

## Document Title

# **Pilot Innovation Environments (Project Region: Bulgaria)**

## Document Type

# **Project Output**

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## 1. EXECUTIVE SUMMARY

This document provides an overview of the Pilot Innovation Environment, indicating the background, main idea and objectives of the Pilot. It also details the development, implementation and contribution of the PIE, regarding national strategy, national/regional development and innovation potential, FORESDA objectives and EUSDR. Furthermore, plan on continuation of PIE is described.

The Bulgarian PIE is the implementation of new production processes allowing the re-manufacturing of once used timber and including it in new wooden products. These processes will provide longer life cycle of the timber material and will reduce the carbon footprint of the items produced using these processes. The implementation of these production processes will be through the development and production of an eco-friendly transformable wooden bike, which will follow the growth of the children between the ages of 2-6 years old. These features guarantee the longer usage of the product. The combination of re-manufactured components and the usage of only natural and recycled materials assure the absolute minimum impact on the environment.

## **2. MOTIVATION FOR PILOT INNOVATION ENVIRONMENT**

### **2.1 BACKGROUND**

Main idea of the Bulgarian PIE is the re-manufacturing of previously used timber. The eco-friendly wooden bike proves that these processes are applicable in practice for the production of environmentally sustainable product with low carbon imprint. The two prototypes are a “could be touched” advertisement of the pilot, allowing better and easier understanding of the pilot to all target groups and stakeholders. The pilot addresses the thematic focus ‘non-conventional uses of wood-based materials’.

Importance of wood as an ecological and sustainable material has been increasing in the recent decades in most of the world. In Bulgaria, the wood has been heavily used during the last decades, which combined with poor forest management causes the decrease of the forest regions and erosion of the soil. Meanwhile the interest in wooden products in general has increased simultaneously with the increasing prices of the timber and the decline in the supply. At the moment the service life of these products is relatively short which increases the need of harvesting more lumber. With the wood re-manufacturing the Pilot proposes an alternative for the SME’s. The usage of wood re-manufacturing will provide them with more sustainable, ecological and cost-effective material than using new timber. The possibilities for these processes will be demonstrated with the construction of an eco-friendly transformable wooden bike for children, showing the capabilities of these materials for usage in the production of wooden products.

### **2.2 OBJECTIVES**

The main objectives of the Pilot are:

- to test a Pilot re-manufacturing of a “real-life” prototype: The production of eco-based wooden bike for children using re-manufactured components.

- To present the capabilities of the re-manufactured product in front of the SMEs from the FBI sector
- to create an interest for redesigned and remanufactured wooden products as other saleable goods.
- to develop a “niche” market for re-designed and re-manufactured wooden products.

### **3. SHORT DESCRIPTION OF PIE**

Bulgarian Furniture Cluster, as a responsible FORESDA Project partner, has implemented the Pilot Innovation Environment with an objective on re-manufacturing of previously used timber. The working group participants were constantly involved in the PIE development and improvement through several workshops and meetings. During the workshops, the capabilities of the wood re-manufacturing processes and the increase of understanding of the subject, which will cause a better usage of the wood resources and more sustainable production and economy in general, were discussed with the stakeholders.

The first prototype and the concept of the PIE was designed and elaborated, during the third and fourth reporting period of the project. It was presented and evaluated on several workshops and conferences in front of delegates from over 25 countries. As a result, a basis for future cooperation with stakeholders was established. Furthermore, BFC established a great collaboration network, regarding PIE with representatives of R&D organisations, as well as several SMEs in the sector, which is a good example of knowledge exchange between stakeholders in terms of the objectives of BFC`s PIE.

Main activities of the Bulgarian pilot project was focused on the implementation of the pilot roadmap, elaborated in the beginning of the project. Representatives of the working group participated in different partner meetings, workshops and conferences, during which the

pilot project was presented to the stakeholders in order to engage them with the PIE activities and establish collaboration networks. In regard to contribution for further development of the pilot prototype, BFC established partnership with start-ups.

