECOLABNET (point 2 - the strategy);
- Identification of the needs of SMEs in the field of eco-innovative solutions on the basis of questionnaires and face-to-face interviews (point 3 of the strategy);
- Identification of competence gaps of the internal team in terms of theoretical and practical knowledge, know-how, skills, provision of services, information, technological and infrastructural support as well as consulting and design activities in the area of eco-innovation, along with the definition of directions of activities to reduce the identified competence gaps (point 4 and 5 of this strategy).

The internal development strategies aimed at establishing new forms of cooperation networks with research and development units and intermediary organizations and improving their own eco-innovative services and products for SMEs. CUT created a template and an internal development strategy as an example, which partners used as a basis for creating their own internal development strategies. The strategy included eight main directions of strategic activities:

- I. Development of research and scientific teams in the design and production of eco-innovative products and services in various fields of science;
- II. Strengthening the potential of research infrastructure;
- III. Extending cooperation with intermediary organizations and SMEs in the region;
- IV. Developing a portfolio of eco-innovative services and products for SMEs, taking the current and planned research and development opportunities into account with the current and planned laboratory infrastructure;
- V. Permanent and continuous development of the team based on the increase of knowledge, skills and experience in the field of developing eco-innovative initiatives;
- VI. Applying in various calls of research and development projects financed by European Union and national funding agencies, and including eco-innovative solutions of SMEs in the projects;
- VII. Preparing and conducting trainings in increasing the competitiveness of enterprises by raising awareness and introducing eco-innovative activities;
- VIII. Developing a system for collecting and presenting eco-innovative products and services, which is a source of professional knowledge about eco-innovative solutions.

In addition, CUT unified the procedure for the creation and implementation of the internal development strategy of project partners, focused on improving cooperation with the sector of small and medium-sized enterprises and developing eco-innovative initiatives. The unification concerned the introduction of 13 stages guiding the creation and subsequent implementation of internal strategies of the Partners:

1. Identifying or creating a team in charge of internal development. The team would be responsible for the collaboration with SMEs in the given organisation.
2. Determining the priorities and strategic actions in the context of collaboration and support for SMEs
3. Identifying the needs of SMEs in the scope of eco-innovative actions including the needs identified in the ECOLABNET survey
4. Identifying competence gaps in particular areas of knowledge within the partnership in the scope of theoretical and practical knowledge; know-how; skills; providing services; support in the scope of information, technology and infrastructure; consulting, eco-innovative, project actions; etc.
5. Determining lines of actions to eliminate competence gaps.
6. Drawing up development strategy in order to determine primary lines of actions.
7. Decomposing strategic objectives into specific objectives.
8. Indicating key development actions/activities - min. 3 activities.
9. Establishing an action plan and tasks to the implementation of the developed strategy.
10. Monitoring the progress of undertaken actions (periodical check-up of implementation progress of tasks, applying corrective measures if necessary.
11. Developing and adopting indicators for evaluation of internal development.
12. Evaluating implementation of the strategy.
13. Preparing a final report regarding conducted actions.

These actions regard determination of specific tasks for individual Partners resulting from the adopted strategy, so they concern planning of what? who? when? and how? will be doing and what the coordination of these actions is going to be like.

2. PRIORITIES IN THE INTERNAL DEVELOPMENT STRATEGIES

In this report we explain the internal development strategies produced by ECOLABNET project partners. The internal development strategies were developed during the 2019-2020 and were analyzed using Ex-Post approach. Following organisations participated in the internal development programs:

1. Design Centre MUOVA (MUOVA)
2. Czestochowa University of Technology (CUT)

3. Lithuanian Business Confederation (LBC)
4. VIA University College (VIA)
5. Centria University of Technology (CENTRIA)
6. Kaunas University of Technology (KTU)
7. Vilnius University (VU)

The tasks distinguished in the strategies of individual Project Partners refer to thirteen stages presented in introduction. The actions focused on improving cooperation with the sector of small and medium-sized enterprises and developing eco-innovative initiatives. Next, we present the results of the internal development strategies of the partners as summary of the results.

2.1 IDENTIFYING OR CREATING A TEAM

Teams in charge of internal development were established in Ecolabnet partner units. The teams were created between August 2019 and January 2020. The numbers of the teams varied - from 2 to 8 people who were members of project teams. These teams participated directly in the creation and implementation of the internal development strategy of the project partners aimed at improving cooperation with the sector of small and medium-sized enterprises and developing eco-innovative initiatives in relation to their needs.

2.2 DETERMINING THE PRIORITIES AND STRATEGIC ACTIONS

In the 2019-2020 all entities complied with the main objective of the strategy; serving manufacturing SMEs. The main objective was the basis for the evaluation of the partners' activities in creating internal strategies for their development. The partners identified their own priorities of strategic activities in the context of cooperation and support for SMEs.

The main goal of the developed strategy was to create conditions for eliminating the competence gaps effective among the members of Ecolabnet project teams, resulting in effective cooperation between the Ecolabnet network and small and medium-sized enterprises in developing, consulting and implementing eco-innovative solutions.

