# SECOND REPORT ON ACTIVITIES: SURVEY ON ECO-ENTREPRENEURIAL QUALIFICATIONS AND SURVEY ON ECO-INNOVATION AND ENTREPENEURIAL TRAINING NEEDS AND EXISTING EDUCATION INITIATIVES

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**PROJECT "A KNOWLEDGE ALLIANCE IN ECO-INNOVATION ENTREPENEURSHIP TO BOOST SMEs COMPETITIVENESS" INTERREG BALKAN MED PROGRAMME**

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## SUMMARY

In the past few decades there has been an increase of social and political awareness of the importance of sustainable innovations. In December 2011, the European Commission launched the Eco-Innovation Action Plan (EcoAP), moving the EU beyond green technologies and fostering a comprehensive range of eco-innovative processes, products and services. Eco-innovation is defined as any form of innovation which aims to significantly and demonstrably address the goal of sustainable development, by reducing detrimental effects on the environment or by enabling the more efficient and responsible use of natural resources and energy. Companies now are more aware of the impact of their activities on the environment and are increasingly motivated by environmental concerns in their pursuit of innovation.

However, research tends to focus on innovation in big companies, overlooking the role of Small and Mediumsized Enterprises (SMEs). SMEs have often been slow in developing and implementing innovation and early initiatives to stimulate environmental management among small firms proved ineffective. Increasingly, governments are looking to universities to build the bridge between SMEs and eco- innovation and the role of the university is to educate and lead those small companies in the process of development and implementation of eco-innovative ideas.

Recently, the Eco-Innovation Observatory EIO (2013) has argued that strategic partnerships between policy makers, businesses, citizens and researchers are key to developing, implementing and applying eco-innovation. If eco-innovation is based on stakeholders working together, it can play a crucial role in the transition to a green and competitive economy. Within this partnership, universities can play a central role in designing competitive systems that are driven by environmental sustainability.

Since this field is not developed enough in the European Union and in the countries candidates, the organization is working on developing it with proper regulation and building awareness and popularization through different project initiatives. One of them is this project “A knowledge alliance in eco-innovation entrepreneurship to boost SMEs competitiveness”, which has the goal first to identify the eco-innovation and entrepreneurial training needs of enterprises,

and also to map the existing educational initiatives in all the countries partners of the project and after that to develop a well planned training program that will be conducted on business entities willing to take part in the project activities.

After the first research activity, the project team got initial insight of the current status of eco-innovation within companies of the Pelagonia region, their past trainings and preferences of new trainings and the modes of learning. In order to get a deeper insight and to listen to the companies in a more open discussion on this important topic a second research activity was conducted and the method of its realization was a personal interview with company representatives. Through this research activity the project team will get an insight of the current problems and needs that the companies have in order to develop a proper training program that will cover all the needs and requirements of the business sector.

The results and the analysis of the research which are presented in this report are very significant since based on this data the project team will develop the further project activities that on one hand will enhance the business's ability to be greener and to realize their eco-ideas that for a long time have been sitting in the minds of the managers or the employees and on the other hand will enhance the University's role as a key partner for the businesses.

The University will educate the company's representatives and will provide support in the realization of eco-innovation ideas. With this the University and business sector members will learn and increase the eco-innovation capacity of both entities. The experience and knowledge obtained from this project could be further developed as a regular subject in the offer of the University providing a sustainable and long term application of eco-innovation in the region.

## INTRODUCTION

SMEs in Pelagonia region take up to 98% of the total number of business entities and due to their prevalence they are an important piece of the business life of the region. Their number grows each year and more and more people decide to start their own business as an option of employment and income for the family. But what is evident is that most of these businesses are opened on low resources base, with very little capital invested since most of the founders are afraid of failure and loss of the investment.

They are mostly in the service sector, retail or small production companies with very small capacity. Very few are based on innovations, something that has not been offered so far on the market and most of them decide to invest in proven investments that provide steady income. But the risk and the innovation could bring much bigger return if they have the knowledge and support in the set up phases. That is the point where the University could step up and provide the needed knowledge and support systems with information, literature and best practices and help those who have good ideas but are afraid to take a step forward in the implementation.

The knowledge share and support in implementation phases is one of the goals of this project, which aims to educate the interested business entities from Pelagonia region and help them first develop their innovative ideas and later implement them as a new way of doing the activities of the company or a completely new business that could serve as an extension of their brand. With this the project team will teach the entrepreneurs about the new “green” economy that offers great opportunities in terms of new products and services that could be highly profitable for the company, the environment and maybe enable them to be competitive in the regional and global market.

But to do it in the proper way the University has the need to obtain sufficient information that will be used to develop a well planned and detailed training program that will be a perfect combination of theoretic background and practical knowledge, organized in the preferred mode of learning and with proper after project support. To achieve that a research activity with an interview protocol form was conducted and all the information, conclusions and recommendations collected from it will be presented in this report.

This report will present the findings of the personal interview research that was conducted on a sample of ten companies from the Pelagonia region and all the information, recommendations and limitations will be presented in it. Additionally this report will include all the comments received from the respondents about their training and education needs in the above mentioned subject.

