

A Look Inside a Young Lean Transformation

Presented By

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Tingue, Brown & Company

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Albany/Capital District APICS





Introduction

- Tingue, Brown - Peachtree City, GA began Lean transformation in February 2009
- Discussion of approach, obstacles, successes, lessons, future direction
- Not meant to be “how-to” guide
- Practical ideas that can be applied in Lean efforts



Background – Tingue, Brown & Company



Tingue, Brown & Co. is a leading global supplier of high quality finishing equipment, products, and dedicated services for flatwork ironers, used in modern commercial laundries.

Locations:

Saddle Brook, NJ
Peachtree City, GA
Hong Kong

Meese Orbitron Dunne designs and manufactures rotomolded plastic laundry, material handling, recycling and other products for nearly every industry on earth.

Locations:

Saddle Brook, NJ
Ashtabula, OH
Madison, IN
La Mirada, CA

Talley Machinery is a leading supplier of parts, equipment, rebuild and rigging services for flatwork ironers and other laundry equipment.

Locations:

Greensboro, NC

- Manufacturing, distribution of products for commercial laundries and other markets
- Includes Tingue, Brown & Co., Talley Machinery Corp., Meese Orbitron Dunne Co.
- Family owned and operated since 1902



Why Lean?

- Board of Directors pressure to adopt Lean
- Executive management support
- Culture supportive of Lean
- Good fit for company
- Employee able to serve as internal champion





Why Start With Peachtree City?

- Division viewed as most receptive
- Processes are relatively easy to understand
- Most direct control
- Highly visible problems to attack
- Best chance for quick, demonstrable success





Background – Peachtree City Facility

- 40 minutes south of Atlanta, close to ATL airport
- 40,000 sq. ft.
- 35 employees
- Facility has been operating for 4 years
- Tingue, Brown and subsidiary called Southern Converters



Background – Peachtree City Facility

- Manufacturer and distributor
- Service component performed by sales force
- Make-to-order with short lead times (1-2 days)
- Purchased lead times vary from days to months
- Recent closures in Winter Haven, FL and Montebello, CA
- Sales of \$12MM



Conditions Prior to Lean – The Good

- Decent process flow
- Short manufacturing lead times
- Arranged in distinct value streams
- Long-term, stable workforce
- Open to new ideas
- Positive/easy to work with
- Minimal ERP system transactions
- Profitable



Conditions Prior to Lean – The Bad

- Excessive inventory
- Frequent stockouts
- Poor layout of inventory areas
- Virtually no organization of inventory areas
- Poor organization of workspaces
- Weak management





Conditions Prior to Lean – The Bad

- Lack of cross-training
- Very little documentation of processes
- Poor on-time shipping
- Frequent mistakes in order fulfillment
- Cultural issues





Lean Transformation Approach

- Be aggressive
- Articulate a Lean Vision
- Document a plan of attack
- Enough education to hit the ground running
- Start building a Lean Culture immediately
- Make culture a primary focus



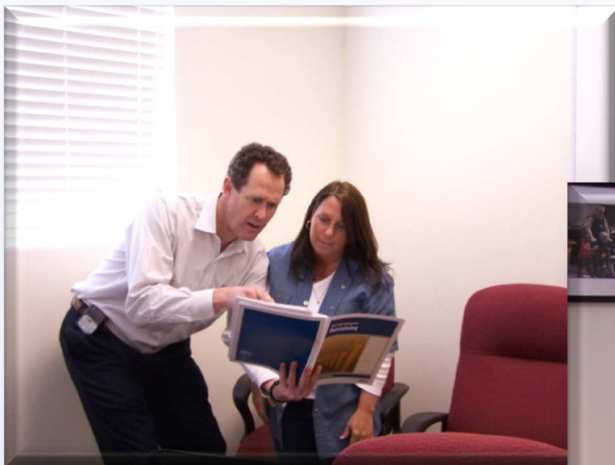
Lean Transformation Approach

- Align all activities with Lean Culture
- Effective Change Management and communication
- Attack the big issues while driving continuous improvement
- Quick, high-impact improvements with little disruption to business
- Flexible and willing to make mistakes



