

# Developing User Personas as a way of Managing Knowledge About Ecolabnet Project Participants

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**Abstract:** One of the vital elements that decide about a success, or a failure of a project is adjusting its offer to the requirements of the beneficiaries. Various methods and tools are used in this respect to make the project's offer consistent with these requirements and guarantee that they are satisfied. One of the methods used in this area is application of user personas. The idea is extensively used in the field of computer-human interactions, as it allows to improve user experience as well as the whole communication in the process of developing IT systems. However, the use of personas is not limited only to designing computer-based systems and solutions. The concept of personas has been also exploited in the Ecolabnet project, financed by Interreg, and implemented in six partner countries in the years 2019-2021. The process of knowledge management in the project assumed gathering the knowledge on its future beneficiaries - manufacturing SMEs from the Baltic Sea Region – and adjusting the offer of the project consortium (RDIs and Intermediary Organisations) to the signalled needs of these enterprises. To facilitate the management of knowledge on the enterprises investigated in the project the concept of persons was used. The underlying objective of the paper is to present the process of transforming the knowledge on project participants into the concept of personas. It consists of two parts. The first part, the theoretical one includes the results of a literature review that provides essential knowledge on utilising the concept of personas in design and management processes. The second part, the empirical one, is based on the empirical research that was conducted at the initial stage of the project. The answers provided in the survey questionnaire allowed for identification of primary needs and barriers in the area of eco-innovations development. This knowledge has led to determining main personas of the project. The analysis of the process of mapping the project users' needs and objective is supposed to answer the following research question: How does the exploitation of personas improve management of knowledge in international projects?

**Keywords:** eco-innovations, knowledge management, personas, SMEs

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## 1. Introduction

One of the primary objectives of the European Union is the promote the development of the society in the desired and envisioned frames and goals for the future. One of the instruments utilised in this regard are European projects, funded through more than 40 funding programmes. The funds are provided for multiple purposes. For example, within the Multiannual financial framework 2014-2020, €213 billion was provided for job creation and business support, €1.5 billion was invested in the Culture sector, €80 billion for research and innovation, €33 billion in infrastructure, and more than 4 million people were able to receive support to study, train and work or volunteer abroad (out of the box International, 2020). One of such EU's projects is the ECOLABNET project. It was funded by Interreg Baltic Sea Region (Project #R077 ECOLABNET of Interreg Baltic Sea Region), and its objective was to create a collaborative network of service providers to stimulate development and implementation of eco-innovations in manufacturing Small and Medium-Sized Enterprises (SMEs) of the Baltic Sea Region (BSR). Eco-innovations and more broadly innovation as well as creativity are believed to be these important factors that allow an enterprise to face the competition pressure (Gede et al., 2019). Eco-innovations are even more important in case of small and medium-sized enterprises than the large ones with regard to their environmental impact's assessment. According to the data by the European Commission there are more than 20 million SMEs in EU countries, compared to around 40,000 large companies (i.e. with more than 250 persons employed). Eco-innovations are of special importance for SMEs as their collective impact on the environment is quite significant, despite their small size. For example, a 2010 study showed that SMEs are responsible for about 64% of the overall environmental impact of businesses in the EU. Until recently, policy-makers and practitioners have tended to focus on promoting pro-environmental practices and innovations in larger firms. As a result, there is considerable scope to reduce environmental impacts in Europe by promoting eco-innovation in the SME population (European Commission, 2020). Therefore, it can be stated that pro-ecological activities are an indispensable element in achieving the goals of sustainable development for all enterprises. However, due to the fact that SME sector enterprises are the backbone of the European economy, they play a crucial role in implementing eco-innovation (Koszarek-Cyra, 2021).