## METHODOLOGY

The personal interview research was conducted in the months of July and August 2018 and it was completed on a sample of ten companies that work in the Pelagonia region. The personal interview research was conducted with the use of a structured interview research protocol form that contained open questions in order to obtain information about the company, the respondent, the current problems and solutions of the questions of eco-innovation, the costs that they have to satisfy the eco-innovation needs and their training needs and preferences.

In the sample building process the method of stratified random sampling was used and the complete region was divided according the industrial zones and a process of contacting companies and scheduling interviews was performed. After the completion of the interview process, the obtained responses were coded and analyzed using Microsoft Excel and SPSS.

Contact was made with over 50 companies and out of the companies that were willing to take part in the interview session ten were selected and a personal interview session was performed. The collected primary data in this report is presented in simple and cross tables and graphics, using absolute and relative values (percentage participation).

This report in the following sections will unite all of that data in different sections such as: results, conclusions and recommendations, limitations and comments from the interviewed companies in order to summarize all the information gathered for this research.

## GOALS OF THE RESEARCH

The personal interview sessions that were realized within the eco-innovation and entrepreneurial training needs and existing education initiatives research had the following goals:

1. Identification of the eco-innovation and eco-management training needs and problems of the companies in the Pelagonia region
2. Identification of the current practices of managing eco-innovation and eco-management in companies in the Pelagonia region
3. Assessment of the current costs and expenditures of companies to deal with eco-innovation issues.
4. Identification of the most important fields of eco-innovation in which the companies would like to be trained
5. Identification of the competences required for successful implementation of green products, services and practices.
6. Identification of the best mode of transferring the information to the potential participants of a training or seminar in terms of choosing the location, time and educational approach.

# RESULTS

The following section contains the results of the research. In the first part of it, the descriptive statistics will be presented with absolute and relative indicators and in the second part cross tabulation analysis will be performed.

## Descriptive statistics

The first question was regarding the position of the person that took part in the personal interview. Most of the interviewees or 60% were managers, 20% were responsible for the accounting of the company, 10% worked in the logistics department and 10% were lawyers.

The position of the interviewee is very important in terms of their general and specific knowledge about the current practices of the company, the standards applied and the future needs.

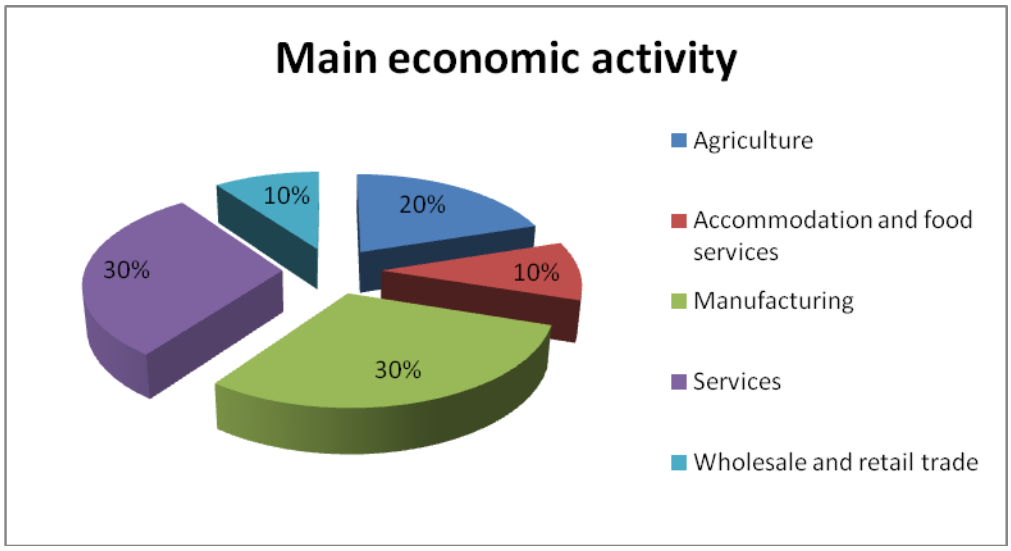
The data regarding the position of the interviewee is summarized in the table below:

| Position | Frequency | Percent |
|---|---|---|
| **Manager** | 6 | 60 |
| **Accounting responsible** | 2 | 20 |
| **Logistics** | 1 | 10 |
| **Lawyer** | 1 | 10 |

Table 1: Interviewee's position in the company

The second question was regarding the main economic activity of the company and the goal was to have companies from different sectors that have different approaches and experiences with eco-innovation and eco-management. The companies that comprise the research sample mostly come from the manufacturing and service sector, both participating with 30% of the sample, 20% come from the agricultural sector and the rest were from the accommodation and food services and wholesale and retail trade.

The graphic below summarizes the main economic activity of the company in which the interviewees work.




Graph 1: Main Economic activity of the company

Following the initial questions about the interviewee and the company he or she works for, the next set of questions was regarding the eco-innovation and eco-management needs and problems of the companies.

