

Sustainable Manufacturing Practices in Michigan

CREATING A CULTURE OF
PERFORMANCE AND
SUSTAINABILITY

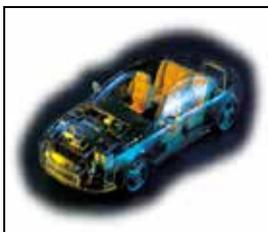
“Metrics Madness”

By: Michael Myszka, Environmental Section Leader

DENSO Overview

DENSO

•#2 Automotive Parts
Supplier in the World



•2013 Sales \$ 39.8 Billion (US \$)

•140,000 associates - Globally

•17,000 associates - North America

•28 Manufacturing locations in NA

Our Facility - DMMI

•is located in Battle Creek, MI

•is located on \approx 100 acres.

The campus: 5 buildings,
at roughly 1.4 million ft²

•Sales: \$ 1.38 B (FY 2013)

•Associates: 2,400 associates + \approx 500 temps

Our Products

•DMMI is the manufacturer of high quality automotive heat exchangers,

•Radiators, heaters, air conditioning components and their final assemblies

•Our customers include Toyota, Chrysler, Honda, GM, Ford and others

•in FY 2013, produced 18.3 M cores produced
(radiator, heater, condenser and evaporator)

Fun Facts (2013)

- Our average electric bill: 8,9000,000 kW-hr/ month

- **Recycling rate:** 89% *12.1 M pounds in 2013*

- **Landfill waste** \approx 99.8% (from 1999)

- **Trash volume** \approx 78% (from 2001)

- **CO2 emissions** \approx 50% *n* (from 2001)
(Nat. gas + electricity)

- **VOC emissions** \approx 36% *n* (2000)

- **Water use** \approx 42% *n* (2000)

Sustainability Headlines: Buzzword Bingo ?

28 metrics that really matter !

8 Key Drivers for Sustainable transparency

Greenwash
– is it Real ?

Sustainable Strategy
requires good Planning

Sustainability Metrics
create value

create value
Sustainability Metrics

Saving Money Is No. 1
Sustainability Driver

Are metrics giving us "Data Intoxication" ?

Sustainability Metrics – the Crisis Management Crisis



**You can't manage what
you don't measure !**

but ...

**Will what you measure
define what you manage
?**

Do we let the "Crisis" manage us ?

Think about it !

PLAN

What is the **best** metric?

What is a **bad** metric ?

Are **more** metrics better ?

Do you like it Raw or **Normalized** ?

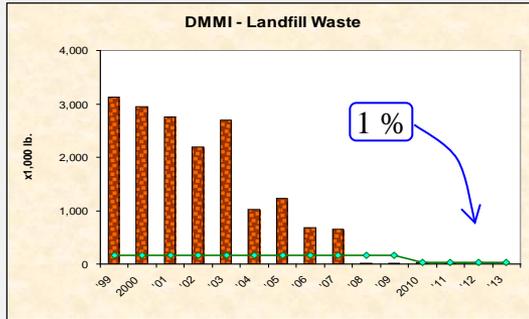
REFLECT

Does today's "failed" metric – create priority bounce?

Remember - The law of diminishing returns ?

"And the winner for best metric is ..." (e.g. waste)

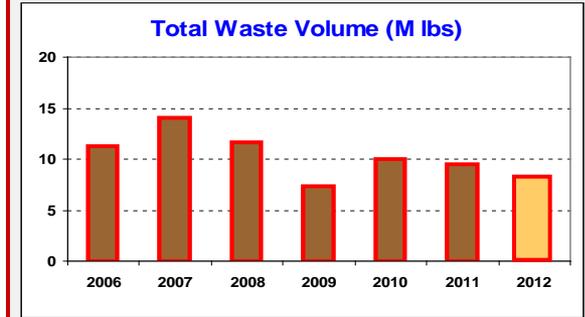
- DENSO Global
"Zero Landfill" (99% ò)



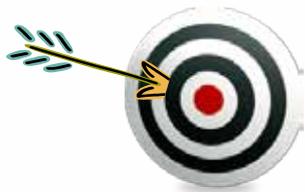
- 2012 – Internal target
"Zero" Trash by 2015



- f 2015 + Global Vision
"Reduce Total Waste"