The concept of personas is frequently used while designing services and products for target customers. It was applied while preparing the offer of the ECOALBNET project consortium for SMEs from the Baltic Sea Region. Bases on the conducted research personas constituted an embodiment of the needs and requirements of those

companies. This in turn translated into the adjustment of the ECOLABNET's offer to the expressed in the course of the research requirements of the SMEs pertaining to lack of expert knowledge in the area of eco-innovations. The design approach utilising the concept of personas was supposed to homogenise the offer of the RDI partners with respect to particular groups of enterprises signalling areas in which they needed support pertaining to provision of knowledge about eco-innovations. It can be stated then that personas constituted an important element of KM strategy in the ECOLABNET project. Therefore, the author of the paper has formulated its primary objective – an attempt to answer the following research question:

- RQ – Does the application of personas concept in service design positively contributes to management of knowledge in international projects?

The paper constitutes a contribution to the literature by analysing one of the stages pertaining to the process of knowledge management in projects – categorising the offer of the project consortium for SMEs based in the concept of personas. The research gap covered in the paper pertains to the application of the personas concept in service design aimed at culturally differentiated target group of SMEs. In this case the process of adjusting the offer of the project consortium needs to consider the variety of needs and expectations towards the offered services to a large extent conditioned by the local and cultural distinctiveness of the final recipients. The underlying objective of the paper is the analysis of the impact of utilising the personas concept on improved knowledge management process, which translates into an overall success of the ECOLABNET project, as well as similar transnational projects. The paper may constitute a precious source of information on issues of knowledge management in international projects both in the theoretical and practical aspects. The theoretical contribution pertains primarily to the advantages of utilising the concept of personas in service design process, tailoring in this way the service offer to the particular needs of target groups of service recipients. The practical aspects of service design with the use of personas concept in projects including partners from various, culturally and economically differentiated countries, may prove beneficial for future project consortiums that can apply similar steps in the KM process to ensure the overall success of their projects.

The paper has the following structure. Introduction includes basic information about EU funded projects and the role of eco-innovativeness in gaining a competitive advantage on the market. Chapter 1 presents the results of the literature review conducted so as to investigate the utilisation of the concept of personas in the process of designing services and products. Chapter 2 outlines the assumptions regarding KM in the ECOLABNET project and provides the details regarding the research sample and methodology. In the third chapter the author describes the process of utilising the concept of personas in developing service packages for SMEs from the BSR region. The last chapter concludes the paper and contains suggestions regarding further research works.

## **2. Literature review - concept of personas in design and management processes**

Personas constitute an element of the process of User Centred Design. User-centred design (UCD) is a design philosophy that models the interactions between humans and computers. It is a multi-stage, problem-solving process which involves the analysis of the needs, desires and limitations of users. Assumptions of user behaviour are transferred into prototypes that can undergo further testing (LeRouge et al., 2013). It is believed that personas combine the benefits of quantitative and qualitative methods. They are also considered to be more engaging than scenarios as a design technique (Pruitt and Grudin, 2003). The underlying objective of utilising the concept of personas in the design process is to enable the designer to identify with the people for whom the system is being designed. As each persona represents a group of target users that share the same behavioural characteristics, they are frequently referred to as archetypes of users, target customer characterizations, or abstract/fictitious representations of users". The application of personas is highly beneficial for the development of usable products as personas depict behaviours of each group of target users and therefore facilitate greatly the design process (Aquino and Filgueiras, 2005).

According to Phil and Susan Turner (2010), the first public appearance of the concept occurred in the work of Cooper (1999) following the observation that designers usually possessed only limited knowledge of the final users. Therefore, it can be stated that fitting users with various humanlike features makes them fairly individualised and, in this way, makes designers more aware of the fact that in the design process they need to consider perspectives of multiple, highly differentiated persons, not just a dehumanised "user".

Yu and Sangiorgi (2018), who analysed the process of design thinking and relationship between designer and customer indicate the existence of various taxonomies that can be applied to categorise this relationship. The most popular ones have been summarised in Table 1 below.

