

Homework 5

Plastics in a Circular Economy

This week we looked into plastics packaging which is the largest source of single use plastic waste. We also heard from Jeff Snyder Senior Vice President, Recycling & Sustainability, Rumpke Waste & Recycling.

- a) Explain why plastics packaging is so widely used in comparison to metals, paper, and glass packaging. Give some examples from consumer products, construction materials, medical supplies, cleaning products, food, e-commerce.
- b) Explain how multilayer film packaging is produced. What are the advantages of multilayer films over single layer films? Why are multilayer films difficult to recycle?
- c) What are the problems with recycling of Flexible packaging? Do the benefits you listed in question “a” outweigh the problems with recycling? If flexible packaging is landfilled, is there a net life-cycle benefit in terms of carbon footprint to these materials compared to paper or glass packaging which can be easily recycled?
- d) Go through the steps necessary to recycle flexible packaging and list the hurdles to each step and how they are being or could be addressed. The steps are 1) Collection; 2) Separation, Sorting and Volume Reduction; 3) Marketing/use of/demand for the product streams.
- e) Give some highlights from Jeff Snyder’s presentation to the class. Compare Rumpke with volunteer organizations like Cincinnati Recycle and Reuse Center, and with companies targeting flexible packaging and non-recyclable packaging like TerraCycle and Hefty EnergyBag. How do their markets and business models differ? Are these organizations competitive or parallel efforts?