EDU-CIRC brings decarbonization into classrooms and businesses

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How can we prepare the skills needed for the green transition of industry? This question gave rise to EDU-CIRC, the Interreg Italy–Austria project that concluded last June.

By Giulia Maria Marchetti

One of the workshops held during the project. Photo: private

The project aimed to promote the dissemination of knowledge and skills related to the **circular economy** and the **decarbonization of manufacturing processes**, two topics that are becoming increasingly central to business competitiveness and the sustainability of the manufacturing sector. The initiative focused in particular on the **automotive**, **construction**, and **wood processing industries**, which are strategic sectors for the cross-border region between Italy and Austria.

Rather than developing new technologies, EDU-CIRC focused on bridging the skills gap needed to support the green transition. Coordinated by Professor Erwin Rauch from the Faculty of Engineering at unibz, the project followed a process that began with an analysis of companies' training needs and led to the development of educational materials, training courses, and awareness-raising initiatives aimed at different target groups: pupils, university students, professionals, and teachers.

Among the project's main achievements are the creation of an open-access **e-learning platform**, a **booklet on the circular economy**, numerous educational materials, and a cross-border training network that will continue to make the resources developed during the project available. Over the course of the project, **64 training courses** were organized, covering topics such as the circular economy, decarbonization, energy efficiency, Life Cycle Assessment (LCA), eco-design, sustainable innovation, sustainable business models, and Industry 5.0.

In addition to classroom-based training, the project also promoted workshops, company visits, and opportunities for direct exchange with businesses, allowing participants to observe concrete examples of sustainable practices implemented in real production environments.

Overall, EDU-CIRC involved **more than 1,500 participants**, including **pupils, university students, professionals, and teachers**. Involving younger students was a deliberate choice, as the future technicians and industrial workers of tomorrow will play a key role in transforming manufacturing processes in the coming years. At the same time, the project also provided up-to-date tools for professionals already active in the workforce and for teachers responsible for educating the next generation.

Businesses also played a central role. EDU-CIRC involved **around 40 companies** from the region, which contributed to the project through interviews conducted as part of the training needs analysis, company visits, participation as stakeholders, and the definition of real-world challenges presented to students during a hackathon. The continuous exchange with industry made it possible to develop training content that responds to the concrete needs of companies and to strengthen the link between education, research, and industry.

Coordinated by the **Sustainable Manufacturing Lab** at the Free University of Bozen-Bolzano, EDU-CIRC was carried out in collaboration with **t2i – Trasferimento Tecnologico e Innovazione** and **Carinthia University of Applied Sciences**, strengthening cooperation between Italy and Austria on industrial sustainability.

The project also developed synergies with other European initiatives, including the organization of a hackathon for students, who were challenged to develop innovative solutions to real-world problems proposed by companies.

"The transition towards a more sustainable industry does not depend solely on technology, but also on people's skills. With EDU-CIRC, we have created open educational resources and a cross-border collaboration network that will continue to generate value even after the project's completion," explains Professor **Erwin Rauch**, the project's coordinator.

Although the funded project has come to an end, the work itself continues. The EDU-CIRC platform will remain freely accessible, providing educational materials, guidelines, scientific articles, and training resources so that schools, universities, companies, and professionals can continue to deepen their knowledge of the circular economy and decarbonization.

More information and all project materials are available on the project's website.

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