In addition to the main goal, the partners defined following strategic priorities:

1. Highlight the importance of eco-innovation and eco-innovative activity as the key sources of competitiveness of enterprises from the SME sector;
2. Strengthen RDI and company partnerships and collaboration;
3. Develop efficient and agile development tools and methods;
4. Apply design to new applications in competence interfaces;
5. Support technological research in terms of early product validation and services, including the so-called first production;
6. Promote investments activities focused on research and development of eco-innovations in enterprises in synergy with research and development centers and the higher education sector;

7. Create a knowledge and technology transfer network;
8. Increase the volume and level of competence in the field of RDI and service activities;
9. Develop multidisciplinary competences in the design and creation of products and services.

The common priority of all project partners was close cooperation with service providers, strengthening partnership and cooperation in the field of research, development and eco-innovation, and supporting SME enterprises. The priority is also the development and synergy of the project partners' own competences in the field of designing and creating eco-innovations by investing in knowledge and skills and creating their own cooperation networks in the countries of the BSR region.

2.3 IDENTIFYING THE NEEDS OF SMES REGARDING ECO-INNOVATIVE ACTIONS

In order to identify the competency gap of project teams, it was necessary to analyze the needs and expectations of SMEs in the area of eco-innovation. The competence gaps were related to theoretical and practical competences, service provision, information support, technology and infrastructure, consulting, eco-innovative project actions. Based on gaps, the teams defined the directions of action aimed at reducing this gap and, consequently, increasing the potential of teams.

The project team studied the needs of manufacturing SMEs in the field of eco-innovative solutions. In addition, it identified the basic barriers to the development and implementation of eco-innovations in SMEs. The joint research used the same research techniques and methods and determined the needs and barriers of SMEs and the situation with eco-innovative services in Baltic Sea Region. The research is described in detail in the report "Manufacturing companies and eco-innovation" produced by VIA University College¹

The research was carried out in the second half of 2019. In total, 296 SMEs participated in the study from the countries of the project consortium, including Estonia - 23.31% (69), Poland - 19.26% (57), Finland - 18.24% (54), Lithuania - 15.88% (47), Sweden - 12.84% (38), Denmark - 10.47% (31). Micro enterprises accounted for 42.23% (125) of the research population, and small enterprises - 27.36% (81). The remaining group - 30.41% (90) are medium-sized enterprises. Moreover, the enterprises represented 20 production areas / sectors.

When analyzing the structure of the participating SMEs, the largest share in the study concerned enterprises from such industries as: Food products 11.14% (33), Other manufacturing 10.47% (31), Machinery and equipment 8.44% (25), Rubber and plastic products 6.41% (19), Wearing apparel and Textiles 6.41% (19), Computer Electronic and optical products 4.05% (12), Paper and paper products 3.71% (11), Fabricated metal products 3.71% (11), Electrical equipment 3.71% (11), Beverages 3.04% (9).

2.4 IDENTIFYING COMPETENCE GAPS

The partners identified the competence gaps based on their own studies as well as the work carried out in ECOLABNET. The project defined the competence caps for the whole ECOLABNET project team in the internal report and requirements for different competence areas². Internal Development Teams

¹ https://issuu.com/muova/docs/manufacturing_companies_and_eco-innovation

² <https://padlet.com/trni1/rc5wpysy16wsdxsk>

mapped and adapted the results of the surveys to the development strategy related to eco-innovative initiatives. CUT prepared the main categories of competence gaps to guide and support the studies of the partners. The main categories of the competence gaps were:

- increasing cross-sectional competences such as: entrepreneurship, creativity, teamwork and communication in testing new eco-innovative solutions on the SME market;
- undertaking eco-innovative activities and planning of creative solutions;
- implementing new, creative eco-innovative solutions in the SME segment;
- assessing the entrepreneurial possibilities of implementing eco-innovation critically;
- creating original or mapping (benchmarks) useful eco-innovative solutions: product, process, business;
- motivating SMEs and intermediary organizations to act and cooperate;
- establishing and maintaining appropriate relationships in organizational networks;
- improving internal communication, both between project partners and members of individual project teams;
- improvement of external communication, both with intermediary organizations and enterprises from the SME sector;
- development of research and scientific project teams in terms of knowledge, skills and experience in the context of developing eco-innovation initiatives, in particular expanding own specialist knowledge;
- increasing the competitiveness of enterprises by raising awareness and introducing eco-innovative activities;
- strengthening the potential of research infrastructure.

The above-mentioned categories were presented to project partners in the CUT's example of the development strategy. The topics were related to improvement of cooperation with SMEs and development of eco-innovative initiatives. The project Leader VAMK Design Centre MUOVA and the project partner Lithuanian Business Confederation supported the development of the template and the other project partners accepted and adopted the proposed competency gaps categories.

