innovation forward

Two new circular economy projects in the pipeline

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Sirris has secured funding for two projects. On 15 March, the twelve winners from the first Belgium Builds Back Circular project call were announced. This call for projects, worth 8 million euros, sought innovative ideas on circular design in the bicycle-, wind turbine-, healthcare- and biomimicry sectors. The financial support allows the winning organisations and companies to test their ideas for the circular design of products and services realistically.

The design phase is the determining factor in reducing the environmental footprint of our production and consumption. Product design needs to be rethought to enable circular value chains. The award-winning projects aim to influence all major sectors. More than 40 applicants responded to this first call for projects from Belgium Builds Back Circular, including 18 projects for bicycles, 9 for biomimicry, 6 for health care and 5 for wind turbines.

Wind energy and biomimetics

Sirris raised funding for ‘C-Blade. Circular solutions for wind turbine blades' under the 'Wind energy' theme and for 'Biomimetic surfaces via laser technology' under the ‘Biomimetics’ theme.

C-Blade wants to build a **Belgian value chain for recycling wind turbine blades**. The project focus is on developing products with high-quality recycled fractions of glass fibre-reinforced

plastics. These fractions are achieved by mechanically shredding the blades and compounding the resulting material with thermosetting resins. In the short term, this gives the process a significantly higher re-use of materials and a lower environmental impact. The technologies will replace current end-of-life routes. The project will result in six product prototypes, developed within a value chain with six Flemish and Walloon product manufacturers and one machine builder. As project coordinator, Sirris will help these companies fill the knowledge gaps and create an ecosystem that balances material flows, costs, returns, investments and risks. With this new ecosystem, the project can reach a wider audience of designers and OEMs to inspire new product developments and research initiatives.

The second project aims at using **femtosecond laser textures** to make components with **biomimetic surface functionality**. Femtosecond laser texturing is a new way to create biomimetic functionality by applying micro- and nanotextures to the surface of a component. Laser technology is ‘clean’ at the product, process- and energy levels when compared to other processes. The technology also makes it possible to create new, innovative, biomimetic functionalities, which will be demonstrated by creating industrial demonstrators: the low friction shaft-hub of an electric bicycle, anti-ice formation on a (scaled) wind turbine blade and an antibacterial handle. An awareness-raising campaign will acquaint industry, education and the general public with the world of biomimetic functionality.

Belgium Builds Back Circular

Belgium Builds Back Circular (BBBC) is part of Belgium’s Recovery and Resilience Plan, and is promoted by Minister of the Environment, Zakia Khattabi, and Deputy Prime Minister and Minister of Economy, Pierre-Yves Dermagne. The ministers wish to use a number of project calls funded by the EU Fund for Recovery and Resilience to support circular economy entrepreneurs who have innovative ideas about circular design and substituting problematic substances in order to encourage and accelerate the transition to a circular economy in Belgium.

Read the full news item here.

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