

Sustainable Manufacturing Practices in Michigan

How to Take Ownership of
Zero Waste Goals

"It's a package deal!"

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DENSO

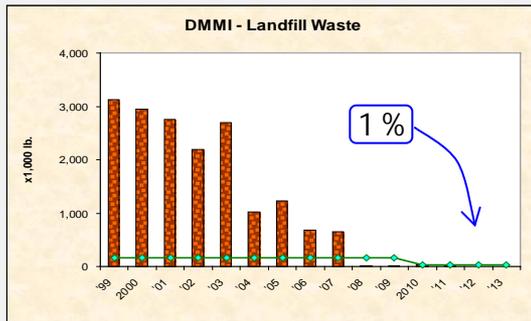
Maybe you have heard of us ?

DENSO

A Case study – P2 & recycling

- DENSO Global

“Zero Landfill” (99% ò)



, 2012 – Internal target

“Zero” Trash by 2015



f 2015 + Global Vision

“Reduce Total Waste”



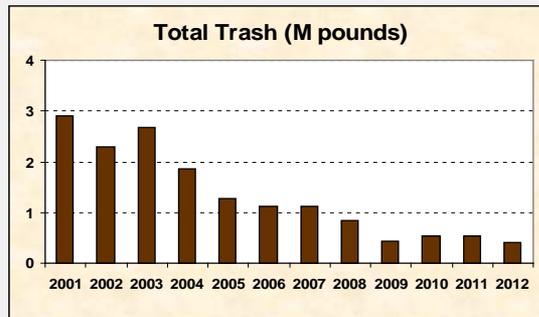
- We “crushed it” on the direct landfill target (with some emphasis on Waste to Energy)
- , We now moved our focus to total trash, which had plateaued after many years –

We have ...
a Target



What has worked?

, 2012 – Internal target
"Zero" Trash by 2015

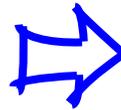


1. **Less Waste**
 - Process design & kaizen
2. **Recycle More**
 - More products, new markets
 - Internal reuse
3. **Recycle Better**
 - Education & collection

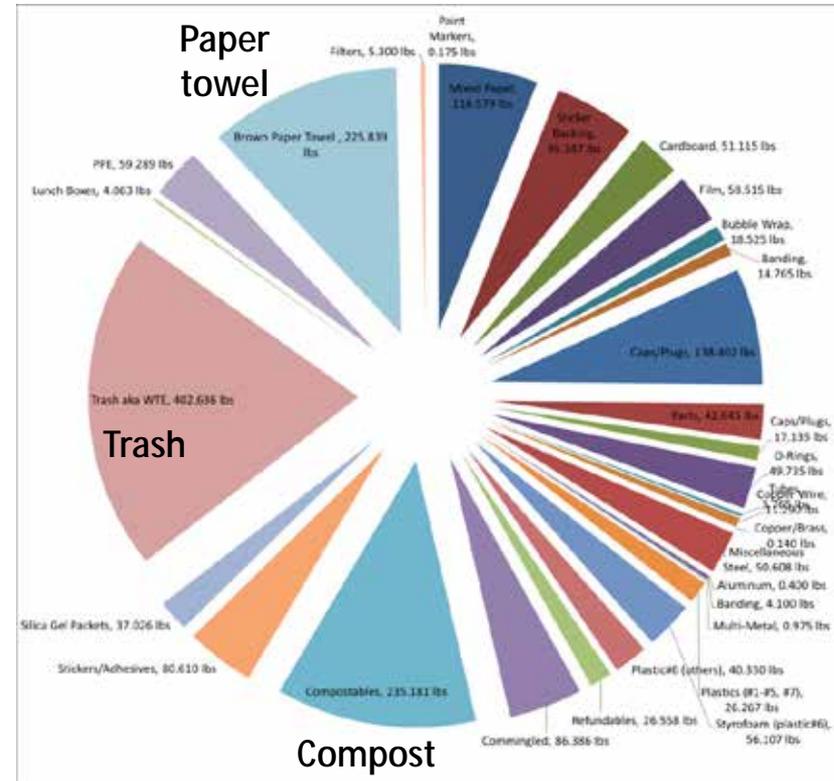
We made good progress
The remainder goes to WTE
Can we do better ? < Yes ! >

