

# Practical insights from Hauru Waste Logistics' Pilots

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# Haurun Jäteauto Oy

An environmental operator from Oulu, operating in the Oulu economic area since 1957.

The goal is to promote the circular economy and sustainable development.

- As the first operator in Northern Finland to introduce biogas-powered vehicles in 2018.
- Digitalization of waste management as the first operator in the field in Finland in 2020.
- A service concept Hauru Smart based on sensor measurement and applications.

## RESPONSIBILITY

Our vehicles run on local biogas, supporting environmentally friendly practices and reducing dependence on fossil fuels. By focusing on smart digital solutions, we can optimize route choices, thus reducing emissions from our fleet. In doing so, we also help our customers make environmentally conscious choices.

## INNOVATION

We are committed to using the latest technology and smart solutions that help reduce our carbon footprint. Our innovative approach means that we do not only follow the development of the industry but are also at the forefront of shaping it.

## LOCALITY

We are proud to serve local residents and businesses. We understand the needs of the area and offer tailored solutions. Our goal is to be a reliable partner that not only provides services but also promotes sustainable development together with our customers.



- Service offerings include comprehensive waste management, container, and sewer maintenance services.
- 30 employees
- 20 vehicles (garbage trucks, sewer service vehicles, pickup trucks and vans)
- Revenue 5,5 million euros (2024)

# Customer Segments

## COMPANIES

- Industry
- Retail
- Event organizations

## CITIZENS

- Housing companies
- Households

## COMMUNITIES

- City



# HAURU SMART

FINLAND'S SMARTEST WASTE SOLUTION

***How digitalization has changed traditional operating models and improved customer experiences, reduced the carbon footprint and optimized clearances?***

- Hauru Smart Total is a service model where the waste bin is emptied only when necessary, after Hauru has received an automatic alert request from the sensor installed in the waste bin.
- Hauru Smart is a service model where the customer can easily order waste collection through a smartphone Smart Waste Bin application.

**Hauru Smart concept helps reduce the carbon footprint, as the smart waste collection ensures that emptying occurs at the right time and based on need, rather than on a fixed schedule (e.g., once a week).**

The importance of efficient waste management is visible and tangible for the customer – bins are emptied according to their fill level, and the bin does not become overfilled.



# Hauru Smart – Overview

- Hauru's waste collection fleet operates on the Vingo ERP platform, integrating route optimization, CRM, invoicing, reporting, and electronic waste transfer documentation.
- Smart containers and fill-level sensors connect to Vingo via a cloud interface, enabling real-time monitoring and automated service requests.
- API integration allows automatic ticket creation and route updates when containers reach predefined fill levels or customers submit requests.



*Diagram showing data flows between sensors, apps, and backend systems enabling Hauru Smart services.*



# Reference case: Nallikari Beach & Smart Bins

Smart emptying schedules help adjust waste collection frequency based on real-time conditions, such as visitor volumes and seasonal variations.

## traditional vs smart

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
28	29	30	1	2	3	4
● 5	6	● 7	8	● 9	10	11
● 12	13	14	15	● 16	17	18
● 19	20	21	22	● 23	24	25
● 26	● 27	28	29	● 30	31	1
2	3	4	5	6	7	8

