AI4 WASTE

FOSTERING AWARENESS AND INNOVATION IN ADULT EDUCATION

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TOOLKIT

Case Study #4 of application of artificial intelligence to the urban waste management sector in Europe

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SUMMARY

Case Study #4 of application of artificial intelligence to the urban waste management sector in Europe – Suez (France).



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Case Study: Suez (France) – Artificial Intelligence in Waste Management

Suez, one of the world's largest environmental services providers, has made significant strides in applying Artificial Intelligence (AI) and advanced digital technologies to optimize waste management processes. The company operates in over 40 countries, focusing on sustainable resource management, including water, waste, and recycling services. Their AI-driven waste management solutions enhance efficiency, reduce costs, and improve environmental outcomes.

How Suez Applies AI in Waste Management

- **Smart Waste Collection with AI and IoT**: Suez has integrated AI into its waste collection operations using Internet of Things (IoT) technologies. The system includes smart sensors installed in waste bins that monitor fill levels and transmit real-time data. AI algorithms analyze this data to: Optimize collection routes; Predict future waste levels; Reduce fuel consumption.
- **AI in Recycling and Sorting**: Suez utilizes AI-powered sorting systems to improve the separation of recyclable materials at their waste treatment plants. The system incorporates robotic arms and computer vision powered by machine learning algorithms that: Identify and sort waste materials; Reduce contamination; Increase recovery rates.
- **Data Analytics and AI for Circular Economy Initiatives**: Suez has implemented AI-driven platforms to monitor the lifecycle of materials and optimize circular economy initiatives. By analyzing vast amounts of waste data, AI helps the company identify: New opportunities for material reuse and recycling; Optimal ways to recover resources.

Benefits of Suez's AI Solutions

- Costs Savings and Efficiency; Environmental impact; Real-time Data for Decision-Making

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