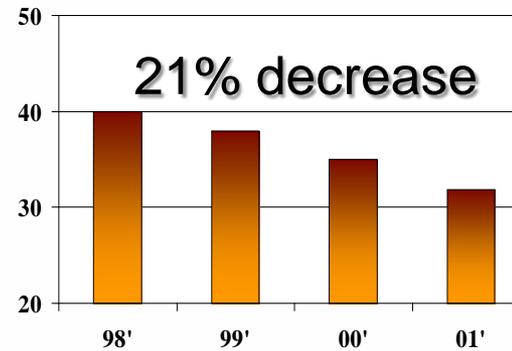
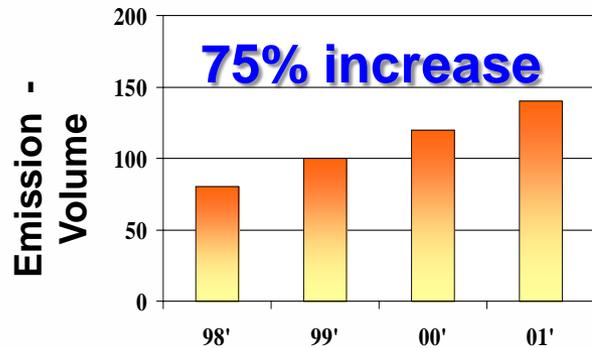


The Metric determines the Path, the Process

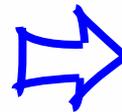


	Zero Landfill	Zero Trash	Total Waste
WTE / Burn	O	X	X
Recycle	O	O	X
Re-use	O	O	O
Prevention	O	O	O

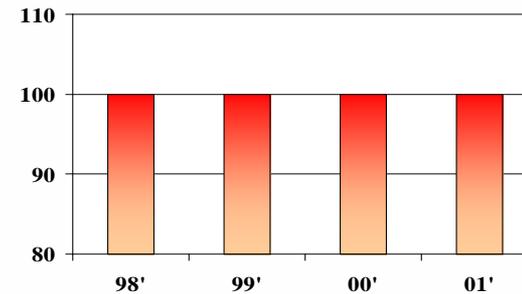
b) Normalization (& *Rur* metrics sustainable ?)



Emission
Volume
Sales



	Sales	Widgets
98'	\$2,000	800
99'	\$2,600	1,000
00'	\$3,400	1,200
01'	\$4,400	1,400



Emission
Volume
Widget

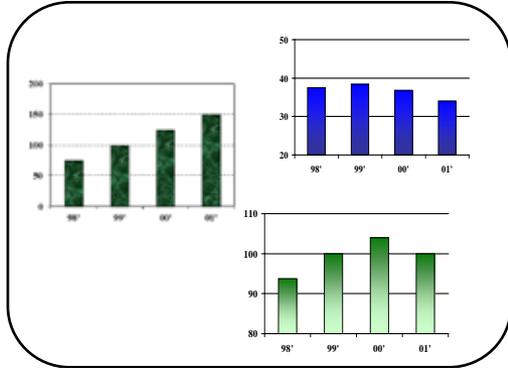
Q? So the purpose is ...

a) Improve environment ?

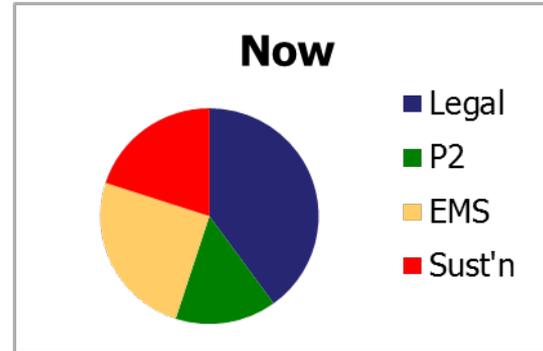
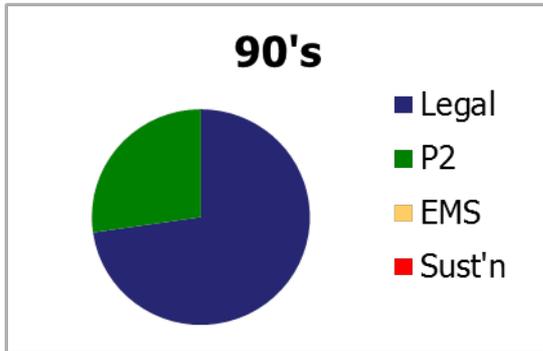
b) look good ?

Are you changing metrics every 2-3 years

c) "I'd give it all up – for just a little bit more"



What Stakeholders want to see



What the EHS staff see

In Summary ...

1. The drive for Sustainability is broadening the world's perspective.
2. However, the concept or definition of Sustainability still varies
3. More and more, Sustainability is reflected through metrics
4. **There is no one (or two ...) universal Sustainability metric.**
5. **There is a subtle and inherit risk of allowing metrics to define Sustainability. Instead, Sustainability should define the metric**

Metrics are a measure,
Sustainability is a mindset !

Any Questions?

