



We apply the  
**80/20**  
process to  
everything  
we do

# Packaging - Best Practices

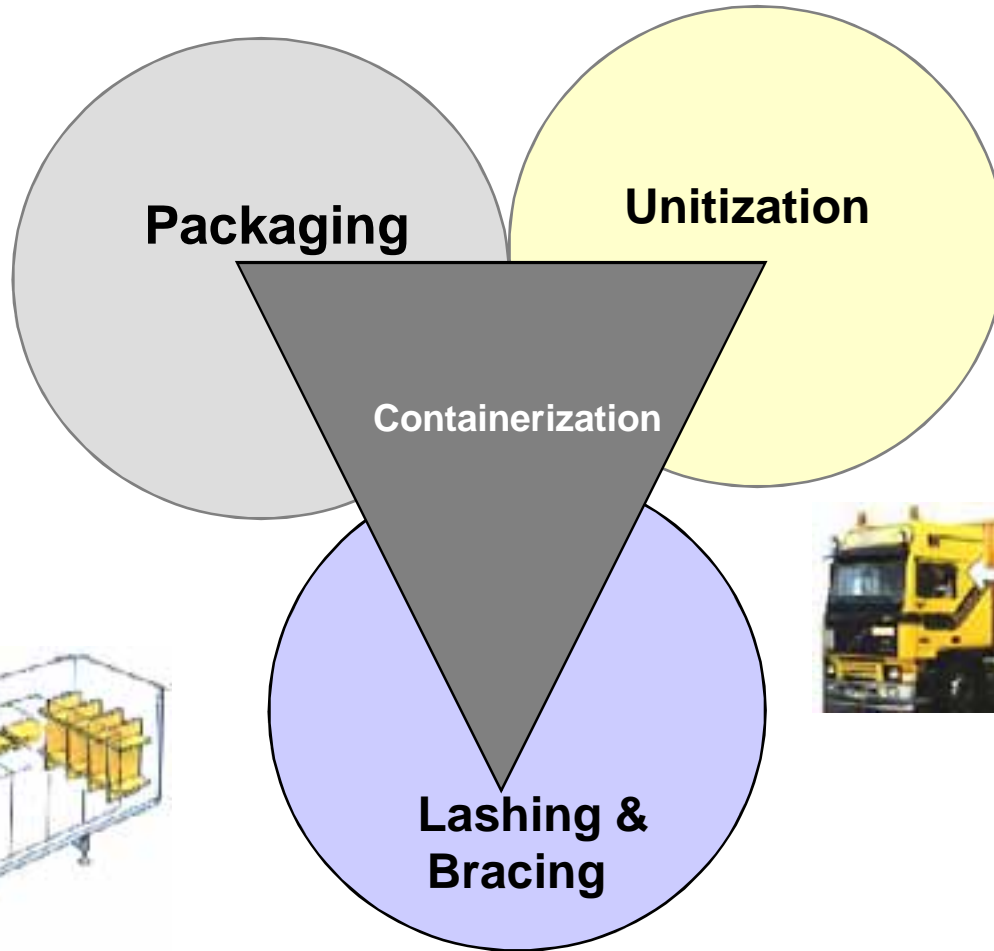
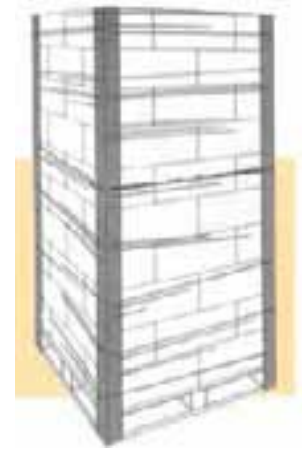
ITW India Ltd



# Auto Industry - Key Issues

1. Product Arrival Concerns
  - a. Corrosion
  - b. Mix up
  - c. Damages
2. Recycling & disposal challenges
3. Response time to packaging design calls
4. Aligning with International Standards
  - Depending on country and customer
5. Continuous Total Cost Reduction







# Packaging... Case Study



# Packaging Case Study #1



## Castings / Forgings

- Typically packed in wood / plywood boxes
- Heavy Gross Load
- Issues:
  - fumigation of wood
  - availability wood boxes
- Strict norms regarding fumigation in US & EU – ISPM 15 norms



## ITW method



- Wood Boxes replaced with Edgeprotectors & corrugated
- Lesser gross weight
- Better Aesthetics
- Easier to unpack & dispose
- Lesser problems of fumigation & moisture
- Lesser total cost of packaging

