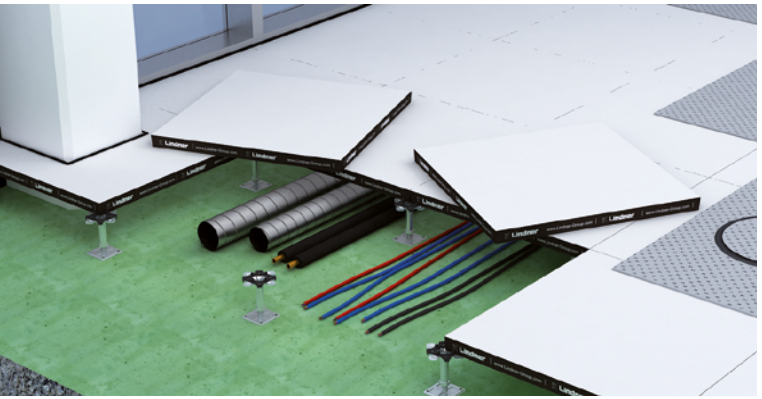
ReziProK
Resource-efficient Circular Economy – Innovative Product Cycles

RessProKA

Closing resource-efficient product cycles in the finishing trade through new business models



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

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Commercial premises are converted at relatively short intervals because they are subject to frequent changes of use or changing needs of the tenants. The aim of the RessProKA project is to develop technical and financial solutions to keep the building products used for commercial premises in circulation for as long as possible.

Resource-relevant finishing trade

The finishing trade is the most important sector in the construction industry in Germany with a transaction volume of around 136 billion euros and around 1.2 million employees in 252,000 companies. The building products used in this sector have significantly shorter turnaround times compared to carcass construction, usually less than ten years.

RessProKA focuses on the optimisation of the technical cycle and the development and implementation of commercial and legal elements in business models for products which may remain the property of the manufacturers throughout their entire service life. After use, the manufacturers are also responsible for recycling and remanufacturing. RessProKA pursues a systemic approach, which is intended to enable the transfer of the developed models to other construction products in terms of concept and instruments.

Interior as an examination unit

For this purpose, in contrast to previous approaches with individual solutions, the interior is considered as a unit and all elements contained therein such as doors, floors, etc. are included in the investigations. As a result, a large number of different material flows and materials are taken into account. The focus here is on commercial and public building construction. In this area, more standardised construction methods are used, the replacement cycles are significantly shorter and the degree of individualisation is much lower than, for example, in private residential construction. The possibilities offered by digitization – for example, by means of Building Information Modeling (BIM) – for data documentation and for marking for location and tracking are also to be investigated and evaluated. These evaluations will also feed into the development of new approaches.

In addition to a further optimisation of the preliminary work already carried out at the project partner Lindner Group KG with regard to technical aspects such as construction, maintenance, deconstruction and recycling, processing and possible applications of secondary raw materials, the questions of concrete implementation in a business model are the focus of the considerations. Only if the corresponding approaches offer incentives for both, producers and customers, the comprehensive realization of closed circle for these products can be expected.

First results

The market assessment revealed a positive development in office space. Due to the prevailing trend towards working from home, in this regard, no significant change is expected in the future.

In particular, the steady reduction in average lease terms underpins the current project's approach of offering interior business models that support customers during conversion and refurbishment cycles in the interests of resource efficiency.

To develop the business models, a canvas analysis was carried out first. As a result, the material and formal objectives as well as the cost structure of the further business consideration were defined.

An ecological assessment of the business model variants permanently accompanies the development of the models.

Mixed construction waste unsuitable for high-quality recycling

Potential for application

The Lindner Group, Europe's largest manufacturer of interior finishing systems for the main areas of ceilings, floors and walls, as well as a complete service provider in the field of drywall construction, will, together with its research partner IWARU from Münster University of Applied Sciences, develop the technical solution approaches which enable the recycling-compatible deconstruction and reuse of interior design elements. BIFAS, an independent research and consulting institute, is responsible, among other things, for developing models that create commercial and legal incentives to maintain the technical and material possibilities of modular building products over several life cycles.

If possible, these business models are to be generalised to such an extent that transferability to other construction products and other construction sectors is possible. Important support in this respect is also provided by the associated partners involved in the project, such as Schüco, e.g. for the window, external doors or veneer segments, and the Re!source Stiftung e.V., as an independent initiative from business, society, science and politics.

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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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Cover-Picture: The components of this Nortec raised access floor can be almost completely reused or recycled.

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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.

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