Lean Leadership Education

- On 2/26/09 seven employees completed APICS Lean Enterprise Workshop





Lean Action Plan

- Lean Action Plan created prior to education
- Distributed during leadership education
- Outlined in workforce education
- Contains components and timeline of initial transformation



Lean Vision

- On 2/26/09 meeting was held with all employees
- CEO David Tingue discussed “Lean Vision”
- Why we are adopting Lean
- What to expect
- How will it affect people
- Written version posted in common areas



Lean Workforce Education

- On 3/10/09 employees given 2-hour Lean overview
- Over next two months, employees viewed four DVDs
- DVDs from GBMP.ORG





Kaizen Teams

- On 3/11/09 four kaizen teams formed and met for first time
- Originally met daily for 10-15 minutes, now twice a week
- Tasked with continuous improvement and problem-solving in areas
- At least one outside member per team
- Non-management members lead meetings
- Focus on attacking waste, mistake-proofing, workspace organization



Lean Leadership Team

- On 3/11/09 Lean Leadership Team had first meeting
- Facilitates larger or expensive improvement activities
- Manages Lean-related contests
- Meets weekly for 30 minutes



Kaizen Teams Boards/Team Contest

- Each kaizen team has continuous improvement board
- Helps manage meetings and kaizen activities
- Monthly team contest started on 4/2/09
- Most “approved” ideas receives \$25 gift cards
- Leadership team maintains and posts standings weekly
- “Wall of fame” with photos of past winners





Suggestion Box

- On 3/11/09 suggestion box was established
- For general suggestions or suggestions outside team area
- Procedures added to allow presentation to Leadership team and appeal decision
- Monthly contest enacted on 4/2/09
- Individual with the most “reasonable” suggestions receives \$25 gift card
- Leadership team maintains and posts weekly standings
- “Wall of fame” with photos of past winners





Cross-Training

- In May 2009 Leadership team identified key skills/knowledge
- Both warehouse/production and administrative
- Created skills matrix for all employees
- Using matrix, cross-training program established
- Addresses critical issues of redundancy/continuity



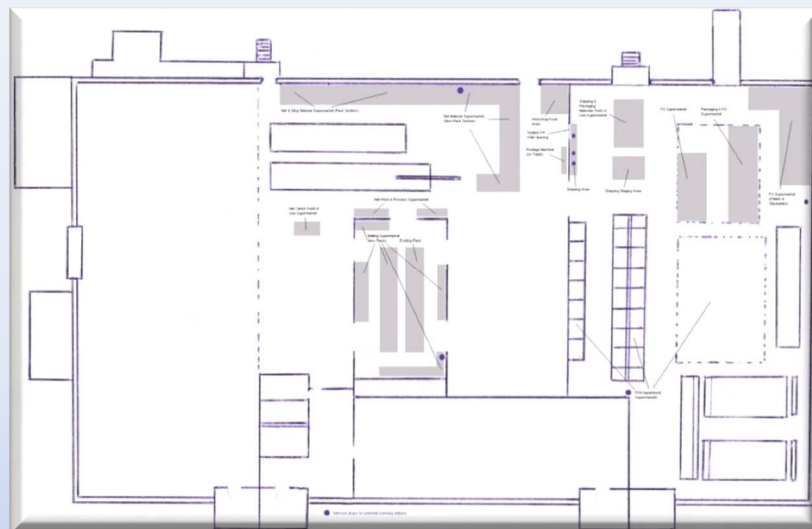
Additional Culture-Building Steps

- After-work social events
- Field trips to customers and vendors
- Coffee maker and coffee
- Periodic breakfasts or lunches
- Monthly celebration of birthdays