2.5 DETERMINING LINES OF ACTIONS TO ELIMINATE COMPETENCE GAPS

In 2019-2020, the project partners defined the directions of activities reducing their competency gaps. The elimination of competency gaps was implemented by:

- defining the development goals and identifying external factors that create emerging problems;
- determining the current level of competences and knowledge in the field of innovation;
- identifying the development needs in the field of eco-innovative initiatives.

It was assumed that the directions of activities aimed at eliminating competency gaps should concern:

- self-improvement of the Internal development Team in terms of developing eco-innovative initiatives
- increasing knowledge, skills, competences and experience in this area;
- continuous analysis and assessment of the team's competency gaps in the context of the variable, multidimensional needs of SMEs in eco-innovation: product, process and business (including: technological, organizational, marketing, logistics, ICT);
- defining and implementing process for internally sharing knowledge about eco practices in different projects;
- consulting current needs in terms of the ability to meet customer expectations regarding products or services;
- close cooperation with intermediary organizations;
- development and optimization of the potential of research infrastructure;
- developing tools in how companies could be supported in communicating about eco-innovations - planning and organizing training for SMEs in the use of eco-innovative solutions;
- consultancy on the effective use of resources in order to create a socially responsible brand, an environmentally friendly company;
- expert advice and assistance in adjusting to changing administrative and legislative regulations;
- advice and assistance of experts in the field of business development and the value chain;
- consulting and promoting services related to material development, testing and 3D printing; development of partner network
- assistance in establishing contacts between SMEs and intermediary organizations or other entities, e.g. research and development units.

The partners emphasized in their independently defined activities and directions, the value of developing competences in a partnership network. Project partners also highlighted the role of self-improvement of their entities, thus the essence of internal development in terms of improving cooperation with the sector of small and medium-sized enterprises and developing eco-innovative initiatives in relation to their needs, both current and prospective. In this case, it concerns the increase of the existing competences related to eco-innovation service portfolio for SME production companies both in quantity and quality.

The analysis of the list of basic directions of activities aimed at reducing competency gaps. The analysis the internal development strategies of the project partners shows multidimensional competency gaps in the areas of: marketing, finance, internal training, infrastructure and diffusion of new knowledge.

3. CREATING THE DEVELOPMENT STRATEGIES

In the 2019-2020 participating organisations considered the main directions of their activities in reducing their competency gaps, and developed the defined strategic goals. The common framework for these goals concerned:

- Defining general areas of cooperation with SMEs, RDI and intermediary organizations to support SMEs in the field of eco-innovative services;
- Developing competences in the field of inter-ministerial and international cooperation in order to support the needs and priorities of the European SME sector;
- Developing a joint portfolio of eco-innovative services for SMEs, taking the current and planned research and development opportunities into account;
- Developing tools for supporting companies through communicating about eco-innovations.

In the context of the defined pre-processing activities, it was assumed that the developed strategy should be oriented towards responsible internal development of Ecolabnet project teams, through the implementation of the following strategic goals:

1. Research and scientific development of project partners in the field of design and production of eco-innovative products and services in various areas of industries,
2. Defining and implementing process for sharing knowledge about different projects eco practices internally;
3. Strengthening the potential of research infrastructure,
4. Expanding cooperation with intermediary organizations and SMEs in the region;
5. Identifying the general areas of cooperation with SMEs, RDIs and intermediary organizations to support SME enterprises in the Baltic Sea region and use this cooperation for the sustainable development of eco-innovation,
6. Developing the clear portfolio of eco-innovative services for SMEs and RDI service providers and taking the current and planned research and development opportunities into account, with the current and planned laboratory infrastructure,
7. Specifying and developing eco-competences - continuous development of the team
8. Applying in heterogeneous calls for research and development projects in the field of eco-innovative solutions in SMEs - projects financed by European and national institutions,
9. Preparing and conducting trainings in the field of increasing the competitiveness of enterprises by raising awareness and introducing eco-innovative activities,
10. Developing tools in how companies could be supported in communicating about eco-innovations
11. Developing a system for collecting and presenting products and eco-innovative services, constituting a source of professional knowledge about eco-innovative solutions.

The identified common strategic goals in the internal development strategy of the Project Partners explain the improvement of cooperation with the sector of small and medium-sized enterprises and developing eco-innovative initiatives. They describe the strategy for developing and implementing a system in which eco-innovative products and services are collected and presented. They also explain the ways of constituting a source of professional knowledge about eco-innovative solutions - as a digital partner network integrator.

