



Rapid Diagnostic. Rapid Value Creation.

TBM Diagnostic

Quickly identify opportunities and financial impact of performance improvements and create a Go-Forward Implementation Plan for rapid value creation.

Diagnostic Plan Assessment Areas



Operational Excellence

- Lean Progression Analysis
- Value Stream Mapping
- Cost Analysis Bridge
- Capacity Analysis
- Operations Analysis
- Management System Assessment
- Going to GEMBA – Shop Floor Observations



Supply Chain

- Logistics and Transportation
- Distribution & Warehouse Operations
- Supplier Management
- Inventory Optimization
- Sourcing & Procurement
- Technology
- Integrated Business Planning / S&OP
- Planning & Scheduling
- Network Review
- Talent Capabilities



Human Capital Management

- Organizational Structure & Gaps
- Leadership Risks
- Talent Management
- Technical Capabilities
- Leadership Capabilities
- Culture



Maintenance Excellence

- Safety
- Workplace Organization
- Maintenance Measure
- Facilities Maintenance
- Equipment Maintenance
- MRO Process
- Information Management
- Work Order Management
- Maintenance Organization

Understand Gap Closure Opportunities to World Class via Diagnostic Assessment

Identify opportunities for performance improvement in production operations; quantifying the benefits of capturing these opportunities including:

- Evaluating the quality of the site (visual management, flow of product, safety, obvious bottlenecks)
- Identifying significant specific productivity savings with respect to throughput and staffing
- Analyzing supply chain management processes
- Analyzing capacity management and utilization
- Evaluating scalability of supply chain and Sales & Operations Planning processes, ability to transform from Make-to-Order to Inventory/Production Plan/Sales Forecast model
- Evaluating proposed initiatives by management and validate the impact on productivity, cost, and revenue
- Identifying additional productivity/quality/throughput opportunities
- Assessment of management team – level of scalability
- Refinement of value creation themes identified during due diligence including:
 - Management System Implementation
 - Process Flow
 - 5S/Workplace Organization
 - Asset Management/Utilization
 - Inventory Reduction
 - Set-up Time Reduction
 - Make vs. Buy
- Developing the initial go-forward plan

Site Diagnostics Delivered in a Short Time Frame

Discovery Pre-Work and Onsite		Report Findings & Implementation Plan	
Validation	Identification	Quantification	Prioritization
<ul style="list-style-type: none"> • Review & analysis of current and proposed management initiatives • Establish a matrix of performance indicators specific to your business • Identify benchmarking and best practices to be identified • Functional Area abilities • Organizational interviews • Site observations to supplement or validate data & assumptions 	<ul style="list-style-type: none"> • Value chain and process mapping of key areas • Conduct Lean Progression Analysis • Capacity analysis • Procurement/ Distribution analysis • Change Readiness Assessment • Understand Gap Closure Opportunities to World Class • Collaborative brainstorming on improvement opportunities 	<ul style="list-style-type: none"> • Cost analysis bridge to performance • Impact of organizational structure on business performance • Current year and run rate savings suggestions • Observations, key actions, and financial impact by improvement theme • Vetted “Likely” and “Possible” case EBITDA impact range 	<ul style="list-style-type: none"> • Opportunity Impact/ Difficulty Analysis • Project summary of findings • Go forward implementation plan and timeline

Sample Diagnostic Deliverables

Executive Summary

Executive Summary

We have completed a diagnostic assessment of the New England site for Building Products Co. we project \$4.9M \$20M of EBITDA improvements (including inventory reductions) based implementation of a lean transformation including improved material flow, site organization, reduced inventory, increased uptime and improved labor efficiency.

Summary of Deliverables

- TBM team has completed an on-site diagnostic review. New England Site (10/12/20)
- Diagnostic efforts for the New England location included: plant walk-through, interviews with site leadership & hourly associates, analysis of available plant data, and general observations.

Key Findings

- Build Line**
 - Reduce change over time by 20%
 - Reduce work-in-progress inventory by 20%
- Shifting**
 - Increase change over time by 20%
 - Increase uptime by 20%
- Material**
 - Reduce change over time by 20%
 - Increase uptime by 10%
- Plant**
 - Increase productivity by 20%
 - Decrease inventory by \$2.0M to \$4.0M
 - Reduce OEE by 10%

EBITDA Bridges

Executive & Financial Summary EBITDA Bridges

Likely Case Pro Forma EBITDA Bridge \$4.9M (\$000)

Possible Case Pro Forma EBITDA Bridge \$20M (\$000)

Assumptions (Likely Case)

- Increase 10% Improvement in Process Productivity
- Increase 10% Inventory Turnover
- Increase 10% Material Efficiency
- Increase 10% Warehouse Productivity
- Increase 10% Warehouse Inventory
- Increase 10% Warehouse Turnover
- Increase 10% Warehouse Inventory
- Increase 10% Warehouse Turnover
- Increase 10% Warehouse Inventory

Assumptions (Possible Case)

- Increase 20% Improvement in Process Productivity
- Increase 20% Inventory Turnover
- Increase 20% Material Efficiency
- Increase 20% Warehouse Productivity
- Increase 20% Warehouse Inventory
- Increase 20% Warehouse Turnover
- Increase 20% Warehouse Inventory
- Increase 20% Warehouse Turnover
- Increase 20% Warehouse Inventory

Return on Investment

Executive Summary: ROI Projection By Investment Category & Theme

Investment Category	Investment (\$M)	EBITDA (\$M)	ROI (%)
Build Line	1.0	0.2	20%
Shifting	1.0	0.2	20%
Material	1.0	0.2	20%
Plant	1.0	0.2	20%
Total	4.0	0.8	20%

Business Priorities

Project Tower: Cost Savings & Value Creation Executive Summary

TBM has completed a diagnostic assessment of the Goldboro and Waukesha sites as well as a rigorous examination of non-manufacturing services for ABC Transformer Solutions. These examinations served to validate ABC to-Process Projects, to identify Enhancements to the Process Projects and to uncover New Value Creation Opportunities.

