LEI Lean Transformation Summit

Theory Meets Application
The Lean Fulfillment Stream

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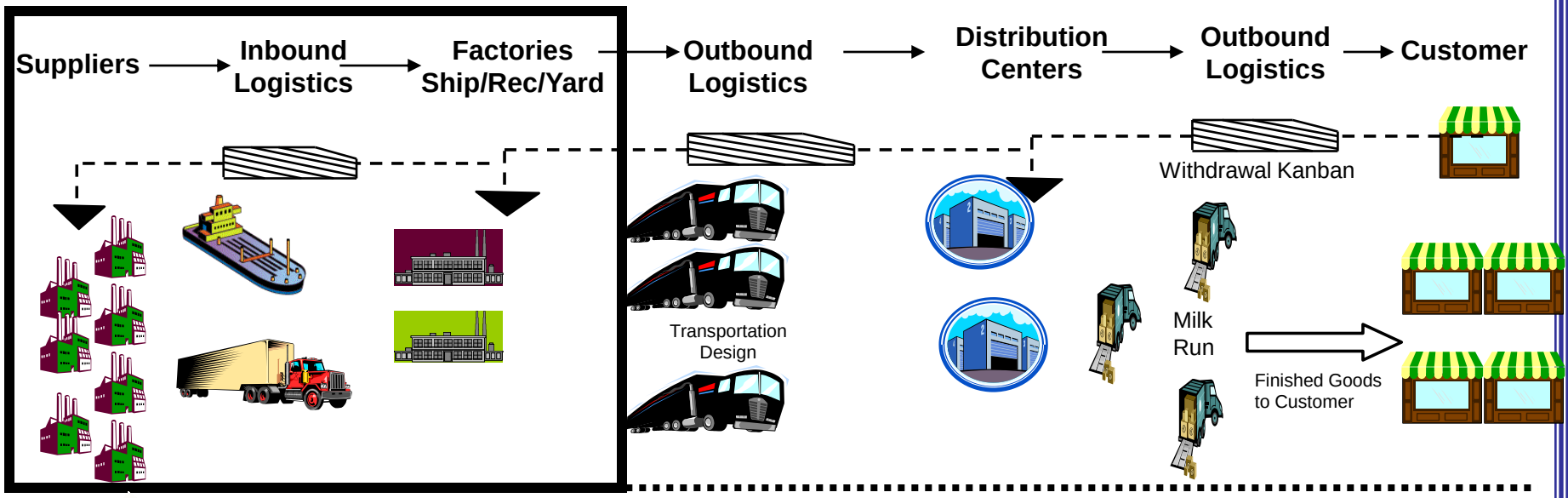
Principles of the Lean Fulfillment Stream



Today's Focus

Principles of the Lean Fulfillment Stream

- Make customer consumption visible
- Reduce lead time
- Use pull systems
- Create velocity and reduce variation
- Collaborate and focus on process discipline
- Measure and manage *Total Cost of Fulfillment*

Who is Polaris Industries ?

Established 55 years ago in Roseau Minnesota

Annual 2007 sales of $1.8 billion

Headquarters in Medina , Minnesota
Plants in Roseau MN, Spirit lake IA and Osceola WI

Polaris designs, engineers, manufactures and markets all-terrain vehicles (ATVs), including the Polaris RANGER™, snowmobiles and Victory Motorcycles for recreational and utility use.

450 + Suppliers

14,000 + Part Numbers

Polaris Current State – Why the Need ?

Executive View = Operational Excellence

Tactical View = Current Fulfillment Stream Challenges

- Standard Work
- Discipline
- Visibility
- Inventory
- Measurement
- Cost
- Supplier Performance

Stability...Cost…Flow

Who is LeanCor ?

