

Finding the Hidden Waste

Understanding the hidden cost of poor packaging

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Returnable Packaging Engineer
Ingersoll Rand





Ingersoll Rand advances the quality of life by **creating comfortable, sustainable and efficient environments.**

Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency.



THERMO KING

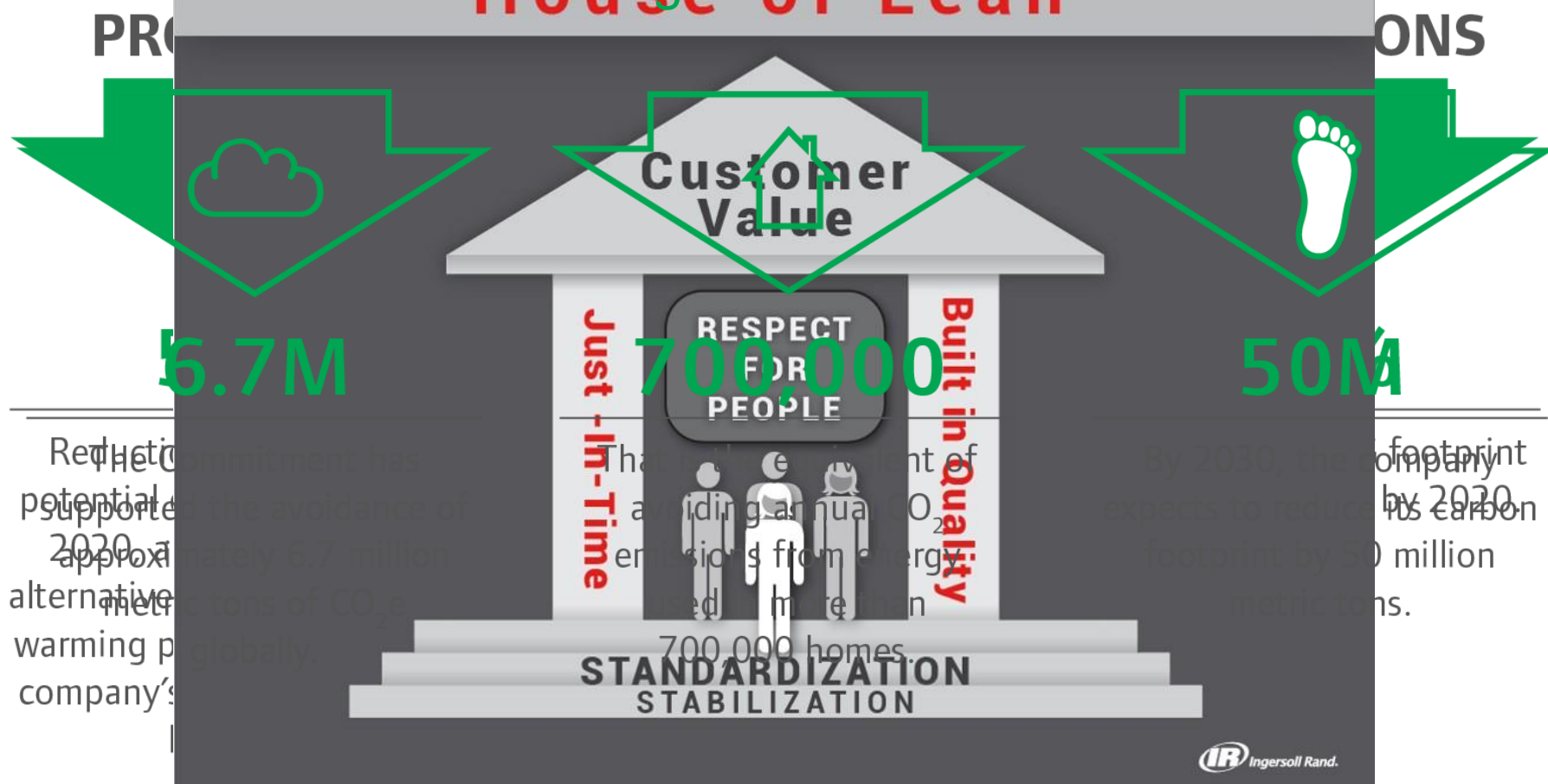


TRANE®

Climate Commitment

Operational Excellence
House of Lean

Climate Commitment
 Progress to Date

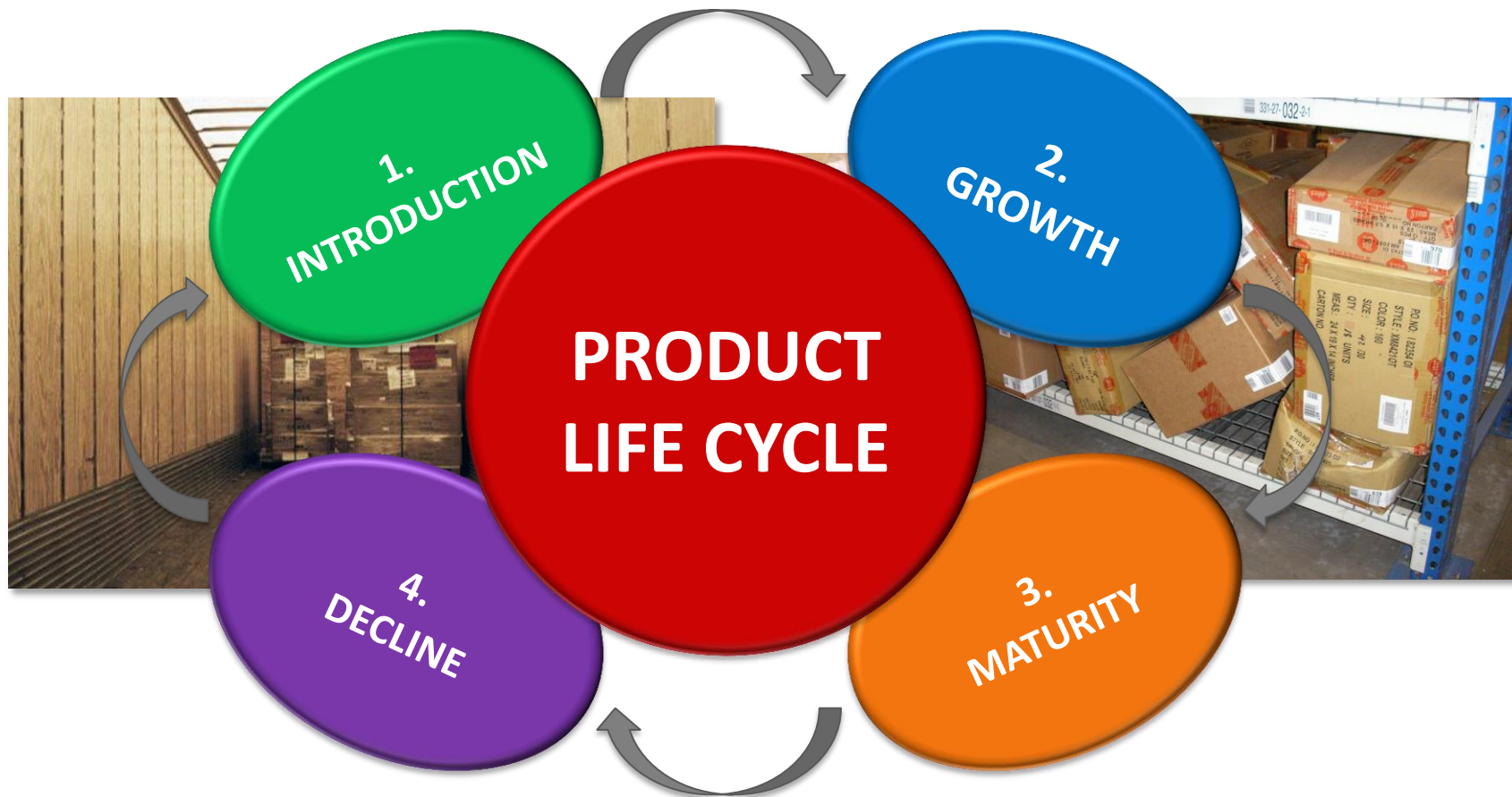




SUSTAINABLE DEVELOPMENT GOALS



What is Packaging Waste?

