

# Consumer goods

DBU-Funding information – Funding subject 3



## Funding subject 3: Development, design and acceptance of environmentally-friendly consumer goods

The development, design and acceptance of environmentally-friendly products is an important tool to reduce resource consumption and negative impacts on the environment. Long-lasting consumer goods like furniture, electronics, household appliances, textiles, cars and games, are of particular importance. These goods are characterised by their long service lives. Negative impacts on the

environment occur during manufacturing as well as in the utilisation and end-of-life phases.

The goal of our funding projects is to design consumer goods to be more environmentally friendly, increase acceptance of these goods, and support the shift in values in our society toward these types of products.

### In particular, the following measures are eligible:

- Creation and testing of new methodical product development concepts
- Development of consumer goods and their components that require fewer resources, taking into account the entire life cycle of a product (e.g. resource minimisation during the utilisation phase, material minimisation, durability, ease of maintenance and repairs, ability to recycle the product and/or its components)
- Incentives for and experimenting with new business models that increase the advantages of consumer goods and/or reduce their negative impacts on the environment, in particular by increasing recyclability and utilisation intensity
- Innovative measures for digitising production processes (e.g. in the areas of the Internet of Things or decentralised production) that result in sustainable design of material and energy flows
- Innovative concepts for recycling and reuse of materials
- Increasing awareness, establishing measures to increase acceptance and improve education in terms

- of both the economy and society (in particular educating children and young people) about technical implementation and utilisation of sustainably designed consumer goods
- Development of decision-making aids for the purchase and use of environmentally-friendly consumer goods



## DBU-funding – competent and service-oriented

The Deutsche Bundesstiftung Umwelt (DBU) can look back on more than 25 years of funding. The foundation has a broad wealth of experience and professional expertise in various fields. In its work, the DBU can rely on a broad network of experts working as honorary consultants.

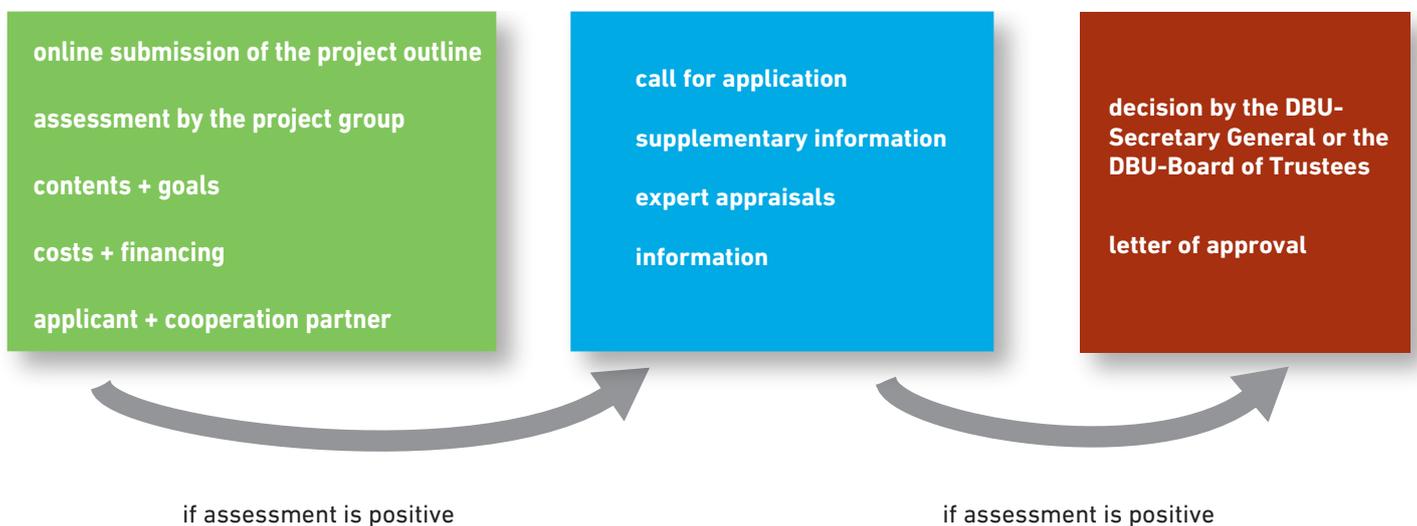
The DBU is independent and neutral from any political party. When submitting an application, only the technical quality and the innovative content of the application are important. The DBU offers its applicants competent, result-oriented advice and individual support by a highly qualified, interdisciplinary team. The internal

assessment of the projects and the external evaluation lead to a further development and qualification of the project proposal.