Vision:

- To be the global leader in Lean Fulfillment Stream

Background:

- Created to drive the next step in the evolution of Lean
- The only 3PL dedicated to the application of Lean principles
- Teaching, operating, writing, thinking the Lean Fulfillment Stream

Services:

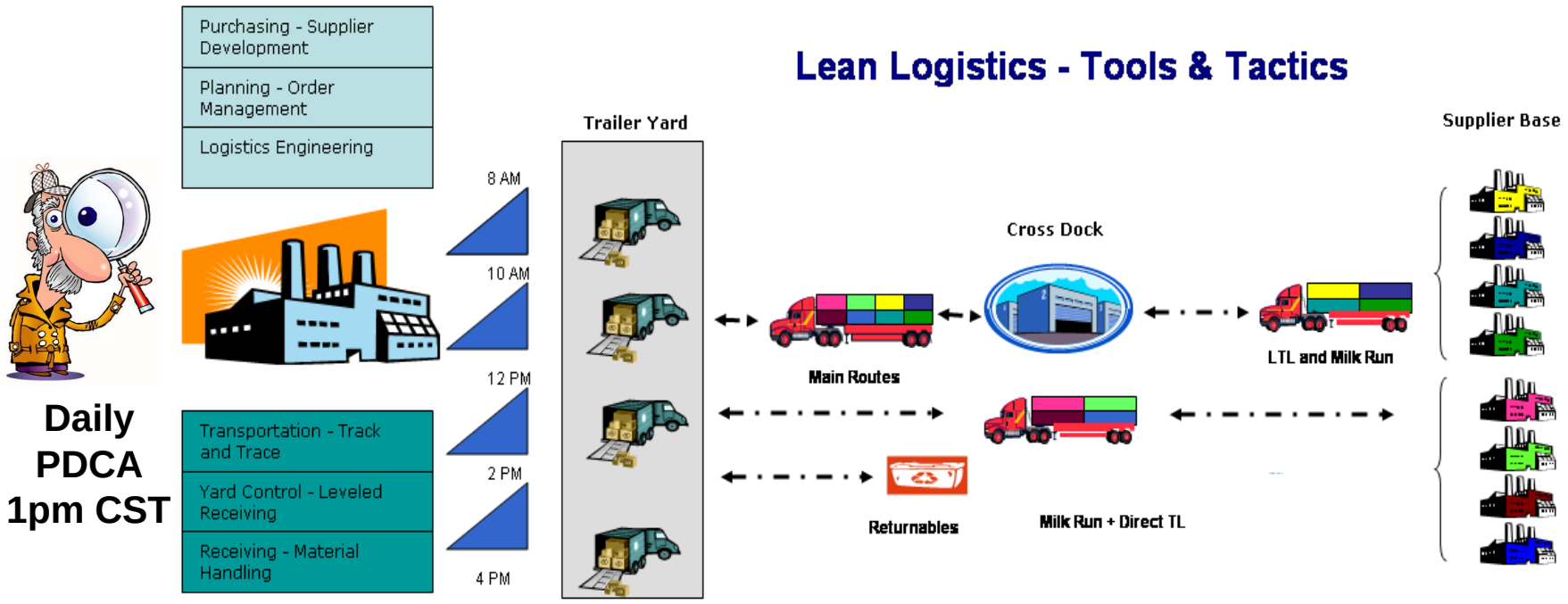
- Training and Education (Public & Private Sessions)
- Consulting (Quick Win Services)
- Lean 3PL Operations (Logistics Engineering & Route Management)

Creating the Future State – Getting Started

- Value Stream Map
  Process Maps
- ↓
- Gemba Walks
  Interviews
- ↓
- Lean Checklist
  Opportunity List
- ↓
- Plan to Action
  Dashboard