**Table 1:** Examples of taxonomies applied in design thinking process

Author	Category of relationship	Brief description
Bruce and Docherty (1993)	Relationships perceived in three ways: family, arms-length, and one-off purchase	The 'family' approach allows designers to proactively engage in creating corporate strategies and innovation solutions based on an understanding of clients' tacit knowledge, culture, vision and strategy, whereas designers in the 'arms-length' and 'one-off purchase' approaches work according to the client's requirements, remaining external to the client organisation's internal practices and processes
Bruce and Morris (1994)	designer-client relationships as short-term and long-term relationships	
Gericke and Maier (2011)	passive coupling and active coupling	Passive coupling is design-led and active coupling is based on the two disciplines' co-creation

Source: own elaboration based on Yu and Sangiorgi (2017)

Bradley et al. (2021), point out how important it is to look at the designed service or product from the perspective of their users, using the concept of personas. They state that any kind of system-wide utility not only stems from individual users' feelings of pleasure and ease, but is highly dependent on an interconnected network whereby users' negative values can impact other users' valuations of a system. This results in a situation where one person's negative experience can damage the total ease of use felt across all users' experiences. This view is also shared by Huynh and colleagues (2021), who stress the fact that although designers frequently attempt to impersonate users and develop products and services they think users would like, it does not produce expected results. This stems from the fact the designers differ from real users as they possess better technical skills, knowledge, expertise and usage goals. In addition, the final product or service on numerous occasions is a compromise between the ease of developing them and their power and usability. Therefore, from the knowledge management perspective, the design process that aims at providing products and services that will actually meet the expectations and requirements of their future users. If the knowledge about particular requirements of the target group is grouped in the categories that can be then represented with the use of personas concept, then the designed products or services will be free of the bias of the designers' perspective, but will promote product usability and satisfaction of the users.

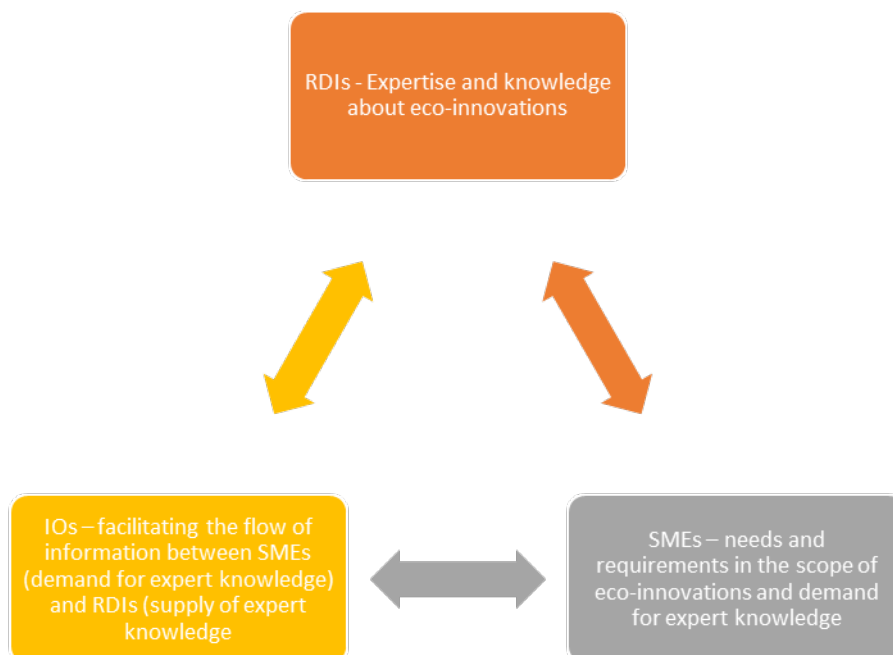
Salminen et al. (2021), stress the importance of understanding that the different worldviews of users are closely linked to personas' ability to challenge the established preconceptions about the users within the organization. These preconceptions refer to the mental representation of users and their behaviours. The primary advantage of creating personas from actual user data is that the user insights inferred from them can be different from the already existing beliefs about who the users are, why they choose the company's product, and what can be done in order to enhance the user experience. This is of particular importance in the case of eco-innovative services and products. They do not only need to be developed by service/product providers, but also need to be accepted and consciously chosen by users.