In the last reporting period, new ideas for further development of the PIE were generated and discussed during several workgroup meetings and workshops, attended by representatives of both SMEs and R&D organisations. The plan was to integrate some smart technologies in the pilot prototype as a result of a cross-project cluster collaboration and to increase the attractiveness of the bicycle to the main target group - children. As a result, the second prototype of the pilot project was designed and elaborated.

Furthermore, the working group was constantly working on dissemination of news, regarding PIE development, implementation and achievements.

## **4. PIE ACHIEVEMENTS**

### **4.1 CONTRIBUTION TO NATIONAL STRATEGY (RELATED TO FBI/FORESDA)**

Several activities were closely connected to the establishment of collaboration and knowledge exchange between SMEs and R&D. A Memorandum of Understanding (MoU) was signed between the member of the FINCOM (Foresight Innovation Community) for Bulgaria, regarding the Danube Transnational Programme project FORESDA. FINCOM is a group of stakeholders, representing policy actors, research institutions, intermediary entities (ex: clusters, associations, tech parks...) and companies that represent the interests of the forest-based sector. A training on good transregional practices for innovation ecosystems also took place in Sofia, Bulgaria. Some good practices performed in the FORESDA Project, especially regarding the PIE and its further development were presented and discussed. The participants gave their comments and views, regarding the pilot project and its objectives.

## **4.2 CONTRIBUTION TO NATIONAL/REGIONAL DEVELOPMENT AND INNOVATION POTENTIAL**

Through participation in several workshops, conferences, meetings etc., the Bulgarian Furniture Cluster managed to contribute to the popularization and dissemination of the FORESDA Project objectives and achievements. Representatives of BFC have presented the project and the activities implemented many times in front of stakeholders (SMEs, R&D, policy makers etc.). Moreover, during the development of the PIE, BFC worked in collaboration with some SMEs from IT sector.

## **4.3 CONTRIBUTION TO THE OBJECTIVES OF FORESDA**

We managed to establish strong collaborative network between the forest-based and the IT sector in the region of Bulgaria, as such contributes to one of the objectives of FORESDA which is the fostering of cross-sectoral and transnational innovation. The both sectors could be empowered by knowledge exchanges and added value of cross-sectoral activities. Cross-sectoral knowledge exchange took place between companies from the FBI sector, R&D and policy, through several workshops and meetings, during the project, contributing to the FORESDA objective for sustainable competitiveness of the region.

## **4.4 HOW DOES THE PILOT CONTRIBUTE TO THE PROGRAMME PRIORITY “INNOVATIVE AND SOCIALLY RESPONSIBLE DANUBE REGION”?**

The PIE concept, objectives and implementation activities contributed to the PROGRAMME PRIORITY “INNOVATIVE AND SOCIALLY RESPONSIBLE DANUBE REGION” thematic objective for improving the framework conditions for innovation and increasing competences for business and social innovation.

In order to foster cooperation and exchange of knowledge between SMEs, R&D and representatives of the public sector, BFC organized several workshops and meetings,

which aimed to establish a collaborative network between the stakeholders and to foster the development of business support and cross-sectoral collaboration as well. The pilot project itself also addresses the problem of obesity of children, which is related to the social responsibility of the cluster. The PIE further development concept was focused on creating the second prototype more interesting for the children and safe at the same time by intergration some smart technologies. We succeeded in brainstorming some ideas for further development by cross-cluster collaboration with SMEs from IT sector and other stakeholders. Thus, the PIE activities contributed to the objectives related to innovative and socially responsible Danube region.

#### **4.5 HOW DOES THE PILOT FIT INTO EUSDR?**

The pilot concept addressed the importance of wood as an ecological and sustainable material in the recent decades in most of the world. With the wood re-manufacturing the Pilot proposes an alternative for the SMEs. The usage of wood re-manufacturing will provide them with more sustainable, ecological and cost-effective material than using new timber. The PIE concept fits into the EUSDR targeted policy for the Danube that meets its ecological, transport and socio-economic needs.

### **5. CONTINUATION OF PIE**

As a continuation of the PIE, ensuring its durability, BFC is planning to bring the pilot prototype up to the market as an output and advertisement of the concept objectives. Furthermore, we will continue the communication with the stakeholders to deepen their involvement and to increase the popularization of the PIE objectives and FORESDA in general.