

4.0 approach makes refurbishing economically profitable

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The BrefurbiSH project is working toward a process for faster and more efficient refurbishment based on data analysis, digital work instructions and cognitive support for the operator. Moreover, its project partners aim at an economic and social value enhancement throughout the value chain.

Refurbishment is nothing new. Many discarded household appliances are already being overhauled, repaired and offered for sale again: 6 to 10 per cent of discarded electrical appliances can be reused in a way that makes ecological and economic sense.

Driven by the demand to make this process more efficient and economically profitable throughout the value chain, taking all operators into account, BSH Home Appliances, Sirris, Circular.brussels, Innoviris and Lichtwerk have joined forces. They have found the solution in advanced data analysis, digital work instructions, augmented reality and cognitive and functional support for the operator. In this way, BrefurbiSH aims to help operators refurbish four appliances a day, compared to today’s average of 1.2 appliances a day.

Operator support, from selection to proces

When the appliances are delivered, it is important to determine quickly which ones can be refurbished, which ones have components that can be recovered and which are no longer usable, whether it is best suited for repair, scrap or component harvesting.

Circular.brussels has extended its portfolio for BrefurbiSH to include the refurbishment of household appliances. An entire experimental refurbishment line has been set up with several working teams who go through the process step by step. A deliberate decision has also been made to limit activities in the initial phase to two representative product families: washing machines and dishwashers.

Digital work instructions ensure that every operator sees the right information at the right time. BrefurbiSH combines various platforms and tools to achieve this. Projected LightGuide Augmented Reality is used to train operators to perform complex actions. Furthermore, operators can consult real-time digital work instructions and visual step-by-step plans on a smartphone, tablet and other screens using the Manual.to platform, in the language of their choice. The information is presented intuitively and step by step, with instructions guiding each worker through every step of the various processes.

Economic and social valorisation

Circular.brussels has also drawn up a value enhancement plan with BSH Home Appliances. As well as extending its portfolio to include household appliances and social employment, ways of selling or renting out the refurbished appliances by various means are being considered. Thanks to BrefurbiSH, households in Brussels living in energy poverty can access affordable, energy-saving appliances. Furthermore, the project partners gain more insight into the lifecycle of products and to continue improving future generations of products thanks to the data on frequent defects and components subject to wear and tear.

In the long term, BrefurbiSH aims to use 5,000 spare parts from 2,500 appliances for repairs every year, and to deliver 1,000 refurbished appliances per year, which is the equivalent of about 50 tonnes of appliances that would otherwise go to waste.

Read the full press release here.

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