Singh and colleagues (2022) stress the negative consequences of not recognising the needs and demands of final users of products and services being designed for them. According to the authors possible consequences resulting from not considering the human aspects may lead to huge economic costs, inefficiencies, not fit-for-purpose solutions, or dangerous and potentially life-threatening situations. Negligence of human aspects while designing products and services that are supposed to solve human needs – not fulfilling the end-users' expectations and causing frustration. This emphasises the need for managing the knowledge about end-users and their requirements prior introducing to the market services and products, including eco-innovative ones. This was exactly the idea behind the ECOLABNET project, which in this case can serve as a model of KM process management that combines the concept of personas and adjustment the project's offer to the actual needs signalled by the end-users.

### 3. Assumptions of knowledge management in the ECOLABNET project and research methodology

The ECOLABNET project was set up in a response to the observed lack of collaboration between SMEs from the Baltic Sea Region and RDIs. This in turn translated into a relatively poor level of developing and implementing eco-innovations in these enterprises. This occurs despite the existing potential for implementing in business new products and services compliant with the principles of sustainable. The underlying objective of the ECOLABNET project was create a network that will unite all the links of value creation chain, and integrate actors including product-service system designers, bio-based material researchers, 3D print technology providers, eco-branding specialists and business developers. This is supposed to foster the uptake of sustainable eco-innovations among the SMEs from the Baltic Sea Region operating in various sectors of the economy. The primary reason behind the insufficient absorption of eco-innovations by SME is believed to be insufficient access to relevant services and expertise on eco-innovations. Therefore, the ECOLABNET project unites a network of research facilities from 6 partner countries with an idea to provide support for SMEs in the Baltic Sea region pertaining to implementing environmentally friendly innovations. The project provides new business opportunities for those SMEs that want to increase their market advantage by offering products and services that are accordant with the principles of sustainability. This is achieved thanks to the cooperation with the research sector. The ECOLABNET network consists of eleven partners from Denmark, Estonia, Finland, Lithuania, Poland and Sweden. The project partners analyse the requirements of SMEs and business support organisations regarding expert knowledge indispensable to ensure successful introduction of eco-innovations (Interreg – ECOLABNET, 2021).

It was assumed by the project partners that the knowledge management process in the project would allow all its participants - Small and Medium-Sized Enterprises – SMEs; Intermediary Organisations – IOs; Research, Development and Innovation - RDIs – to achieve their individual goals based on the collaboration of the entire network . Therefore, the model of collaboration, and at same time knowledge management in the project, was based on the assumption of providing by RDIs expert knowledge to SMEs with the assistance of IOs. This has been demonstrated in Figure 1.



**Figure 1:** Model of knowledge management in the ECOLABNET project

Source: own analysis

The whole process of knowledge management in the ECOLABNET project was divided into the following three stages:

Stage 1 - knowledge gathering – recognition of needs and expectations of SMEs in the scope of eco-innovations,

Stage 2 - knowledge analysis – identifying needs and barriers for eco-innovations among the investigated for SMEs, identifying own competence gaps – internal development – strategy of internal development for RDIs and IOs, product and service cards, service packages.

Stage 3 - creating ECOLABNET knowledge repository (Digital Collaboration Tool - DCT, service journeys and knowledge dissemination.