Packaging

Unitization

# Unitization ... Case Study

## Tier 1 – Auto Ancillary

Lashing &  
Bracing



# Unitization...Case Study





# Case Study : Packaging + Unitization



SKD EXPORTS



# Packaging + Unitization

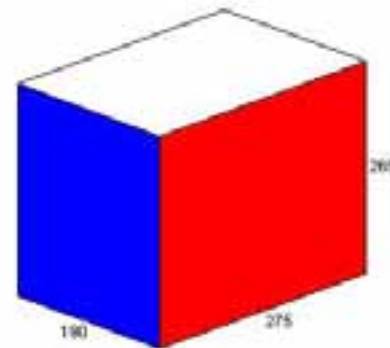
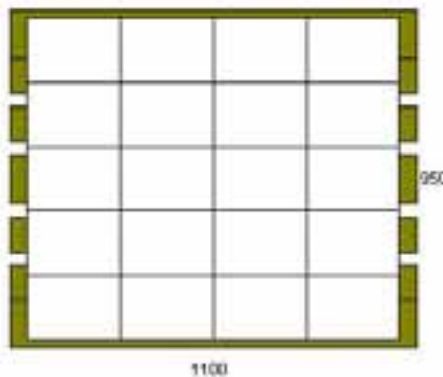
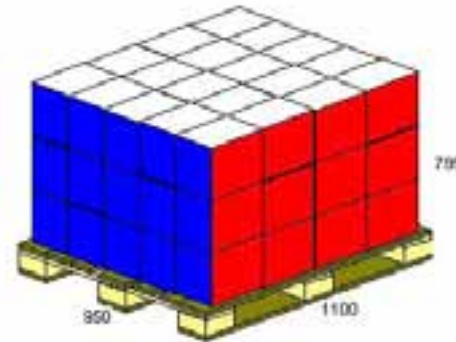
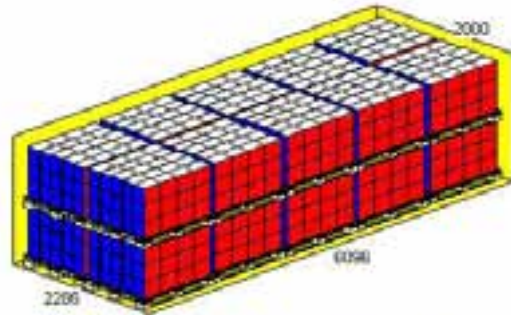
Key Factors		Initiatives
§ Cost	→	§ Zero Based approach
§ Load types <ul style="list-style-type: none"><li>§ Dense Loads</li><li>§ Odd Shaped</li><li>§ Machined Surfaces</li></ul>	→	§ Reinforcements § Load strapped to Base § RP oils / Dessicants § VCI Stretch film
§ Custom Packaging Design	→	§ Outsourced design & Operations
§ Total cost optimization		§ Reduced total Cost through reduced packaging cost