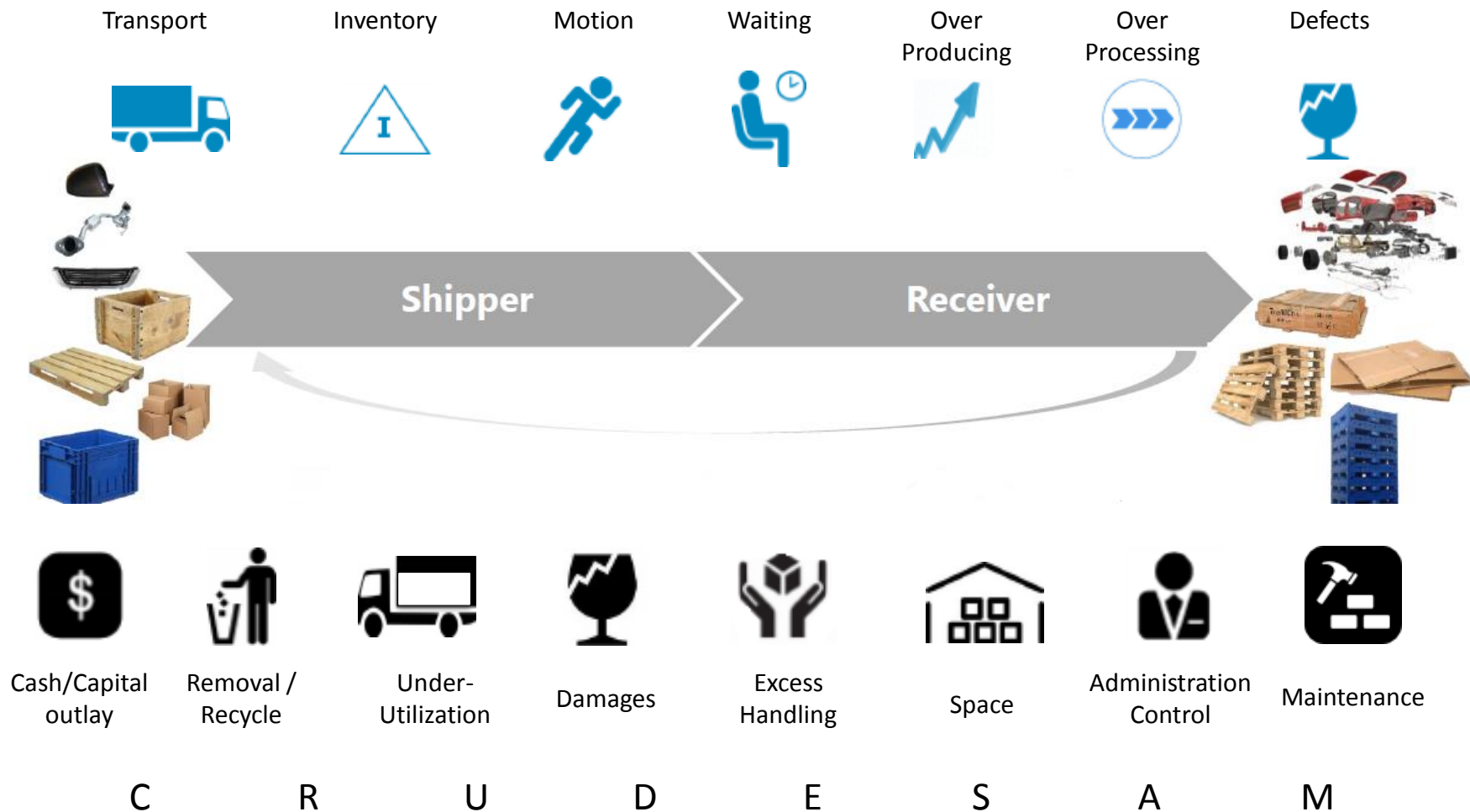


Types of Packaging

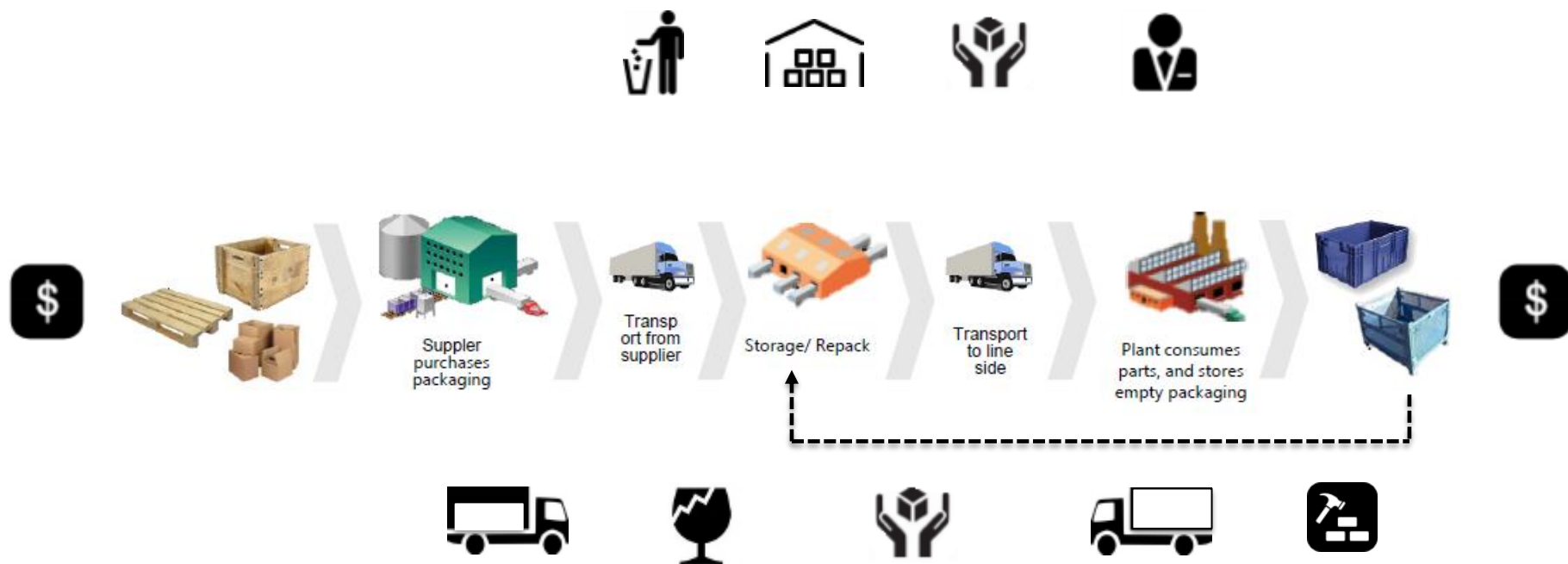


- One-Way Packaging (OWP): disposable
- Bespoke: special design
- Standard: off the shelf