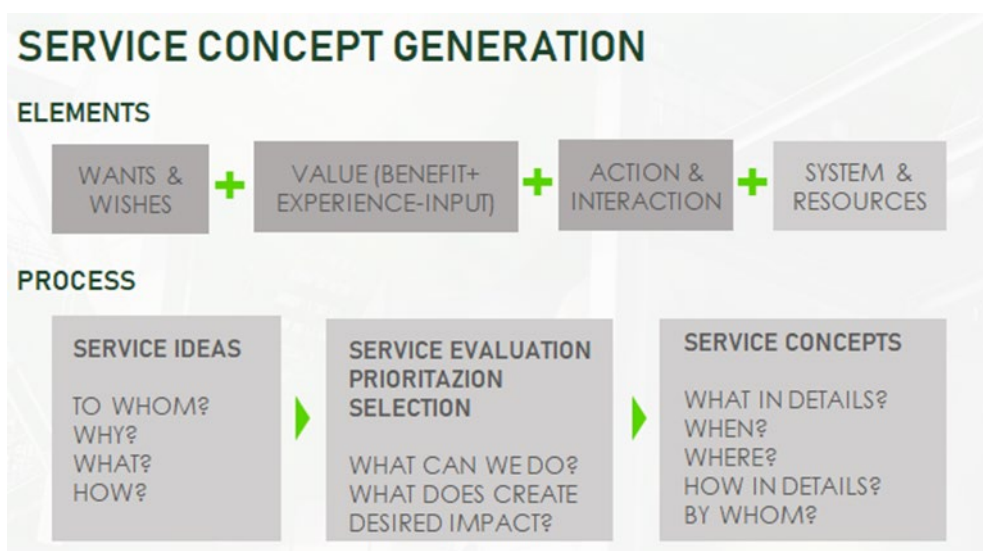
Due to the limited content of the paper the author focuses in particular on the selected elements of KM in the project – methodology of data acquisition (Stage 1) and process of categorising project beneficiaries applying the concept of personas (Stage 2). Personas were utilised in the second stage of the process of KM while preparing the offer of RDI partners, in the form of service and product cards and services packages. Service and product cards constitute essential elements of the project consortium's offer for SMEs. They contain essential information about the service or product provider as well as detailed information about services and products themselves. Service packages in turn are bundles of services developed based on the demand signalled by the SMEs participating in the research, and information about services that the project partners are capable of offering, which have been described in service cards.

In accordance with the assumptions the project began with the research intended for the SMEs in the partner countries (Stage 1). The research was supposed to provide essential knowledge on the current level of pro-environmental awareness, and also the level of pro-environmental activities already implemented by the investigated SMEs. The data gathering process utilised the CAWI (Computer Assisted Web Interview) method.

According to the definition by DJS Research (2008) in the CAWI method the survey appears in the browser in the form of a web-page that can be reached by the respondents in different ways. The survey respondents only see the questions to be answered on the screen while the processing of answers occurs in the background. The answers for the questionnaire are sent immediately to the main server, which allows for continuous tracking of data collection and the results. The survey questionnaire used in the ECOLABNET research included 27 questions that were divided in five groups. The first group of 5 questions provided basic information about the surveyed enterprise and its profile of operation. The second group, questions 6 to 15, pertained purely to eco-innovations, in particular knowledge about eco-innovations, motivating factors and barriers to introducing eco-innovations in manufacturing SMEs of the BSR region. Questions 16 to 21 were supposed to investigate the knowledge of the surveyed SMEs with regard to 3D printing as an eco-friendly solution that can be applied in manufacturing processes and replace the previously used one that contribute to environmental degradation. Then, questions 23-24 were supposed to provide an answer to the question of how big the demand for expert knowledge was and if it could be satisfied by project partners. The questionnaire finished with the 3 questions concerning the possibility of future cooperation and address details. The research that was supposed to identify the needs of the target group of SMEs in all the partner countries of the project was carried out in 2019, with a total of N=296 SMEs participating in it. In a breakdown into particular countries the participation of SMEs was as follows: Estonia – 23,31% (69), Poland – 19,26% (57), Finland – 18,24% (54), Lithuania – 15,88% (47), Sweden – 12,84% (38), Denmark – 10,47% (31). With regard to the structure of the investigated SMEs, micro enterprises accounted for 42.23% (125) of the investigated population, small enterprises - 27.36% (81), the remaining group - 30.41% (90) being medium-sized enterprises. The enterprises participating in the survey represented 20 production areas/sectors such 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%. The data collected in the first stage of the KM process was used in the subsequent stages in the process of tailoring the offer of the project consortium to the needs signalled by the surveyed SMEs.