The first question in this segment was the question about the current training needs and problems of each one of the companies regarding eco-innovation and eco management.

For the training needs almost all of them expressed the need to be trained on waste management and recycling of packaging materials, batteries and metals. They all deal with different kinds of waste created through the everyday normal functioning and they would like to know the best ways of dealing with this waste and maybe using it as an additional possibility for creating income that could be used for employee's motivation or for team building activities. The companies from the agricultural sector expressed the need to be trained on organic production and on eco-friendly products that could help them get bigger income and use the land capacity in a more organic and sustainable way. Also some of the companies expressed the desire to get trainings on solar energy and using it as a way of reducing the energy costs. Additionally the companies expressed the desire to get trainings on grant application procedures since they are

well informed of the offered grants from the National Agency and also grants provided from foreign agencies that deal with eco-innovation and eco-management practices. They think that these funds could be very helpful in improving their activities, turning them into more eco-conscious entities, helping them get a competitive advantage by offering new things on the market or by reducing the fixed costs for functioning. They would like to get training in order to have more successful and well defined applications in which their ideas could be turned into sustainable solutions for the future.

The table below summarizes the training needs and problems of the interviewed companies:

| **Training needs and eco-innovation problems of the interviewed companies** | | | |
|---|---|---|---|
| **Needs** | Training on waste management and recycling of packaging materials, batteries, metals | Problems | Lack of knowledge about contemporary practices and innovations in waste management which is a limitation factor in the strive to recycle bigger amounts of the created waste and earn more money which can be used for other activities. |
| | Training on organic production and eco-friendly products | | Lack of knowledge about the production and commercialization of eco-friendly and organic products in the agriculture sector |
| | Training on renewable energy and use of solar panels | | Lack of knowledge or training how to minimize or recycle the waste created from production processes |
| | Trainings for application processes for grants for eco-innovations in the innovation fund of the country or in foreign agencies that offer small and medium sized grants for eco-innovations | | Theft of the raw material from the recycling facilities owned from the companies |

Table 2: Training needs and eco-innovation problems of the interviewed companies

The second segment of the question was about the eco-innovation and eco-management problems the companies face within their functioning. Most of them pointed out the lack of knowledge on contemporary waste management innovations and practices that are applied worldwide as a problem since it limits their recycling capacity and shuts down an income source that could be used on other activities. Furthermore, a problem for the interviewees is the lack of knowledge on waste minimization and recycling of the waste created through production processes. For some of the companies a problem is the lack of knowledge about the production and commercialization of eco-friendly and organic products and for the companies that work with waste as a basic raw material a problem is the theft of their main raw material from the recycling containers and bins that are put in different locations in the region.

This information is very important since it confirms, based on the responses from the companies that comprise the sample, that the companies from Pelagonia region would like to learn more about eco-innovations and eco-management practices and use that knowledge in the application process for funds, recycling activities and in the everyday functioning as a competitive advantage that could help them reinforce their position or to grow and become bigger players on the overall market.

The next question had the goal to obtain information of the current practices of dealing with eco-innovation and eco-management needs and problems.

The table below summarizes the current practices of dealing with eco-innovation problems and needs.

| **PRACTICES OF DEALING WITH ECO- INNOVATION PROBLEMS AND NEEDS** | |
|---|---|
| **1.** | Respecting the laws and standards for the sector of functioning |
| **2.** | Applied ISO standards |
| **3.** | Applied internal standards of waste management and recycling |
| **4.** | Applied waste selection practices and organized recycling processes |
| **5.** | Implementation of eco-innovative solutions in the work processes |
| **6.** | Eco-labels |

Table 3: Practices of dealing with eco-innovation problems and needs

Almost all of them pointed out the present legal framework as a way of dealing with eco-innovation needs and problems. The companies respect the law's demands and implement the equipment and procedures that are required to obtain and maintain the permissions to work. The companies that need ISO certification have them applied and some of them have even internal standards defined that deal with the questions of waste management and recycling. The companies that work with waste as a main economic activity have applied waste selection practices and eco-labels on their waste collection facilities and are trying to follow the newest practices of waste management that are successful in the world.

But for a more eco conscious region we need more than respecting the law and only a few entities that strive to implement new practices, we need all the entities involved in building a more eco-friendly society. The region is drowning in waste created by individuals and companies

that can be recycled and reused as an energy source or for company's expansion in new sectors and activities. The companies from the region need education and if the legal framework is the building block of company's behavior then maybe the authorities should take measures to incorporate more eco-innovations and eco-management practices in the legal framework to increase the volume of companies involved in eco-friendly activities.

The following question in this segment deals with the costs of companies to deal with eco-innovation problems and needs. The interviewees had the option to give numbers or percents and their responses were either small costs which means less than 10% or big costs which means over 30-40% and up to 70% of the total annual costs of the company. Regarding this question most of the companies were hesitant to reveal numbers and opted to talk about percents.

