



# EPP Rapid Research

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## **EPP Rapid Research Reusable Transport Packaging EcoBiz (Portland, Oregon)**

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### **Request**

What are the benefits and what is the feasibility for reusable transport packaging in the auto repair supply chain?

### **Background**

The Eco-Biz program in Oregon is assessing the environmental operations of auto repair shops. One common waste stream from these shops are one-time, or limited-use cardboard boxes used to ship/transfer supplies and parts from suppliers. The cardboard boxes are typically recycled after parts/supplies are received, but there may be an opportunity within the Portland area network of suppliers, to begin using reusable totes for some parts and supplies.

### **Key Findings**

Many companies are realizing the financial and environmental benefits of reusable transport packaging. Reusable totes may be an opportunity between different locations of the same company, between subsidiaries, between retail and distribution centers within a company, within a supply chain, and in the case of "pallet pooling" shared between different companies.

(Excluding pallets), In some cases, sturdy woven plastic bags, typically made from polyester or propylene, are used. However, more common are plastic bins or crates, which may or may not have lids, and that are designed for collapsing or stacking when empty. It can be helpful to use color-coded boxes for different parts or inventories.

These products are designed to be reused many times over, and eliminate thousands of throwaway bags and cardboard boxes, making them economic and socially sustainable. Companies report savings in labor costs, damaged goods, inventory costs, shipping costs, and purchase of cardboard, tape, and other packaging materials.

The INFORM document *Delivering the Goods: Benefits of Reusable Shipping Containers* includes a short discussion of the benefits of reusable shipping containers and the obstacles to expanding reuse. See [http://www.informinc.org/xsum\\_deliver.php](http://www.informinc.org/xsum_deliver.php) for more information.

A useful guide in assessing the opportunities, and the costs and aspects of getting started, is StopWaste's *A Cost Comparison Model for Reusable Transport Packaging* at <http://stopwaste.org/docs/Reusables102.pdf>.

Time and attention are required to initially set up a reusable tote program because the supplier (or distribution center), customer or endpoint location, and hauler/transporter must devise a system that is usable and reasonably affordable for all involved.

Another consideration within the auto repair industry, due to the lubricant use on many parts, is keeping reusable crates and totes clean.

Below are some case studies highlighting different applications for reusable transport packaging. Not all apply directly to the auto repair supply chain, but may provide insight. (To read more on the case studies that do not have links, find the actual case study at [www.usereusables.com/casestudies/index.html](http://www.usereusables.com/casestudies/index.html)).

**Savoy Spinach:** Switching from wooden bushel baskets to returnable, nestable and stackable HDPE containers has helped drive costs out of the supply chain for the Savoy Spinach industry.

**ANG Newspapers:** ANG Newspapers worked with the StopWaste Partnership - they determined that ANG had the ideal distribution system for reusable plastic pallets.

**Toyota Logistics Services (TLS),** formerly shipped carpet in cardboard boxes on pallets. Now, at all six Vehicle Delivery Centers in the United States, they use reusable, collapsible, and stackable crates, that do not require a pallet. The switch saves them 3,000 tons/year of wood and cardboard (combined weight), and \$3.5 million in reduced packaging and disposal.

**Ghirardelli Chocolate Company:** The San Leandro facility produces premium chocolate products. The company switched to plastic tubs to eliminate the waste, product breakage, and high costs of transporting its premium chocolate squares within the plant (and to packagers) in cardboard boxes.

**CHEP: Pallet Pooling Systems:** To reduce the overall environmental footprint of their supply chains, many manufacturers and retailers are looking to a shipping method that has long been used to maximize operational efficiencies. The CHEP pallet pooling shares pallets between numerous companies.

**Kaiser Permanente:** began using reusable totes in place of disposable cardboard boxes for distribution. Since implementing the program, Kaiser has saved approximately \$40,000 a year by dramatically reducing the cardboard boxes, tape, and filler purchased. Kaiser also reduced the amount of labor required for delivery of supplies to end-users by color-coding the totes according to their content.

In the Seattle area, a United Parcel Service (UPS) customer uses plastic crates to distribute retail goods to their stores and outlets. Each store then stacks four empty totes together and secures the sides with zip ties for UPS to deliver back to their distribution center (DC). Instead of paying for four empty totes going back to the DC, they are only paying for one. This effort has saved the company significantly in purchasing packaging materials. (No link available).

**NACHI Technology, Inc.,** a supplier of ball bearings to the auto industry reduces pallet, box, and expanded polystyrene (EPS) purchase costs by \$25,600 a year--and disposal costs by \$6,800 a year--by working with raw materials suppliers and customers, including GM, to adopt standard and reusable logistical shipping materials. <http://www.p2pays.org/ref/06/05028.htm>

## Conclusions

The PPRC recommends exploring efforts or systems to begin using reusable packaging within certain supply

chains of the auto repair sector in the Portland region. The PPRC may be able to assist with identifying sources for the packaging, and developing and establishing a pilot or trial system with a key supplier to the autobody sector.

### **Additional Resources**

Many other companies in the US, Germany and Australia have overcome barriers of reuse and are now invested in reusables. The following are case studies to this effect that can be found at [http://sydney.foe.org.au/SustainableConsumption/epr\\_pamphlets/reusable\\_pack.html](http://sydney.foe.org.au/SustainableConsumption/epr_pamphlets/reusable_pack.html):

Pallet reuse and recycling may be another opportunity that is not discussed further here. The PPRC may be able to help find recyclers if this is helpful to EcoBiz.