TIM WOOD vs CRUDE SAM

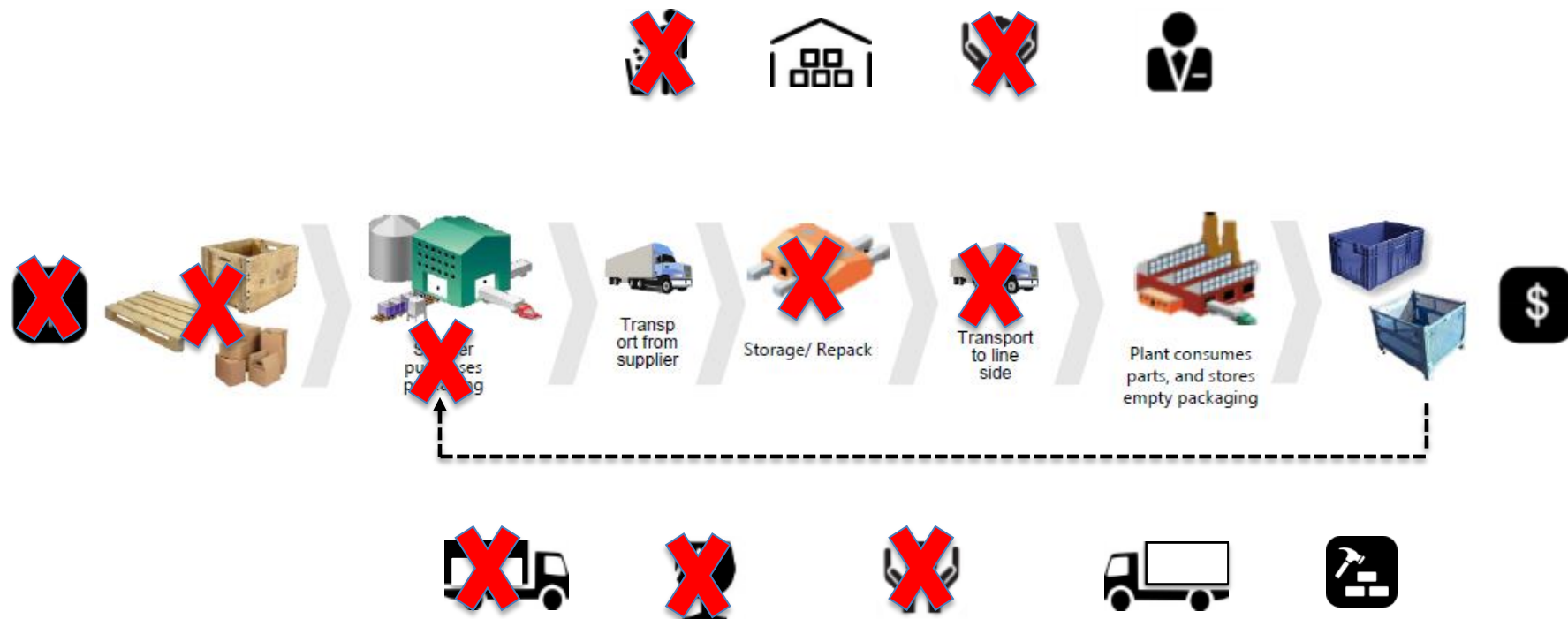


Hidden Waste of Packaging



One Way Packaging Supply Chain (OWP)

Reusable Packaging Supply Chain



OEM Owned Packaging

Who is Engaged at Ingersoll Rand?

SUPPLIERS → Returnable packaging must meet their safety guidelines and processes

LOGISTICS → Help to determine cubic efficiencies, and reverse logistics of empty containers

WAREHOUSE → Repack, detrash, storage, safety

ASSEMBLY → Ergonomics, TAKT, quality

FINANCE → Evaluation of alternatives, budgeting, business case analysis

EHS → Ergo risk, solid waste impact study

EVERYONE!

How to get started?

