



# ADVANCING RECYCLING FROM AIRCRAFT CABINS

## Strategies for Large & Medium Airport Hubs

Large-hub and medium-hub airports account for about 90 percent of the country's 700 million annual passenger enplanements. These passengers generate more than 200,000 tons of waste onboard aircraft. Approximately 25 to 35 percent of this deplaned waste by weight consists of valuable recyclables such as aluminum cans, plastic bottles, and paper.

Significant opportunities are available at these airports for recycling materials from in-flight service. Even in regions with less robust recycling programs, stable markets usually exist for materials such as aluminum cans and newspaper, which can generate revenues from recycling.

### THE BUSINESS CASE—WHY RECYCLE?

According to industry estimates, the annual cost of disposing of aircraft waste is estimated at \$20 to \$26 million. Meanwhile, the market value of common recyclable materials generated from U.S. passenger flights is estimated at \$18 to \$26 million annually. While many airports already recycle some materials like aluminum cans, paper, cardboard, or plastic bottles, significant opportunities remain to reduce waste and increase recycling of waste from passenger terminals, airport concessions, and deplaned from aircraft.

A well-designed and well-managed recycling program benefits both airports and airlines through improved economies of scale, reduced disposal costs, and increased passenger convenience and satisfaction. Effective recycling can also help meet state or local recycling requirements and build a positive green image. This summary focuses on recycling deplaned materials from in-flight food and beverage service. Airport-wide recycling is addressed elsewhere, such as the U.S. Environmental Protection Agency's guide, *Developing and Implementing an Airport Recycling Program*.



Los Angeles International Airport (LAX) provides recycling collection and support services in tenant and public areas throughout the airport.

The program collects a wide range of materials from cans, bottles, and paper, to scrap metal and pallets. Sales of recyclables generate approximately \$50,000 per year.

### BUILDING ON EXISTING SYSTEMS

At airports across the United States, deplaned waste and recyclables from aircraft are typically directed either to

- An **airport-managed** system, in which cabin service crews or terminal maintenance personnel take materials to waste or recycling containers owned or operated by the airport or its contractor.
- An **airline-managed** system, in which **either**:
  - Flight kitchen crews take materials to flight kitchens or in-house airline provisioning operations for handling, **or**
  - Cabin service crews place materials in containers owned or operated by the airline or its contractor.

At airports where recycling infrastructure is not available or easily accessible to airlines, airlines may back-haul or transport recyclables to another location with the appropriate recycling services. The recycling best practices summarized here fully utilize and expand on the existing airport- and airline-managed systems for handling waste and recyclables. The parent document to this summary sheet, [ACRP Report 100: Recycling Best Practices—A Guidebook for Advancing Recycling from Aircraft Cabins](#), provides more information.

Separate summary sheets are available for small-hub and non-hub airports, airlines, and flight kitchens.



# Best Practices

## for Recycling from Aircraft Cabins at Large & Medium Airport Hubs

### STRATEGIES FOR GETTING STARTED

In partnership with airlines and their contractors as well as other key recycling participants, airports can implement the following **recycling best practices**.

**Secure top-down and bottom-up commitment** within the airport for recycling efforts. Leading programs combine executive leadership and Green Teams with the active support of frontline employees.

**Develop consistent recycling procedures** and infrastructure. Standardizing the recycling procedures and collection infrastructure to accommodate both materials from the airport terminal and deplaned waste will support recycling and efficiency. Provide clearly marked recycling containers paired with all waste containers, and share clear recycling procedures and site maps with airlines, flight kitchens, and other tenants.

**Track, evaluate, and share data on program performance.** Tracking airline-specific recycling rates, waste quantities, and cost savings from recycling supports continuous improvement in recycling. Airports can request reports from their waste haulers on quantities and costs of waste and recycling services and share the results with airlines.

**Make recycling part of everyday business** by providing education, training, and support to airport personnel, concessionaires, airlines, and others—and celebrate success.



At Portland International Airport (PDX), college interns provide monthly one-on-one recycling training to tenants in the airfield and terminal areas. This partnership supports recycling at the airport and provides meaningful work experience for the students.

### OPTIONS FOR TAKING YOUR PROGRAM TO THE NEXT LEVEL

- Conduct periodic waste assessments to identify additional recycling opportunities.
- Make purchasing choices that facilitate recycling and reduce waste. Airports can also encourage terminal vendors to sell recyclable items and minimize packaging waste.
- Separate waste disposal and recycling costs in tenant lease agreements, so that airlines and other tenants have a direct financial incentive to reduce waste and increase recycling.
- Where possible, use large compacting collection dumpsters to maximize collection efficiencies and cost savings.
- Foster collaboration and support industry-wide recycling by sharing best practices and lessons learned with other airports, airlines, and flight kitchens as well as industry trade associations.

Seattle-Tacoma International Airport (SEA) charges airline tenants customized rates for waste disposal, using data estimated based on compactor usage. Airlines and other tenants use key cards to open waste and recycling dumpsters on the airfield. The airport provides each airline its recycling rate, garbage fee, and savings from recycling.

### RESOURCES

- ACRP Report 100: *Recycling Best Practices—A Guidebook for Advancing Recycling from Aircraft Cabins* (2014)
- USEPA's *Developing and Implementing an Airport Recycling Program* (2009)
- FAA's *Recycling, Reuse and Waste Reduction at Airports: A Synthesis Document* (2013)



San Francisco International Airport (SFO) designed its new terminal with zero waste in mind. The airport embedded 16 sustainable policies in its concessions contracts, including requiring all disposables to be compostable or recyclable. The successful new food court has no garbage containers—only recycling and composting bins.