

UPZENT



“Upcycling Centre” – A participatory business model to raise awareness and implement a resource-efficient circular economy

Resource-efficient Circular Economy – Innovative Product Cycles (ReziProK)

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In UpZent the approach of the Upcycling Centre is transferred into a transferable business model and tested at several locations. Suitable forms of organisation are being investigated for this purpose. The aim is to work out a business model for a resource-efficient circular economy around the topic of upcycling in order to establish a socio-economically sustainable structure. The production of upcycling products and the sensitisation of interested stakeholders are to contribute to a resource-efficient circular economy



Circularity at regional level

The project leader, the Institute for Applied Material Flow Management (IfaS), has been operating an upcycling centre since 2016. UpZent is a project for circular economy, qualification and integration, which is being implemented in the district of Neunkirchen (Saarland) and in Herzogenrath. In the project, furniture and products are developed by product designers of K8 gmbH and produced by a social company as part of qualification measures. In the sense of a resource-efficient circular economy, the aim is to establish a sustainable cascade through the conversion and upgrading of commercial waste materials at regional level on a permanent basis and in dialogue with companies, recyclers and consumers.



Economic model

Upcycling implies cycle-oriented and intelligent product designs, choice of raw materials, and production and reuse processes. This in turn requires trans-sectoral cooperation between different actors along the entire product life cycle, from product design and manufacture to use and recycling. The concept of the Upcycling Centre, which has already been developed and tested by IfaS, is based on a sustainable education strategy of the participants and supports their networking. The further development of the Upcycling Centre into a self-supporting business model enables transferability to other regions and can promote the system change towards a circular economy in Germany.

Research questions that are being addressed in this project are:

- Is it possible to jointly use economies of scale and standardisation so that a model can be organised in an economically viable manner?
- Is it possible to influence product design, production or the reuse of materials via an upcycling centre?
- What contribution can this instrument make in terms of the EU objective and taking into account the waste hierarchy in regional as well as decentralised structures?

First results

From the beginning of the project, more than 2,000 products from commercial residues such as waste wood, old textiles or kite material have been produced by the partners AQA gGmbH in Neunkirchen and FAUK e. V. in Herzogenrath. In the course of the project, the network partners continuously developed and optimized the circular product design, the manufacturing process, as well as product quality and security.

In the regional environment of the UpZent locations in Neunkirchen and Herzogenrath, cooperation's with local partner companies have been successfully settled. UpZent currently cooperates with around 20 companies for the acquisition of residual materials.

The goals of this cooperation are the cascading use of residues, as well as the sensitization of the partner companies to a recycling and resource efficiency. This also raises the actors' awareness of sustainable consumption.

UpZent was selected as one of six best practice projects as part of "KreativLandTransfer". Thanks to their outstanding commitment to innovative design and circular economy, the selected projects serve as role models for stakeholders across Germany.

UpZent has currently a successful cooperation with the Service Agency Communities in One World (SKEW) from Engagement Global gGmbH, where the IfaS supports local communities in Saarland in the implementation of the Sustainable Development Goals (SDGs). For this purpose, UpZent stools were made from leftover cardboard and waste wood, which represent the 17 goals for sustainable development.

reziprok.produktkreislauf.de/en

Project team from research and companies

The project pursues an inter- and transdisciplinary research approach with high practical relevance. Therefore, in addition to the two university partners, the Trier University of Applied Sciences and the Saar University of Fine Arts, three upcycling centres are to be integrated as practice models and research platforms. Furthermore, the manufacturing industry and the waste management sector will be integrated.

In order to ensure that the project is processed efficiently and effectively, the upcycling centre already established in Neunkirchen and its corporate partners will act as a best practice model. The second project partner is also a non-profit organisation in Herzogenrath in the Aachen region. The third location will be found during the project period.

The project team aims to develop the success factors for transferability. Essentially, these are suitable instruments and standardisation as well as the selection and design of a long-term sustainable business model.

The research results thus enable interested parties to implement innovative and economically viable product cycles or cascade systems and to organize themselves within a network in such a way that economies of scale and synergies can be tapped.

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"ReziProK" is part of the research concept "Resource-efficient Circular Economy" of the Federal Ministry of Education and Research (BMBF) as part of the FONA Field of action 6: "The circular economy – efficient use of raw materials, avoiding waste" and supports projects that develop business models, design concepts or digital technologies for closed product cycles.

Funding measure

Resource-efficient Circular Economy – Innovative Product Cycles (ReziProK)

As part of the FONA Field of action 6:

The circular economy – efficient use of raw materials, avoiding waste.

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UpZent – "Upcycling Center" – A participatory business model to raise awareness and implement a resource-efficient circular economy

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