

Enpro 352

A Recyclable Business Model for the IIT Future



Plan Overview

▶ Goal

- Find cost savings from increased recycling rate and new revenue to justify five (5) student workers (~ \$40K/Yr.)

▶ Pilot a Program to Increase Recycling Rate

- Using small scale surveys and leading industry information, and using other, non-pilot building as a control group
- Create and conduct a pilot program in one or two buildings as a test to see its impact if it was rolled out campus-wide

▶ Find New Sources of Revenue from Recycling

- Without interfering with existing initiative in recycling batteries, computers, cell phones and other electronics
- Find and develop a plan to generate new revenue

Conflicts

- ▶ Familiarity with recycling
- ▶ Advertising without wasting

Ethical issues

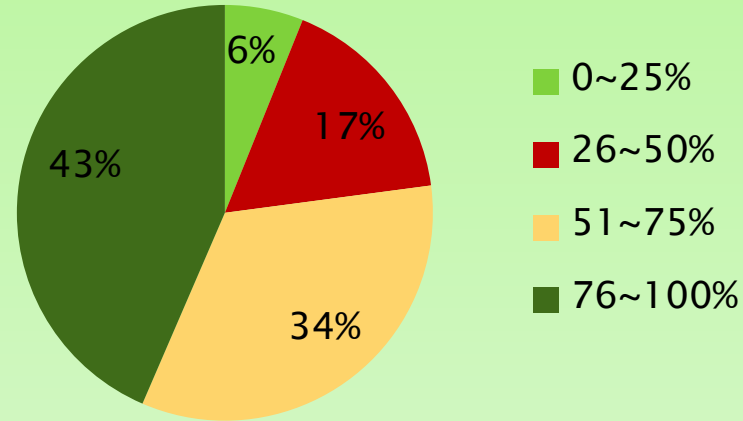
- ▶ Ensuring materials are completely recycled
- ▶ Pre-existing contracts



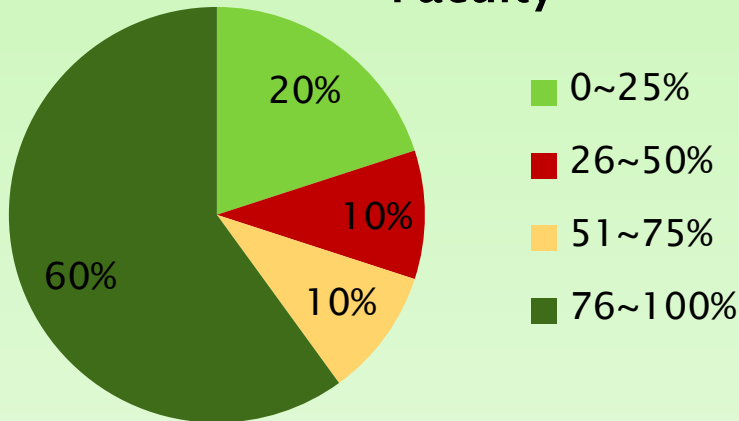


What percentage of paper do you place in the recycling bins?