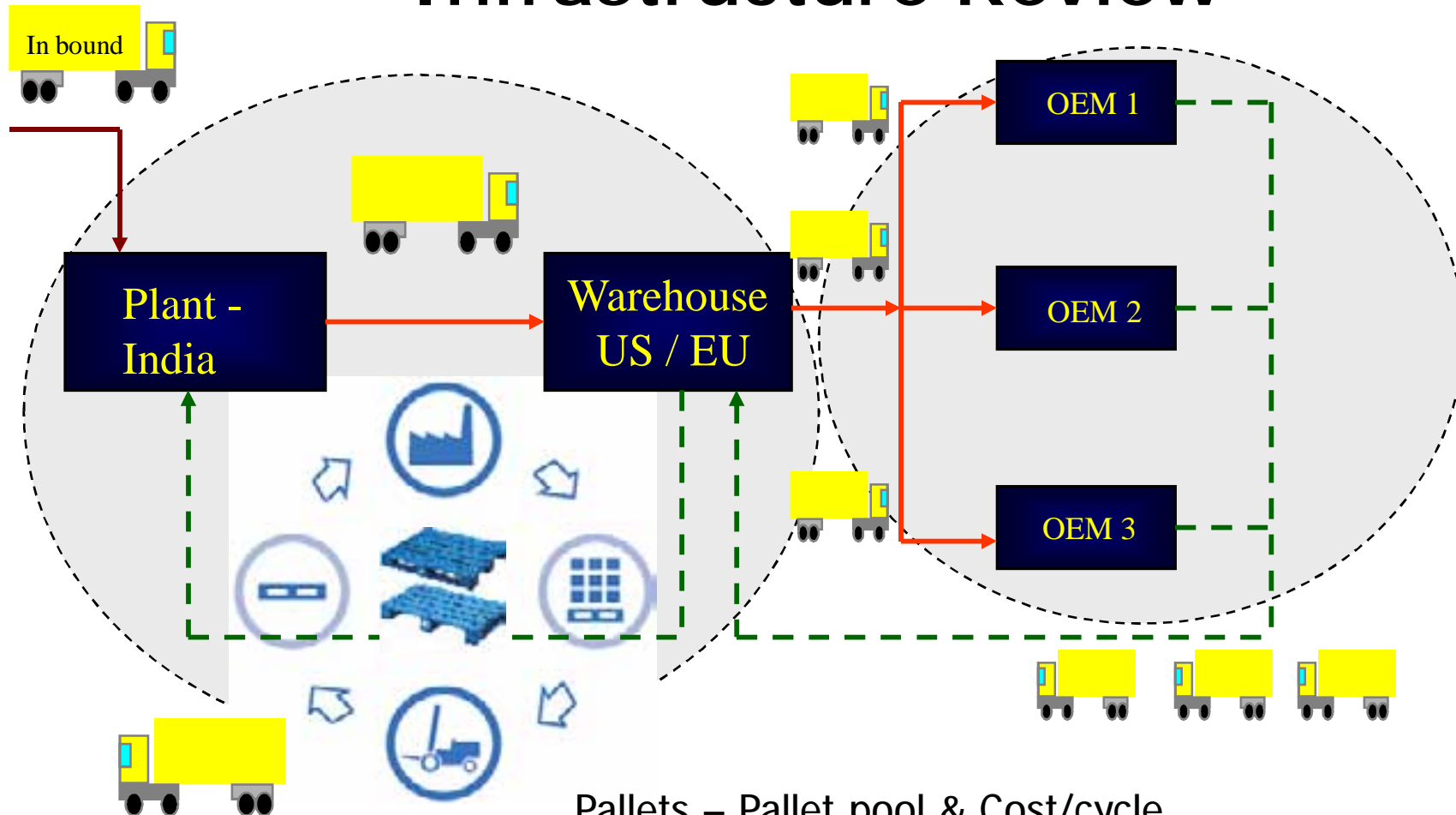
# Pallet + Container Utilization Reviews

Product Name  
Product Code  
Datafile Name (1/13/2004)  
Solution Ref. 1 C  
Cube Used 81.0 % 20 Carton / Layer  
Area Used 87.1 % 3 Layer / Load  
Pallet type EURO3 60 Carton / Load  
Truck Solution Ref. 1 C 1200 Carton / 2020MOOI  
Truck Area Used 86.1 % 20 Load / 2020MOOI

	Length	Width	Height	Net	Gross
Carton (OD)	275.0	190.0	265.0 mm	16.000	16.000 Kg
Product	1100.0	950.0	795.0 mm	960.000	960.000 Kg
Load	1200.0	1000.0	940.0 mm	960.000	990.000 Kg
Product	6000.0	2000.0	1880.0 mm	19.200	19.800 t
2020MOOI	6096.0	2286.0	2000.0 mm	19.800	29.800 t



# Infrastructure Review



Pallets – Pallet pool & Cost/cycle

Capital cost / cycle & velocity

Handling – Fork lifts/Hand trolleys/Dock-levellers



# Lashing & Bracing Practices



# Safe Product Arrivals

## Blocking & Bracing-Air Bags & Void Fillers

- Reduces the transit damages by securing the load firmly with the container
- No matter how tightly a load is positioned, either by fork truck or by hand, a build-up of small voids will remain.
- These voids are eliminated by air bag compacting and positioning the load for securement.





# Simulation Devices



Inclined Impact Tester



Vibration Table



Accelerometer



# Parameters

<b>Cost Parameters</b>	<b>Productivity Parameters</b>
<p>1. Packaging Cost</p> <ul style="list-style-type: none"><li>– BOM</li></ul> <p>2. Handling Cost</p> <ul style="list-style-type: none"><li>– Packing &amp; Loading, Storage</li><li>– Unpacking, Unloading &amp; Storage</li></ul> <p>3. Manpower costs</p> <p>4. Cost of Packaging quality</p> <ul style="list-style-type: none"><li>– Transit Damage</li><li>– Claims</li></ul>	<p>1. Equipment utilization</p> <p>2. Throughput</p> <p>3. Product arrival condition</p> <p>4. Warehouse space utilization</p> <p>5. Product Movement</p> <p>6. Overheads</p> <ul style="list-style-type: none"><li>– Maintenance</li><li>– Supervision cost</li></ul>



Thank You