Functional Area	Lean Principle Dynamics										
	Customer Pull (Takt)	Stability	Standardization (Std Work)	Quality at the Source	Just in Time - Frequency	Leveled Flow	Organized Workplace (5S)	Visual Management (including pipeline)	Total Systems (Cost) Thinking	People Engagement	Problem Solving (PDCA)
5 Process in place , working well 3 Process in place , attention required 1 Process not in place Lean Principle Dynamics: 1.8 Lean Logistics Journey Average: 1.9											
Inventory Management	3	3	1	3	3	1	3	3	3	3	3
Parts Order Management	3	3	1	1	3	1	1	1	3	3	3
Supplier Management	1	3	1	3	3	1	3	1	1	3	1
Logistics Design	3	3	1	1	3	1	3	1	3	3	1
Transportation Management	1	3	3	1	3	1	1	1	1	3	1
Cross Docking Management	1	1	3	1	3	1	3	3	3	1	1
Warehousing Management	3	1	1	3	3	1	3	3	3	1	1
Yard Control	3	3	1	3	3	1	3	3	3	3	3
Receiving Management	3	1	1	1	3	1	1	1	3	3	1
Packaging	1	1	1	1	1	1	3	1	1	1	1
Average	2.2	2.2	1.4	1.8	2.8	1	2.4	1.8	2.4	2.4	1.6

Inbound Fulfillment Stream Future State

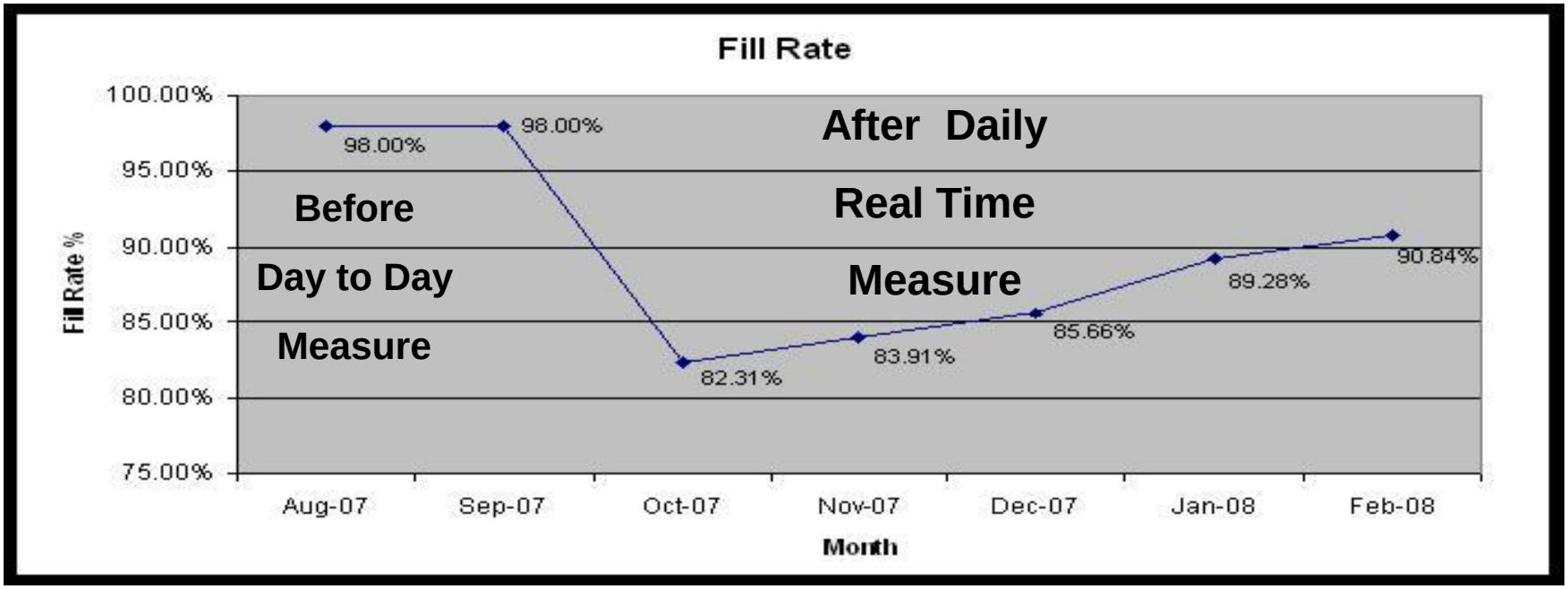


Theory vs. Reality – A Dialogue

In Theory…

- Everybody understands the vision of the lean fulfillment stream
- The manufacturing plants are ready for velocity of material flow
- Measuring "total of fulfillment" …and getting data is easy
- All fulfillment stream partners want to expose problems
- Daily *Plan Do Check Act* discipline is easy to implement
- What to do next is clear and obvious to all involved