#### **4. Applying the concept of personas in the Ecolabnet projects**

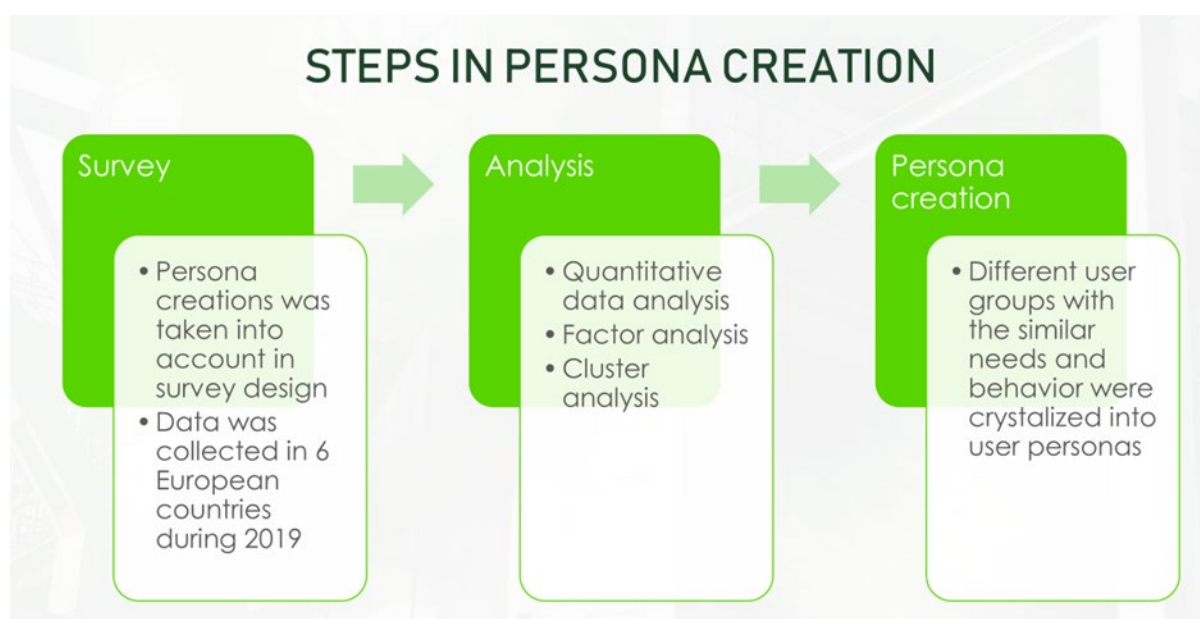
In the further steps the knowledge accumulated in the first stage of the project's duration was analysed with respect to designing services that would support development of eco-innovations in the target group of SMEs. The primary goal of such an analysis was to create ideas of ECOLABNET services that could be offered to SMEs by the project partners. The service design approach was used in this process and user personas were utilised so as to facilitate making relationships between the ideas for services and types of their target recipients. The process of generating service concepts has been presented in Figure 2.



**Figure 2:** Service Concept Generation

Source: internal materials of ECOLABNET project

While categorising the SMEs in accordance with the concept of personas, each of the personas was assigned its individual message for change (benefits of plunging into eco-innovations for this particular group of enterprises. Additionally, the ideas for services and collaboration activities were incorporated in the descriptions of service ideas. The next step involved investigating the similarities between groups of SMEs and their expressed needs for services. The personas were grouped accordingly. Then, based on the nature of the service, service ideas were categorised for each user persona. In the last step appropriate personas representing IOs were added as collaborative partners. In the graphic form the process of creating personas has been presented in Figure 3.



**Figure 3:** Steps of personas creation

Source: Internal materials of ECOLABNET project

As Figure 3 demonstrates and what needs to be stressed, the whole process of generating concepts of ECOLABNET services and their breakdown into particular categories of personas was based on the survey conducted in the first stage of the project – the stage of knowledge gathering. According to Madsen and colleagues (2014), personas are not simply a description of individuals or average information of specific groups of users. They constitute combined patterns of users' behaviour and motivations, where