3.1 DECOMPOSING STRATEGIC OBJECTIVES INTO SPECIFIC OBJECTIVES

With regard to the strategic goals, the partners defined the following specific goals:

1. Research and scientific development of project partners in the field of design and production of eco-innovative products and services in the areas of:
 - environmental engineering,
 - energy,
 - environmental management,
 - corporate social responsibility,
 - sustainable development of SME enterprises,
 - synergies in scientific, research and organizational networks,
 - in various perspectives, i.e. national, international, e.g. in the region of BSR countries.
2. Defining and implementing process for internally sharing knowledge about different projects eco-practices:
 - systematic improvement of cooperation between project partners in the implementation of individual project tasks;
 - being open to the needs and requests of other project partners.
 - Strengthening the potential of research infrastructure:
 - analysis of the existing laboratory base in terms of the diagnosed project needs,
 - identifying gaps in the laboratory infrastructure in the context of the diagnosed project needs,
 - identifying the possibilities of modernizing and expanding the laboratory infrastructure,
 - expansion of laboratory infrastructure.
4. Extending cooperation with intermediary organizations and SMEs in the region:
 - increasing the scope of cooperation with existing partners, both IO and SME,
 - constant search for new intermediary organizations and SMEs that would be interested in cooperation in the development and implementation of eco-innovative initiatives,
 - defining strategies and techniques for searching for new organizations willing to cooperate.

5. Identification of general areas of cooperation with SMEs, RDIs and intermediary organizations to support SME enterprises in the Baltic Sea region and use this cooperation for the sustainable development of eco-innovation:

- Encourage the state and society to open up opportunities for enterprises to provide innovative services and improve quality and accessibility for the population;
- using partnership to promote the development and availability of the business ecosystem and RDI infrastructure (including energy, biotechnology, production, communication);
- encouraging investments of domestic and foreign capital and related partnerships, development of high-value-added business, job creation (in the area of business and RDI).
- Encouraging companies to more actively develop research and innovation, implement information technologies, modern management methods and management systems, promote e-business and other initiatives that increase business efficiency, provide new goods and services, and develop in new markets.

6. Develop clear portfolio of eco-innovative services for SMEs and RDI service providers

- developing a portfolio of eco-innovative services for SMEs, taking the current and planned research and development opportunities into account, with the current and planned laboratory infrastructure;
- developing a portfolio of available (ready-to-implement) eco-innovative products and services for SMEs,
- developing a portfolio of designed (at the stage of development) products and eco-innovative services for SMEs, broken down into a short-term perspective - implementation time up to one year and long-term - implementation time over one year.

7. Specifying and developing eco-competences - sustainable development of the team based on the increase of knowledge, skills and experience in the field of developing eco-innovative initiatives:

- analysis of global trends in the development of eco-innovative initiatives,
- analysis of the latest periodicals in the field of eco-innovative products and services,
- continuous interaction with intermediary organizations and SME enterprises,
- participation in thematic scientific conferences and industry events,
- organizing training courses.

8. Applying in the various calls for research and development projects related to eco-innovative solutions in SMEs - projects financed by European and national institutions:

- analysis of calls announced by European and national institutions, i.e. Interreg, HORIZONT, NCBR or PARP, dedicated to the development of companies from the SME sector,
- creating a network of contacts (consortia of enterprises) in order to apply for the above-mentioned calls,
- preparation and submission of project applications.

9. Preparing and conducting trainings in the field of increasing the competitiveness of enterprises by raising awareness and introducing eco-innovative activities:

- determining the subject of training,
- developing a training schedule,
- defining the methods (methods and techniques) of conducting trainings,
- implementation of trainings.

10. Developing tools in how companies could be supported in communicating about eco innovations:

- Participation in a public dialogue on cooperation between business and science, adapting the education and science system to the needs of business and the economy,
- using the project partners' communication channels and transparent lobbying methods to promote and accelerate cooperation between business sectors and business organizations,
- using the project partners' communication channels to increase the availability of services provided by related business structures related to business start-ups, business development and the development of foreign markets for domestic companies,
- Using knowledge and competences (through educational activities and public events) to promote enterprises' access to finance, and thus to promote the creation of new innovative enterprises, increase productivity and the environmental impact of enterprises.

11. Development of a system for collecting and presenting products and eco-innovative services, constituting a source of professional knowledge about eco-innovative solutions:

- development of the system concept,
- specifying the method of its implementation,
- system start-up and testing,
- putting the system into operation.

In the process of comparative analysis, searching for a common framework of specific objectives, on the basis of the above bullet points, the following specific objective areas are distinguished:

- I. research and scientific development of the project partners' staff,
- II. strengthening the potential of research infrastructure,
- III. searching for new sources of financing for research and development in the field of new eco-innovative services as well as
- IV. increasing productivity or promoting new products,
- V. expansion of communication channels,
- VI. increasing the availability of services provided by related business structures, as well as
- VII. lobbying to promote and accelerate cooperation between business sectors and business organizations.

Detailed strategic goals are also focused on: branding, promoting the development and availability of the business ecosystem and RDI infrastructure of the partner network. On the other hand, in the joint portfolio of eco-innovative services of the project partners, the specific objectives are focused on: defining the method of implementation, launching, testing and operation of the digital partner network integrator: a system for collecting and presenting eco-innovative products and services, which is a source of professional knowledge about eco-innovative solutions.

