Developing a Lean Supply Chain
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About Us

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WILD Flavors and Specialty Ingredients, ADM (Archer Daniels Midland)
Flavor manufacturer for oral care, confectionary, etc.
specializing in mint
Established 1869, recently acquired by ADM
During this breakout session:

• We will share our experience building a lean supply chain
• Share classroom type training
• Reinforce with a simulation

This is an interactive training. We expect your questions and participation.
Agenda

Introduction
What is a Lean Supply Chain
Current State VSM
Future State VSM
  • Supermarkets
  • PFEP
  • Triggers
Implementation
Sustaining Your Lean Supply Chain
A **supply chain** is a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer.
Starting the Supply Chain Project

• Gain Leadership Commitment
• Form a Team
• Agree on the objectives
• Agree on the time commitment
• Tie to strategy or business need
• Prepare
Foundation For Project

- Boatloads of Continuous Improvement
- Improved Inventory Layout
- Improved Manufacturing Flow
Improved Inventory Layout

Developed new layout eliminating cross traffic and increasing storage space by 440 drums.
Improved Manufacturing Flow
Starting the Supply Chain Project

Project Agenda/Schedule

• Overview of Project, Business Importance
• Identify Supply Chain Problems
• Current State Value Stream Map Creation - Material and Information Flow
• Future State Value Stream Map Creation
  • Includes development of a Coordinated Supply Chain Plan
• Identify Required Continuous Improvement Projects to Reach Future State
• Assign CI Responsibility to Project Team with Deadlines
• Implement Future State Value Stream Map
• Establish Supply Chain Management Team meeting including Supply Chain performance KPI review
• Project Completion 60-90 days
Starting the Supply Chain Project

Project Outcomes:
• Coordinated Supply Chain all working from the same “Plan”
• Supply Chain Improvement (optimized across the whole supply chain, not sub-optimized by area)
• Supply Chain performance management including KPIs with ongoing data collection and review
  • Measure improvement, possibly cost savings
• Learning, understanding of the entire Mint Supply Chain

Key Business Objective
• Develop and utilize WILD’s regional mint operations and supply chain to drive sales growth.
  – Work with WILD Global Operations group to optimize global mint supply chain.
  – Utilize Global LEAN continuous improvement program to optimize processes, build capacity and create efficiencies throughout our Global Supply Chain. We are targeting a 10 business day order lead time to customers and are optimizing our processes around this target.
Value Stream Map

• Current state Value Stream Map identifies the current state (as is) material and information flow of the supply chain

• Future state Value Stream Map identifies the future state (to be, after improvement) material and information flow of the supply chain

• Continuous Improvement/Kaizen are challenges for supply chain improvement
Current State Value Stream Map Creation
What Did We Learn

7 Different Reports- many not coordinated
4 Different Meetings all using different information
Inconsistent Purchases
Planning and Scheduling Challenges
Wrong Ingredient Mix
No way to measure Supply Chain performance

Inconsistency and Complexity
Bringing Cherries to Market

- 5 different groups:
  - Northern Michigan Cherry Farmers
  - Leelanau Fruit Processors
  - M22 Packaging
  - Mission Point Distribution Center
  - Traverse City Supermarkets

- Each group take 10 minutes to review the current state value stream map and the supply chain assumptions for your part of the supply chain
“To capture the lean concept of smooth flow, we find it is helpful to envision a steadily advancing stream of materials, and the firms and facilities involved as tributaries joining their efforts to serve the customer. We call this flow of parts and finished products a **fulfillment stream**.”

Building a Lean Fulfillment Stream
By Matichenko, Von Grabe
Principles of a Lean Supply Chain

1. Make Customer Consumption Visible
2. Create Velocity
3. Level Flow of Information and Materials Through the Supply Chain
4. Collaborate and Create a Problem Solving Culture
5. Focus on Total Cost of Fulfillment

Implementing the Lean Supply Chain
By Martichenko
Supermarkets

- Planned inventory of raw materials and finished goods (packaging included)
- Designated storage areas
Plan For Every Part (PFEP)

• A plan for each raw material and finished good
• Includes key information including:
  – Lead time
  – Usage
  – Batch Size
  – Reorder points
  – Min/Max
  – Etc.
• Managed by a designated person
Triggers

• Method of indicating that a specific item has been consumed in the inventory or finished good supermarket.

• Visual
Challenges

- Determining Make to Stock vs. Make To Order products
  - What is the threshold? Top 80% of sales by transaction
  - Data, contract, forecast, history
- Differentiate products by Manufacture to Order
  - Not all Make to Stock products will be part of the Finished Product Supermarket
  - Principle of keeping materials in an unfinished state for as long as possible
    - Initial inventory set at 4 weeks
- Look at Overall Average Lead Time and track against business plan 10 day target.
  - Not just OTS%
  - Part of Supply Chain KPI/Metrics
Bringing Cherries to Market

Develop Future State of Cherry Process

• Raw Material Supermarket
• Finished Product Supermarket
• PFEP
• Triggers
• Draw Future State
PDCA to Completion

• Finished Product Supermarket Development
  – Responsible: Judy Little, Aki Nichols
• Raw Material Supermarket Development
  – Responsible: AJ Todd, Chad Glerum
• Forecast Process Development
  – Responsible: Kathy Hunt, Steve Buell, Rob Boven
• Triggers and Information Flow
  – Responsible: Judy Little, Troy Tungate
• Total Cost of Fulfillment/Metric Development
  – Responsible: Rob Boven, Troy Tungate
• Establish Supply Chain Team and Regular Reviews
  – Responsible: Judy Little
• Development of the “Plan”
  – Responsible: Team
• Inventory Considerations
  – Responsible: Judy Little (Chet)
• Goldendale Evaluation and Integration
  – Responsible: Aki Nichols and AJ Todd
Sustaining

• Daily- review supermarkets
• Weekly- review status against plan
• Monthly- review system
• Quarterly/Annually- discuss system improvements, business changes
• Designated responsibility
Bringing Cherries to Market

Develop an implementation plan for the future state

Develop a sustainability plan for the future state
Elimination of substantial organizational waste
- Improved flow/velocity of processes
- Linked information
- Continuous improvement
Conclusion

Using Lean principles to redesign and plan your supply chain can create substantial improvements across your organization.
Thank you

Any questions?