

# Enevo ONE

## Waste Collection for Smart Cities

Enevo ONE is a comprehensive logistics solution that saves time, money and the environment. It uses wireless sensors to measure and forecast the fill-level of waste containers and generates smart collection plans using the most efficient schedules and routes.

The solution provides up to 50% in direct cost savings.



# Concept

## STATIC ROUTES

Until now collecting waste has been done with static routes and schedules. Containers are collected every day or every week regardless if they are full or not. This causes unnecessary costs, poor equipment utilization and the constant nuisance of container overflow.

## DYNAMIC ROUTES

Enevo ONE uses smart wireless sensors to gather fill level data from waste containers and sends it to a cloud based analytics platform. The platform then generates accurate forecasts for ideal container pick-up schedules and routes which can be accessed directly by the driver through any cellular enabled tablet or smart phone (iOS, Android, Windows 8).

## SMART PLANS

The Enevo ONE service provides not only monitoring, scheduling and optimized routes, but truly smart waste collection plans which are the result of millions of complex calculations regarding fill level trends and projections, scheduling constraints and routing options.



## MANAGEMENT

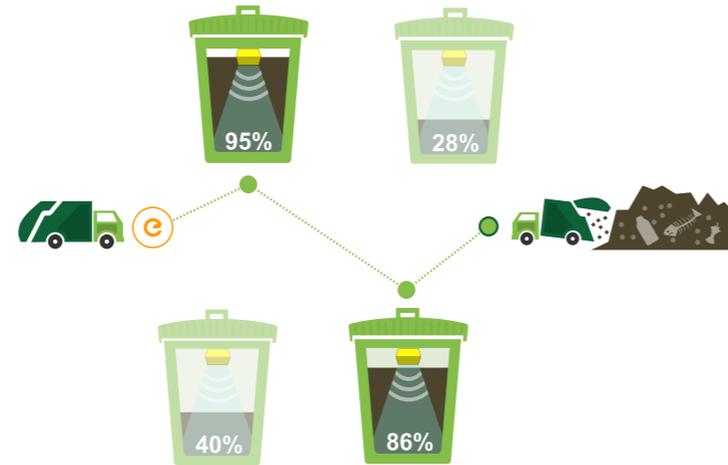
- + Cost savings
- + Automated planning
- + More transparency and control: less room for foul play and overcharging
- + Detailed reporting & statistics

## OPERATOR

- + Cost savings
- + Less maintenance
- + Less fuel used
- + Less time used
- + Offer better service
- + Higher fleet utilization

## END CUSTOMER

- + Cost savings
- + No waste overflow
- + Higher quality of service
- + Better transparency
- + Track how much waste is generated



# Value

Collection based on Enevo's smart plans significantly reduces costs, emissions, road wear, vehicle wear, noise pollution and work hours. Enevo ONE provides you up to **50%** in direct cost savings in waste logistics. And that's not all. Reducing the amount of overflow containers means less litter and happier customers! Enevo ONE provides a significant increase in efficiency across the whole value chain:

# Features



## SMART PLANS

Receive automatically generated schedules and optimized routes which take into account an extensive set of parameters (future fill level projections, truck availability, traffic information, road restrictions, container and content types the vehicle can collect etc.). New schedules and routes are planned not only looking at the current situation, but considering the future outlook as well.

## WEB SERVICE

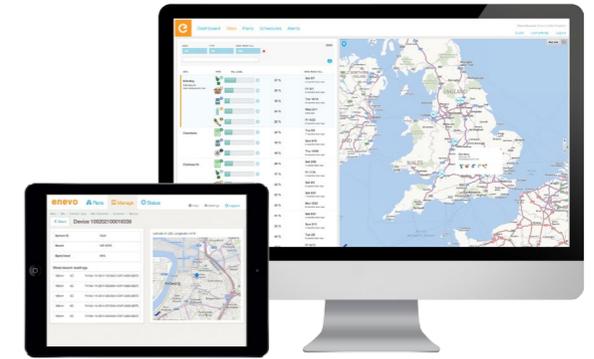
Access all your information 24/7 via our easy-to-use web services both from the back office as well as from any mobile location.

## MOBILE SERVICE

Access smart plans on the go with cellular enabled tablets (iOS, Android, Windows 8), which guide your drivers along optimal routes using GPS and enables them to report problems directly via the tablet. The mobile service also enables management of all site configuration (e.g. creating new sites, installing new devices, registering movement of containers between sites).

## STATISTICS

Get access to a rich historic backlog of all the analysis results, trends and projections regarding your containers (e.g. fill-up trends, collections, partial collections, alerts, reports and savings etc.)



## WAR ROOM VIEW

Monitor container fill-levels, forecasted fill-up dates and vehicle tracking, all beautifully displayed on our interactive map.

## REPORTS

Receive detailed reports regarding completed collections, upcoming collections, alerts and sudden changes in container fill-levels. Reports are generated automatically and sent out daily according to user preferences. Reports are provided both as formatted HTML emails as well as standard import formats (CSV and JSON) allowing easy use within other tools and systems.

## ALERTS

Receive alerts for conditions such as containers, partial collections and temperature extremes. Alerts can be sent out as both email and SMS immediately and are also visible in our web services.

## 24/7 SUPPORT

Enevo operates a 24/7/365 control center that provides customer support and constantly monitors each component of the service.

## GLOBAL COVERAGE

Our sensor network has global cellular coverage and works in over 100 countries and 204 wireless carriers.

# Technical Specifications

## SMART SENSOR

- Ultrasonic fill level sensor
- IP Rating: IP 66
- Easy installation
- Zero maintenance
- 10+ years battery life
- Wireless GSM communications
- Operational in: -40 – +85 °C



# Compare

- ✓ Reduced fuel consumption, vehicle wear, labour
- ✓ Lower emissions, road wear, noise pollution
- ✓ Guards against missed collections and overfull containers
- ✓ Convenient subscription based cost model
- ✓ High data security “in the cloud”
- ✓ Intuitive map based user interface
- ✓ Optimised mobile services
- ✓ Intelligent, adaptive analytics
- ✓ Alerts and notifications
- ✓ Global sensor device network
- ✓ Track container fill-level, temperature, motion, location
- ✓ Guided mobile navigation and collection plan execution
- ✓ Detailed fill-up trends and statistics
- ✓ Collection histories by site and content type
- ✓ Optimized scheduling and routing satisfying complex constraint sets
- ✓ Continuous online monitoring
- ✓ Comprehensive reporting
- ✓ Explicit collection plans provided directly to drivers each day
- ✓ Management of sites, vehicles, and containers
- ✓ Live vehicle location tracking
- ✓ Live driver reporting and job confirmation
- ✓ Live “war room” view of operations
- ✓ Live connection between back office and drivers
- ✓ Flexible integration with 3rd party systems via rich API
- ✓ 24/7/365 service monitoring and support

## API

Enevo ONe provides a robust REST based API for accessing and managing your data and allowing you easy integration with your existing IT solutions. Retrieve fill level data and trends, smart plans, sensor device report histories, and more; whenever and as often as needed.

## PRICING

Customers only pay a monthly subscription fee per container. The service cost is hence easy to budget for, increases proportionately to your own business growth and there is no need for significant up-front capital investment. Contact our sales staff or one of our local resellers for an exact quote. Bulk pricing available.