

*Using Plastic
Reusable Packaging
To Go Green*



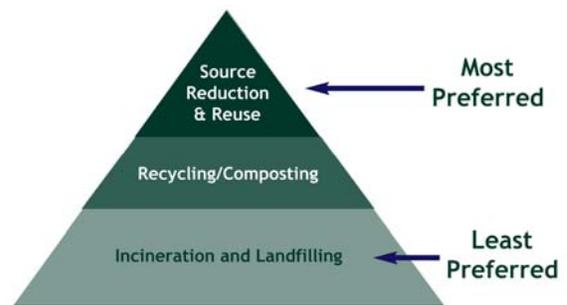
ORBIS Corporation Helps Companies Go Green

World Class Companies Strive for Sustainability Across the Supply Chain

As leading companies continue to refine their environmental practices to drive sustainability, they scrutinize every point in their supply chain, including the packaging used to move, handle or store their product, for opportunities to make positive environmental impacts.

Plastic Reusable Packaging Supports Environmental and Sustainability Initiatives

The use of plastic reusable packaging effectively stops waste at the packaging source to prevent the entry of disposable packaging in the solid waste stream. The long service life of reusable containers and pallets allow them to be used over and over again in place of single-use corrugated boxes and limited-use wood pallets. When compared to single-use or disposable packaging, reusable packaging enables significant “source reduction”.



Source: Environmental Protection Agency

About ORBIS

ORBIS Corporation, a subsidiary of Menasha Corporation, helps world-class customers move their product faster, safer and more cost-effectively. ORBIS uses proven expertise, industry-leading knowledge, innovation, superior products (containers, pallets and dunnage) and supply chain services (pooling, cleaning and logistics) to implement plastic reusable packaging systems.



to return empty packaging for re-use or replenishment.

Specifically, ORBIS plastic containers and pallets are used for work-in-process, storage and distribution applications within the supply chain. They are ideal for multiple trip applications in a closed-loop environment. They can also be used effectively in a managed open-loop system, with reverse logistics in place

Sustainability Defined

The Environmental Protection Agency (EPA) defines “sustainability” as the “ability to achieve economic prosperity, while protecting the natural systems of the planet and providing a high quality of life for its people.” The EPA

established three tenets of sustainability: economic, social and environmental. ORBIS helps today's global companies support these tenets of sustainability with reusable packaging.

According to USA Today, Wal-Mart says it will reduce solid waste from its US stores by 25% within 3 years and vows to cut greenhouse gas emissions by 20% within 7 years. In addition, Wal-Mart realized it can save hundreds of millions by cutting transportation costs with a more optimized shipping fleet. ⁷

Ford Motor Company recently renovated its historic River Rouge plant into "one of the most environmentally sound factories in the world." ⁸ In 1999, Bill Ford Jr., then Ford Motor Company Chairman of the Board, proposed to overhaul the entire Rouge complex. Re-establishing the environmental spirit his great-grandfather, Henry, had instilled in the company, Bill Ford set out to "lay the groundwork to transform a 20th century industrial icon into a model of 21st century sustainable manufacturing." ⁹

What Makes Packaging Sustainable?

The Sustainable Packaging Coalition has defined criteria for sustainable packaging. It states that to meet sustainability requirements, packaging must:

- Be beneficial, safe & healthy for individuals and communities throughout its life cycle
- Meet market criteria for performance and cost
- Sourced, manufactured, transported, and recycled using renewable energy
- Maximize the use of renewable or recycled source materials
- Be manufactured using clean production technologies and best practices
- Be made from materials healthy in all probable end of life scenarios
- Be physically designed to optimize materials and energy
- Be effectively recovered and utilized in biological and/or industrial cradle to cradle cycles

By design, ORBIS' plastic reusable packaging products meet most sustainability requirements and strongly support the three tenets of sustainability.

How does ORBIS Impact the Three Tenets of Sustainability with its Customers?

