Companies are interested in adding the "green" label to their products to reduce their spending on new containers and to create an eco-friendly reputation

Community

EPS foam containers are used to ship food and other items within communities

The solid EPS can be sold to back into the economy for about $0.40 per pound.

Recycling EPS foam shipping containers into new products begins with the densification of EPS foam material. The containers are densified into a solid material which can be reconstituted into products such as surfboards and building materials.

People within the community can serach and locate recyclers of EPS foam

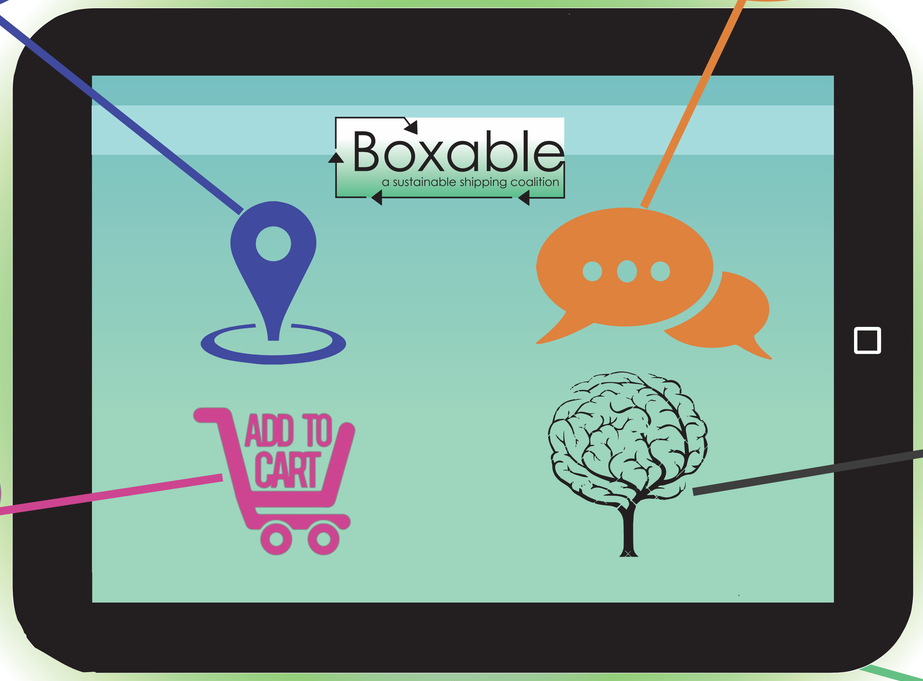
People in the community can communicate using the **Boxable interface** to build a more sustainable network

Biotechnology

EPS foam containers can be dropped off at local recycling companies. Community members can find local recyclers on the Boxable interface.

Densification can be used in cities that do not have ample reuse options

Recycle



A portion of the cost savings by biotechnology companies will be passed onto research laboratories, thus allowing researchers to allocate money towards other supplies.

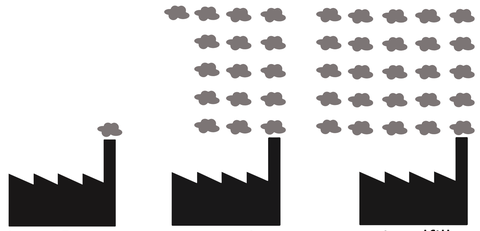
Biotechnology companies pay on average between $4-$12 for every new EPS foam container. Discarded EPS foam containers can be reused up to 25 times.

The **Boxable interface** will allow research facilities to sell EPS foam back to biotech companies

The **Boxable interface** will connect buyers and sellers of EPS foam together through a online marketplace

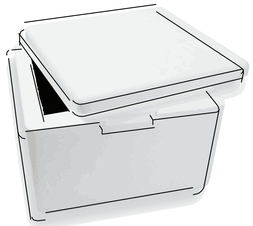
The **Boxable interface** will educate people about EPS foam, aiding the goal of continuous recycling and programs associated with it.

Greenhouse Gas Emission Scenerios for Three Different Pathways



One cloud symbolizes 0.1 lbs CO2/box

EPS Foam Starting Point



The begnning of EPS Foam's contribution to a circular economy

Research Facilities

Laboratories receive high amounts of EPS foam containers

Collection Site

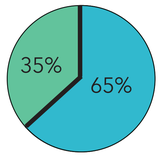
Boxable will serve as an intermediary for all monetary exchanges within this circular economy

While EPS foam is cheap to produce, it requires a substantial amount of energy from non-renewable resources.

Landfill

EPS foam has a beaded matrix structure and the beads pollute the environment when the product is mishandled. When EPS foam beads are ingested by wildlife species, they can block the digestive tract and cause starvation. To human health, EPS foam is a "reasonably anticipated human carcinogen" (U.S. Department of Health and Human Services).

There are 3,300 labs on UW-Madison's campus receiving EPS containers everyday



Survey results showed that approximately 65% of labs were aware of an EPS foam recycling location

Without a specialized recycling facility, 100% of EPS foam is landfilled. EPS foam cannot be placed in common community single-stream recycling containers due to its high volume and low density properties.

Boxable
a sustainable shipping coalition

Boxable was founded on the principle of reusing and recycling Expanded Polystyrene (EPS) foam shipping containers. The University of Wisconsin-Madison is a dedicated research university and houses over 3,300 wet laboratories which receive an estimated total of 10,000 EPS foam shipping containers each year. Beginning in 2013, WeConserve (a sustainability organization on campus) started the EPS foam recycling system at UW-Madison. Through their initiative, there is now 25 EPS foam recycling stations on campus. Boxable aims to to increase the recycling/reuse of EPS foam shipping containers locally, because the containers are in prime condition after being discarded in laboratories. Our program serves as an educational model that research universities could implement using our interface (**Boxable Website and Phone Application**).

A research university can divert 5 semi trucks of EPS foam per year with a recycling program