3.2 INDICATION OF KEY DEVELOPMENT ACTIONS/ACTIVITIES

In order to focus the development activities of individual project partners, it was assumed that each partner should focus its attention primarily on three key areas / development activities, selected from the set of identified strategic goals in the developed strategy of internal development. The project partners most often focused on the following key development activities:

- Internal sharing of knowledge on environmental practices;
- Identifying and developing eco-competences;
- Supporting companies in communication about ecological innovations;
- Internally sharing knowledge about eco-practices;
- Specifying and developing eco-competences;
- Supporting companies in communicating about eco innovations;
- Strengthening the potential of research infrastructure;
- Expanding the network of contacts;
- Design, development and creation of a portfolio of services for the SME sector
- Supporting the search for new partners and service providers, as well as network activities aimed at achieving eco-innovation goals;
- Promoting innovative services, products and knowledge that are the resources of the Ecolabnet network;
- Advising and promoting services related to the development of materials, testing and 3D printing;

As a result of the comparative analysis, we can distinguish a common framework for key development activities in improving cooperation with the small and medium-sized enterprises sector and developing eco-innovative initiatives in relation to their needs. Consequential key activities are: acceleration of research and development activities as well as acquired new competences, including in the partner network.

Moreover, the key activity perceived by the project partners is the development of a network of contacts, which is correlated with common internal development strategies. The key development activity, which also results from the comparative analysis of the above list of key activities, is the design, development and creation of a joint portfolio of services for the SME sector with the partners. In addition to the commonly perceived key development directions, the project partners also indicated those that

identify their unique activity in the field of eco-innovative services dedicated to SMEs, and at the same time expand the competences of other entities from the perspective of the partner network.

4. ESTABLISHING THE ACTION PLANS

In order to achieve the strategic goals they must be translated into operational activities. All project partners, as part of the internal development strategy detailed their action plans and task implementation. A typical action plan includes implementation, tracking implementation, and evaluating the results.

The action plans specify: Development area, Objective, State, Development activities, Tasks, Responsibility, Resources, Start, End (forecast), Monitoring status, POC% follow-up, Closed, Final comments, Evaluated, Assessment comments (Development area, Objective, Status, Development actions, Tasks, Responsibility, Resources, Start, End (forecast), Follow up status, Follow up POC%, Closed, Closing comments, Evaluated, Evaluation comments.

With regard to the key development activities identified in the internal development strategy, the detailed action plans were as follows:

- Internally sharing knowledge about eco practices Sharing of best practices concerning important themes.
- Specifying and developing eco-competences: Development of competences in the area of eco-innovation. Investment in knowledge and skills. Procedure stages:
 - Overview of current level of competences within eco-innovation
 - Listing skills & knowledge needed and the potential gap
 - Prepare training for SMEs
 - Schedule of training and prepare materials
 - Performing the training Develop competences and tools for evaluating customers resource efficiency (Project planning - implementation - knowledge).
- Supporting companies in communicating about eco innovations:
 - Guide customers towards more ecological service business.
 - Develop a checklist 3R (reduce, reuse, recycle) to be used in beginning of customer project when choosing solutions (product, package, etc.).
 - Develop sales material for ecological services.
- Strengthening the potential of research infrastructure: Eco-innovation is closely related to research and development activities, which include the access to scientific and research facilities and equipment, the use of modern production methods and access to knowledge and qualified staff. Proper selection of scientific and technical staff and continuous improvement of their knowledge and qualifications is an important link in the aspect of strengthening the scientific and research potential, including research infrastructure.

Creating and developing modern, eco-innovative solutions, primarily in the energy industry as well as waste processing and management, requires the use of appropriate equipment and tools. It is particularly important here to strengthen the scientific and research potential by expanding the infrastructure in terms of renewable energy sources. Obtaining energy from renewable sources is one of the key issues for the future, requiring at the same time various research related to, inter alia, with increasing the efficiency of energy conversion and operation of energy systems along with their disposal. It seems that strengthening the research potential in this area should be a key action within the strategy and should result in the development of innovative products and services and their introduction to the service offer within the ECOLABNET network.

- Expanding the network of contacts: Expanding the network of contacts leading to an increase in the group of potential recipients of services and products offered within the ECOLABNET network is a key activity for internal development. Actions may result in expanding the network of contacts should be carried out as widely as possible and on various levels. In particular, this activity should include active publishing activities, active participation in mainly industry events, as well as participation in research and development projects. An equally important element of activity should be activity on industry forums and in social media.
- Design, development and creation of a portfolio of services for the SME sector: A wide portfolio of eco-innovative products and services that are an offer for the SME sector is a key element of the activities within the ECOLABET network. Designing, developing and creating such a portfolio requires analyzes of the potential of the product offer and the possibility of providing services for the SME sector, as well as analyzes of the demand from SMEs for eco-innovative products and services. Identification of key development activities / activities in this area should be carried out on the basis of surveys and direct interviews with the use of a questionnaire, as well as on the basis of the cooperation tool in the ECOLABNET network (DCT - Digital Collaboration Tool). Supporting the search for new partners and service providers, as well as network activities aimed at achieving eco-innovative goals Clarify the criteria for membership in ECOLABNET network, increase the number of members.
- Promoting the innovative services, products and knowledge that are the resources of the Ecolabnet network: Clarify the strategic objectives and priorities that will increase the awareness of eco-innovations and eco-innovative activities for business ecosystem. Strengthening the image of eco-innovation (products, process and services) via communication tools.
- consulting and promoting services related to material development, testing and 3D printing

