AI4 WASTE

FOSTERING AWARENESS AND INNOVATION IN ADULT EDUCATION

2023-2-PT01-KA210-ADU-000184346

TOOLKIT

Case Study #4
Application of AI in Waste Management Sector-EVREKA

This publication was developed by the ERASMUS+ project consortium the Erasmus + project AI4Waste: Fostering Awareness and Innovation in Adult Education with the number 2023-2-PT01-KA210-ADU-000184346 coordinated by LIPOR – Associação de Municípios para a Gestão Sustentável de Resíduos do Grande Porto, Portugal.
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SUMMARY

Case Study #**4** of application of artificial intelligence to the waste management sector in **Türkiye** – **Evreka Smart Waste Solutions**



Evreka, based in Ankara, offers a Software-as-a-Service (SaaS) platform that leverages AI and machine learning to optimize waste collection operations. Their solutions have led to significant improvements, including an 89% reduction in missed collections and a 15% decrease in operating expenses through route optimization. Notably, the Turkish Red Crescent implemented Evreka's system, achieving a 60% reduction in collection time and saving 20 hours per month in operational planning.

Evreka was founded in 2015 and began as a small startup with smart waste collection ideas and quickly expanded globally.Evreka designs digitized and end-to-end waste management solutions with a focus on operational excellence in the waste management industry.

Evreka improves integrated platforms to utilize software, and hardware innovations as well as works in cooperation with waste management companies, local authorities, and municipalities all over the world for a more sustainable and digital process management. With the customer-centric point of view, Evreka strives for the needs of its users transparently. Evreka adopts environmental initiatives and reflects an outstanding level of innovation that drives real business value and advances sustainability.

Evreka reaches millions of people and provides services to waste companies, smart cities and municipalities with smart solutions by taking the best practices of waste management companies as a reference.

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Case Study: EVREKA - Artificial Intelligence (AI) and Dıgıtal Solutions

Evreka is a **Turkish** company, is a pioneer in applying Artificial Intelligence (AI) and digital solutions**.**Founded in **2015**, Evreka is a complete sustainability management software solution that enables organizations to manage sustainability projects. Drive new successes and transform your business by leveraging our software technology, innovation, best practices and benchmarks; and to develop sustainability strategies, reduce costs, and increase stewardship.

Key Products and Solutions

Evreka offers a full suite of solutions, including:

Product	Description
Evreka Smart Sensors	IoT sensors placed inside waste bins that monitor fill levels, temperature, and location.
Evreka Platform (SaaS)	A cloud-based dashboard for real-time waste management monitoring and reporting.
Route Optimization	AI-based software that designs the most efficient collection routes based on bin status.
Fleet Management	Monitors truck locations, driver behaviors, fuel usage, and maintenance needs.
Asset Management	Tracks the entire lifecycle of assets like bins, trucks, and equipment.
Citizen Mobile App	Citizens report full bins, illegal dumping, or request new bins via an easy mobile app.
Workforce Management	AI helps organize field teams, task assignments, and real-time workforce tracking.

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How They Use Artificial Intelligence

AI and Machine Learning are at the center of Evreka's operations:

- Predictive Analytics:
  AI models predict when each waste bin will fill up based on historical data, weather, events, and patterns.

- Dynamic Routing:
  Instead of fixed routes, Evreka's AI creates daily-optimized truck routes depending on which bins need service.

- Anomaly Detection:
  AI algorithms monitor sensor data to detect abnormal conditions — like fires (temperature spike) or bin theft (location change).

- Fleet Optimization:
  AI analyzes traffic data, weather conditions, and vehicle health to suggest the safest and fastest driving routes.

- Sustainability Reporting:
  AI generates automated sustainability reports to help cities and companies measure CO2 savings, recycling rates, and operational efficiency.

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Impact and Achievements

- **30-55% cost reduction** for waste collection companies.
- **Up to 60% fewer collection trips**, meaning massive carbon footprint reduction.
- **Improved citizen satisfaction** by eliminating overflowing bins.
- **Expansion to 20+ countries**, including in Europe, Middle East, and North America.

They work with:

- Municipalities (public sector)
- Private waste collection companies
- Industrial zones
- Shopping malls, airports, and large institutions

International Expansion

Evreka isn't only active in Turkey — they are a **global player** now!

Countries where they operate:

- Germany □□
- Switzerland □□
- Netherlands □□
- United Kingdom □□
- United Arab Emirates □□
- Saudi Arabia □□
- Qatar □□
- Mexico □□
- Canada □□
- United States □□

They have customized their platform to match **local regulations** (e.g., recycling standards) and **different waste collection cultures**.

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Future Plans

Evreka is currently investing in:

- **AI-powered robotics** for waste sorting.
- **Circular economy platforms** (where waste becomes resources).
- **Blockchain** for waste traceability and certification.
- **Advanced Carbon Tracking** tools for companies to meet ESG (Environmental, Social, and Governance) targets.

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