Workspace Organization (5S)

- In April 2009 plan developed to reorganize warehouse
- Implement pull and reduce wasted time, space, effort
- Roughly once a month, detailed task list created
- Tasked with completing list by following month
- One major focus was use of vertical space





Workspace Organization (5S)

- Visual controls beginning to be implemented
- In August 2009 greater emphasis placed on work area organization
- Two-pronged approach: top-down directives and kaizen team activity





Inventory Reduction & Control

- In May 2009 inventory reduction/control plan developed
- Implemented aggressively over the next four months
- Establishment of inventory levels for stocked items
- Replenishment quantities for stocked items
- Pull replenishment system – mechanisms and procedures



Kanban Cards

- Kanban cards used to drive pull system
- Information stored in the ERP system
- Kanban labels printed on demand
- Labels affixed to index cards, placed in vinyl pocket
- Overstock cards for initial inventory that will not be replenished





Kanban Collection Bins

- Collection bins fashioned from plastic brochure holders
- Set up at inventory areas, receiving, requisitioning, production





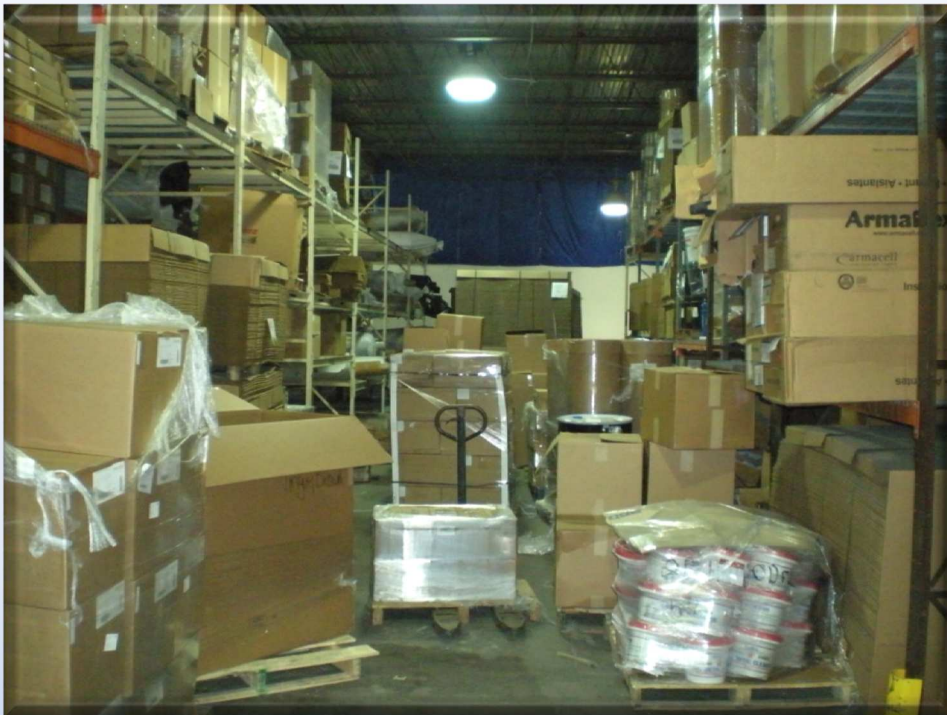
Early Results

- Inventory reduction greater than 40%
- Doubling of inventory turns
- Expected first pass inventory reduction of 60%
- 20% savings in required space
- Improved on-time shipping
- Absorbed business of closed facilities with less resources
- Steady increase in team improvement efforts and suggestions
- Beginnings of strong, sustainable Lean culture

