Website address:
https://www.gesundheitsindustrie-bw.de/en/article/press-release/doppelter-erfolg-der-prototypenfoerderung

Prototype funding for two Konstanz projects

Chemical building blocks from plastic waste; Reducing the risk of falls using virtual orientation aids: Konstanz chemists Manuel Häußler and Lukas Odenwald as well as sport scientist Lorenz Assländer receive Baden-Württemberg prototype funding for their transfer projects "Waste2DCA" and "Augmented Balance".

Extending the real world by displaying virtual objects in it (augmented reality; AR) to reduce the risk of falls in old age? Or producing building blocks for the chemical industry from plastic waste instead of petroleum? Two transfer projects initiated by University of Konstanz researchers were successful in the current round of calls for prototype funding in Baden-Württemberg.

Project funding totalling nearly 800,000 euros is provided in the context of the joint funding programme by the Baden-Württemberg ministries of Science, Research and the Arts (MWK) as well as Economic Affairs, Labour and Tourism (WM). Both project teams have been supported by the University of Konstanz's knowledge and technology transfer team as well as the Transfer Platform for some time now.

Augmented balance

The goal of the "Augmented Balance" project, led by Lorenz Assländer, a sport scientist from Konstanz, is to develop a wearable AR system to improve balance and thus prevent falls. "About one in three people over the age of 65 falls at least once a year, which often leads to serious injuries such as fractures, thus resulting in great individual suffering and high costs to the healthcare system," Assländer says.

His idea: Use AR glasses to project stationary patterns into the lateral field of vision of people with a high risk of falling. "These virtual patterns are intended to serve as additional spatial orientation aids, improving orientation and balance, ultimately reducing the risk of falls," Assländer explains. The goal during the two-year period of project funding is to develop a first prototype of the wearable AR system, work out the optimal visual parameters for improving balance and validate the function of the concept.

Waste2DCA

In their project "Waste2DCA", two chemists from Konstanz, Manuel Häußler and Lukas Odenwald, focus on dicarboxylic acids (DCAs) – chemical building blocks with enormous importance for industry. They are needed for the production of plastics, coatings and surfactants, for example. "To date, DCAs have been made exclusively from imported resources, primarily petroleum. We have developed a new process that now makes it possible to produce these essential chemicals from inexpensive plastic waste – a resource-saving raw material that is also available locally and in abundance," explains Häußler.

In addition to that, the newly developed procedure offers the possibility of producing particularly long DCAs, which are high in demand but were previously not available. As part of the funded project, the process is now to be scaled up from the basic research level to the kilogram scale. Moreover, the chemists will develop their own product samples, which can then be used to approach a wide range of customers.

About the funding programme

The prototype funding programme was jointly announced by the MWK and the WM ministries and is co-financed by funds from the European Regional Development Fund (ERDF) of the European Union. According to the programme website, the central goal of the programme is "to examine, substantiate and evaluate the innovation potential of the research results identified in the specialization fields of the Baden-Württemberg innovation strategy and to successively develop potential areas of application in coordination with the partners, taking into account the existing legal and ethical framework conditions as well as the acceptance of the market and society."

Press release

29-Nov-2022
Source: University of Konstanz

Further information

- University of Konstanz