



SMART WASTE MANAGEMENT

IMPROVING PUBLIC TRASH COLLECTION TO IMPROVE COMMUNITIES



The cleanliness of public spaces can not only boost civic pride, but it also can lead to local economic investment. Addressing recycling programs and removing trash from public streets and parks are important ways to keep cities healthy and thriving. Using technology to improve collection systems can enable significant efficiencies and reduce costs across municipalities.

THE CHALLENGES OF TRASH COLLECTIONS

Public waste management is a vital municipal service beset by budgetary pressures and widespread inefficiencies. The uneven accumulation of trash means crews will often service bins that are nearly empty, while bins in nearby neighborhoods overflow. Many areas lack recycling bins, and this increases costs for sorting and storing recyclables at the collection center. Trash accumulation in public spaces can lead to infestations, deter pedestrians and create health risks. These conditions spur complaints from residents and businesses, which drive additional costs to the municipality in terms of remediation.

SMART GARBAGE COLLECTION SOLUTIONS

Backed by cost-efficient technologies, smart waste management programs are operational in cities across the United States. Using modified trash bins that have been fitted with low-cost sensors, the fill rate of the bins—among other data—can be analyzed by smart applications and put to use in real time.

The bins contain multiple compartments, with clear user signage and specially designed openings, enabling residents to easily place their recyclables in the correct compartment—keeping recyclable materials separated. These bins are outfitted with compactors that compress the waste and recyclable materials, so they can hold more trash. Sensors can prevent odor and pest control issues by periodically dispersing chemical sprays.

SMART WASTE MANAGEMENT CAN BENEFIT YOUR MUNICIPALITY

With data from trash bin sensors, municipalities can better manage the collection of garbage and drive cost efficiencies. Routes can be modified in real time to focus on bins that fill up quickly, while also tending to all bins in a timely manner to avoid having trash sit for an extended period.

Real-time data also enables more efficient use of labor and truck fleets, preventing municipalities from deploying excess trucks and incurring costs for overtime pay. Efficient routes also translate into reduced fuel and maintenance costs. Additionally, fewer trucks on the road means less traffic congestion, noise and air pollution.

Handling recycling within the bin lessens the costs of sorting and storage at the collection center. Keeping bins from overflowing with trash and the resulting unpleasant odors, meanwhile, enhances communities by reducing complaints, improving public health and benefiting local businesses.

With proven technology and well-established business cases, applying smart waste management principles to trash bin collection is an excellent step toward smart city planning. It can provide a high return on investment and improve the health and economic development of the community.