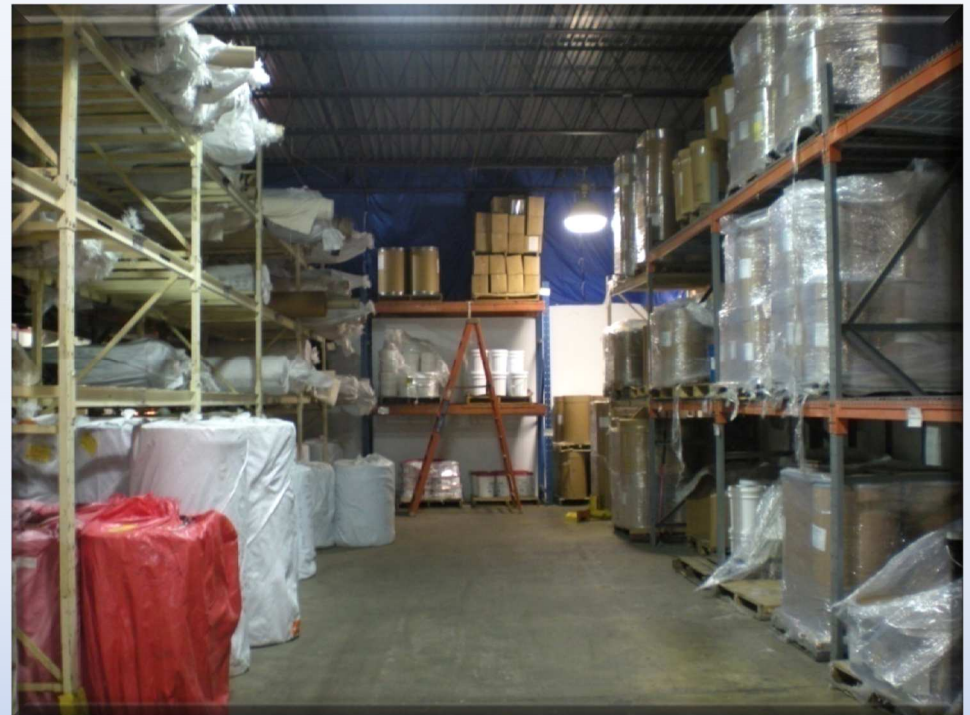


Before & After – Pick & Pack/FWI Materials

- Area not easily accessible
- Far too much inventory
- No organization



- Accessible by forklift or person
- Pull to control inventory
- Maximized storage space
- Logical organization
- Visual controls to locate products





Before & After – FWI Materials

- Excessive inventory
- Difficult to locate materials
- Shelving not arranged optimally



- Logical organization
- Visual controls to locate products
- Pull system in place
- Shelving arranged to maximize storage



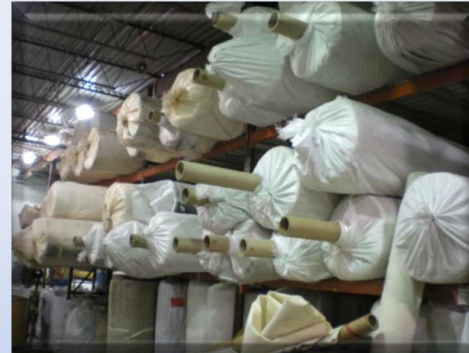


Before & After – FWI Materials

- Areas not easily accessible
- Too much inventory
- No organization
- Inventory encroaching into work areas and travel lanes



- Everything accessible
- Pull in place
- Maximized storage space
- Area organized logically
- Visual controls to locate products



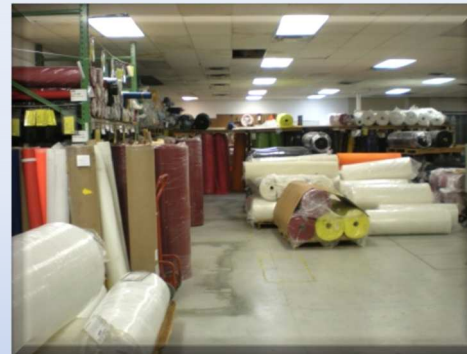


Before & After – Net Materials

- Too much inventory
- Too far from point-of-use
- No organization
- Poor utilization of storage space