The detailed action and task implementation plans developed in the internal development strategies of individual project partners are varied, which once again confirms the autonomy of the strategies developed by individual project teams. However, some fundamental steps in the implementation of these strategies can be distinguished (which once again confirm the coherence of the partnership network created under the Project), such as:

- Defining goals and priorities of activities,
- Diagnosis of the current level of competence in the field of eco-innovation,

- Competency development,
- Strengthening the image of eco-innovation (products, processes and services) through the use of various communication tools,
- Expansion of the portfolio of financial and material resources,
- Strengthening the potential of research infrastructure,
- Expansion of the portfolio of eco-innovative services for the SME sector,
- Expanding the network of contacts,
- Monitoring and controlling the progress of the implementation of the internal development strategy, risk identification, taking corrective actions, current and periodic assessment.

5. MONITORING THE ACTIONS

Monitoring of the actions taken includes an assessment of the progress in the implementation of the developed strategy in accordance with the adopted schedule of activities, in semi-annual or annual periods. The assessment of the degree of implementation of the objectives is a set of internal development evaluation indicators.

Monitoring the progress of the actions taken is part of the implementation action plan. Its purpose is to ensure that:

1. Activities are maintained within the parameters of agreed strategic goals and objectives;
2. Activities are in line with the vision, mission and values of the organization;
3. Everything is reviewed and internal and external changes or adjustments will be made to achieve the goals.
4. Activities are kept within the parameters of the agreed strategic aims and objectives;
5. Activities are consistent with organization's vision, mission and values;
6. Everything is under review and that internal and external changes or adjustments will be done to achieve the objectives.

The task of monitoring the progress of undertaken activities, and most importantly - the method of assessing the degree of implementation of internal development goals, as part of the implementation of the internal development strategy, is also included in the strategy implementation plan for improving cooperation with the small and medium-sized enterprise sector and developing eco-innovative initiatives.

The partners confirm the essence of control and evaluation of the current implementation of internal strategies at intervals not longer than a month and periodic evaluation at intervals not shorter than 6 months. The leader of WP 3.4 - CUT Partner in the project recommends monitoring and assessment of the progress of undertaken activities in the context of the implementation of the developed internal development strategy in accordance with the adopted schedule of activities by each Partner in the

project. An interim report will be prepared on the basis of the assessment of the progress made in the implementation of the tasks. The person responsible for drawing up the periodic report will be the team leader.

5.1 DEVELOPING AND ACCEPTING INDICATORS OF INTERNAL DEVELOPMENT EVALUATION

The adopted strategic goals and the detailed goals developed on their basis constitute the framework for evaluating the evaluation of internal development. Referring to the adopted specific objectives, a set of evaluation indicators was developed.

The proposed set of indicators focuses on the key areas from the point of view of the development of the project team's competences and enables periodic monitoring of the adopted assumptions. As a result, it is used to evaluate the implementation of the adopted strategy aimed at eliminating competency gaps of members of Project Teams and achieving effective cooperation between research and development units and small and medium-sized enterprises in the development and implementation of eco-innovations.

STUDY AREA	RESULT / INDICATOR	UNIT OF MEASURE	VALUE
research and scientific development	participation in trainings, workshops, seminars, symposia, conferences	number of participation	
	publications in the field of eco-innovation and sustainable development	number of publications	
sharing knowledge within the Ecolabnet network	spreading knowledge in the field of eco-innovative solutions and experiences	number of actions taken	
laboratory infrastructure	degree of use of the laboratories	%	
	the gaps in the infrastructure related to the needs	Number of gaps	
cooperation with SMEs and intermediary organizations	acquiring partners from the business environment	number of partners	
	acquiring partners from SMEs	number of partners	
portfolio of eco-innovative services for SMEs	development of new eco-innovative products and services for SMEs	Number of implemented products and services	
	designing new eco-innovative products and services for SMEs that are currently under development	number of products and services at the design stage	

participation in research and development project calls	Creating a network of SMEs and intermediary organizations in order to apply for project calls	Number of contacts in the network	
	preparation and submission of project applications	number of submitted applications	
	effectiveness of the activities related to the project applications and the degree of funding obtained	number of accepted applications	
eco-innovation training and promotion activities	preparing and conducting trainings in increasing the competitiveness of enterprises	number of trainings	
	raising awareness and introducing promotional activities in the field of eco-innovation	number of actions taken	
communication tools	Adaptation of ICT tools to increase the effectiveness of communicating with IO and SME organizations about eco-innovative solutions and the potential of the Ecolabnet network	number of adapted tools	
		type of adapted tools	
knowledge base about eco-innovation	spreading knowledge in the field of eco-innovative products and services	number of actions taken	

The adopted indicators for evaluating internal development evaluation are both qualitative and quantitative. For example, the assessment of activities in the field of creating a portfolio of eco-innovative services for SMEs can be expressed in terms of the number of services offered, the number of enterprises served, the value of services provided to SMEs or on the basis of an analysis of opinions and customer satisfaction.