From the interviewed companies, 30% have high costs, they are the companies that deal with waste management or that use very expensive raw materials and they have high costs to deal with eco-innovation problems and needs. The rest have low costs since they either have no big investments or eco-innovation activities applied. They think that the costs would increase if they have that kind of activities applied but are willing to put an investment if that would be beneficial for the overall company and environment.

| Costs for dealing with eco-innovation problems and needs | Frequency | Percent |
|---|---|---|
| **Low costs** | 7 | 70 |
| **High costs** | 3 | 30 |

Table 4: Costs for dealing with eco-innovation problems and needs

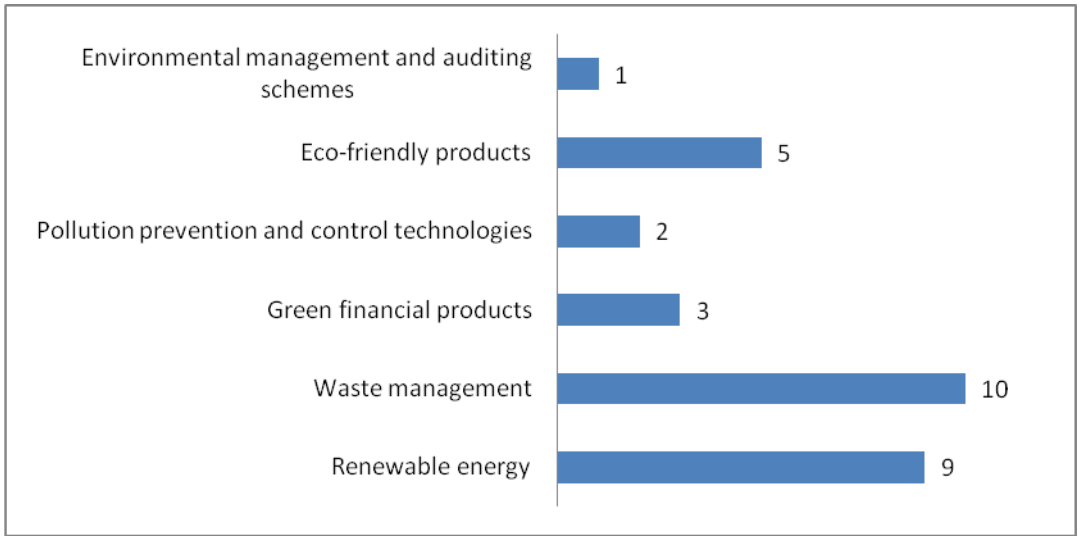
In the next question the interviewees were asked to select three to five fields connected with the environment for which they or the employees of their company would like to get training in order to improve their capacity with dealing with eco-innovation and eco-management problems.

All of them would like to get training on waste management and especially they said that they would like to learn about the modern practices of waste management since they think that what is applied in the Pelagonia region is outdated and that better success could be achieved with the new practices that very often are less expensive and more efficient than the old practices. Almost all of them would like to get training on renewable energy since they are unanimous that

the world energy sources are drying out and that the planet needs to rely on renewable energy sources that are more eco-friendly and often less expensive like the wind, water and solar energy sources. They are unanimous that they do not need regular, theory based training, but a training in which the practical aspects and information would have the leading position.

Half of them would like to get training on eco-friendly products since they are becoming more and more popular in the region and also worldwide and they think that these products will bring higher income than traditional products and could have a competitive advantage and would help them improve their market position. From the remaining responses the companies expressed the desire to learn about green financial products, pollution prevention and control technologies and environmental management and auditing schemes. These fields were less mentioned from the interviewees maybe due to their complexity and demand for more specific knowledge from the person attending the trainings but there is interest also for them and in an educational offer they should have a guaranteed place.

The information for the fields of training interest of the interviewed companies is summarized in the graph below:




Graph 2: Fields of training interest

The information gathered through this question could be used as a guideline in the process of developing a well planned and organized educational offer on eco-innovation and eco-management. That program should cover the more general fields of waste management,

renewable energy and eco-friendly products for which almost every individual or company have certain general knowledge that could be deepened with more specific literature and best practice information and also should include more specific fields. The specific fields could be party or fully treated depending on the structure of training participants or they could be treated through an individual mentoring program between the University and the company involved.

But for a successful eco-innovation training program an important prerequisite is to have the proper participants. The program can be well planned and could have the proper balance between theory and practice but if the participants do not have the capacity to process the information and then transfer and apply it within their company then all the effort would be useless. That was the reason behind the following question in which the interviewees were asked about the competences that company's employees should possess in order to have proper success in the learning process and successfully transmit the knowledge in the native organization and to help in the application of green solutions and products. They were free to point out any competence they thought was crucial in the application of eco practices and solutions.