- Inventory at point of use
- Racks designed to fit materials
- Pull system
- Logical organization
- Visual controls to locate products





Before & After – Maintenance Shack

- Unnecessary equipment and supplies
- Structure wasting space
- No organization



- Materials reduced to what's needed
- Stored in smaller footprint
- Beginning steps to organize
- Old area now supermarket



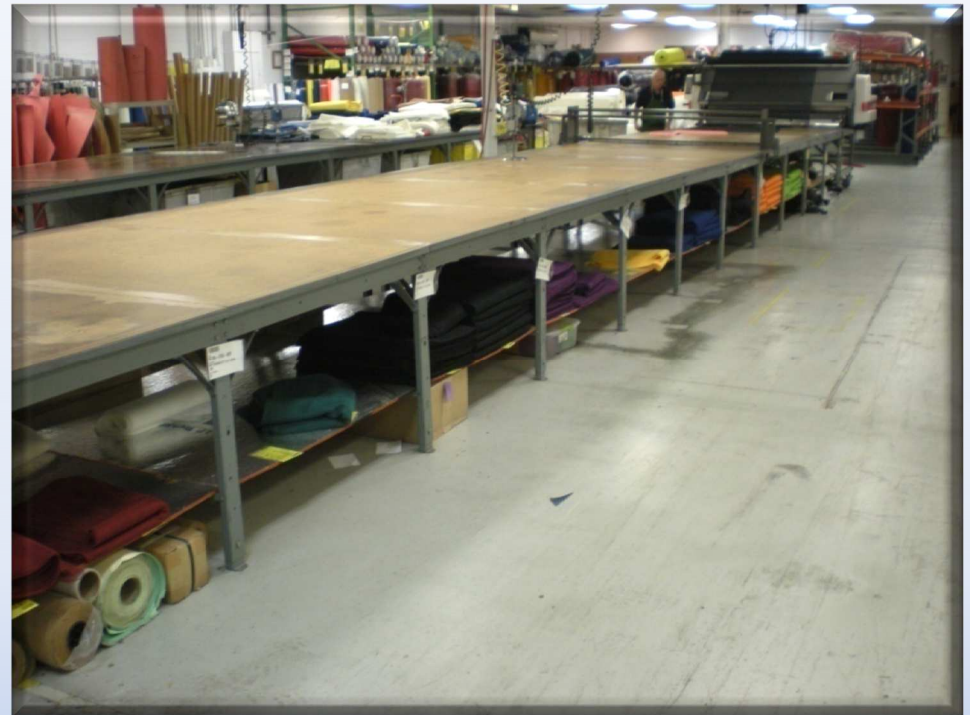


Before & After – Net Work-in-Process

- Excessive inventory
- Slower-moving sizes/colors
- Poor use of storage space
- Desire to maximize cutting changeovers



- Close to the point of use
- Only popular sizes/colors
- Batch sizes reduced
- Pull utilized
- Floor space freed up





Before & After – Guide Tapes

- Maze of cartons
- Too much inventory
- Very little organization
- In net point-of-use area
- Poor utilization of space



- Closer to point of use
- Pull in place
- Better use of vertical space





Before & After - Springs

- Long lead-time item, still too much inventory
- Springs “mountain” hard to access



- Inventory is easily accessible
- Pull in place
- Better use of vertical space





Before & After – Finished Nets Inventory

- Buffer against variable demand
- Far larger than necessary
- Stored far from point-of-use
- Poor utilization of vertical space



- Stored at the point-of-use
- Pull in place
- Better use of vertical space





Before & After – Sling Area Supplies

- Supplies stored haphazardly
- Too much inventory
- Poor visual control
- Organization could be better
- Vertical space could be used better



- Standardized shelving used
- Pull utilized
- Better use of vertical space
- Organized and easy to locate materials