Strategy

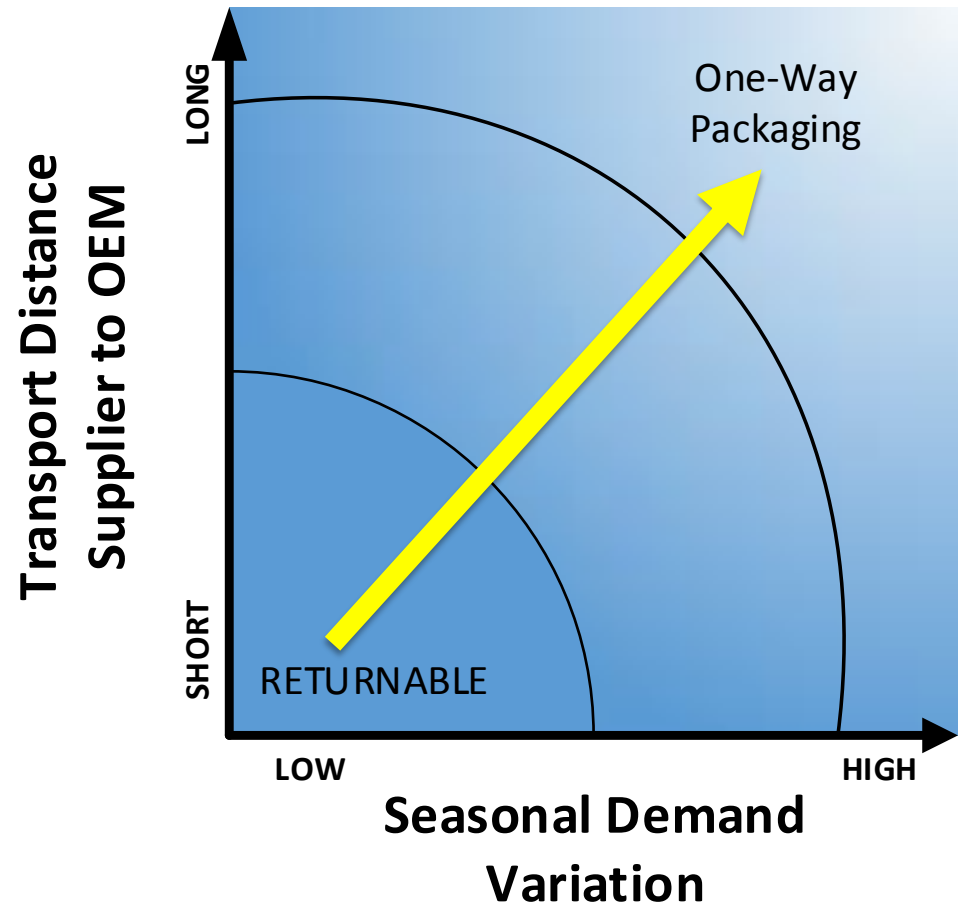
- Resources
- Ownership

Prioritize

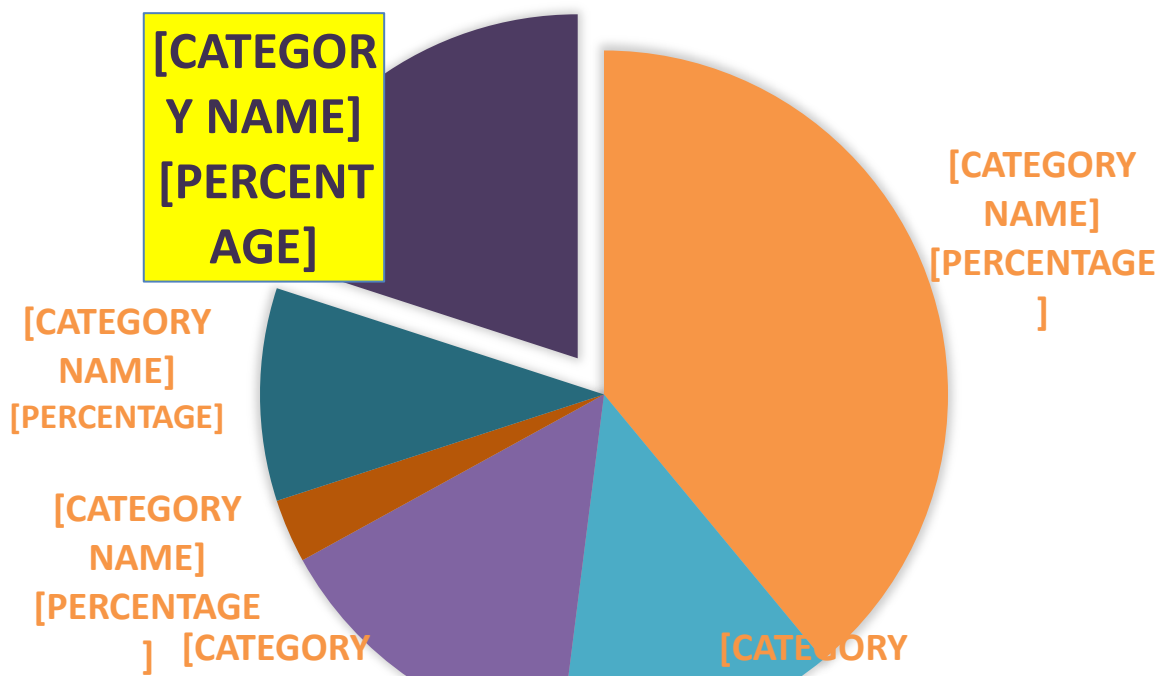
- New parts/suppliers
- Local supplier
- Repack Ops