The responses of the required competences are summarized in the following table.

| Competences | Frequency |
|---|---|
| **Management skills** | 6 |
| **Communication skills** | 9 |
| **Presentation skills** | 10 |
| **Design skills** | 1 |
| **Marketing skills** | 4 |

Table 5: Competences for successful implementation of eco-products and solutions

The interviewees share the opinion that the successful implementation of green practices, products, services or solutions requires presentation skills. According them, sometimes even the bad product or service that is well presented could have success and they think that the eco products and services with good presentation on the market could have immediate success. In combination with the presentation skills they also mentioned the communication skills, and here they refer to the communication during the presentation with the public and also within the company since for the success a good communication flow is a must.

Further, they point out the management competences that are needed to have successful implementation of new practices and especially green practices, since management is crucial for all aspects. Management is needed in every phase, in the product or service development phases, in the market launch phase and in the following growth and decline phases. Also, marketing is important since it has to follow the management activities in every phase and should help the new products and services to get the proper attention of the public sometimes even before they are positioned on the market. An important skill the companies mentioned is the design skill since the product and service and their support activities should be well designed.

The conclusion that can be drawn is that the successful implementation of green products and services requires a good combination of all the above mentioned competences and the company must choose the proper individual or team in order to have the winning combination that will increase the chances of success.

The last question was about the most appropriate training format for the training participants. They expressed their wishes on the most convenient mode of learning, duration and time. This is very important in order to have a clear overview of how the training sessions should be organizes, when and how long they should last for optimal results. The responses about the training format are summarized in the table below:

| Training format | | Frequency | Percent |
|---|---|---|---|
| **Time** | work week | 3 | 30 |
| | weekend | 7 | 70 |
| **Time of the day** | morning | 8 | 80 |
| | afternoon | 2 | 20 |
| **Duration** | 2-3 hours | 1 | 10 |
| | 3-4 hours | 8 | 80 |
| | 4-5 hours | 1 | 10 |
| **Mode of learning** | classroom | 3 | 30 |
| | online learning | 2 | 20 |
| | combination of classroom and online learning | 5 | 50 |

Table 6: Preferred training format

In terms of the preferred time of the week to have the training sessions, most of the interviewed companies or 70% prefer the weekend since they think that they have more free time

and could be more focused on the training session and not on the daily tasks that dominate the work week. The rest prefer the work week since they would not like to take time of the free weekend of their employees.

Regarding the duration of the training sessions 80% of them prefer training sessions that last 3-4 hours with breaks and the rest are willing to have a little shorter training sessions from 2-3 hours and the rest a little longer from 4-5 hours. They would not like to have training sessions that last a complete day, since they think that would be too long and it could reduce the effectiveness of the training.

Regarding the preferred mode of learning half of them or 50% prefer a combination of online and classroom learning since they think that if they cannot make it to the session they would like to follow it online. They also mentioned that it would allow their representatives to communicate with others and increase the networking of the company. From the rest, 30% prefer the old classical way of learning in a classroom setting and the remaining 20% prefer online sessions. They all would like to have access to all the materials online and that would make the dissemination process much easier within the whole company. In addition the online learning mode could be made available to more people from the same company as opposed to only one participant that could attend the sessions.

The above mentioned information is very important in the training program development process since it summarizes the training format preferences of the business community from the region. The project team could use this information and develop the most appropriate program that could have all the preconditions for successful implementation.

## Cross tabulation analysis

In order to get a better overview of the responses from the interviewed companies, a cross tabulation analysis of their coded responses was performed.

The first cross tabulation table provides information on the fields of interest for training and the main economic activity of the interviewed company. The company from the accommodation and food service sector is interested in waste management, renewable energy and pollution prevention and control technologies. The companies from the agriculture sector are interested in training on waste management, renewable energy, eco-friendly products and green financial products.

The manufacturing sector companies are interested to get training on waste management, renewable energies, eco-friendly products and pollution prevention and control technologies. The service sector companies are interested to learn about waste management, renewable energy, green financial products, eco-friendly products and environmental management and auditing schemes. The company from the wholesale and retail trade sector would like to get training for waste management and renewable energies.

| | **Fields of interest** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Main economic activity** | **Eco-friendly products** | **Environmental management and auditing schemes** | **Green financial products** | **Pollution prevention and control technologies** | **Renewable energy** | **Waste management** | **Total** |
| **Accommodation and food services** | | | | 1 | 1 | 1 | 3 |
| **Agriculture** | 1 | | 1 | | 2 | 2 | 6 |
| **Manufacturing** | 2 | | | 1 | 3 | 3 | 9 |
| **Services** | 2 | 1 | 2 | | 2 | 3 | 10 |
| **Wholesale and retail trade** | | | | | 1 | 1 | 2 |
| **Total** | 5 | 1 | 3 | 2 | 9 | 10 | 30 |

Table 7: Cross tabulation of the main economic activity and the training fields of interest

The second cross tabulation provides information on the costs of dealing with eco-innovation and eco-management needs and problems and the main economic activity of the interviewed company. Based on the analysis the interviewed companies from accommodation,

agriculture and wholesale and retail trade sectors have low costs to deal with eco-innovation, whereas some of the companies from the manufacturing and service sectors have low and the others have big costs to deal with eco-innovation problems and needs.

