

Zero-Waste Manufacturing



GOAL: FROM LESS TO ZERO.

Today's throw-away society is quickly becoming a thing of the past. In its place is a new way of thinking about the products we manufacture, their impact on the environment, and what happens to them when they've outlived their usefulness. At Waste Management, our Sustainability Services team can guide you to this emerging frontier and help you tread lightly on the environment at every stage of the supply chain.

WHAT IS ZERO-WASTE?

More and more organizations are aiming to eliminate waste entirely by reducing or reusing, in some way, all the products and byproducts of their manufacturing and business operations. This initiative is called "zero-waste." And, as idealistic as it sounds, it's a goal whose time has come. Nature itself provides a good example, as living things die, decay, and replenish the earth, preparing the way for new growth.

In historic terms, zero-waste can be seen as the next wave of the industrial revolution. And like that era, it signals a profound cultural shift. Taking cues from the Lean Manufacturing or Six Sigma movements, it's a way of doing business that seeks to either eliminate non-product output (the material that doesn't end up in your products, which you pay to get rid of) or transform it into product output that generates value. Some advocate taking this even further, by making the goods you sell sustainable by designing them with end-of-life in mind.

FROM WASTE TO RESOURCE.

Increasingly, manufacturers are seeing that waste is a cost they pay twice: first, when raw material is purchased for production input; and again, when non-product output is thrown away.

Implementing zero-waste initiatives enables these organizations to lower production costs, boost the bottom line, and help them achieve their sustainability objectives.

GUIDING YOU TO THE EMERGING FRONTIER.

As North America's leading environmental solutions company, Waste Management was encouraging recycling and reuse long before the term "zero-waste" was coined. Our Sustainability Services team is adept at finding value in the materials our customers are accustomed to throwing away. According to data provided by our customers, we've helped them recover more than \$60 million of this value.

Pursuing a zero-waste journey isn't easy. There's more to it than recovering materials at the back end. Success requires changing both people and processes. At Waste Management, we can help guide you through the obstacles while accelerating your progress.

SUSTAINABILITY SERVICES: AN OPERATIONAL VEHICLE TO SUCCESS.

At Waste Management, we offer real-world advice and guidance to help your organization adopt a zero-waste approach. As sustainability experts, we have the methods, tools and knowledge to guide you every step of the way.

Our professionals analyze your industry and organizational dynamics (people, processes, suppliers) and create an end-to-end, unique solution and plan of action. We offer expertise from *strategy*, to *design*, through *execution* of the plans.



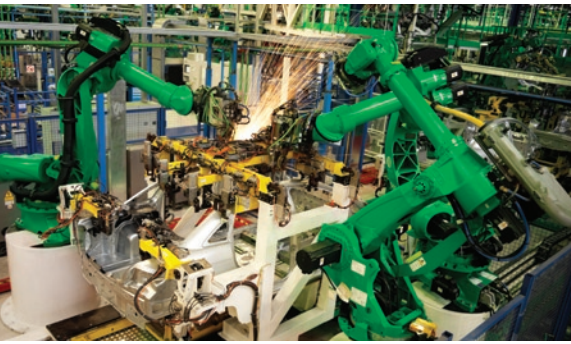
WASTE MANAGEMENT IS WITH YOU EVERY STEP OF THE WAY.

EXPERT GUIDANCE

IMPLEMENTATION

OPERATIONS

RESULTS



TARGETING ZERO-WASTE

Waste is an accepted part of business. So it may be hard to imagine huge manufacturing plants never throwing anything away. But that's exactly what growing numbers of companies, large and small, are committing to do. And at Waste Management, we're showing them newer, better ways to think about it.

Reducing or eliminating waste.

At Waste Management, we help you address the myriad of sustainability issues you face by finding and implementing the right waste elimination and reduction solutions. In the process, we are able to draw on a vast infrastructure and network of provider alliances.

RESOURCE FLOW ANALYSES.

Our experts will examine the environmental impact of your product or service, including its raw material input, conversion processes, conveyance system, non-product output, consumer use, and final disposition.

SUSTAINABLE OPERATIONS REVIEW.

We'll examine your operation from input through output and, specifically, look for opportunities to help you:

- Save money by eliminating or reducing non-product output
- Source or design product inputs with "next-life" potential
- Engage your supply-chain partners in sustainability
- Design customer products with improved sustainability attributes
- Increase success through organizational and behavioral changes
- Design comprehensive material flow and recovery systems

RESOURCE PRODUCTIVITY.

We can help you develop sustainable business operations that reduce waste by concentrating on resource productivity and next-life solutions. We can work with our network of outside sources and recyclers to find homes for manufacturing residuals – some of which end up right back in your facilities as new materials.

THINK GREEN.®

ZERO-WASTE SUCCESSES.

Across the country, manufacturing companies of all sizes are discovering the cost savings and environmental benefits of working with Waste Management's Sustainability Services team to eliminate or greatly reduce their waste. Here are just a few examples.

ALUMINUM PRODUCTION

Waste Management helped this company recognize the value of materials that were discarded as a byproduct of the manufacturing process. Through innovative process improvements and committed execution strategies, the result was more than \$500,000 annualized savings in landfill and raw material costs.

AUTOMOTIVE MANUFACTURER

Since 2000, Waste Management has managed resources for this manufacturing plant, which has achieved zero-landfill status. The automaker has now taken the next step, redirecting the waste from this plant toward alternative energy generation, which now creates energy to power homes in the surrounding community.

MANUFACTURER OF HEAVY EQUIPMENT

This Fortune 200 manufacturer of heavy construction/ mining equipment worked with Waste Management to minimize plant and vehicle emissions and optimize use of renewable resources. At one company location, the landfill diversion rate has already improved from 30% to 80% in its first full year.

MAJOR MANUFACTURER

Waste Management achieved \$175,000/year in first-year savings. Our collaboration with the production floor teams drove down labor costs while increasing diversion successes. A closed-loop recovery system added an incremental \$75,000/year in savings from non-traditional waste recycling.

BEVERAGE PRODUCER

In this relationship with a major beverage producer, Waste Management evaluated the company's supply-chain management of obsolete and off-spec product. The result was a national reverse-logistics and zero-landfill program solution.



**THERE'S SO MUCH MORE TO KNOW ABOUT WASTE MANAGEMENT'S SUSTAINABILITY SERVICES.
PLEASE CONTACT YOUR WASTE MANAGEMENT REPRESENTATIVE OR CALL 1-800-963-4776.**



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