Responsibility

- SME
- Team

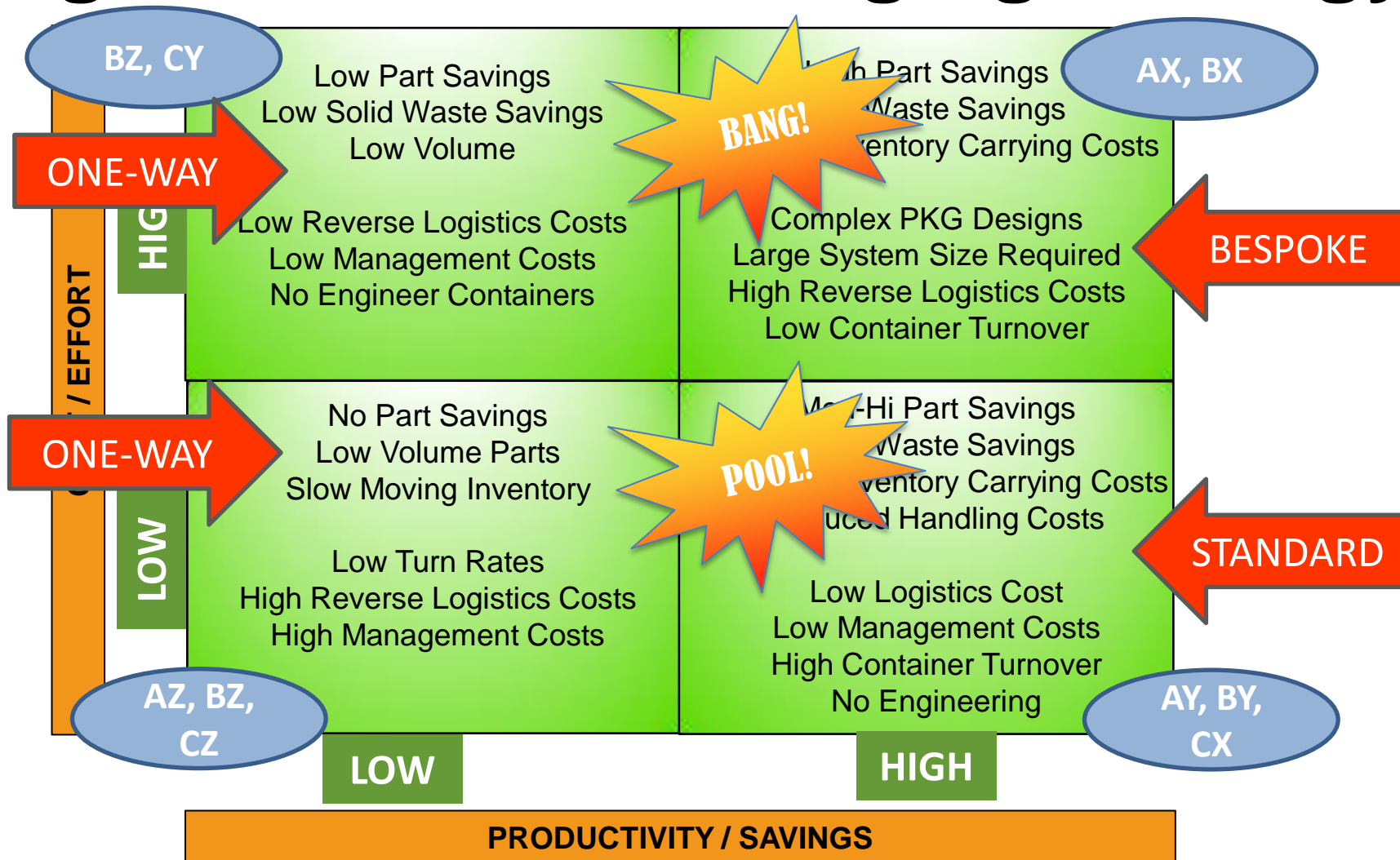


How to Get Started with Cost – Total Cost of Ownership



80% of the TCO of one-way packaging
is not planned or budgeted for

Ingersoll Rand Packaging Strategy



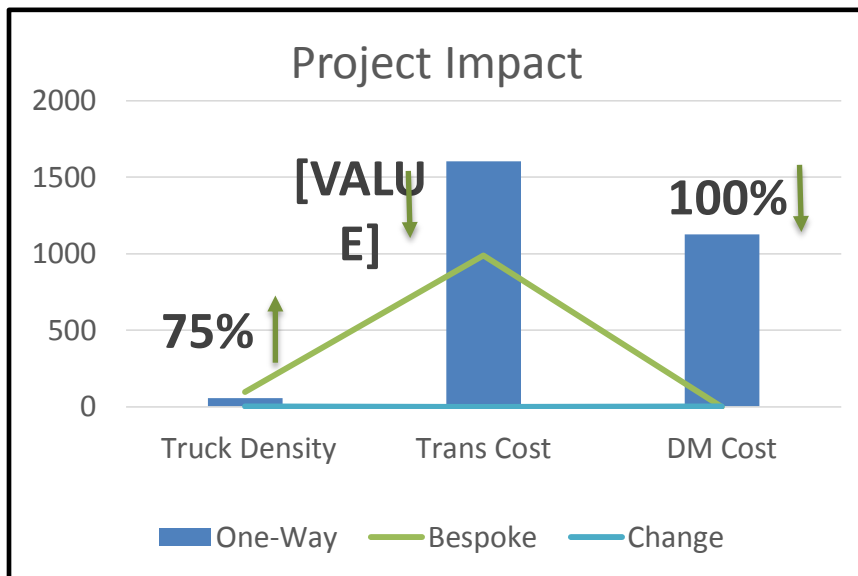
Bulkhead Story



- 4 parts per crate
- 411 shipments/year

Annual Savings
Solid Waste
C0² Reduction

\$1.5M
799 tons
158 tons



Sustainability Impact

- 799 tons of wood = 17 acres of hardwood forest/year
- Framing lumber = 566 2400 sq.ft. homes/year
- If burned = 12 homes/year of electricity
- 176 less trucks = 158 tons C0₂/year

Thank You!

Your opinion is important to us!

Please take a moment to complete the survey using the conference mobile app.

WS/43

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