the rich information of an amalgamation of users is synthesized into a set of user archetypes or personas (Madsen et al., 2014). This was done at this stage of the ECOLABNET project and allowed us to identify the main elements of the service offer of the project consortium and led to distinction of the services and support activities that were especially desired by the targeted SMEs. Also, the signalled by SMEs limitations pertaining to access to expert knowledge were addressed in the service offer with an intention to boost the change in the area of eco-innovations in the analysed BSR countries (Kuceba et al., 2021). Therefore, it can be stated that establishing main similarities with regard to the needs of the said SMEs and grouping them under the corresponding personas that would represent the nature of the services was one of the major elements of KM in the project. As a result, the following six types of personas were distinguished with regard to the SMEs participating in the research: eco-booster, eco-opportunist, eco-optimizer, eco-developer, eco-cautious, and eco-laggard. The information regarding the characteristics of particular types of personas has been aggregated in Table 3 below.

**Table 2:** Personas and their basic characteristics

Persona	Interest in eco-innovations	Main barriers	Focus area
Eco-booster	Highly motivated in developing eco-innovations for the following reasons: <ul style="list-style-type: none"> <li>to satisfy customer needs</li> <li>to use resources efficiently</li> <li>to strengthen corporate brand image</li> </ul>	<ul style="list-style-type: none"> <li>lack of capital</li> <li>certification costs</li> <li>limited access to external knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Business</li> <li>Development</li> <li>Technology/Production</li> </ul>
Eco-opportunist	Not interested in developing eco-innovations, unless they can provide: <ul style="list-style-type: none"> <li>potential business opportunities</li> <li>efficient use of resources</li> <li>reduction of environmental effects on the business operations</li> </ul>	No major barriers, main worries: <ul style="list-style-type: none"> <li>lack of capital</li> <li>limited access to external knowledge</li> <li>lack of suitable tools and methods</li> </ul>	Business (value chain assessment)
Eco-optimizer	Interested in eco-innovations mainly for: <ul style="list-style-type: none"> <li>Cost reduction</li> <li>Efficient use of resource</li> <li>Satisfying customer needs</li> </ul>	No major barriers, main worries: <ul style="list-style-type: none"> <li>lack of alternative materials</li> <li>lack of capital</li> <li>uncertain return on eco-innovation investment</li> </ul>	Technology/Production (Increasing efficiency)
Eco-developer	Interested in eco-innovations mainly for the following reasons: <ul style="list-style-type: none"> <li>to satisfy customer needs</li> <li>to differentiate from competitors</li> <li>to use resources efficiently</li> <li>to strengthen corporate brand image</li> </ul>	No major barriers, main worries: <ul style="list-style-type: none"> <li>lack of alternative materials</li> <li>lack of capital</li> <li>uncertain return on eco-innovation investment</li> </ul>	<ul style="list-style-type: none"> <li>Business</li> <li>Development</li> <li>Technology/Production</li> </ul>
Eco-cautious	Interest in eco-innovations mainly driven by: <ul style="list-style-type: none"> <li>compliance with legislation</li> <li>differentiating from competitors</li> <li>strengthening corporate brand image</li> <li>cost reduction</li> </ul>	<ul style="list-style-type: none"> <li>Uncertain return on eco-innovation investment</li> <li>Lack of capital</li> <li>Uncertain demand from the market</li> <li>Lack of in-house expertise</li> </ul>	No important focus areas
Eco-laggards	Interest in eco-innovations mainly driven by: <ul style="list-style-type: none"> <li>cost reduction</li> </ul>	<ul style="list-style-type: none"> <li>uncertain return on eco-innovation investment</li> </ul>	No important focus areas

Persona	Interest in eco-innovations	Main barriers	Focus area
	<ul style="list-style-type: none"> <li>compliance with legislation</li> <li>using resources efficiently</li> </ul>	<ul style="list-style-type: none"> <li>uncertain demand from the market</li> <li>certification costs</li> <li>legislative demands</li> </ul>	

