



Virtual Reality and Circularity of Plastics

RECYCLING AND SUSTAINABILITY THROUGH INTERACTIVE VIRTUAL ENVIRONMENTS

KEY WORDS

VIRTUAL,
CIRCULAR,
RECYCLING

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DESCRIPTION

Capacity to design, implement, and operate virtual reality (VR) environments applied to the circular economy of plastics, enabling the immersive modeling and simulation of real processes such as PET bottle recycling, material sorting, and the transformation of recovered plastics into new products. This capability facilitates the visualization and practical analysis of reduction, reuse, and recycling principles, promoting a systemic understanding of these processes without generating waste and without interfering with real production lines.

APPLICATIONS

- Industrial training: Education of operators, technicians, and professionals in plastic recycling and sustainable management processes.
- Environmental education: Educational programs in schools, universities, and technical training centers.
- Corporate awareness: Training sessions for companies committed to sustainability and circular economy principles.
- Research and development: Evaluation of processes and design of innovative circular economy strategies in simulated environments.
- Outreach and science communication: Interactive presentations at fairs, museums, and technology events showcasing the plastic life cycle.