



Smart garbage truck – Can it Introduce Real Savings?



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Executive Summary

GreenQ's monitoring device, known as smart truck system, was installed and tested by the municipality of a city of 120,000 residents in Israel. An analysis of the data found 3 major recommendations of improvements with significant results. The results proved cost-effective, leading to a reduction in costs of over 50%, and the city to install the smart truck System on all their city trucks, with a monitoring station where the trucks and waste collected is tracked in real-time.

- Canceling one weekly collection day
- Diesel consumption (in liters): 8,000~. 53% costs reduction.
- CO2 emissions (in tons): 16~. 53% costs reduction.
- 6.3%~ of the current overall working-time.



" According to the data collected by the system, the waste production rate is lower than the waste collection rate."

Challenges

Before implementing GreenQ's smart truck System, the municipality had a collection of trucks in route 3x a week from outside the city. The municipality wanted to find and improve inefficiency via workers deviating from work areas, tardiness and desertion, and replacing current inspection methods.

How the Product Helped

The smart truck System was implemented over the course of 35 days, and monitored by testing 1 truck out of 9 trucks in the city, and monitored the exact weight and volume of the bins during pick up to obtain data for how waste was collected.

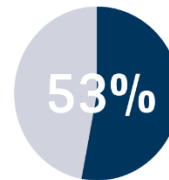
All data was monitored and recorded in real-time, and accessible from any device, either desktop, mobile or tablet. The system also sent alerts via email and/or SMS, and allowed GreenQ and the municipality to track movement without having to wait for analytical results.

Results, ROI, and Future Plans

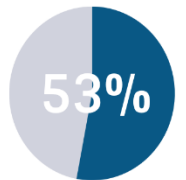
The analysis of the smart truck System concluded and recommended reducing the trucks weekly pick up by a day while adding additional garbage bins in specific areas. The daily weighing procedure of the truck also deemed redundant and cost-inefficient, as it is already a tool incorporated in the System.

In addition, data showed the need for trucks to stay closer to the city to cut down on emissions while on route. Adjustment from the recommendations would lead to a 53% reduction in costs of CO2 emissions, diesel consumption, and distance needed for driving. The return on investment for the municipality would be in less than a year, as well as overall reduced costs over the year.

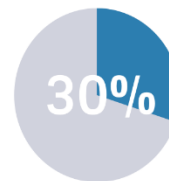
Savings



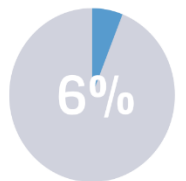
Diesel consumption



CO2 emissions



driving distance



overall working-time