Moving forward - we partnered with WMU-GMI

WMU – GMI in action: “Deep dive” Dumpster-ism



Values in pounds



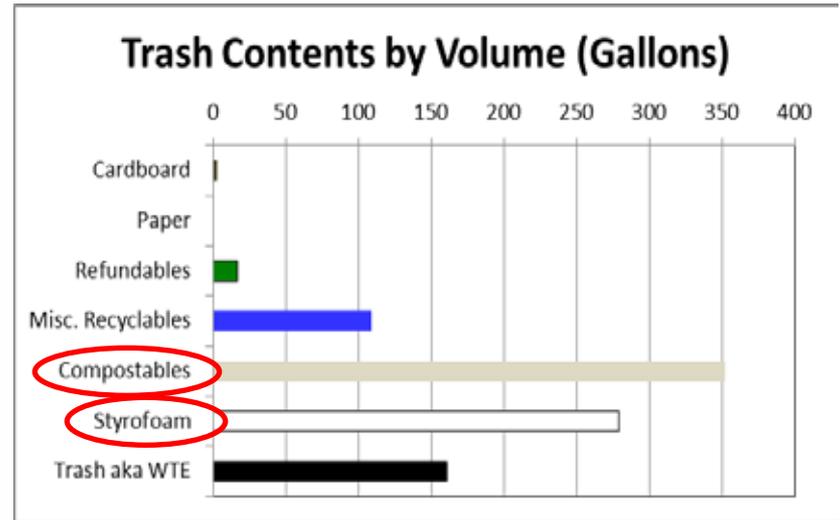
We have ...
The Facts



Fresh eyes and Strong backs produced the *details!*

And digging even deeper!

DUMPSTER DIVE OF CAFETERIA TRASH



RESULT

By **volume**, the top items were:

1. Compostable –
Food & Brown Paper Towel
2. Styrofoam

CONCEPT ACTIVITIES

Action 1 –

- a) change from styrofoam to reusable (washable)
- b) change from styrofoam to compostable materials (paper)
- c) find a way to recycle the current styrofoam

Action 2 -

Compost current materials



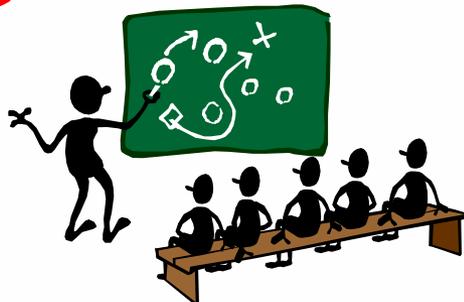
We have ...
Our Plan



Where to next ...

	Washable tableware	Compostable tableware	Styrofoam densifier
Concept	O	O	D-X
Eco - Benefit	O (reduces waste)	D (still creating the waste)	D (still creating the waste)
Barriers	No Space Labor to support	Cost Increase Who should pay ?	No Space Operating Cost
Waste Cost	O	O	D
Total Cost	X	X	X
Overall	X - D?	D- O?	X

Approval ?



Behind the scenes



- Lots of enthusiasm
- Concerns with cost, Associate perception
- Benchmarking – what is “X” doing ?

Next step – conduct associate surveys

How do you show that Sustainability is 3-P's, not just \$

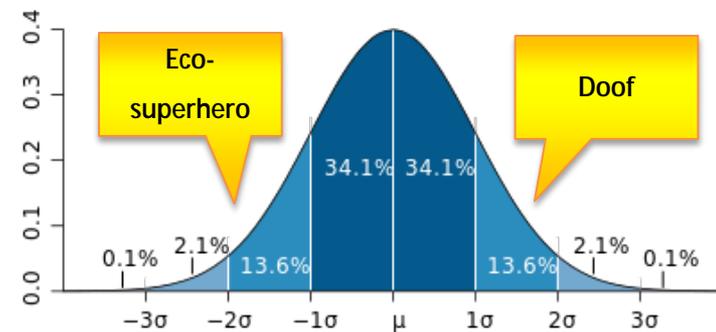
Other common "Barriers"

Common barriers and distractions : *Organization, Culture & Human Nature ?*

#1 = 3 ft. rule



#2 = 10% rule



#3 = the law of diminishing returns



#4 = NIMBY or T.N.M.J.



In Summary ...

1. **If it was easy – everyone would do it.**
2. You need a mechanism for creating value of intangible benefits
3. When you're "on the fence", it's critical to know the cultural priorities and perspectives.
4. (W-o-W) A slam dunk for someone else might not fly at home.
5. (W-o-W) Sometimes, the same message carries more weight from a 3rd party than coming from home.



Ownership is a function of creating mutual & shared values.

Any Questions?

