

According to Wikipedia,

“Waste management or waste disposal is all the activities and actions required to manage waste from its inception to its final disposal. This includes amongst other things, collection, transport, treatment, and disposal of waste together with monitoring and regulation. It also encompasses the legal and regulatory framework that relates to waste management encompassing guidance on recycling.”

What makes Smart Waste Management so Smart?

Waste management companies rely on technology to reduce their time and resources allocated to managing waste. Sensor-based technologies are key to developing smarter solutions for solid waste management.

According to the Annenberg Learner Foundation, “Every year, the United States generates approximately 230 million tons of “trash”–about 4.6 pounds per person per day.”With such an increase of waste, problems with waste collection, transport, processing, and disposal have grown.

Smart Waste Management is a necessary solution.

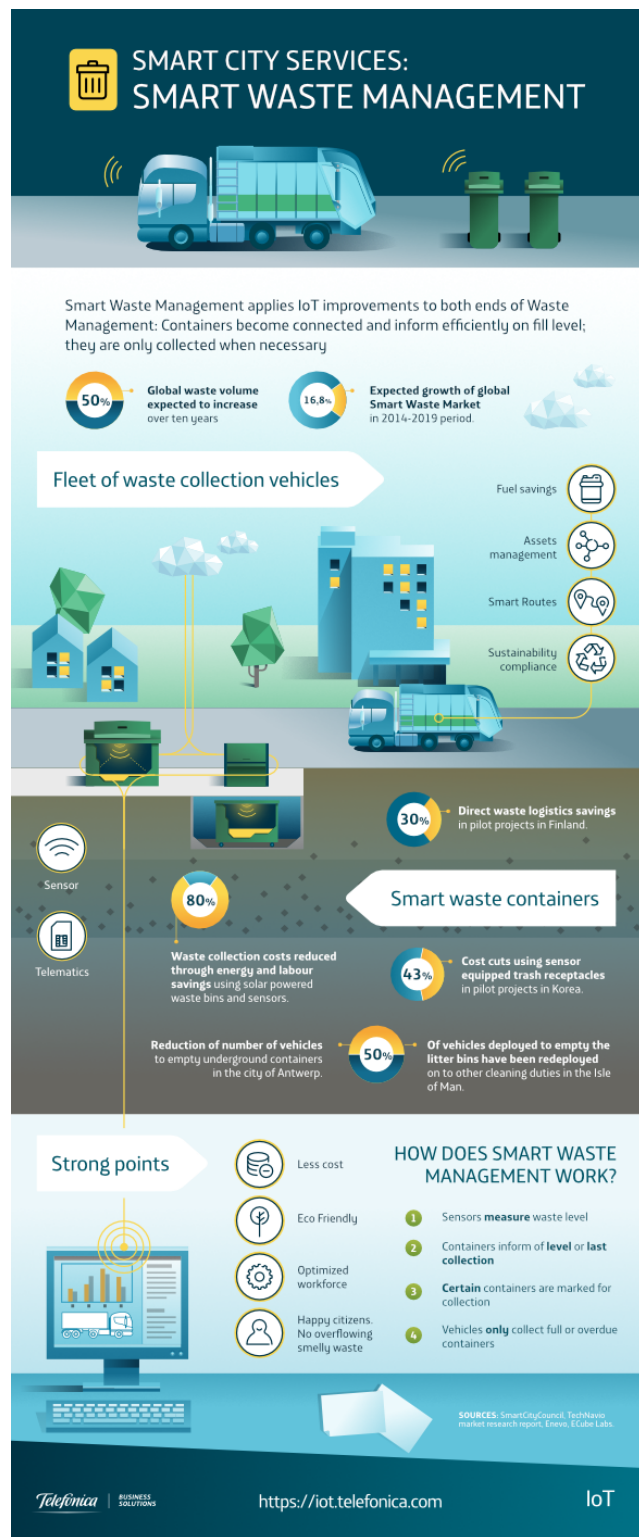
This infographic from Telefonica breaks down how smart waste management works.

Fill-level sensors designed specifically for sensing waste levels, like our TrashSonar line, are being used to sense the level of trash bins in order to determine if a can needs to be emptied or not. That means there could be less time on the road for trucks, less need for human resources as well as fuel emissions.

How Does Smart Waste Management Work?

- Sensors measure the level of waste
- Containers send the info to a data management system of the level of waste or last collection.
- Only certain bins are marked for collection.
- Vehicles only collect full or overdue containers.

The way waste is collected is smarter, reducing overall transport and collection by 50%.



The main benefits of Smart Waste Collection include, but aren't limited to:

- Less Cost
- Eco Friendly
- Optimized Workforce
- No overflowing trash in the streets.

Products in the market include:

- Solar powered trash compactors.
- Wireless fill level sensors provide real-time information on how full a bin is and alert owners when it needs to be emptied.
- SaaS solutions optimize schedules and routes for collectors. They manage data collection, optimize routes, and also use labor and fleet resources more efficiently.
- The data collection allows companies to forecast waste pickup based on past information.

Where is Smart Waste Management being used?

Residential Buildings

Streets

Commercial Buildings

College Campuses

Homes

Public Places

Hospitals

Airports

Ecubelabs has an airport waste management solution which, according to Hannah Forbes, increased Dublin Airport's operational efficiency upwards of 90%:

After deploying the solution, we have been able to go from collecting 840 containers 4 times a day to collecting just 80 containers a day. This has increased our operational efficiency upwards of 90% and resulted in significant cost savings. The solution has also provided us with data which has allowed us to recognize peak times in areas and from that adjust the allocation of staffing in those areas as well as increase waste container capacity where needed.

Smart city initiatives and new regulations are expected to help the smart waste management segment expand at a compound annual growth rate of 16.9 percent between 2016 and 2021. – MarketsandMarkets.

Companies like Envac are taking it a step further in developing an Automated Waste Collection System.

The Swedish company has an underground waste collection system which collects waste via vacuum tubes, whether outside or indoors. The underground tanks have sensors that notify waste collection when the tank is full and ready to be serviced. The waste is then collected away from residential areas by a truck and then transported to a waste management facility.

IoT solutions are being introduced to everyday life and making cities smarter. We want to make sure we're here to cover any part of your journey in changing the world.

If you're in need of a reliable sensor for your waste level sensing, our TrashSonar line is ideal.

Place your order today from our webstore or contact our sales team at sales@maxbotix.com