On the other hand, evaluation in the area of training and promotional activities in the field of eco-innovation can be made on the basis of the number of trainings organized, the number of people participating in the training, or the benefits of participating in the training.

The defined set of indicators is well matched to the specific objectives and main activities defined by the individual Project Partners. This enables the degree of implementation of the adopted internal development strategy to be assessed, but it does not constitute a closed set. It can be freely modified, extended by individual project partners depending on the key activities carried out.

5.2 EVALUATING STRATEGY IMPLEMENTATION

Assessment of the strategy implementation consists in periodically checking the following elements:

- Material effects obtained for individual activities (developed indicators can be used).
- Conditions for the implementation of activities and their changes, assessment of barriers to the implementation of activities.
- Correctness of the assumptions made.
- The degree of implementation of the strategic goal.

Typically, the strategy evaluation process involves answering questions such as:

1. How much progress have we made towards our vision?
2. Are our strategic focus areas still relevant?
3. Which of our objectives have we completed?
4. Which objectives are no longer needed?
5. Do we have sufficient projects to deliver incomplete objectives?
6. Are our KPIs still effective for measuring progress towards our objectives?
7. Where do we fell short of our targets, why did this happen?

The evaluation should be closed each time with a conclusion about the need (or no need) to revise and change the strategy or its part, including the time of task implementation and achievement of goals. The sum of the assessments of individual effects carried out annually, should indicate whether the strategy is to be continued in the adopted form or whether there is a need to change its individual elements.

The changes in the strategy may consist in adjustments assumed in the strategy of activities or in the inclusion of new activities aimed at achieving the assumed goals of the strategy, while the strategic goals should not change. If necessary, a new strategy should be prepared. Assessment of the implementation of the strategy with possible proposed corrections should be performed by the person responsible for the coordination of the strategy.

5.3 PREPARING FINAL REPORT REGARDING CONDUCTED ACTIONS

Final reports on the implementation of the internal development strategy for the development of eco-innovative initiatives will be prepared at annual intervals by individual Project Partners in accordance with the instructions.

6. COMMON DIRECTIONS OF INTERNAL DEVELOPMENT

Despite the differences of the partners in their mission and objectives of the activities in the Ecolabnet project consortium, the common ground in competency gaps, priorities, determinants and directions of the internal development strategy can be clearly identified. It confirms the stability and synergy of cooperation within the service development network for eco-innovation in the BSR countries.

A common priority for all project partners is close cooperation with other service providers and target groups. Strengthening the partnership and cooperation in the field of research, development and eco-innovation is a common development objective as well as supporting eco-innovation of SME enterprises. The partners were interested in developing their own competences in eco-innovation and investing in knowledge and skills. They also were interested in the fostering their cooperation networks in the countries of the BSR region.

In the partners internal development strategies, the fundamental strategic direction is the development of competences in the partner network. The network operates as a platform for the transfer of knowledge, competences as well as exchange of experiences and skills. By analyzing the information on the internal development strategies of individual project partners, a common framework for these strategies was identified. The framework contains following topics:

- Defining general areas of cooperation with SMEs, RDI and intermediary organizations to support SMEs through eco-innovative services;
- Developing competences in multidisciplinary and international cooperation in order to support the needs and priorities of the European SME sector;
- Developing a joint portfolio of eco-innovative services for SMEs, taking the current and planned research and development opportunities into account;
- Developing tools to support companies in communicating about eco-innovations.

In addition, a common framework of specific objectives was also identified. The specific objectives were categorised into:

1. research and scientific development of project partners' staff,
2. strengthening the potential of research infrastructure,
3. searching for new sources of funding for research and development in the field of new eco-innovative services
4. increasing productivity and promotion of new products,
5. developing communication channels that increase availability of services, and promotion and acceleration of cooperation.
6. branding, promoting the development and availability of the business ecosystem and RDI infrastructure of the partner network.

As a result of a comparative analysis of the internal strategies of the project partners, one can also distinguish a common framework of key development activities in the field of improving cooperation with the small and medium-sized enterprise sector, such as:

- acceleration of research and development activities in the areas of core activities
- development of a network of contacts in correlation with common internal development strategies,
- designing, developing and creating a joint portfolio project with partners, services for the SME sector.

