# Waste Pickup Grapple Trucks - Digital Monitoring

White Paper

Digital monitoring as a tool to optimize and improve grapple trucks waste pickup service



#### Background

Grapple trucks are one of the most versatile tools for waste pickup. As such, these are used for handling various types of waste: special containers, green waste and debris.

Monitoring of waste pickup metrics can be extremely challenging since the truck assignments and waste capacity cannot be predicted. Moreover, the waste is diverse and does not necessarily collected using one type or any type of containers.



#### The GreenQ Solution

GreenTrack platform by GreenQ, is based on computer vision and automatic analysis of the waste pickup process. By utilizing GreenTrack, cities and contractors are able to achieve data transparency and analytics for the waste pickup process. Leveraging this data allows them to optimize and improve the pickup service.

## **GreenTrack Setup**

Within a single day of installation, a hardened GreenTrack box is installed on the truck. It includes the main computer which collects, processes and transmits the metrics to the GreenQ cloud, as well as a camera and several more sensors.

The installation process takes 6-9 hours per truck. Once installed, the customer receives credentials for accessing the GreenQ dashboard.

As a part of GreenQ fully automated approach, the system is independently working in the background, without any need of interfering with the waste pickup process. No special certifications or training required for the truck staff and the process continues as usual.

The system activates automatically once the truck is started. It transmits data and metrics in real time back to the GreenQ cloud service. This data is presented on the customer dashboard in a simple and intuitive way.

When the customer is interested in receiving information for a specific pickup, the data is accessible by a single click on the pickup icon which appears on the map. This would provide a snapshot of the work environment before, during and after the pickup, along with other useful data elements.

Statistics and alerts on the waste pickup process are generated by the system automatically and sent by email/SMS to the customer.



#### Visual recognition

Was the waste picked up? How much was collected? Was the environment left clean and tidy?

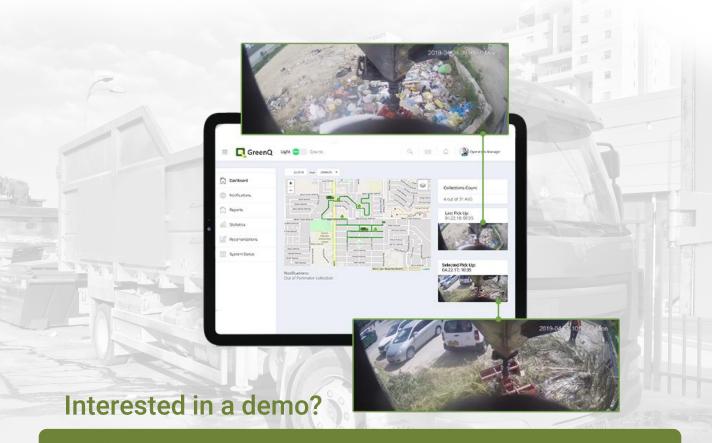
A single click on the icon can provide the required information, no need to spend minutes on analyzing video manually.

### **End customer transparency**

- GreenTrack allows attaching an image to the invoice, for full transparency
- The system can be connected through an API, allowing enrichment of external systems with information on the waste pickup progress
- Visibility to the full cycle of the waste pickup process

Contractors and cities often use a CRM or ERP solutions to manage the ongoing work and backoffice processes, including communications with the end customers

GreenTrack offers an out-of-the-box integration for notifications and connectivity with such solutions, allowing pickup events as triggers for creating, updating or closing related tickets.



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