AI4 WASTE

FOSTERING AWARENESS AND INNOVATION IN ADULT EDUCATION

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TOOLKIT

Case study: PreZero (Spain): AI in waste management and treatment

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Case study: PreZero (Spain): AI in waste management and treatment

PreZero is one of the leading companies in the environmental services sector in Spain and Portugal offering state-of-the-art solutions in essential urban services, waste treatment and circular economy for public and private clients. Through the implementation of new disruptive solutions based, among others, on AI, PreZero contributes to the circular economy and energy decarbonisation by producing new secondary raw materials and/or energy carriers from the waste it manages..

How PreZero uses AI in waste management

- **Advanced robotics :** The new capabilities that vision and artificial intelligence have brought to industrial robots are allowing us to improve our waste sorting capacity, recovering a greater number of materials of better quality and improving working conditions and the well-being of our workers. We currently have 4 robotic units with integrated artificial intelligence operating in different facilities and working on different waste streams**.**
- **Characterisation of materials :** Advances in the identification of materials by A.I. are allowing us to develop systems for real-time monitoring of our treatment processes. Thanks to this, we can know in real time the composition of the waste flow, and have, for example, a continuous mass balance in the material selection processes, as we are already verifying in several of our facilities that have operational pilots**.**
- **Automation of activities** : PreZero is working on the incorporation of vision and artificial intelligence, both in operation and inspection and maintenance activities, order to anticipate potential incidents and generate alarms that are accessible to its operators in just a few minutes.

Benefits of PreZero solutions

- Increasing recovery rates, improving the quality of recovered materials, optimising operational efficiency and contributing to the circular economy.

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