Before & After – Belting

- Areas not easy to access
- Excessive inventory
- Overflow stored far from point-of-use
- Needed better organization
- Poor use of space



- Better use of vertical space
- Pull in place
- Organized
- Net accessories now stored in area

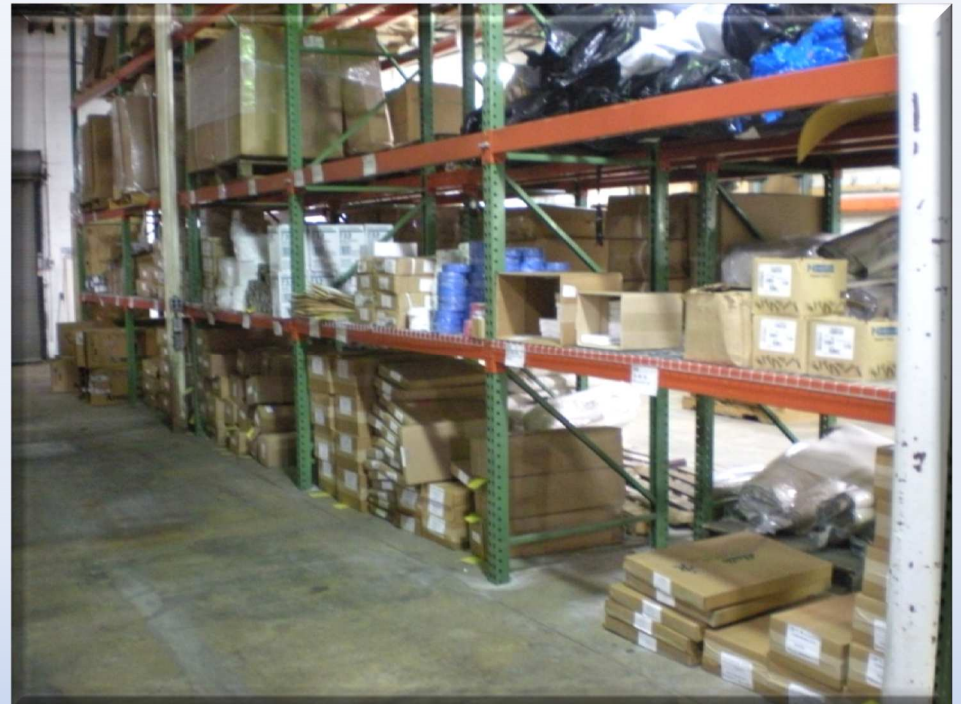


After Photos – Pick & Pack Area

- Resale items stored all over the facility
- Not close to point-of-use
- No organization at all
- Far too much inventory



- Closest inventory area to shipping
- Organization
- Pull in place
- Some inventory converted to drop ship





After Photos – “Forbidden” Zone

- Roughly 8500 sq. ft. area
 - For expansion of another division or outside business.
 - Dumping ground for inventory
- Used as a temporary holding area
 - Not completely cleared out, on its way
 - Slow-moving or goods awaiting disposal





Future Direction

- Continuation/expansion of current efforts
- Kaizen team gemba walks
- Continued development of culture
- Value stream mapping
- Detailed look at process flow
- Refine inventory supermarket levels
- Procedures for supermarket review
- Lean sales force



Future Direction

- Administrative focus
- Standard work
- Demand stability efforts
- Lean Supply Chain
- Lean metrics
- Development of people
- Strategic use of technology
- Long-term stability and continuity efforts



Parting Wisdom

- Have a game plan
- Develop your own brand of Lean
- An internal champion is a must
- Qualities of a Lean Champion
- Actively and visibly engaged management is critical
- Culture is the foundation of Lean



Parting Wisdom

- A Lean culture is fragile
- Importance of Change Management
- An aggressive approach is best
- The less pain, the better
- Don't wait for perfect solutions
- Lean must be part of everyday life