1st Measures of Success – Supplier Fill Rate



We know intuitively, but can't show with definitive numbers (YET)

- *Material planner productivity*
- *Adherence to Plant Schedule (materials related)*
- *Inventory*
- *Transportation Cube Utilization (Packaging Implications)*

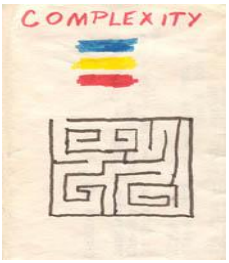
The True Lean Measure – Problem Solving

Inventory

Transportation

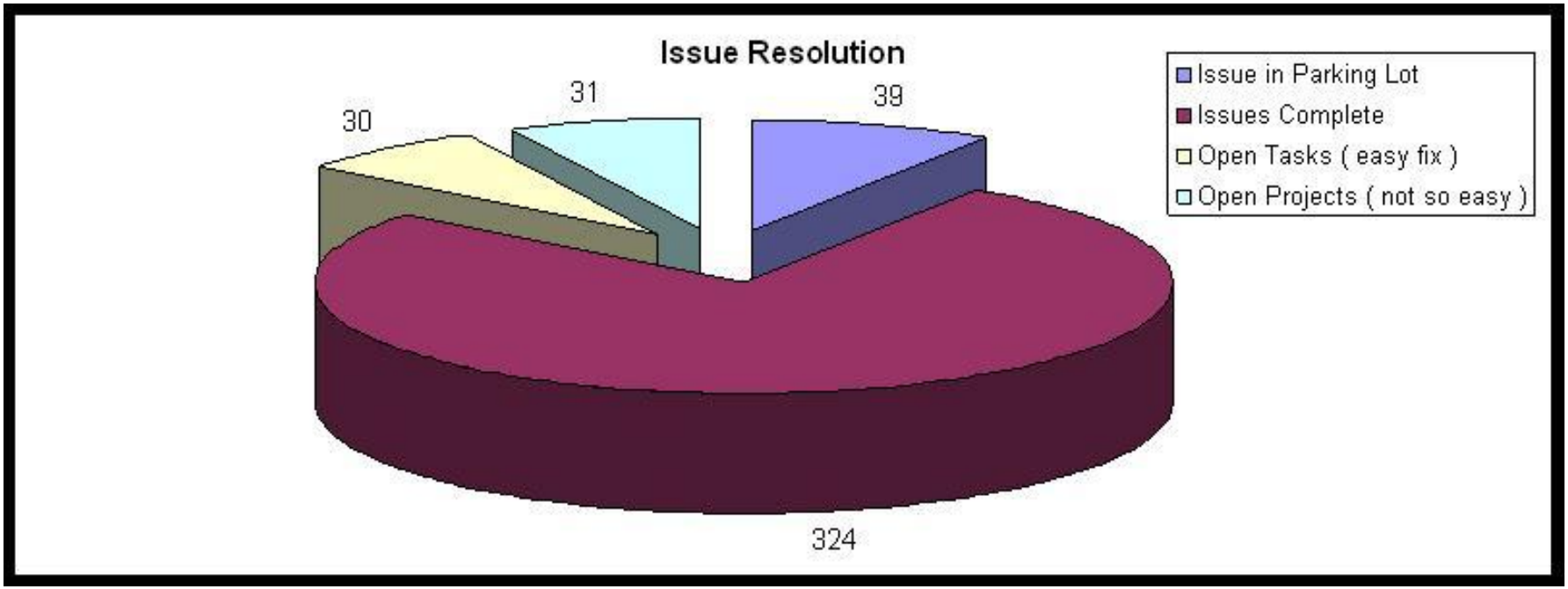
Time

Space



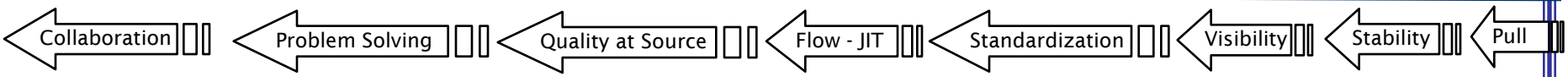
Process

Packaging



What's Next at Polaris ?

