

GreenQ



IoG for Smart Cities

Waste Pickup Challenges

Record rise in councils compensating households for 'extreme' bin collection failures



Some people were treated so badly they received payouts worth an average of £140, with the worst cases receiving £350 in compensation from councils CREDIT: RUI VIEIRA

L.A. NOW LOCAL

L.A.'s new recycling program has more than 28,000 complaints for missed trash pickup



By DAVID ZAHNISER JAN 07, 2018 | 3:00 AM



Los Angeles Times

Waste collection service hit by 120 complaints every day



The Telegraph

Waste Pickup Challenges

Cities and waste collection contractors today have low visibility on the pickup process, which leads to:



Suboptimal route planning



Unnecessary expenses

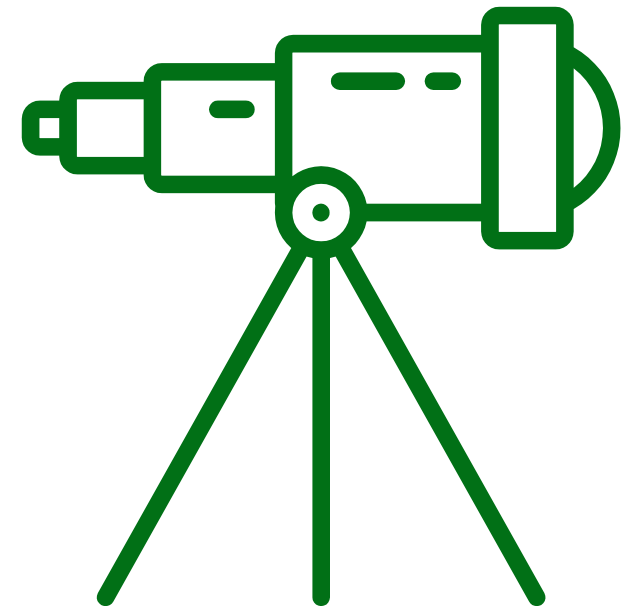


Higher emissions by trucks



Lower resident satisfaction

GreenQ solves this issue by providing **visibility on the waste pickup process**



Fully Automated Monitoring

Patent pending technology
One day installation
No tech on the bins

Monitoring a city of 500,000 residents
With Less Than 100 installations



Truck sensors collect data



Data stored on GreenQ cloud



Data processed to dashboard and analytics

Automated Digital Event



Digital Transformation

Capacity 80%

1100L

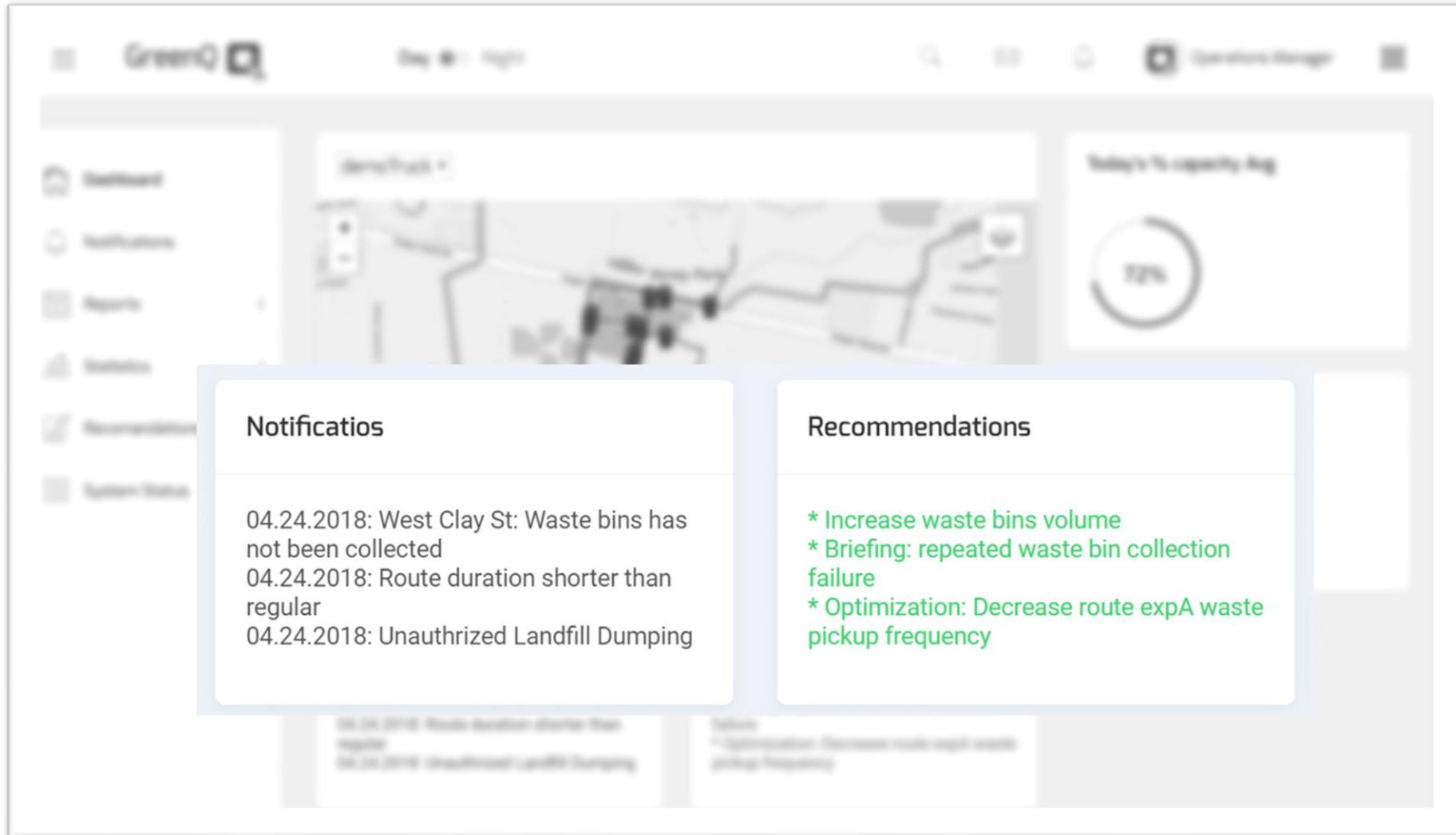
Unsorted waste



DATE: 2017/09/29
TIME: 07:50:12



Monitoring and Optimization



Reports Dashboard and Analytics: Digitized Waste Pickup