Source: own elaboration based on the internal materials of the ECOLABNET project

As Table 2 demonstrates the six types of personas exemplify the types of services that need to be provided for each sub-group of enterprises based on the level of their involvement in eco-innovations. Each of the personas represents attitudes of the given group of enterprises towards eco-innovations. Eco-boosters are these enterprises that are motivated in eco-innovations. They perceive eco-innovations as a way to increase the effectiveness of their company. Eco-opportunists lack both motivating factors and barriers. The only thing that makes them interested in eco-innovations is expected financial reward. Eco-optimizers are a group of companies primarily interested in reduction of costs of their operations and resource use. They see the need for more expert knowledge about eco-innovations. Eco-developers in turn are focused on differentiating their offer from the competition and strengthening their brand's image. For Eco-cautious ones the primary goals include differentiating from competition and strengthening the brand's image. However, their main barrier is financial uncertainty of investments into eco-innovations. Eco-laggards are motivated towards eco-innovations when they can reduce the costs of their operations and improve efficiency of used resources. Yet, they lack knowledge pertaining to legislative issues and certification costs. They are also unsure whether investments into eco-innovations will prove beneficial. Thus, it can be concluded that the determination of the personas constituted a crucial step in tailoring the offer of the ECOLABNET network to particular needs and gaps of knowledge reported by the SMEs from the BSR in the survey. This ensured that the final offer of the project consortium would address the issues that were actually perceived by the investigated SMEs as the ones that had the direct impact on their attitude towards eco-innovations. This conclusion is also supported by the literature on the subject, which includes various examples stressing the role of knowledge management in achieving the set goals especially in case of project involving partners from several countries. Proper KM provides benefits in the form of internationalisation and effective utilisation of knowledge, and this can support organisations in achieving improved innovation and overall performance (Zia and Shafiq, 2017). This also constitutes the answer to the RQ – Does the application of personas concept in service design positively contributes to management of knowledge in international projects? Utilisation of the concept of personas allows all the project actors to streamline their offer based on the characteristics of the target groups. Most importantly, however, personas represent the needs and expectations of the beneficiaries based on the actual data about them collected in the research. In this way, the improved KM in the ECOLABNET project, and all similar international projects, can result in a better adjustment of the offered range of services and products that is intended for the project beneficiaries and contribute substantially to the overall success of the entire project.

## 5. Conclusion

The success of a product or a service on the target market depends largely on the ability of the designer to look at them from the perspective of their users. Failing to do so can produce a number of potential consequences being an outcome of not considering the human aspects properly. One of the possible solutions to prevent such occurrences may be utilisation of the concept of personas in the design process. Rather than rely on their own perspective designers ever more frequently make use of personas in the creative process of developing products or services to make sure that they will be free of their own bias. Although the concept of personas was originally used in developing computer software, its utilisation is currently possible across various areas and methods of developing new products and services. Utilisation of personas seems particularly useful in the processes of KM in international projects. Application of persons in the ECOLABNET project facilitated the process of designing products and services, in this particular case eco-innovative ones, to ensure that they best match the requirements of final users. In addition, utilisation of the concept of personas in international projects, such as the ECOLABNET project, prevents the situation when particular project partners develop their product and/or service offer in the way they consider as the most appropriate from their perspective. As the outputs of projects are meant to serve the purposes of particular target beneficiaries, considering their actual needs and expectation, categorising the future users of products/services made it easier for the ECOLABNET partners, coming from various countries, to homogenise their offer. This in turn contributes substantially to the overall success of the project in all the participating countries. This has been the case with the ECOLABNET project. Therefore, it can be concluded that utilisation of personas concept is of great practical value in the process of managing knowledge about the requirements and expectations of final users. This seems particularly effective



while designing services that are supposed to reflect the actual needs of target groups, rather can addressing them from the perspective of service/product designers themselves. As the example of the ECOLABNET project demonstrates, such an attitude translates into streamlining the offer of service/product providers ensuring their successful commercialisation and market acceptance. Undoubtedly, there are still a number of issues to be investigated in this domain to provide more details on the limitations and benefits of applying the personas concept. The author is going to continue the research on the effectiveness of utilising personas in the design process. Future research in this domain may concentrate on the evaluation of personas application in the design process of eco-innovative products and services by the target groups – SMEs from the BSR participating in the first stage of research in the ECOLABNET project.

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