



“Reduce, Reuse, Recycle” is a mantra that most are familiar with. Facilities may even put these three R’s into practice. But could there be too much emphasis on the last R, focusing on the sense of pride around a facility’s recycling efforts?

Effective January 1, 2018, China banned the import of 24 recyclable materials due to receiving too many contaminated recyclables. Although U.S. congresspeople have called upon the government to repeal it, there are no signs that China will reverse this policy that has left parts of the world in a recycling panic.

At this time, facilities can no longer ship away their recyclables without having to think about their end destination. Beyond facilities, haulers, waste generators and everyone throughout the supply chain are forced to handle this issue at home. Meanwhile, waste materials are piling up, not only in the U.S., but also in other global markets.

There is now an opportunity for facility managers to approach their existing waste and recycling systems from a different, yet more positive, outlook. This ban provides facilities with an opportunity to avoid the landfill, prioritize reduction first and consider technology that will allow facility managers to understand where waste is coming from and how that volume can be decreased.

But there is still a shortage of recycling centers in the U.S., and the existing facilities are reaching capacity. With nowhere else for waste materials to go, other than the landfill, the environmentally responsible act of recycling negates its purpose.

Although the waste industry can continue to bury waste because it is cheap, quick and easy, this approach is not sustainable. Facilities have a role in managing this waste. The more waste and recyclables facilities are producing, the greater they are contributing to the amount of materials that are going into landfills.

But, the situation isn’t hopeless. There is still a way to achieve a feel-good, environmentally friendly response from facility recycling efforts. China’s new policy is forcing everyone to take a deeper look at facility systems to better understand where waste is produced — both trash and recycling — and to use that information about waste streams to identify ways to reduce the materials eventually thrown away.

sume. Facility occupants may also express discomfort and inexperience when it comes to reducing because they associate it with loss of choice, status or convenience.

Facility managers and occupants most likely have never had to seriously consider these complex thoughts behind “reduction” because they have not yet been held accountable for the amount of waste they are generating or understood the impact of the entire life-cycle of their waste.

However, the China recycling ban has made two things clear: The U.S. is producing too much waste, and there aren’t systems in place to manage that significant volume internally. Focusing on reduction of waste first may alleviate some of the issues associated with the recycling ban. Overcoming consumer fears and rethinking existing waste models offer positive, long term and localized solutions for facilities.

And this solution can be more easily achieved with the integration of technology.

DON’T REDUCE DATA

Some of these waste and recycling industry issues stem from how waste management on the local and facility level has been traditionally based on assumptions, relying on manual reporting. Facility managers in restaurant or retail facilities, for example, may manually check their dumpster once and base their collection needs on that, never putting much thought into their waste and recycling programs again — at least until an issue occurs.

Haulers use GPS geofencing to track route accuracy, but that doesn’t ensure each dumpster has actually been collected. It only shows that the vehicle entered the area around the pickup location. When waste isn’t collected as scheduled, that could lead to overflowing dumpsters and major issues for the fa-

FMS & OVERFLOWING LANDFILLS

The U.S. has poured a lot of money into recycling efforts and built large facilities to process and sort these materials.

REDUCE FEAR, REDUCE WASTE

The word “reduction” often evokes something akin to a fear response as people feel they have a right to con-



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cility, such as health fines and violations. Nine percent of scheduled waste pickups are missed, and 21 percent of sites need waste service level adjustments. This means these facilities are paying for waste services that do not meet their actual needs, so they may be paying more than needed or their dumpsters may be picked up when only half full. Their collections need to be adjusted to align with their waste generation and volume.

Waste services providers can now use data from waste container sensor technology to help facilities understand their waste and recycling streams. This data is significant because visibility into waste management has never been this readily available to facility managers. Not only will the collected data help drive cost savings around waste management, but it will also help facilities ultimately reduce waste. This data originates at the dumpster.

DUMPSTER DATA

Connected, smart technology, like waste container sensors, is increasingly being used across facility operations. Implementing Internet of Things (IoT) technology at the dumpster level allows facility managers to better understand volumes of materials that come in and out of a facility.

By monitoring around-the-clock sensor data, waste services providers can manage alerts, compare dumpster pickups against collection schedules and

work with haulers to adjust service levels to meet actual needs. They can also use the data from container sensors to identify changes in volume, understand what is making up the garbage facilities produce, monitor if recycling programs are being properly implemented at the site level and employ recommendations for an easier-to-follow program. Waste services providers can make recommendations for waste reduction and lay out a plan that goes beyond just saying, “reduce.”

Dumpster data can provide actionable insights and resources for facilities to improve operational efficiency while also reclaiming the accountability for their waste. Data collected can inform facility managers about what is making up their waste, how to reduce it throughout the supply chain and how purchasing multi-use items can help eliminate waste. Ultimately, waste services providers can help facilities understand their waste stream and drive toward the end goal of reduction.

TECHNOLOGY AS AN ANSWER

In addition to container sensors, there has been a recent push of technology-enabled solutions in the waste industry that impact the waste management process. Technologies like robotic technology that sorts materials faster and more accurately as well as cameras installed on collection trucks to monitor routes and put more accountability on waste haulers. But why do we need technology in the first place? Can it really solve all waste problems?

Technology cannot replace behavior change. Furthermore, technology wouldn't be so necessary if waste producers like facility occupants were not tossing large amounts of waste materials in their dumpsters and, ultimately, in the landfill. Focusing on reduction first minimizes total waste. Once consumers and facilities consume less, we will all produce less waste.

The U.S. has started to hold producers more accountable for the waste they are generating. States like Massachusetts and California have implemented take-back rebates and the Bottle Bill to incentivize people to keep things out of landfills. Europe already has extended producer responsibility (EPR) market-based instruments, like deposit take-backs and advanced disposal fees, that have helped reduce waste management costs and incentivize package reduction and recycling overall.

TAKING RESPONSIBILITY

China may have issued the recycling ban, but the waste we generate is ultimately our responsibility. A facil-

ity can use this new regulation as an opportunity to reevaluate its current waste management system and look for ways to implement positive changes and lasting, sustainable impact. It's up to the waste industry to offer alternative options to contributing to landfills, but it is in the hands of facilities to introduce new policies based on behavior change.

Is your facility ready to reduce its waste? **FMJ**

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