The measurable value of the analysis of the internal development strategy of the project Partners is the identification of fundamental common directions for their implementation:

- Defining goals and priorities for activities,
- Diagnosis of the current level of competence in the field of eco-innovation,
- Development of competences,
- Strengthening the image of eco-innovation (products, processes and services) through the use of various communication tools,
- Expanding the portfolio of financial and material resources,
- Strengthening the potential of research infrastructure,
- Expansion of the portfolio of eco-innovative services for the SME sector,
- Expanding the network of contacts,
- Monitoring and controlling the progress of the implementation of the internal development strategy, risk identification, taking corrective actions, current and periodic assessment.

Common directions, strategic goals resulting from the autonomous strategies of individual Project Partners, unequivocally justify the coherence of the partner network - the Ecolabnet consortium established under the Project.

In the context of the distinguished common framework of the internal development strategy of Project Partners in the field of improving cooperation with the sector of small and medium-sized enterprises and developing eco-innovative initiatives, in relation to their needs, both current and prospective, the Ecolabnet Project Consortium recognizes that the integrator of these activities will also be a joint a system or service for collecting and presenting eco-innovative products and services, constituting a source of professional knowledge about eco-innovative solutions, referred to as the Digital Collaboration Tool.

7. SUMMARY

The aim of the internal strategy process was to strengthen organisational competences in order to create better access to the facilities and competences related to eco-innovation. The internal strategies aimed at improving cooperation with SMEs and developing eco-innovative initiatives. The RDI partners of ECOLABNET project built their own internal development programs according to the instructions and templates, so called the etalon of the Development Strategy. This etalon was analyzed and modified by other project partners.

The competence gaps and the needs of manufacturing SMEs were used as a starting point for internal development. In addition, the service design process carried out in ECOLABNET project and the service journeys created for ECOLABNET, gave new directions for developing RDI organisations.

According to the instructions and templates of the CUT, the partners established an internal development team responsible for developing their service system and competences. The development team established an internal development strategy including strategic objectives, at least 3 development activities and an action plan. The teams reported the implementation of their development program to CUT which comprised a general report of the activities.

The autonomous internal development strategies developed by project partners was analysed and comprised into the common framework for internal development strategy for RDI actors supporting eco-innovation in manufacturing SMEs. The framework contributes competence development in the individual project partners, but also the entire Ecolabnet network, with a clearly noticeable synergy effect. This will increase the impact of the Ecolabnet network on developing and promoting eco-innovation in small and medium-sized enterprises. The results can be used, not only in the project partner countries, not only in the BSR countries, but also in other European countries.

The tangible value of this work is also the preparation of this report on the implementation of internal development strategies. The analysis of the internal strategies of the project partners proves that its development depends mainly on the attitude of a given entity including staff involvement, risk acceptance, reactions to the actions of external entities. It also depends on the mutual relations with the environment, e.g. in the partner network. The relationships may affect the implementation of strategies, which includes subsequent stages of individual - coherent but at the same time separate - strategies of internal development.

8. TEMPLATE FOR INTERNAL DEVELOPMENT

Date of completing:

Partner's name:

Development of all entities is associated with undertaking actions that comply with or are ahead of the needs of the environment and market. The developed strategy determines activities in the scope of development, collaboration and support provided to the SMEs, adapting them to the changes in a dynamic environment and identifying the needs of enterprises, both the current as well as the prospective ones.

These actions regard determination of specific tasks for organisation resulting from the adopted strategy, so they concern planning of what? who? when? and how? will be doing and what the coordination of these actions is going to be like. The created strategy should consider the assumptions included in the strategic documents of a given region or country.

Table. The template for the strategy for internal development

No.	Name of task	Deadline	Responsible person	Remarks
1.	Identifying or creating a team in charge of internal development. The team responsible for the collaboration with SMEs in the given organisation.			
2.	Determining by the identified/created team the priorities and strategic actions in the context of collaboration, and support for SMEs.			
3.	Identifying by the internal development team the needs of SMEs in the scope of eco-innovative actions (including the needs identified in the survey conducted among SMEs in partner BSR countries).			
4.	Identifying competence gaps in particular areas of knowledge within the partnership (in the scope			

	of theoretical and practical knowledge; know-how; skills; providing services; support in the scope of information, technology and infrastructure; consulting, eco-innovative, project actions; etc.).			
5.	Determining lines of actions so as to eliminate competence gaps.			
6.	Drawing up development strategy with regard to determined primary lines of actions			
7.	Decomposing strategic objectives into: Tactical and Operational.			
8.	Indication of key development actions/activities - min. 3 activities (please specify activities): 1. 2. 3. Please describe in brief what you are going to develop in case of each activity: 1. 2. 3.			
9.	Establishing an action plan and tasks implementation within the developed strategy.			
10.	Determining implementation steps/stages in the scope of strategy implementation.			
11.	Monitoring the progress of undertaken actions (periodical check-up of tasks implementation progress, applying corrective measures if necessary).			
12.	Developing and accepting benchmarks of internal development evaluation.			
13.	Evaluating strategy implementation.			
14.	Preparing final report regarding conducted actions.			