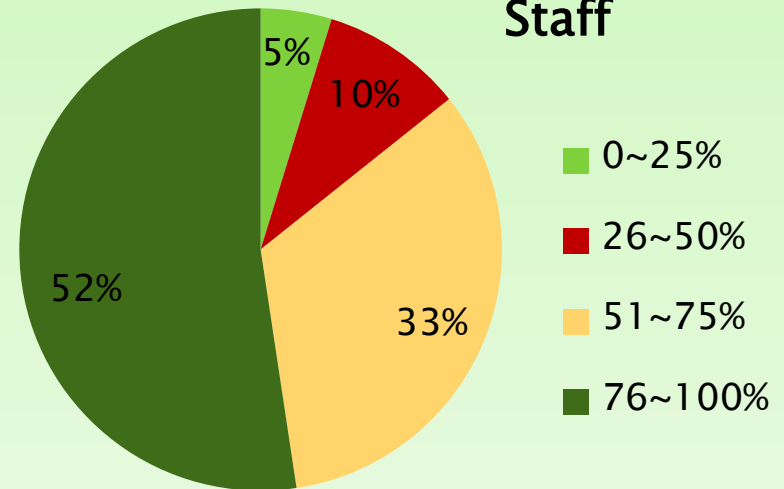
Students



Faculty



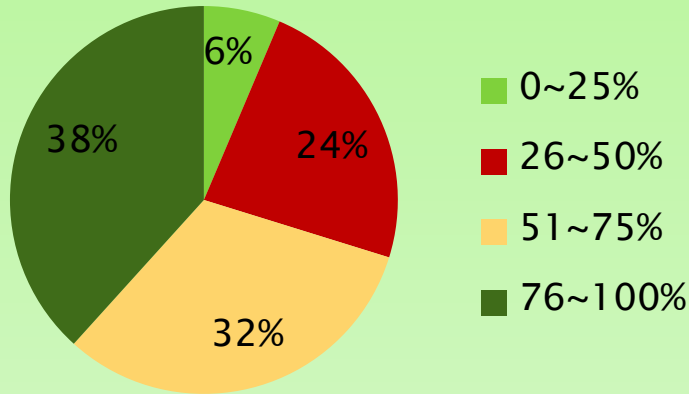
Staff



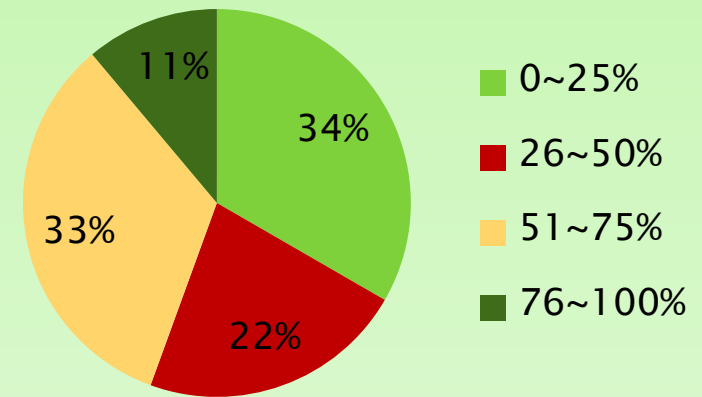
What percentage of plastics

do you place in recycling bins?

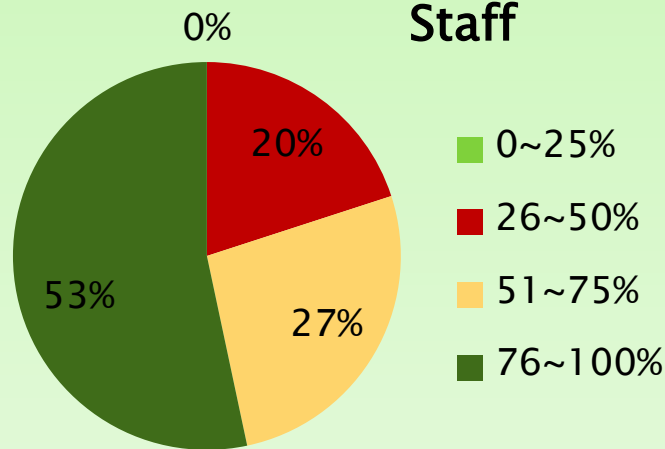
Students



Faculty



Staff



Awareness

- ▶ Currently 7,707 Students at IIT
- ▶ OmIIT Waste Campaign
- ▶ Recyclemania
- ▶ Sports Events



Immediate Solutions



- ▶ Education/Training
 - Orientation
 - Faculty Training Sessions
- ▶ Pilot Program
 - Alleviate Confusion
 - Avoid Contamination
- ▶ Correcting Labels
 - Standardize
 - Pictures, Color-Coding...



More Efficient Pick Up



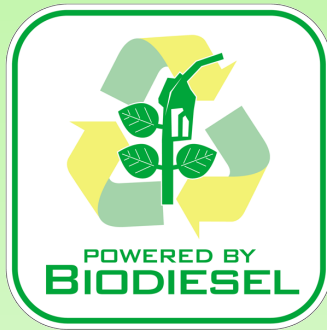
- ▶ Reducing the number of pickups will in turn reduce the cost for the university

- ▶ Decreasing the number of routes by allocating the most efficient locations, will cut down the time spent collecting materials around campus.



Biodiesel

- ▶ Sell to IIT shuttle service
- ▶ Sell oil directly to Loyola



Hand Soap

- ▶ Fairly simple and cheap process
- ▶ Use in campus bathrooms

Loyola University Program

- ▶ 1,950+ gallons produced
- ▶ 2oz sample \$2.49
- ▶ 8oz container \$7.99
- ▶ 1gallon \$20.00

