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## Food Waste Diversion Case Study Massachusetts College of Art and Design Boston, MA

**Summary:** *Massachusetts College of Art and Design (MassArt) is a public college offering undergraduate and graduate programs in art and design. MassArt has been diverting pre-consumer food waste in the kitchen prep area since February, 2012. In October of 2014 MassArt rolled out compost collection of post-consumer cafeteria waste. MassArt and Chartwells, their foodservice provider, have worked collaboratively to implement a comprehensive waste diversion program that captures compostable and recyclable materials both in their kitchen prep area and in their cafeteria.*

### At-A-Glance:

- *MassArt's cafeteria serves approximately 4,500 meals daily.*
- *Food waste diversion began with diverting food scraps in the kitchen in 2012. In October 2014, post-consumer collection began.*
- *MassArt's program is forecast to divert 90 tons of waste annually.*
- *Adjustments to MassArt's hauling service have cut organics hauling costs by 50%.*

**Profile:** MassArt has a single dining facility that serves approximately 4,500 meals daily to students from both MassArt and the Massachusetts College of Pharmacy and Health Science (MCPHS). The dining facility is operated by Chartwells. The facility has a small loading dock that must accommodate both deliveries and waste removal. Prior to working with RecyclingWorks, waste was collected into three types of containers: a compactor for trash, a mini-compactor for single stream recycling, and wheeled carts for food waste.



Post-consumer waste sorting stations

Because all food is served on disposable serviceware or in to-go containers, each day the cafeteria generates more than four yards of waste, most of which could be composted or recycled.

**Implementation:** Food waste diversion was implemented at MassArt in two phases. In 2012, they began by diverting food scraps in the kitchen prep area. Kitchen staff were trained extensively on separating waste into three streams: compostables, recyclables, and trash. Because the kitchen staff already used an internal program, Trim Trax, to measure and record wasted food, diverting food scraps from the trash to the compost bins was relatively straightforward. Ongoing training helps remind staff about which items to place in each bin.

Post-consumer food waste collection was rolled out in the cafeteria in October of 2014. All waste sorting stations were set up to separate compostables, recyclables, and trash. Chartwells communicated with the processors of both the compostable and recyclable materials to ensure they were purchasing serviceware that could be composted or recycled at their facilities. RecyclingWorks provided advice on what to consider in the process of bidding and procurement to best achieve their waste diversion goals.

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A large banner at the cafeteria entrance introduces the waste streams with color-coded icons

**Signage:** Signage throughout the cafeteria was developed through collaboration between MassArt students, staff, a marketing firm, and RecyclingWorks. A large banner at the cafeteria entry introduces three waste streams with color-coded icons: compost (green), recycling (blue), and trash (red). These icons and colors are repeated throughout the cafeteria. In the service area, labels indicate which containers are compostable and recyclable. The same color coding and icons appear on the signage and receptacles at waste sorting stations. Shadow boxes at these stations display actual examples of products that should be placed in each receptacle.

**Collection:** The collection process that transfers waste from the cafeteria to exterior compactors is also color coded. Each type of waste receptacle is lined with a different type of bag. Compost receptacles are lined with a compostable green bag, recycling receptacles are lined with a clear bag, and trash receptacles are lined with a black bag. Outside, the doors to the compactors are also color coded and labeled with the same system as found in the cafeteria. Sawdust from the woodshop is added to the compost compactor to eliminate any odor.

**Education:** In addition to the signage throughout the cafeteria, MassArt sent an email to all of their students explaining the new waste diversion system. They also plan to utilize student groups to teach incoming freshmen and remind existing students about proper sorting. Because the signage throughout the cafeteria and at sorting stations is so clear, the system is self-explanatory and does not require staffing at sorting stations.

**Challenges:** In order to execute their goal of diverting compostable materials, MassArt had to find solutions to several obstacles.

The most significant challenge MassArt faces is the space constrictions of its urban location in the center of Boston. As a result, they have very limited space to collect and store waste outside. Before implementing the front-of-house food collection, MassArt had a trash compactor, a mini single-stream recycling compactor, and wheeled carts for food waste from the kitchen. The carts did not have the capacity to store the high volume of compostable waste from the front-of-the house. To solve this challenge, MassArt switched to a waste hauler that could provide a divided trash and single stream recycling dumpster. This freed up space for a 10 yard compactor for compostable waste.

MassArt reduced the cost of upgrading the sorting stations in the cafeteria by retrofitting the existing stations. Instead of purchasing all new bins, MassArt re-covered the existing bins with a color coordinated laminate top that matches the signage and labels throughout the cafeteria.



Signage in the service area help identify which containers are recyclable and compostable

**Evaluation:** The new waste removal program has greatly reduced collection costs and results in a much cleaner dock area. In switching from collecting organics in carts to a collecting in a compactor, the cost for hauling organics was cut in half.

Diversion of compostables at MassArt is forecast to divert approximately 90 tons of food and organic waste each year.