

Xerox

By converting from a system that used many different sizes of one-way shipping containers to a system that relies on nine standardized sizes of reusable corrugated cartons, Xerox factories and suppliers worldwide can reuse the same boxes. This increases the reuse of corrugated boxes, diverts a large volume of corrugated packaging and wooden pallets from disposal, and cuts storage and shipping costs.

How it Works

In the past, Xerox's Webster, New York facility received component parts from more than 400 suppliers, each part packaged in its own, unique box. This resulted in the use of thousands of different types of boxes and as many as 24 different pallet sizes.

To gain better control over its packaging waste, Xerox developed a box reuse program (called the 88p311 Supplier Packaging Program). The company brought together packaging engineers from Xerox and its international suppliers to achieve a consensus on box style. Other participants in the planning process were quality control engineers, buyers, line engineers, assembly line workers, suppliers, and box makers. The program received final approval from senior manufacturing management.

The key features of the system are as follows:

- Nine standard corrugated cardboard box sizes and two standard wooden pallet sizes have been adopted; suppliers are required to use them. A "Supplier Packaging Agreement Form" specifies how parts are to be delivered to Xerox facilities and describes under what circumstances exemptions are allowed.
- A third-party handler manages the collection, sorting, and reselling of empty containers, eliminating the need to return containers to their point of origin. This is an "open loop" system.

Boxes and pallets can be used at any Xerox facility. They are designed to fit directly into designated positions on the assembly line, compatible with just-in-time delivery. As incoming shipments of parts are received and used, boxes are collapsed and stacked. The company then either reuses them itself to ship parts to other Xerox facilities or repair centers, or it sends boxes to the third-party handlers (one on each coast and one in the Midwest) who sort and resell the boxes to Xerox suppliers.

Savings

Before adopting the new system, Xerox spent over \$500,000 a year at Webster to send more than 4 million boxes to landfills. Now, standard boxes can be used for 60% to 80% of all incoming parts, and boxes average eight uses. Box usage has been reduced by 2.4 to 3.2 million units a year; \$1.5 million has been saved in pallet disposal costs. Payback was almost immediate.

The change results in some other benefits as well:

1. Reduced freight cost because standard boxes and pallets "cube out" more efficiently.
2. Reduced damage because boxes designed for reuse are sturdier. Higher unit cost of sturdier boxes negated by large-volume purchases and reuse.
3. Reduced storage costs owing to just-in-time delivery.

All things considered, Xerox estimates that the new packaging program saves its manufacturing facilities between \$2 million and \$5 million a year.

Credits: Indiana Institute on Recycling, Waste Reduction Case Studies
(<http://web.indstate.edu/recycle/caselist.html>)

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