Decision Support System for Waste Management

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Abstract

Growing population, fast economic growth, and increasing consumption boosted the municipal waste generation and made its management serious concern. Municipal solid waste (MSW) collection and disposal is one of the major problems of urban environment in most countries worldwide today. The large spectrum of waste types and complex waste-treatment paths makes it difficult to get a complete overview of the waste generated and its whereabouts.

In this paper, we present the results of an extensive analysis of data collected at public waste management company. The results illustrate how data acquired during the waste collection process may be integrated into an up-and-running BI solution, which allow for descriptive and predictive analytics, as well as prescriptive analytics. Proposed solution utilizes the data sources connected to the garbage collection systems and transform raw data into self-service dashboards, which we provide as a decision support systems for local authorities, and as the awareness-raising tools of environmental protection for residents.

Keywords: waste management, decision support system, business intelligence, data analysis