| | Costs | | |
|---|---|---|---|
| Main economic activity | **Big** | **Low** | **Total** |
| **Accommodation and food services** | | 1 | 1 |
| **Agriculture** | | 2 | 2 |
| **Manufacturing** | 1 | 2 | 3 |
| **Services** | 2 | 1 | 3 |
| **Wholesale and retail trade** | | 1 | 1 |

Table 8: Cross tabulation of the main economic activity and the costs of dealing with eco-innovation

The third cross tabulation provides information on the main economic activity of the company and the required competences for successful implementation of green products, services and practices. For the companies from the accommodation and food service sector the communication, presentation and design skills are most crucial for success in eco-innovation. For the companies from the agriculture sector the most important are communication, presentation, marketing and management skills. The manufacturing companies pointed out the presentation, communication and management skills as essential for success. The service sector companies consider presentation, marketing, communication and management skills as basic of good green services and practices and for the wholesale and retail trade company the presentation, communication and management skills are a must for success of green practices and offers.

| | **Competences** | | | | | |
|---|---|---|---|---|---|---|
| **Main economic activity** | **Communication skills** | **Design skills** | **Management skills** | **Marketing skills** | **Presentation skills** | **Total** |
| **Accommodation and food services** | 1 | 1 | | | 1 | 3 |
| **Agriculture** | 2 | | 1 | 1 | 2 | 6 |
| **Manufacturing** | 3 | | 3 | | 3 | 9 |
| **Services** | 2 | | 1 | 3 | 3 | 9 |
| **Wholesale and retail trade** | 1 | | 1 | | 1 | 3 |
| **Total** | 9 | 1 | 6 | 4 | 10 | 30 |

Table 9: Cross tabulation of the main economic activity and the required competences for successful implementation of eco-innovation products, services and practices

The fourth cross tabulation gives an insight of the main economic activity of the company and the strategies applied in the treatment of eco-innovation matters. From the table below, that summarizes the coded responses from the interviewed companies, the conclusion can be drawn that for almost all the companies the legal framework and the ruling laws are the borders of the behavior in the aspect of eco-innovation and eco-management. They respect the laws and fulfill all the requirements imposed in them regardless of the sector of functioning.

The company from the accommodation industry has individuals that collect the packaging waste and are using solar energy and heating and cooling from wells. The companies from the manufacturing sector are following internal and external, mostly ISO standards that define how they perform the activities and deal with the consequences from those activities. The company from the wholesale and retail trade sector has organized a complete system that covers the waste management issues, whereas the companies from the service sector mostly abide the ISO standards or are organizers of a system of collecting, transporting and recycling the waste of other business entities.

This information is important to get a certain insight of the applied strategies and their allocation depending on the sector in which a company operates and it can also be used in order to incorporate this aspect in an educational training. The training participants could get information on the possible strategies of dealing with eco-innovation and eco-management and based on their needs and capacity, choose the most suiting option.

| Main economic activity | Eco-label of products | Internal standards | External (ISO standards) | Complete system of collecting the waste, transport and recycling | Packaging waste is collected from individuals | Respect the laws | Specially marked containers for waste separation, organized recycling process | Using solar panels and heating and cooling from water coming from wells |
|---|---|---|---|---|---|---|---|---|
| **Accommodation and food services** | | | | | 1 | | | 1 |
| **Agriculture** | | | | | | 2 | | |
| **Manufacturing** | 1 | 2 | 2 | | | 3 | | |
| **Services** | | | 2 | 1 | | 3 | | |
| **Wholesale and retail trade** | | | | | | | 1 | |

Table 10: Strategies of dealing with eco-innovation based on the main economic activity of the company

The fifth cross tabulation deals with the connection of the position of the interviewee within the company and the competences she or he thinks would be crucial for the successful implementation of green products, services and solutions. They all point out the presentation and the communication skills as the building block of success in this field. For the interviewees that have managerial positions in the company the management skills would have a very important impact and some of them also point out the marketing skills. They declared that any market presence requires a good combination off all those skills since every concept of a product or a service must be managed, marketed and presented in the right way to the customers in order to expect good results. One of the accounting responsible also mentioned the design and creativity skills because in her sector, which was the accommodation and food service sector, the good design and delivery of an offer is essential in the pursuit for customers. They must be innovative and think of new ways of delivering the service, since the competition is vigorous and demands constant changes.

| | Competences | | | | |
|---|---|---|---|---|---|
| Position in the company | **Communication skills** | **Design skills** | **Management skills** | **Marketing skills** | **Presentation skills** |
| **Accounting responsible** | 2 | 1 | 1 | | 2 |
| **Lawyer** | 1 | | | 1 | 1 |
| **Logistics** | 1 | | 1 | | 1 |
| **Manager** | 5 | | 4 | 3 | 6 |

Table 11: The position of the interviewee in the company and the competences required for success in eco-innovation

All these cross tabulations give a more deeper outlook on the questions regarding eco-innovation and eco-management in companies in the Pelagonia region and this gathered information and knowledge will be used in the process of developing a proper training program, that will take into account all the needs and issues of the companies, the appropriate strategies that could be applied to deal with this kind of matters and the most appropriate fields that should be covered in the preferred format and setting.