Impact	ABC to-Process	Enhancements to to-Process Projects	New Value Creation Opportunities
EBITDA	\$4.93 Million	\$3.33 Million	\$ 4.38 Million
Working Capital	N/A	N/A	\$3.4 Million
SPX-Led	SPX-Led	TBM-Led	TBM-Led

Operational Strengths

- Build plans present responsibility well
- Site and equipment available
- No inventory operational risks observed
- Suppliers are engaged with contracts and long-term agreements
- Good relationship with labor union
- Effective use of ERP
- Suppliers have strong OJ group in place

Key Operational Improvement Themes

- Engineering & Process Planning
- Inventory Management
- Material Efficiency
- Warehouse Productivity
- Warehouse Inventory
- Warehouse Turnover
- Warehouse Inventory
- Warehouse Turnover
- Warehouse Inventory

Prioritized Opportunities

Process Improvement Initiatives With Cost Savings and Margin Impact Prioritized

High EBITDA Impact

Low EBITDA Impact

High Difficulty

Low Difficulty

Priority Initiatives

- 1. Reduce Change Over Time
- 2. Increase Inventory Turnover
- 3. Increase Warehouse Productivity
- 4. Increase Warehouse Inventory
- 5. Increase Warehouse Turnover
- 6. Increase Warehouse Inventory
- 7. Increase Warehouse Turnover
- 8. Increase Warehouse Inventory

Quick Wins

Waukesha Insulation

Productivity % for 2019-2020

Observations

- Productivity % for insulation trending negatively
- Equipment reliability issues
- Absenteeism up 1.6%
- Limited capacity and capability of current equipment

Key Investment Category	Investment (\$M)	EBITDA (\$M)	ROI (%)
Automotive Repair and Reflow equipment	2.0	0.4	20%
Increase work CNC capacity and capabilities	1.0	0.2	20%
Resource Utilization Initiatives	1.0	0.2	20%
Total	4.0	0.8	20%

Change Management

Change Readiness Assessment

Observations/Ideas

- Communication beyond management team consists of results and "word of mouth". Worded passed to Supervisors and Shop floor.
- Training program not in place, left to the discretion of departments. Assembly training done on-site.
- Talent issues exist consistent across. Lack of quality and quantity in hiring process. Treatment of new hires (assembly) a factor in turnover. Opportunity to improve hiring and talent acquisition process.
- Accountability and discipline lacking across assembly. Supervisors intimidated by unions; discipline based on labor shortage.

Impact Highlights

- Communication is consistent, shop floor aligned with daily goals. Morale improved.
- Training structure built, reducing turnover due to agent on usability to work different lines. Quality Tests no longer based on work lines.
- Talent acquisition operation increases headcount ahead of Plant's start-up.






Key Actions

- Effective Tier Meetings implemented through SPX Management System.
- Consistent onboarding and engaged program developed and implemented. Cross-training designed to assembly.
- Diagnostic on talent acquisition and hiring process performed and redesigned.
- Facilitate engaged leadership skills workshops.

Implementation Roadmaps

	Year 1	Year 2	Year 3	Year 4
Connected Worker	Target (High Quality)	Target (High Quality)	Target (High Quality)	Target (High Quality)
Connected Machine - Pilot	Target (High Quality)	Target (High Quality)	Target (High Quality)	Target (High Quality)
Automation	Target (High Quality)	Target (High Quality)	Target (High Quality)	Target (High Quality)

Diagnostic Improvement Opportunities Identified

CLIENT	IMPROVEMENT OPPORTUNITIES
 <p>HVAC Manufacturer</p>	<p>\$14 Million/500 bp of achievable improvement in EBITDA worth ~\$90+ million in value creation.</p>
 <p>Specialty Foods Manufacturer</p>	<p>\$10+ million identified in productivity savings and excessive product give-away.</p>
 <p>Middle Market Auto Interior Maker</p>	<p>\$2 million captured in annualized savings in less than 1 year.</p>
 <p>First Data, Parent of Western Union</p>	<p>\$2 million validated EBITDA improvement.</p>
 <p>Diversified Global Manufacturer</p>	<p>30% up in EBITDA in three years.</p>
 <p>Plastic Films Maker</p>	<p>\$1.9MM to \$3.6MM identified in EBITDA improvement opportunity by the operational diagnostic team and go-forward recommendations to achieve it.</p>

Schedule Your TBM Diagnostic Today!

Identify opportunities for performance improvement in production operations.



Speed wins every time.

TBM specializes in operations and supply chain consulting for manufacturers and distributors. We accelerate operational performance to make you more agile and help you accelerate business performance 3–5x faster than your peers.



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