The screenshot displays the GreenQ Reports Dashboard. The top navigation bar includes the GreenQ logo, a Day/Night toggle, search, email, and notification icons, and the user profile 'Operations Manager'. The left sidebar contains navigation options: Dashboard, Notifications, Reports (with a dropdown arrow), Bins Data (highlighted with a green border), Statistics, Recommendations, and System Status. The main content area is titled 'Bins Data' and contains a table with the following data:

| id | Address | Scale(lb) | Capacity | truck | Pickup time |
|----|---------------------------------|-----------|----------|------------|-------------|
| 1 | Waverly St Hartford CT 06112 | 174.0 | 56% | Demo Truck | 00:00:34 |
| 2 | Waverly St Hartford CT 06112 | 83.3 | 47% | Demo Truck | 00:02:47 |
| 3 | Waverly St Hartford CT 06112 | 86.2 | 49% | Demo Truck | 00:04:08 |
| 4 | Cleveland Ave Hartford CT 06112 | 110.4 | 69% | Demo Truck | 00:09:48 |
| 5 | Cleveland Ave Hartford CT 06112 | 253.9 | 86% | Demo Truck | 00:26:57 |



PATENT PENDING WASTE MONITORING TECHNOLOGY

No installation is required on the waste bins

By monitoring the waste collected **per bin**, our platform provides **detailed real time** monitoring and comprehensive reports

Using our “Digital Truck” approach, monitoring a city of 500,000 residents can be done with

less than 100 truck installations

Easy to deploy

GreenQ requires only ONE device on the truck

No installation is required on the bins

Install a truck within one day

Any type of waste collection

No operational overhead for the driver



Key Platform Offering

Based on the data collected by truck sensors, GreenQ provides a comprehensive visibility on the waste pickup process:



DASHBOARD



REAL-TIME ALERTS



HEATMAPS

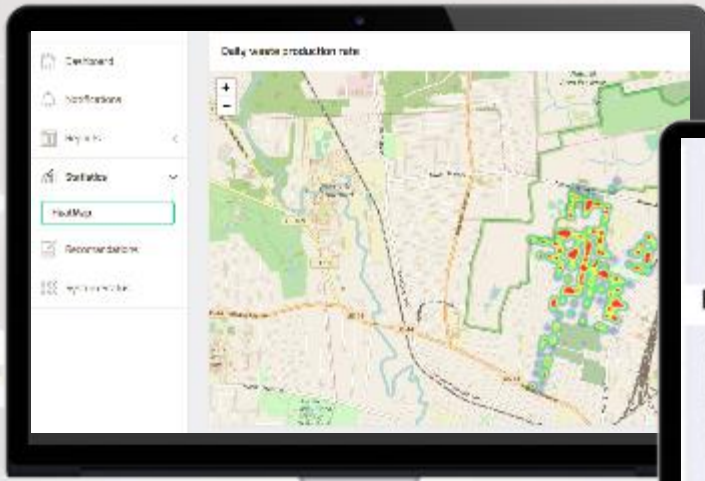


REPORTS AND
BIG DATA ANALYTICS



OPTIMIZATIONS/
RECOMMENDATIONS

PLATFORM BENEFITS



Optimize routes



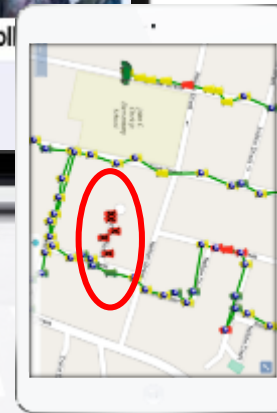
Real time visibility

Bins data 07/09/2017

| Bin | Coordinates | Address | Scale (kg) | Capacity | Track | Pickup time |
|-------|-------------|--------------------------------------|------------|----------|---------|-------------|
| 79097 | | 252 Cleveland Ave Hartford CT 06103 | 15.0 | 76 | 2348376 | 08:00:03 |
| 87412 | | Waverly St Hartford CT 06112 | 78.9 | 908 | 2348376 | 08:00:54 |
| 88306 | | 83-883 Garden St Hartford CT 06112 | 40.4 | 533 | 2348376 | 08:01:46 |
| 87336 | | 924 Center St Hartford CT 06112 | 45.0 | 628 | 2348376 | 08:02:11 |
| 87458 | | Waverly St Hartford CT 06112 | 37.8 | 478 | 2348376 | 08:02:47 |
| 86598 | | 825-885 Garden St Hartford CT 06112 | 57.2 | 826 | 2348376 | 08:03:28 |
| 87041 | | Waverly St Hartford CT 06112 | 39.1 | 498 | 2348376 | 08:04:08 |
| 87573 | | 256-316 Westlaw St Hartford CT 06112 | 132.8 | 768 | 2348376 | 08:04:33 |
| 86396 | | 325-323 Bolbear St Hartford CT 06102 | 54.2 | 776 | 2348376 | 08:05:28 |
| 79097 | | 825-885 Garden St Hartford CT 06112 | 5.4 | 128 | 2348376 | 08:05:58 |

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Monitor pickup rates



Troubleshooting/resident services and support

Business achievements

10 paying clients
in EMEA region

1,078,438,000 sensor reads analyzed

500K+ residents served

1M+ ton garbage monitored

20M+ waste bin lifts monitored

15 clients in pipeline

IL, EU (Germany, Slovenia), US

expected total ARR \$1.5M

2 Existing distributors **3** in pipeline

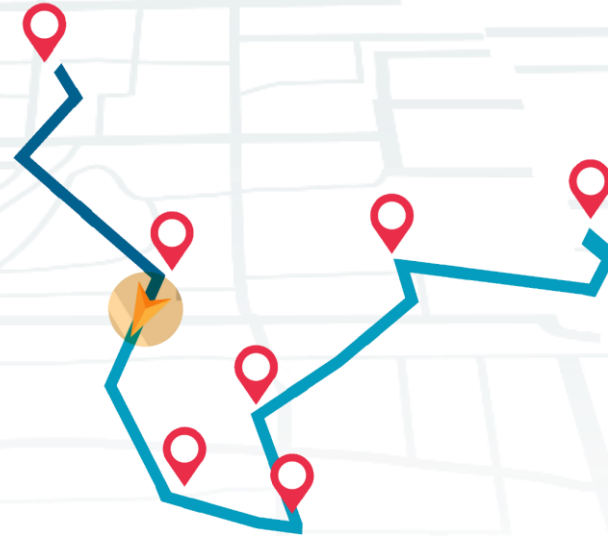
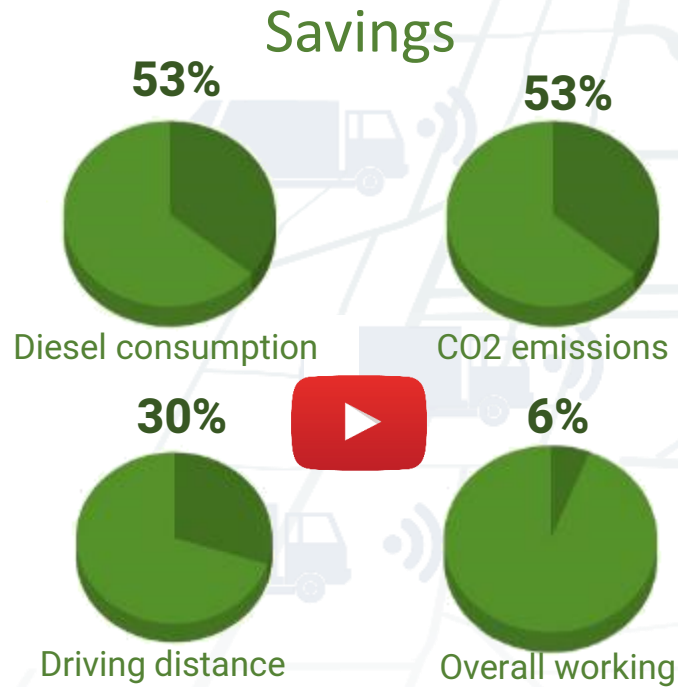


Platform ROI: Real World Results

Client focus optimizations

Real time Monitoring

Transparency enabler



CUSTOMER CASE STUDY HERZLIYA MUNICIPALITY

Herzliya (a major municipality in Israel) is one of the first GreenQ's paying customers

A study was conducted by Herzliya to measure the ROI of implementing the GreenQ platform

The study covered **35** days of pickup **600** waste bins

During this period **8,499** waste bins collections were monitored by the system

396 ton of waste was measured

19 critical events (as defined by the city) were automatically captured and alerted to the city by GreenQ

ThanQ