The DBU accompanies project partners from the project outline to implementation and provides support in finance and expertise.

DBU-partners of particularly successful projects are also supported in the dissemination of their project results by appropriate communication measures (trade fairs, exhibitions, events, publications, press work).

## From outline to funding



## First steps in a project outline

We are pleased to receive innovative, exemplary project ideas that contribute to the development, design and acceptance of environmentally-friendly products.

When preparing your project outline, first consider the following questions:

First of all, it needs to be clear:

- Does the project idea fit the funding subject?
- Does the project idea consider at least one or more solution approaches?

If this is the case, the following criteria must be taken into account when preparing a successful project outline:

- The problem addressed is of supra-regional significance.
- The project makes a concrete contribution to the solution for the problem described.

- The solution approach is developed in a practical manner, tried and tested for strengths and weaknesses.
- The solution approach is exemplary and the proposed measures and methods are particularly promising for this exemplary aspect.
- The unique selling point of the project in terms of technical significance and/or innovation is explained.
- The significance for small and medium-sized enterprises (SMEs) is made clear.
- The benefits of the project for SMEs are explained.

If these criteria apply, interdisciplinary and systemic project approaches are of particular importance for the DBU.

You can submit your detailed project outline online at [www.dbu.de/antragstellung](http://www.dbu.de/antragstellung)

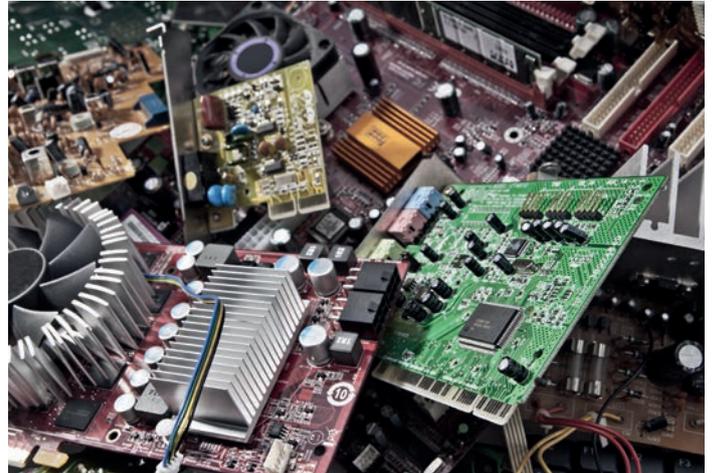
## Exemplary DBU-funded projects

The eligible fields of action (see p. 1) can be structured in many ways: Consumer goods (in addition to furnishings, electronic devices, household appliances and vehicles) include, for example, clothing and industrial textiles, jewelry, toys etc. It is possible to provide support for the entire value chain, i.e., from the extraction of raw materials, through production and use, to disposal or further use/reuse of the products. This also includes alternative utilization concepts and business models.

The following projects show an excerpt from the thematic range of funding subject 3 and specify the implementation of the fields of action mentioned on page 1. Further information on the projects can be found at [www.dbu.de](http://www.dbu.de)

### Teaching repair knowledge at school (AZ 32720)

To inspire students for technology, to offer a didactically founded approach to the topics of reparability and longevity of consumer goods, to counteract the trend towards non-repairable products - these are only some of the goals of the RETIBNE project of the Technical Education Working Group of the University of Oldenburg. In cooperation with the Department of Computing Science and other partners at seven other universities, the team develops teaching modules in the areas of technology, manufacturing, industrial theory and informatics. In so-called repair workshops, the pupils learn to identify sources of trouble professionally and, for example, to repair mobile phones, loudspeakers, and sewing machines, but also bicycles and laptops. This awakens interest in technology and promotes awareness of sustainably designed consumer goods.



### New production process for GRP Components (AZ 30203)

Sanitary articles made of plastic, such as shower trays, are currently produced in two process steps: first, the visible side of the product is formed using an energy-intensive deep-drawing process. It is then laminated with glass-fiber-reinforced polyester (GRP) resin for mechanical stability. In the processing of polyester resins, styrene is used as a reactive diluent. This is considered harmful to the environment and health and may possibly harm the child in the womb. Two companies, formatherm Kunststoff GmbH and BÜFA Composite Systems GmbH & Co. KG, are currently developing an alternative concept: To replace the energy-intensive deep-drawing process, the visible side is made of a so-called »gelcoat«. A layer of gelcoat is applied to a positive mold with a spray gun. Afterwards, polyester resin is also laminated onto the surface and, after it has hardened, the finished product is demolded. The styrene content of polyester resins has already been reduced from 45% to 26% and is to be completely avoided in the future.