Fill Level Percentage

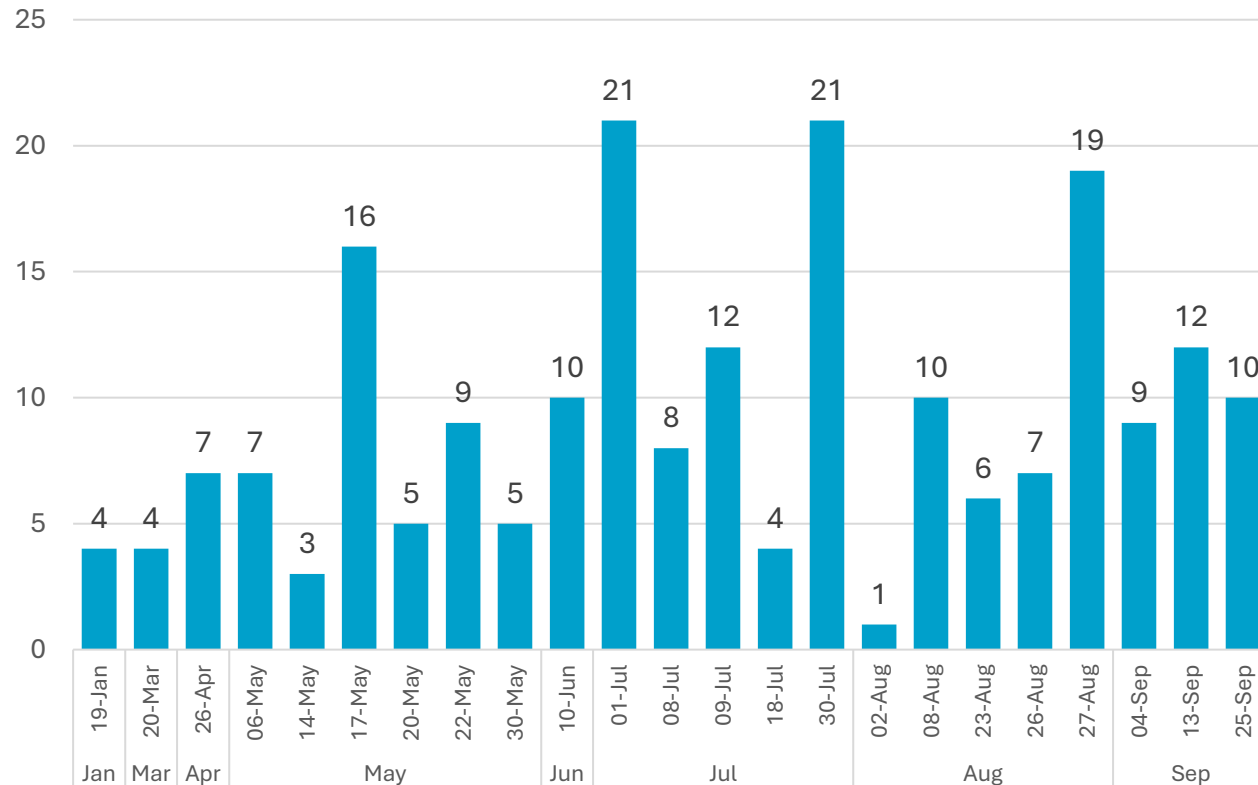




# Reference case: Oulun Golf & Fill-Level Sensors

# Optimizing Septic Tank Collections Using Sensor Data

2024: Sludge from septic tanks in Oulun Golf (t)



Sensor data enables the optimization of septic tank emptying operations by helping ensure fuller truckloads and more efficient routing.

Collection points can be flexibly combined to maximize efficiency, such as using key areas either as primary sources or supplementary stops.

# Reference case: Ideapark – Smart Compactors



# Optimizing logistics with Smart waste compactors



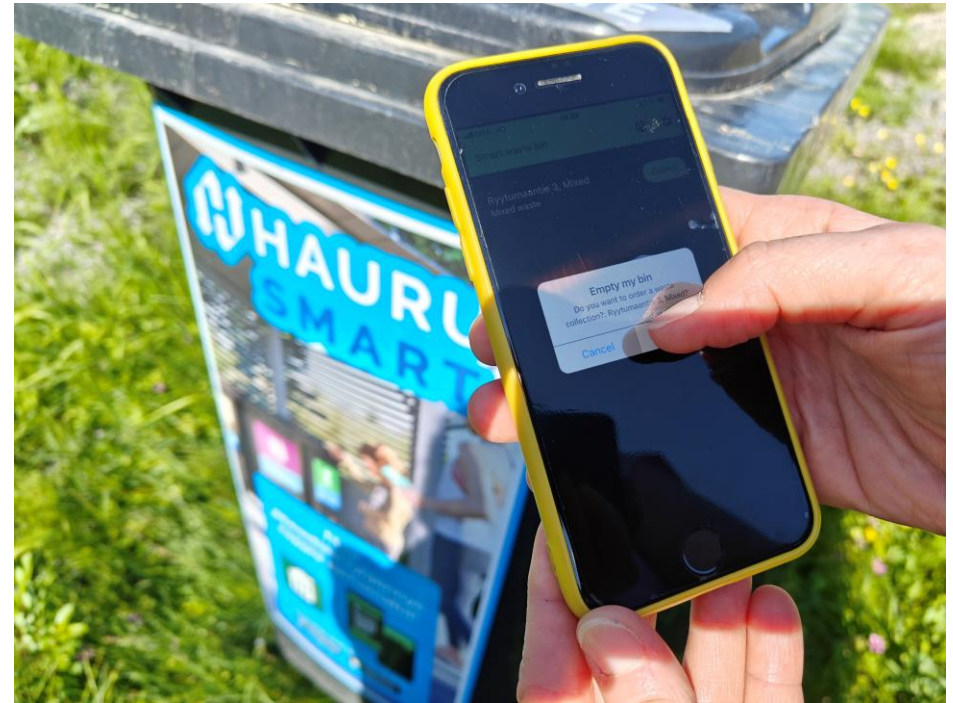
Enable high-volume sites to optimize compactors' fill-level monitoring and collections.

# Hauru Smart app



# Collect-On-Demand Service

- Hauru together with Wastebook introduced the Smart Waste Bin application in 2022, featuring a collect-on-demand ordering function tailored specifically for private households.
- The app eliminates the need for service suspensions during holidays and enables residents to request emptying only when needed, rather than following a fixed collection schedule.
- As of 2025, the application has nearly 1,000 users in the Oulu region.



# HAURU SMART

FINLAND'S SMARTEST WASTE SOLUTION



## RESULTS

Significant cost and emission reductions from dynamic routing and real-time optimized collections.

Enables new business models and opportunities.





# INSIGHTS

INNOVATE.

RECOGNISE THE TRENDS.

DECIDE TO BECOME A FORERUNNER.

SOLVE CUSTOMERS' PROBLEMS.

CHANGE THE WAY HOW TO MAKE  
PROFIT IN YOUR INDUSTRY.

BUILD AND MAINTAIN PARTNERSHIPS.

**Thank you!**



**HAURU**

Oululainen ympäristötekijä