## LIMITATIONS AND COMMENTS FROM THE INTERVIEW SESSIONS

During the realization of the interview sessions research activity, certain issues could be mentioned as limitations:

1. Some of the companies that were contacted to take part in the interview sessions refused since they thought that would take up to much of their time or were not sure if their knowledge on the subject would be deep enough to have constructive interview session. That increased the number of contacted business entities and that made the process of scheduling and conducting the interview sessions much slower.
2. During the interview sessions some of the interviewees had distractions in the sense of urgent phone calls about important matters about their businesses but they did their best to respond on all the questions.
3. Some of the interviewees had limited knowledge on the subject of eco-innovation and eco-management, but they were willing to share the practices applied in their company and the fields that would be interesting for them. Some asked for clarification of the concepts of eco-innovation and others said that they have read something online or in the literature about these concepts that are the future of this planet.

In addition to the limitations, here will be summarized the comments from the interview sessions:

1. The companies are unanimous that eco-innovation is the future of all businesses. The world's resources are scarcer each year and the planet and the people must orient themselves towards new sources of renewable energy that could be less expensive and available to most countries like the sun, the wind or the water.
2. Some of them have eco-solutions in their companies and some even use them in their homes. All of them said that they are trying to be as environmentally conscious as possible and to try to separate the waste but what is not acceptable according them is that in the 21$^{st}$ century this region does not have a modern waste separation and recycling system that is very present in the countries in the West. They said that if the

people from this region start to separate the waste it could speed up the decomposition process of all the materials that decompose fast if mixed together compared with the current practice in which materials that could easily decompose are mixed with others and that delays the overall process.

3. They said that for this region what is imposed as a law is a must for every company and as a potential way of increasing eco-innovation and eco-management practices they pointed out including certain aspects into the legal framework, such as obligatory organized recycling treatment of all waste, revision and fines of all sources of pollution, subsidies for using renewable energy systems and maybe tax reductions if the complete energy system is on renewable base.
4. In addition they pointed out that their access to literature and to case studies of best practices is limited since for almost all innovations in this field there is very little detail online. They agree that if people and companies have access to this kind of information on a website, through a brochure or through some application that could be downloaded on their phones their knowledge on eco-innovation and eco-management could be increased and that potentially could be a source for new business ideas or optimizations in the current ones.
5. Especially the small companies said that the implementation of eco-innovations and eco-management practices in their companies would be a little complicated in terms of lack of knowledge, human resources and investments, but on the other hand they agree that with the support from University experts and through grant applications and funds they would be willing to try and implement some practices that are suitable and beneficial for their businesses.

## CONCLUSIONS AND RECOMMENDATIONS

This last segment contains the conclusions and recommendations from the personal interview research:

1. The biggest training need for the companies from Pelagonia region, based on the interview sessions with the ten selected companies is waste management. This region has very big issues with this matter since the presence of companies that deal with waste is limited to a few private companies that collect and recycle waste from individuals or from business entities and the state owned company that in some of the cities from this region has no recycling capacity and in some it has only certain recycling capacity. Waste management is a big concern especially for the small companies since they mostly rely on the pick up from the state owned waste company and they are losing an income source if for example some of it was collected and recycled from a company that in return would pay for the provided raw material. Waste management should have an important position in a training program, but not only in terms of dealing with it, but also in terms of best practices and ideas how companies could earn from their waste and use the money for other things.
2. Depending on the sector of functioning the companies expressed the desire to learn about other eco-innovation fields such as eco-friendly products and alternative and renewable sources of energy. That would help them lance new products on the market or reduce the costs of functioning and increase their market competitiveness. They could charge higher prices for eco-friendly and organic products on the local or on the regional market and obtain higher profits that could be invested in expansion or further modernization of the company.
3. In addition most of them would like to increase their grant application abilities since grant offers for this kind of matters on national and international level are quite abundant. In the country, a National Innovation Agency treats this kind of applications and if the application is approved they provide funds for the implementation of the innovation ideas. The companies in the region, especially the small ones, lack knowledge on the application procedures and a good training

program should also include a chapter on grant application procedures and applications. With this the potential training participants would be informed about the fund sources and would have the needed training for a successful grant application that would be most likely approved.

