Reusable Transport Packaging
Implementing and Improving Reusable Pallet, Container, and Tote Programs

Presented by:
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• Founder, President and CEO of Relogistics Services
• In reusable packaging business for over 20 years
  • Started in pallet business in 1997
  • Also worked in reusable containers and drums
  • Founded Relogistics in 2011
• Board Member - National Wooden Pallet and Container Association
• Past Chairman - Reusable Packaging Association
Reusable Transport Packaging

• What is - and is not - Reusable Transport Packaging

• Changing economy

• Benefits of reusable transport packaging

• Attributes of good opportunities

• Reverse logistics
What is Reusable Transport Packaging?
Reusable Transport Packaging

• What is Reusable Transport Packaging?
  • Comprised of pallets, containers, totes, wraps, bands and dunnage *designed for reuse* within a supply chain
  • Can be made of *any material*
Reusable Transport Packaging

- Reusable Transport Packaging is not:
  - Single or limited use packaging
  - Non transport packaging
Reusable Transport Packaging

• Reusable Transport Packaging \textbf{is not:}  
  • “Loop” by TerraCycle  
  • Procter & Gamble, Nestlé, PepsiCo, Unilever, Mars Petcare, Clorox…
Waste Hierarchy

- Reduce
- Reuse
- Recycle
- Energy from waste
- Disposal
Changing Economy
Changing Economy

• Linear Economy
  • “Take, Make, Waste” system fueled by consumption
  • Turns natural resources into products for sale through a series of value-adding steps
  • Ownership and liability for risk and waste is passed to the buyer

• Circular Economy
  • Reuse/Repair/Recycle system fueled by restoration
  • Reprocessing activities create jobs while reducing energy, resource needs and waste

• Shared Economy
  • Borrow or rent assets owned by someone else; resource sharing
  • Allow customers to access goods when needed
Linear Economy

Resources

Resource → Production → Distribution → Consumption → Landfill

Energy

Waste → Recycle
Circular Economy

Resource → Production → Distribution

Recondition ↑ Reposition ↓ Consumption

Recovery

Decouple growth from resource use
Benefits of Reuseables
Many Benefits of Reusables

Financial

Environmental

Health & Safety
Financial Benefits of Reusables

• Revenue Enhancement
  • Merchandising at store level
  • Elimination of white space at the plant level

• Capital Utilization
  • Pooling/rental of reusables

• Operating Expense Reduction
  • Reduced labor back of the stores or line side
  • Reduced total freight cost
Environmental Benefits of Reusables

Reusable transport packaging containers

- Generate 29% less total greenhouse gas emissions;
- Require 39% less total energy; and
- Produce 95% less total solid waste on average.
Health & Safety Benefits

• Reusable totes can reduce injury from overfilling non-uniform boxes.

• Reusable pallets can reduce injury from broken pallet debris hazards such as splinters, nails and wood on the floor.

• Ergonomically designed reusable totes can reduce bending, lifting and handling injuries.

• Reusable intermediate containers can reduce injuries from rolling drums and chime removal.
Attributes of Good Opportunities
Attributes of Good Opportunities

Within a Single Facility

Manufacturer

In-plant Storage

In-plant Transport
Attributes of Good Opportunities

Closed-Loop System

Manufacturer ➔ Shipper/Transportation Company ➔ Customer/Retailer
Attributes of Good Opportunities

Managed Open-Loop System

Manufacturer/Shipper

Customer/Retailer
Critical Components for Success

• Usable Asset
• Affordable Asset
• Recycle Value of Asset
• Accurate Tracking & Reporting of Assets
• Partnership of Every Outlet Asset Touches
• Ability to Efficiently Recover Assets
Reverse Logistics
Factors Affecting Logistics Costs

- Number end users
- Geography of return logistics
- Dispersion of end users
- Style of reusable equipment
- Degree of sanitization required after each use
Reverse Logistics

- Reusable packaging in distribution is increasing
  - Pallets
  - Reusable Plastic Containers (“RPCs”)
  - Totes/Break Pack Boxes
- Sortation and return of reusable packaging essential to success of any program
- Great benefits to supply chain from reusable packaging but…
- Must manage and minimize handling costs of empty packaging
Traditional Reverse Logistics

- Recycler
- Pallet Recycler
- RPC Poolers
- Pallet Poolers
- Manufacturer
- Store
- Distributor

- Loaded
- Empty
Traditional Reverse Logistics

• Advantages
  • Convenient – all activities at distribution center
  • No out-of-route mileage
  • Utilizes existing overhead, facility, etc.

• Disadvantages
  • Non-revenue generating activities utilizing expensive real estate
  • Reclamation activities not conducive to warehouse environment
Offsite Reverse Logistics

• Advantages
  • Minimizes impact of reusable packaging operation at DC level
  • Improve fleet efficiency
    • Empty trailers create opportunities for potential paying backhauls of product to DCs
  • Increased efficiencies of dedicated facility
    • Lower handling costs
  • Lower pooled asset cycle time = lower costs

• Disadvantages
  • Potential out-of-route mileage
  • Increased cost of third party reverse logistics center, overhead, etc.
Tracking

If you can’t measure it, you can’t manage it.
What Makes Dollars and Sense?

Aggregate Tracking

Individual Tracking

Barcode

RFID
Reverse Logistics

• Empty reusable packaging can either be handled
  • On-site, or
  • Off-Site

• Regardless of location, program must:
  • Unload trailers quickly to increase utilization of assets
  • Accurately and efficiently sort/segregate all items according to requirements
  • Quickly return assets to origin/poolers and/or recycle/dispose of other items
  • Track all activity
  • Detailed reporting of asset movement to all participants
Reverse Logistics – Other Items

• While reusable use is growing, recyclables and other items may also be collected
  • Recyclables
    • Corrugate, plastics, shrink, metal, etc.
  • Unsaleables
    • Damaged or returned items
  • Salvage Items
    • Racking, carts, etc.

• Additional recyclable collections support Green initiatives
• Can be centrally handled, but
  • Value of commodity must be more than the cost of transport and handling
Conclusion
Reusable Transport Packaging

• What type(s) of reusables will work?
• Will we buy or lease?
• Where/how will we store them?
• Do we need to clean them?
• How will we track them?
• How will we get them back?
• What’s the ROI?
Reusable Transport Packaging

• What are the benefits of reusable packaging for your supply chain?
• Who can benefit from introducing reusable packaging into their supply chain?
• What types of reusable transport packaging are available?
• Do the economics of reusable packaging work for your business?
• What should be considered in developing an implementation plan for reusable packaging?
• Post implementation, how do you make sure all benefits are realized?
• What are ways to improve existing reusable packaging programs?
Many Benefits of Reusables

But only if the reverse logistics program is effectively designed, implemented and managed
Questions
For more information

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