

Ecological inland water transportation

Bringing renewable energy and new technologies closer to tourists

Sector: Transport

Overall budget: 200k EUR

Countries involved: PL

Funding: European Regional Development Fund

Duration: 2016-2017

- Lack of ecological tourism alternatives in Poland creates market, which could be beneficially used by small business ventures
- Particularly interesting in this area are zero emission transport vehicles – electric boats and ships
- The new solutions for inland water transportation will change the face of the Polish tourism market

Introduction

Nowadays, the tourist business in Poland, similarly as it is happening in other European Union countries, is going through intensive development – between the years 2005 and 2014 its growth oscillated near 5% annually. For the Polish economy it is of great importance, because as the survey of Ministry of Sport and Tourism of the Republic of Poland shows, contribution of this kind of business creates up to 5% of gross domestic product (GDP).

On the other hand, tourists' attitude towards leisure is becoming more and more oriented into direction of close contact with nature and sustainable usage of natural resources – therefore, it creates a niche for services like eco-tourism. Particularly interesting field of these innovations is substitution of traditional combustion engines, which are loud, ineffective and polluting, by electric engines (that harness energy from renewable resources), in different kinds of transport vehicles, which could be used by tourists both for fun and for transport.

Opportunities mentioned above were recognized by small, private tourism venture – "Przystań Wodna Wypożyczalnia", specialized in lending of water vehicles and located at Polish Pomerania – a region abundant in beautiful lakes and wild forests.

About the project

The aim of this project is to develop innovative inland water transportation vehicles, for use by small leisure company:

- VIP class sail boat for max. 8 people, supplied by energy harnessed from wind and hydro-energetic recuperation
- Engine inland water transportation ship for min. 60 people, with zero-emission propulsion, photovoltaic cells and advanced energy storage technologies.

RIC Pro-Akademia will design and deliver prototypes of technological solutions and assist the company in introducing the services using the prototypes on the market.

Overall goal of the project is to acquire and implement new services for quickly growing eco-tourism branch, at area of water transport, and making it available for customers. The most important results, which the company is planning to accomplish during the projects, is gaining technological (thanks to prototype systems) and human (thanks to widening the knowledge and competences of staff) abilities. These abilities will be very helpful in servicing small and demanding tourists groups (also from abroad) in Kaszuby region with zero-emission, environmentally friendly transport.

Implementation methods

Realization of the projects will require the design and implementation of new technical solutions:

Water transport for 8 persons – VIP class

- prototype of boat's integrated propulsion and hydro-energetic recuperation power supply systems
- prototype of energy storage system, capable of constant, 4 hour use of zero-emission propulsion, without need to harbor berthing, if the weather conditions unable of using traditional sail
- prototype of VIP class sail boat, with mass not exceeding 2000 kg and with ballast of 400 kg
- systems integration



Inland water motor transport for group of min. 60 people, with utilization of zero-emission propulsion

- prototype of systems: boat propulsion without emission of exhaust fumes
- energy harnessing from photovoltaic cells
- storage systems for collected energy
- systems integration



During the process of design and implementation, the group of 20 end-users (individual clients) will be engaged. It will present broad range of tourists types, such as: families with kids, tourists travelling alone, pensioners, persons with disabilities and foreign tourists. Adding end-users into this project is aimed mostly to evaluate how the market will react for this type of innovative transport. They will be taking part in actions such as:

- identification of users' needs,
- testing the prototype,
- assessments of new services,
- conclusion and summary of project implementation in report form.

End-users' opinions will be used for creating final version of the service marketing, adapting prototype systems to suggestions of the company's clients, as well as for better understanding of their needs and desires. Conclusive report will be of great value to venture, as it will allow to know better its main marketing targets.

During the final phase of the project, new services will be included into company's offer. This should contribute to widening the type of sales, increasing the company's profits, and also will allow to take further actions in other innovative projects.

What is more, the company is planning to reach with its offer to as many people as possible by using web page, (which, apart from Polish version, will have also versions in English and Russian), presenting its achievements at tourism market fairs and working closely with tourism and eco-tourism promoters. There are assumptions, that the news about eco-friendly, easily accessible boats at the lakeshores of Pomerania region will reach about 50,000 people.



Expected results

Introduction of the SME's new services on the market will result in creating new and innovative service of water transportation, available for all kind of tourists. It's development will help to solve a specific problem of deficiency of eco-tourism options in Poland – and thus it have a great chance of becoming marketing success, not only at regional, but also at national level.

Comparing size, character and tendencies of growth in tourist services, both in Kaszuby region and in the whole country, it is assumed that the prototypes will generate **10% growth** of demands for this kind of services, since they are unique, niche and perfectly matched for target tourists.

Results are the answer for market needs in the field of professional water eco-tourism offer – the type of sustainable tourism, which can actively contribute to:

- creating new jobs,
- increasing tourists' environmental awareness,
- spreading practical knowledge about renewable energy resources,
- protection of the environment,
- increase of the quality of life of local societies.

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