▶ offsetting 37,200+ lbs CO2 emissions

Wood Shop



- ▶ Mulch
- ▶ Composting Agent
- ▶ Pet Bedding
- ▶ Chipboard/Fiberboard



Auto Shop

Energy & Heat



Used Oil Re-refinery

Lubricating oil

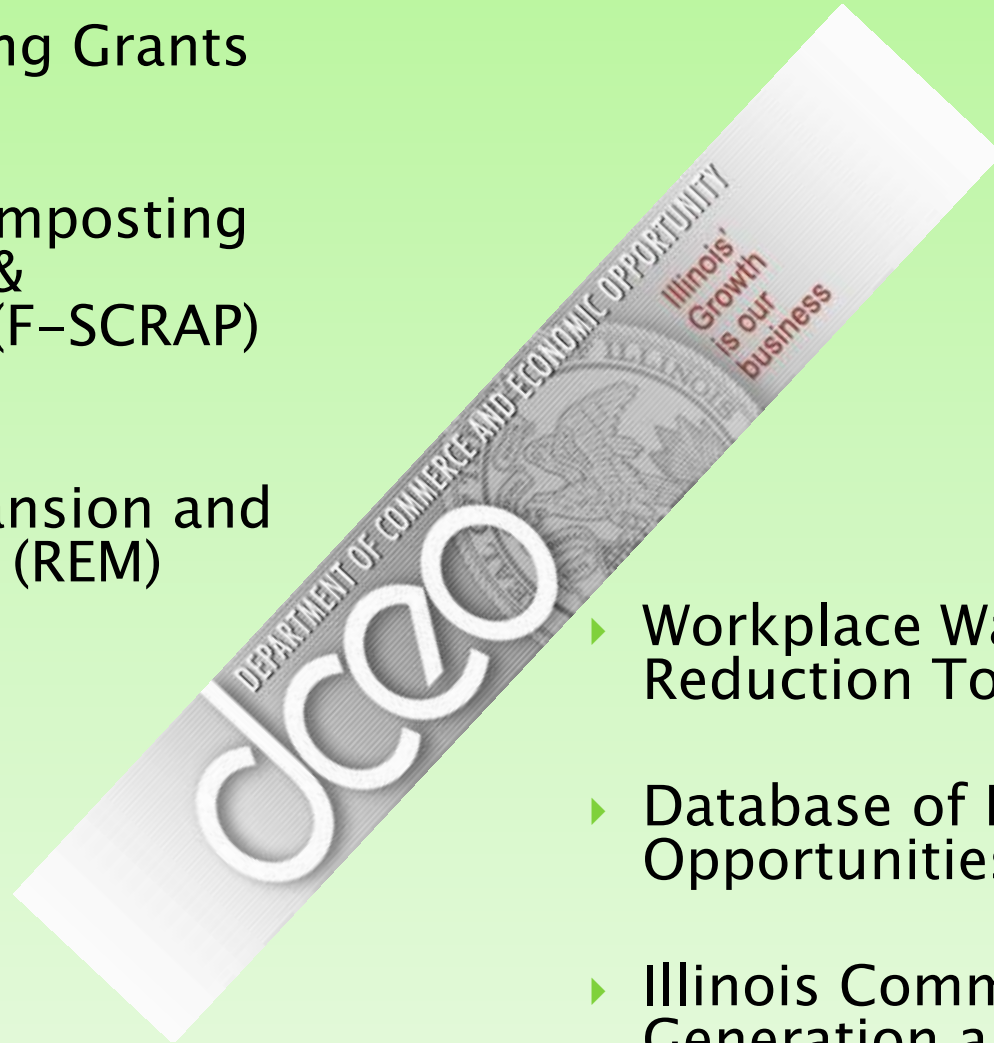
Recycling Scrap Metal



Aluminum	\$0.15–\$0.45 per lbs.
Iron	\$0.01–\$0.04 per lbs.
Stainless Steel	\$0.15–\$0.35 per lbs.
Lead	\$0.08–\$0.15 per lbs.
Copper	\$0.35–\$1.50 per lbs.
Brass	\$0.25–\$0.90 per lbs.
Bronze (red brass)	\$0.30–\$0.90 per lbs.

Grant Opportunities

- ▶ Illinois Recycling Grants Program
- ▶ Food Scrap Composting Revitalization & Advancement (F-SCRAP) Program
- ▶ Recycling Expansion and Modernization (REM) Program
- ▶ Workplace Waste Reduction Tools
- ▶ Database of Recycling Opportunities in Illinois
- ▶ Illinois Commodity/Waste Generation and Characterization Study



Surplus Property Exchange for University Departments:

A website that will further campus sustainability

- ▶ **Reduce** the amount of materials just laying around
- ▶ **Reuse** non-grant items to give them a new life and save money by not purchasing new
- ▶ **Recycle** materials that cannot be reused

Next steps in implementing a salvage store website:

- ▶ Research
- ▶ Investigate
- ▶ Financial
- ▶ Legal
- ▶ Security
- ▶ Create processes
- ▶ Unsold items
- ▶ Marketing Plan

Rummage Sale Event

- ▶ Create enthusiasm for & gauge people's interest in establishing an online "rummage sale" like the salvage store.
- ▶ Various IIT departments will be asked for donations of materials that are not being utilized. Here are some examples:



Self-Measurement of Success

- ▶ New recycling program that has been tested and is ready to be implemented campus-wide
- ▶ Several new revenue opportunities that have been researched and developed to the point of implementation
- ▶ Proposed calendar of events and corresponding job descriptions for the new student workers who will be hired by Joe Clair, the EnPRO Sponsor, to run the new recycling business