4. The main problem for the interviewees was the lack of knowledge in this field and obtaining it would help them minimize waste and use the natural sources of energy and apply effective eco-innovative management that could contribute not only for a cleaner environment but also would bring additional finances for the company. For the companies that use waste as a raw material a problem is the theft done by individuals that harm their facilities and steal the raw material and for this the local authorities must take action. The training program should be a combination of theoretical and practical knowledge that would help the business entities to have a better base in dealing with eco-innovation and eco-management issues.
5. The most frequently applied strategy in dealing with eco-innovation problems and needs is respecting the laws of the country and applied ISO standards for the sectors in which these standards are required. Some of the companies have their own internal standards and some have organized recycling activities. For the companies to be more effective in dealing with eco-innovation issues, and since the legal framework is their behavior guideline, the country officials should review the need to increase the laws that control this field and the companies themselves with suggestions and feedback could give a constructive contribution in the development of the new laws that will increase their eco-innovation dealing capacity. The training program should cover all the different strategies in dealing with eco-innovation issues and point out the most effective ones depending on the main economic activity of the company.
6. Currently for most of the companies the costs of dealing with eco-innovation needs and problems are low and that is due to the fact that they have very limited activities in this field. For those who work with waste or other fields of eco-innovation, the costs are much higher because they make very big investments in new equipment and treatment of that waste. In future as the companies start to use eco-innovation solutions more frequently, the costs will increase and here the companies should strive to cover them through grants and subsidies because especially for the smaller

companies investments are hard to make due to the limited financial resources. The training program should clarify to companies that the investment, regardless of its size, is worth and it will have long-term and sustainable effects.

7. Based on the obtained data, the most interesting eco-innovation field for training is waste management since all the companies would like to learn about the most modern waste management practices used worldwide. Also there is big interest in renewable sources of energy and eco – friendly products. These three fields should be the core of a well planned training program that should be enriched with other popular fields like green financial products, pollution prevention and control technologies and environmental management and auditing schemes. These are the fields that the interviewees mentioned based on their own knowledge on the subject or after being given the list of possible suggestions. The reason for which waste management and renewable energy are the most popular among the interviewees may be due to their popularity in the media in recent years, but although they should have an important position in a training program, all the remaining fields should get the same treatment and dedication since some could be not popular at the moment but could reach a breakthrough in the future.
8. For successful eco-innovation, the companies need adequate skills and according the interviewees those skills include a set mostly comprised of presentation, communication and management skills. The presentation and communication skills are the base since the products, services or practices must be well communicated or presented within the environment in order to be successful. In addition some of the companies mentioned the marketing and design skills, but they are all unanimous that the skills of their employees can be increased through trainings and courses and without the proper knowledge they would not like to try to implement any eco-innovative solutions.
9. For the organization of the training program, the best time would be the weekend and for most of the companies a training that lasts up to four hours would be the most effective. The combination of classroom and online learning is the most preferred one since it allows communication of their own representative with representatives from other companies but the online part gives them flexibility in case they have an issue

and cannot attend some of the workshops of the training. Additionally they would like all their employees to have access to all the materials in order to be on the same page and to work in the same direction in developing eco-innovative products, services and practices.

# ANNEXES

## Interview Protocol Form

*for identifying the eco-innovation and entrepreneurial qualifications and training needs of enterprises*

Thank you for your agreeing to participate in this interview session. The interview is a part of the activities of the European project 'A knowledge Alliance in Eco-Innovation Entrepreneurship to Boost SMEs Competitiveness', which is funded by the Interreg Balkan MED programme.

The aim of this activity is to identify the training needs of enterprises related to eco-innovation, eco-management and entrepreneurship, in order to develop and deliver a series of trainings addressing these needs.

We would like to inform you that all information you will provide during the interview will be held confidential and will be used only for the purposes of this project. Your participation is voluntary and you may stop at any time if you feel uncomfortable.

We have planned this interview to last no longer than one hour. During this time, we have several questions that we would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.

Date: .....

Enterprise: .....

**QUESTION A** - What is your job position in the company?

**QUESTION B**- What is the main economic activity of your company?

**QUESTION C**- What are your company's current needs or problems, related to eco-innovation and eco-management? List up to five major needs /problems.

**QUESTION D**- How do you currently address these eco-innovation and eco-management needs or problems?

(e.g. Eco label for products/services, establishment of environmental management systems, such as EMAS or ISO 14001)

**QUESTION E**- What does it currently cost you (in absolute numbers or as a rough % of the total expenditures per year) to address these eco-innovation and eco-management needs or problems?

(If they have difficulties in answering this question, you can provide them the option to answer if this cost is considered as major or minor for their enterprise)

**QUESTION F** – Based on your company's needs, please name three to five environmental fields that you wish you and your employees to be trained on, to address eco-innovation and eco-management problems in your company. Please give more details about what you expect to learn about the fields you chose.

(If they have difficulties in answering this question, you can provide examples of environment fields: pollution prevention and control technologies, environmental management and auditing schemes, green financial products, eco-friendly products, waste management, renewable energy etc)

**QUESTION G**–Based on your company's needs, what competences (knowledge & skills) do you think that are necessary for your employees and yourself to have in order to address issues associated with green practices/solutions and/or green products/services of your company?

(If they have difficulties in answering this question, you can provide examples: management skills, development of sustainable business models, design skills, communication/marketing/presentation skills etc)

**QUESTION H**- What kind of training format is most suitable for you and your employees?

Do you prefer a training workshop/seminar to take place during the weekdays or the weekend?

Do you prefer morning, afternoon or full day (6-8 hours) training course?

Do you prefer classroom, online or blended (a combination of the previous) training course?

**Other Comments**