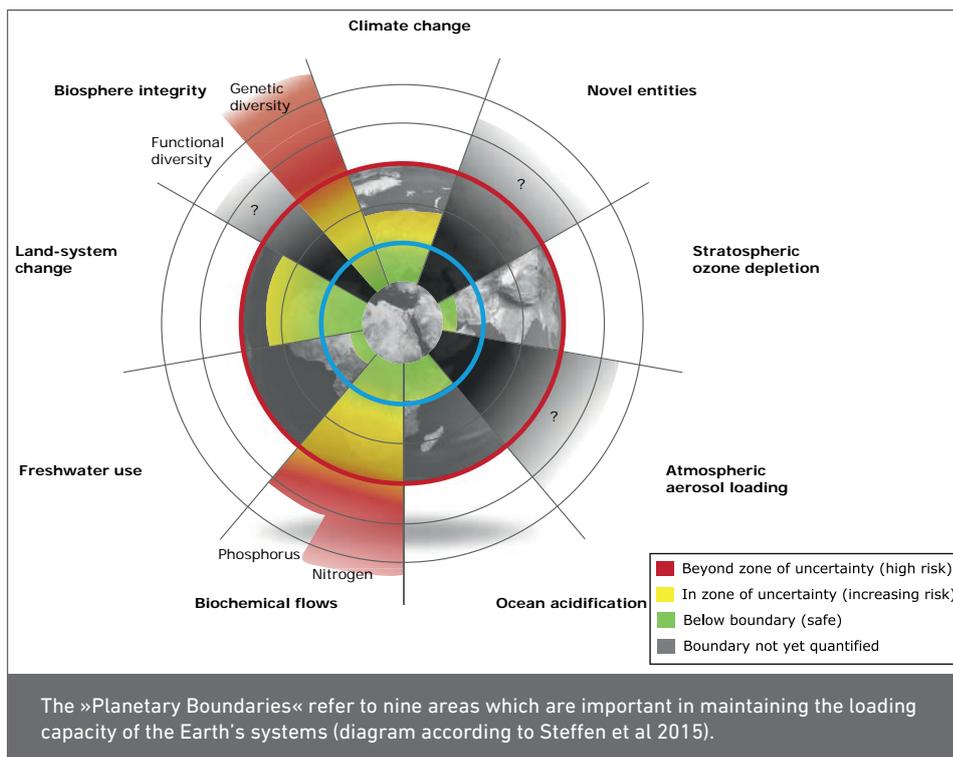
### Recycling of PUR flexible foams (AZ 29395)

In the production of flexible polyurethane (PUR) block foams, such as those used for mattresses, up to 30,000 tons of production waste is produced in Germany alone. To date, there has been no direct recycling process for these materials. H & S Anlagentechnik GmbH, from Sulingen, has developed a chemical recycling process using cyclic dicarboxylic acids and in the presence of polyols, which are normally used in the production of flexible foams. A recycled polyol is produced which is suitable for reuse in PUR flexible foam production. Ecologically, this recycling convinces through its increased material efficiency and resource conservation, since in Germany alone more than 10,000 tons of conventional polyols can be replaced by recycled polyols. The process has been in large-scale use since 2013.



## DBU – We promote innovations

The Deutsche Bundesstiftung Umwelt (DBU) supports innovative, exemplary and solution-oriented projects for the protection of the environment in accordance with the foundation's mission statement, with special consideration for the mid-sized business sphere. Funded projects should achieve sustainable effects in practice, provide impulses, and have a multiplier effect. It is important to the DBU to contribute, in particular, to solving current environmental problems which result from unsustainable economic practices and ways of life in our society. The DBU sees key challenges above all in climate change, biodiversity loss, the unsustainable use of resources, and harmful emissions. The funding subjects thus tie in with both current scientific findings on »planetary boundaries« and with the Sustainable Development Goals adopted by the UN. Especially with regard to biological diversity (biosphere integrity) and the disruption of the nutrient cycles of nitrogen and phosphorus (biochemical flows), the planetary boundaries have been far exceeded. Humanity has therefore moved a long way from any safe operating space, and is now exposed to a high risk of negative ecological, economic and social consequences. Mankind has also already moved into the danger zone in terms of land-system change and climate change.



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### We promote innovationen

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