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The **right ERP system** can help companies **stop wasting** food and resources

During the last few years, awareness of food waste has reached a threshold where food industry representatives, media, policymakers, and the larger public are calling for change. Distributors and manufacturers of food items must find ways to address this issue, both to avoid painful losses as well as to ensure that hungry people are fed. Industry-optimized ERP can help reduce food waste at the level of each company and every production and distribution process.

The vast scale and regional differences of food waste

Research from a variety of sources generally agrees on the enormous scale and impact of food waste, which occurs at various points in the journey from the grower or producer, through distribution and resale, to the final consumer. In the U.S., for instance, roughly 40 percent of the food supply is wasted, equaling close to 20 pounds of food per person, per month.

In European countries, wastage is comparable. In many areas, food waste amounts to as much as 150 kilograms per person, but it is above 250 kilograms in several countries. Europe as well as the combined North America and Oceania cause 14 percent of the world's food waste, and industrialized Asia is responsible for 28 percent. Latin America and regions of Africa are in the single digits, between six and nine percent.

There are many good reasons for reducing food waste:

- In the U.S., for example, wasted food items result in organic matter being the second-highest material in landfills. Landfills are the country's largest source of methane emissions, which environmentalists are trying to reduce.
- Once water and other finite resources are degraded in waste, recapturing them is difficult and expensive.
- In terms of expenses, food waste amounts to many billions of dollars every year.
- Some populations continue to grow. Global food production must become more resource-efficient, or even more people will starve than do today.

While food losses worldwide are by far the largest for fruits and vegetables, they are also substantial for the more costly, perishable, and better-controlled meat, eggs, and fish. Important differences in the generation of food waste are noticeable across the world's regions. In developing, poor countries, most waste happens at the front end of the supply chain, when food is grown or produced, and during the first transport to a distributor

or reseller. In highly developed, industrialized countries food waste generally occurs later, when food items are made, packaged, stored, distributed, and shipped to retailers. Production and distribution account for more than half of the food waste in those countries, with the remainder occurring in the homes of individual consumers and at restaurant tables.

Implementing industry-optimized ERP to minimize waste and its consequences

Because much of the responsibility for food waste lies with manufacturers' and distributors' planning, resource management, production, and supply chain practices, there are clear opportunities for improvement. When these companies use modern ERP systems with functionality that suits their industry, they can use technology to minimize the amount of food waste they generate. [To-Increase Food Manufacturing and Distribution for Microsoft Dynamics NAV](#) extends ERP to manage all processes in food production and distribution. It also provides food companies with a number of capabilities to help them reduce food waste and its impact.

Demand-driven, realistic planning and production.

To avoid generating waste, you want to ensure that what you produce has the highest possible likelihood of being sold profitably in response to real demand and within each product's timeframe for usability.

Reliable planning is paramount in this effort. Successful planning, in turn, depends on making reliable, complete information available to a company's decision-makers in such a way that it becomes meaningful for action. The solution provides ways to review the full history of sales orders, prices, costs, and product quantities. Production planners can see what customers bought, at which costs and margins, and how they timed their purchases and deliveries. They can also track how changes to recipes and batch formulations impacted production. By making use of that information, they can plan purchasing, inventory, and production to minimize the likelihood of materials and items going to waste.

Sales associates can review this information to make smart up- and cross-sell recommendations to their customers, moving the products that are known to sell and are available in inventory. Together, well-informed planning and sales can take a company a long way toward taking inventory and the waste of products and materials to their lowest possible levels. One reason why Food Manufacturing and Distribution helps planning and sales teams succeed in this effort is that it provides meaningful, contextual data in such a way that it meets the real information requirements of their business roles.

Quality management at company and supply-chain levels. The quality control and quality assessment capabilities in Food Manufacturing and Distribution enable companies to reach into own operations as well as their supply chains to ensure that the quality

of goods received, produced, and distributed matches customer requirements. With effective, firmly scheduled quality testing and results tracking, it becomes easier to elevate the quality provided by vendors and avoid quality compromises in production. Food companies can verify the quality of goods before they receive them into inventory, and only ship products that satisfy customers' expectations for quality. They can avoid the material and financial losses of goods that don't meet corporate, regulatory, or industry-specific quality standards. That means less waste from spoiled, rejected, returned, or non-returnable items.

Food Manufacturing and Distribution provides the tools to assess and control quality across the entire operation. Companies can ascertain, document, and review the quality performance of their vendors to support wise purchasing decisions. They can set up quarantine policies for goods that do not meet standards. They also can manage lots with auditable, lot-specific quality histories and unique properties, and easily identify lots with certain test values or according to other criteria. Through the solution's deep integration with Microsoft Dynamics NAV, they can link quality assessments to all business processes where quality matters, such as receiving, production, and reporting.

Metrics that effectively help reduce food waste. In managing inventory and production to minimize waste, the right quality assessment criteria are also critical. Food Manufacturing and Distribution offers different

freshness calculation methods: *date-to-fresh*, *sell-by*, and *best-if-used-by*. If these metrics are applied appropriately, companies can avoid wasting goods that may not be entirely fresh, but perfectly fine to use in production. At the same time, they can prevent dated goods from entering production and distribution, and making consumers ill.

At the lot level, Food Manufacturing and Distribution also offers *best-before* and *expiration* dates, as well as *days-to-fresh*. Days-to-fresh helps companies stay abreast of deteriorating quality and make timely use of sensitive items, and expiration dates reduce the risk to consumers if products are used past a certain date. In addition, the solution supports *first expired*, *first out* (FEFO) picking to prevent aging inventory. Together, these metrics and practices can facilitate substantial reductions in food waste.

Facilitating timely redistribution. At an organizational level as well as that of individual decision-makers and planners, the visibility of potentially wasted food items is critical in minimizing waste. Even if they run an efficient, low-waste operation, food companies may have in their inventory materials and items that can no longer be sold, although they are still safe for consumption. They can use the stock-level and lot control features in Food Manufacturing and Distribution, together with the reporting functions in the ERP system, to see how such inventory comes about and how they can adjust their processes to avoid it.

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They can also determine what time windows remain for consuming it, and redistribute it to food banks or other nonprofits that serve hungry people. Using technology that way, they can still prevent this perishable inventory from going to waste.

To-Increase is planning additional, enhanced capabilities for Food Manufacturing and Distribution. They will bring greater effectiveness to such areas as transport planning and logistics, and also have a positive impact on waste reduction. Learn more about To-Increase Food Manufacturing and Distribution, and review customer success stories, at www.to-increase.com/erp/food/microsoft-dynamics-nav. Contact learnmore@to-increase.com to explore the solution more in-depth.



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