Right Part ? Right Time ? Right Place ? Right Price ? Right Quality ? Right Source ? Right Service ?



2007

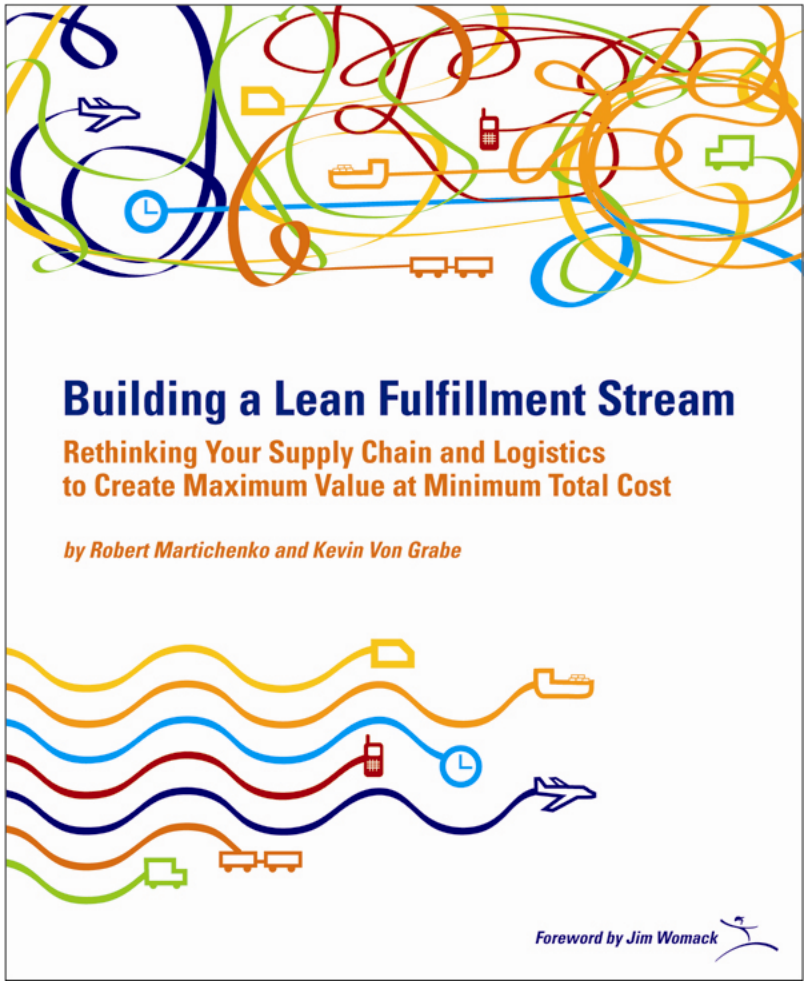
1. Isolate current condition
2. Develop opportunity analyses
3. Develop Lean Road Map
4. Focus on Visibility and Stability

2008

1. Connect with Customer Cadence
2. Sourcing – Supplier Collaboration
3. Pull Systems – Part Level DNA
4. Focus on Standardization and Flow

Identify Problem – Solve Problem – Identify …

For a Closer Look…today and beyond



Breakout Session Tomorrow

Polaris & Stern Industries:

A Fulfillment Stream Partnership

- Molly Rossini, Logistics Projects, Polaris Industries
- Ron Kobes, Logistics Manager, Stern Industries
- Matt Melrose, Manager Lean Implementation, LeanCor LLC