AI4 WASTE

FOSTERING AWARENESS AND INNOVATION IN ADULT EDUCATION

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TOOLKIT

Case Study #1 of application of artificial intelligence to the urban waste management sector in Europe

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Authors
Sucessos Criativos Lda, Portugal

Contributors
LIPOR – Associação de Municípios para a Gestão Sustentável de Resíduos do Grande Porto, Portugal

Darica Belediyesi

Consell Comarcal del Vallès Occidental

Contact: https://ai4waste.eu
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SUMMARY

Case Study #1 of application of artificial intelligence to the urban waste management sector in Europe – Enevo (Finland).



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Case Study: Enevo (Finland)

Enevo is a Finnish company that **applies Artificial Intelligence (AI) and Internet of Things (IoT) technologies** to revolutionize waste management. The company's smart waste solutions optimize the collection of urban solid waste, reducing operational costs, minimizing environmental impact, and improving the overall efficiency of waste collection systems.

How Enevo's Solutions Works

- **Smart Sensor**s: Enevo installs IoT-based sensors inside waste bins to monitor their fill levels in real-time. These sensors are wireless and can detect when a bin is full, nearly full, or empty. The data is sent to Enevo's cloud-based platform, where AI algorithms analyze the information.
- **AI-Powered Data Analysis**: Using historical data, AI predicts the fill patterns of waste bins. This allows the system to anticipate when a bin will be full and adjust collection schedules accordingly. This avoids unnecessary collections of half-full bins or missed overflows.
- **Route Optimization**: One of the key features of Enevo's system is the ability to optimize waste collection routes. The AI takes into account the real-time bin data and generates the most efficient route for waste collection trucks. This reduces fuel consumption, labor hours, and vehicle emissions, contributing to sustainability goals.

Benefits of Enevo's Solutions

- Cost reduction, Environmental impact, Improved service efficiency

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