Frugal innovations by the people, for the people

Fraunhofer IAO teams up with international partners to stage open innovation challenges

Demand for affordable yet high-quality solutions is soaring. Fraunhofer IAO joined forces with manufacturing companies and other partners to determine what innovations would benefit society as a whole and bring the general public on board to develop frugal solutions. This initiative, an EU project that goes by the name of FRANCIS, aims to accomplish this end by posing two open innovation challenges.

Many analysts have pointed out that the current crisis is not only affecting social life; it is also influencing consumer behavior. Emerging trends include a preference for quality over quantity, greater demand for locally produced goods and e-commerce seeing such wide-scale use. Now would seem an auspicious time to make the most of open innovation, or OI for short, to develop frugal solutions that are simple and affordable, yet high in quality. Various online challenges aimed to develop frugal ventilators during the pandemic have proven the merits of this approach. They are a great way of tapping the creative potential of experts from all over the world, who can then share their ideas to help with technical issues. A consortium of seven partners from six European countries is putting this principle into action for the FRANCIS project. The Fraunhofer Institute for Industrial Engineering IAO, the Fraunhofer Information Center for Planning and Building IRB and the VTT Technical Research Centre of Finland are on board to provide scientific support. The Finnish non-profit organization InnoFrugal, the Behavioural Insights Team (BIT) from the United Kingdom, the French tech startup Agorize and two industrial enterprises, HELIOZ from Austria and Turkey’s BSH Hausgeräte, are also involved in the project. It aims to get citizens involved in the creative process and develop frugal solutions with the help of moderated challenges.

Harnessing the potential of “Citizen Frugal Innovation”
Citizens can submit their ideas via an online platform designed by Agorize for this project. Face-to-face events will also be held in select countries addressed by the participating manufacturing companies to ensure local hands-on support with tools and methods.
Example of an idea submitted to the online platform Source: Fraunhofer IAO

Submitted ideas are put to a vote twice. The best get funding for further development. Scientists and business mentors help citizens develop their ideas, while students provide hands-on assistance. HELIOZ and BSH Home Appliances Turkey are taking part in the project to usher ideas to market. The two proposed challenges are geared towards these manufacturing companies’ specialty fields. “The whole idea is a win-win proposition. The public has the opportunity to collaborate creatively on new ideas for products, and companies can gain better insight into what cost-sensitive customers want and need. Here’s an example: A washing machine manufacturer is already planning the next generation of a product operated with a high-tech touchpad. The company also sees potential in simple machines with just a few functions, but is having trouble finding the right approach,” says Liza Wohlfart from the Fraunhofer IAO and FRANCIS project manager. The consortium has made a priority of addressing society as a whole, including marginalized groups such as the poor, the elderly and large families. It also focuses on minimalists, a growing movement of people who want to simplify their lives. This is why events will also take place in retirement homes, schools and libraries.

Gaining experience with crowd-based frugal innovation for future initiatives

Another objective of FRANCIS is to drive the development of a solid framework for “Citizen Frugal Innovation” in collaboration with businesses to come up with frugal innovations. To this end, the project team is also going to make some behavioral tests to pinpoint potential barriers and learn more about what motivates the citizens involved in these challenges and what kind of support they need. The research team will draw on these first-hand insights to devise effective strategies to promote frugal innovation and citizen science initiatives.

The project launched in February. The plan is to develop the conceptual framework in 2021 and then conduct the two challenges in 2022 and 2023. Some events will take place in the NextLab, the Fraunhofer IAO’s new creative space. “The project is another important building block for us in the development of our Center for Frugal Products and Manufacturing Systems at the Stuttgart Technology and Innovation Campus S-TEC,” says Prof. Dr. Wilhelm
Bauer, executive director of the Fraunhofer IAO. “The SMEs in Baden-Württemberg addressed by the center benefit from new scientific findings and international exchange. After all, many of our companies are globally networked.”

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 74 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of more than 28,000, who work with an annual research budget totaling 2.8 billion euros. Of this sum, 2.3 billion euros is generated through contract research. Around 70 percent of the Fraunhofer-Gesellschaft’s contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.