Economic impacts:

- Reduces Packaging Costs: One computer manufacturer was spending more than \$1.7M/year in single-use packaging. It estimated that with a \$187,500 investment in reusable bulk containers and dunnage, it saved approximately \$1M/year in packaging.
- Generates Rapid ROI: Check Printers (Nashville, TN) implemented reusable containers and experienced a financial payback within just 9 months, with a Return on Investment of over 430%, over a 5 year service life.
- Reduces Costly Product Damage: General Electric Appliance (Louisville, KY) reduced damage to inbound component parts by 85% after implementing reusable containers.

- Reduces Labor Costs: With small-lot packaging implemented at their assembly lines, Ford saved up to 3 feet of walking distance for each part, equating to 54 hours per year or 1.35 man weeks. ¹
- Reduces Inventory/Space Requirements: CAMI Automotive cut inventory up to 40% with reusable packaging and related process improvements. ² Another manufacturer implemented reusable containers and pallets and re-allocated 20,000 square feet of production space.

Social impacts:

- Fully Recyclable: Reusable packaging is designed to be fully recovered and reprocessed into other useful products at the end of its service life.
- Improves Workplace Safety: Worker injuries at CAMI Automotive (lacerations from opening boxes and strains from lifting heavy or awkward loads) were reduced after converting to reusable packaging in the late 1990s. ²
- Improves Workplace Efficiency: At Daimler-Chrysler's Belvidere, IL plant, line-side assembly areas were reduced by 270 ft, resulting in less worker walk-time. Parts handling was also reduced by 27%. ³

Environmental impacts:

- Prevents waste from entering solid waste stream
- Reduces Greenhouse Gas Emissions: Franklin Associates studied the life cycles of two types of containers (single use and reusable) to identify and quantify energy and material inputs and emissions to the air, water, and land over the life cycle of a product system. (cradle to grave) In this Lifecycle Inventory Study, Franklin Associates found that the use of reusable containers reduced greenhouse gas emissions by 39%. ⁵
- Improves Transportation Efficiency, resulting in fewer trips and reduced fuel costs: CAMI Automotive increased truckload cube utilization on inbound trucks to 85% - 90%, with reusable packaging. ²
- Supports Source Reduction: Reusing items is another way to stop waste at the source because it delays or avoids that item's entry in the waste collection and disposal system. ⁶ According to the Lifecycle Inventory Study, reusable packaging produce 95% less total solid waste ⁵
- Requires Less Energy: According to the Lifecycle Inventory Study, reusables require 39% less energy over their service life. ⁵

ORBIS' Focus on Recyclability

At the end of their service life, plastic reusable packaging products can be fully recycled into other useful products. ORBIS provides its customers with an alternative to the disposal of excess, surplus, damaged or obsolete plastic reusable packaging, with its "Recycle with ORBIS" program. This program is designed to efficiently recover, recycle and reprocess plastic packaging products at the end of their service life. ORBIS purchases or provides credit towards a future purchase, in exchange for excess plastic packaging. Customers use visit the "Recycle with ORBIS" section of the web site to expedite the recycling process.

With strong industry, supply chain and application experience, ORBIS experts strive to support customers' environmental initiatives. Using a proven approach, ORBIS professionals analyze their customers' systems, design a solution and execute a reusable packaging program for long-term cost savings and environmental sustainability.

References:

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- ⁴ "Reusable Packaging: A Must, But at What Cost?", Council of Logistics Management Meeting, 2002. Presented by Jason Bullock, GreenPak and Thomas Goldsby, Ohio State University.
- ⁵ "Life cycle inventory of REUSABLE PLASTIC CONTAINERS AND DISPLAY-READY CORRUGATED CONTAINERS USED FOR Fresh PRODUCE APPLICATIONS", Franklin Associates for the Reusable Pallet and Container Coalition, October 2004.
- ⁶ <http://www.epa.gov/msw/sourcred.htm>
- ⁷ Fetterman, Mindy, "Wal-Mart Grows Green Strategies", *USA Today*, September 25, 2006.
- ⁸ Adler, Jerry, "Going Green", *Newsweek*, July 17 ,2006.
- ⁹ www.ford.com

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