

The Corporation for Manufacturing Excellence

Zone Works
October 2009

It long has been recognized that the manufacturing sector is the foundation for economic vitality in California and the United States.

Since 1995, The Corporation for Manufacturing Excellence (Manex) has provided a broad array of proven solutions and resources *exclusively* to manufacturers, distributors and their supply chains, enabling them to compete on a global scale.

We use a holistic and proven approach – from strategy through implementation – to impact all facets of business performance.

The results: growth, profitability, and competitive advantage.

About Us

- **Manex is a premier provider of high-value consulting and business advisory services exclusively to manufacturers, distributors and their supply chains, enabling them to improve global competitiveness by significantly increasing their growth, productivity, quality and profitability**
- **We are a 501(c)(3); NorCal's sole resource for improved business performance focused on small/midsized manufacturers/distributors, we create economic and workforce development**
- **Partner with economic development firms, federal and state agencies, other non-profits (DOC, NIST, DOL, EPA, EDD/ETP, SBDC, GSN); team on programs, leverage grants.**
- **Partner with private industry (accounting, banks, IBanks, PE, altL)**
- **Consultants average 20 years experience**
- **Proven ROI - 10:1 to 38:1 – US DOC/NIST**
- **Involved with TBAP since its inception (lead subcontractor for business assistance in TBAP1, prime contractor in TBAP2)**

What We Do

→ **strategy > people > process > performance**

Strategy

→ **strategy > people > process > performance**

- **Focused on growth/revenue/competitive advantage**
 - What is the market environment (macro, competitive, customer)
 - What do/can we do better?
 - What is better worth?
 - Who cares the most?
 - What do they need/want/desire/value?
 - How do we do it (plan)

People

→ strategy > people > process > performance

- **Focused on workforce development**
 - What resources (human capital) are required?
 - Are they “bought in”?
 - How do we organize or coordinate?
 - What do they need to know (skills)?
 - What do they need to do?
 - How do they learn?
 - Are they empowered?

Process

→ strategy > people > process > performance

- **Focused on the “how”**

- What processes support the strategy?
- What processes/steps add value?
- What processes/steps have no value?
 - Must do
 - Just do
- How do we eliminate WASTE?
 - Time (initial+rework), raw materials, scrap, landfills/etc
- How should processes and flow be optimized?
 - Time, Cost, Quality, Value
- How do we keep going?

Performance

→ strategy > people > process > performance

- **Focused on measuring/managing/improving**
 - You can't improve what you don't measure
 - What are the appropriate KPIs?
 - How do we measure them?
 - Who needs to know what (cascading KPIs)
 - How do they find out (dashboards, andan)
 - What do we do with the information?
 - Fix/improve now, and then...
 - Pipe info/data to restart the whole process (flow back to strategy, continuously improve)

Representative Results

- **Over the course of a recent 12-month period, our clients reported an annual aggregated:**
 - \$117 million in sales increased
 - \$37 million in cost savings
 - \$25 million in prevented expenditures
 - 912 jobs created or retained

What You Might See and/or Hear (1)

- “Out of state (or lower cost) competitors are killing us”
- Flat or declining revenue or increased revenue with diminishing returns
- Flat or declining market share
- Margins pressure (gross, op, net)
- Writeoffs, writedowns, markdowns, obsolescence
- Increasing customer or product concentration
- “Onerous” customer requirements for time/cost/quality
- Raw materials inventory increasing/high
- Finished goods inventory increasing/high or low turns
- Suboptimal labor productivity
- Rework, scrap, quality issues
- Rush to build (CapX) for more capacity

What You Might See and/or Hear (2)

- **In the Manufacturing Facility:**

- Excess staged raw materials
- Intermediate product not moving
- Excessive finished goods inventory
- Line stops
- Idle labor (hands in pockets, kicking rocks, scratching heads)
- General disorganization
- No signage, pictograms or performance metrics articulated or posted
- People doing the same thing, but not the same way
- Product on floor or in garbage bins
- People dodging forklifts, equipment, or other people
- Anyone > Supervisor walking briskly or faster

Tale of Two Companies

In 2004, two plastics companies contacted Manex to discuss improvement opportunities. One became convinced his 9% seller's discretionary cash flow was good enough; the other wanted to further increase his, which was 10%. Only one moved forward on our recommendations.

In 2007, one sold his company for 8 times seller's discretionary cash flow, which he had grown to more than 12.4%. That improvement was worth \$16 million. The other is suffering tremendously, with revenue off by half and bankruptcy likely. On top of that, market multiples are now 2-2.5 times SDCF.

Lesson: the decision to “not improve” is a decision to worsen.

How It CAN Be

1. Medical device manufacturer is growing ***sales 80% over 2008***
2. Accessories manufacturer achieves more than ***20% net income***
3. Contract manufacturer ***doubled their market share***; prices up 8%
4. Food company achieves ***\$400k in sales per employee, doubles throughput, reduces per-unit costs by 20%***
5. Division of aerospace company ***increased sales by 700%*** over past 24 months
6. Local premiere construction firm succeeding in entering new markets and ***increasing close ratios to 70% of new leads***
7. Automotive Supplier achieves ***38% EBITDA***

Who Survives, Who Does Not

Survivors:

- Focus on data and research; does not run on assumptions
- **Invest (time and effort is far more important than \$)**
- Use tools (primarily software)
- Take measures and conducts analysis with them
- Ask customers for feedback
- Ask employees for input
- Get suppliers involved
- **Communicate their story**
- **Look for help/support**

Non-Survivors:

- Operate primarily off of gut feel because they “think it’s right”
- Operate off of long-running, often outdated pricing and quoting processes
- Cut costs in areas such as marketing, training and IT
- Limit communication with employees and/or suppliers
- See suppliers as “vendors” and distribution partners as “a necessary evil”
- **Think customers already know**
- **Are filled with pride**

Who Thrives, Who Does Not

	Status	Revenue	Yr/Yr Change	Income	Value t1	Value t0	Value x
Company 1	Didn't listen	13.9MM	-	0.12%	119k	1.65MM	0.07
Company 2	Implemented	8.3MM	+	1.49%	1.44MM	861k	1.67
Company 3	Implemented	2MM	+	5.45%	770k	63k	12.22
Company 4	Implemented	3.4MM	+	5.30%	1.2MM	329k	3.65
Company 5	Implemented	5.2MM	o	4.33%	1.58MM	n/a losses	inf

Step One: Know Where You Stand – what you don't measure you can't improve

- Good data is hard to find, great data requires “mining”
- Use this information to set goals and targets, not just for your organization, but for departments and individuals
- Target the “best in class,” not the average

	Leaders	Average	YOU
Sales Per FTE	\$150k	\$133k	\$125k
Comp per FTE	124%	98%	100%
Quality Rate	99.6%	98%	95%

	Leaders	Average	YOU
Margins	31%	29%	21%
Profitability	14%	11%	8%

Example – Benchmark Study

Analysis of 12 key operating metrics and percentile ranking within peer group:

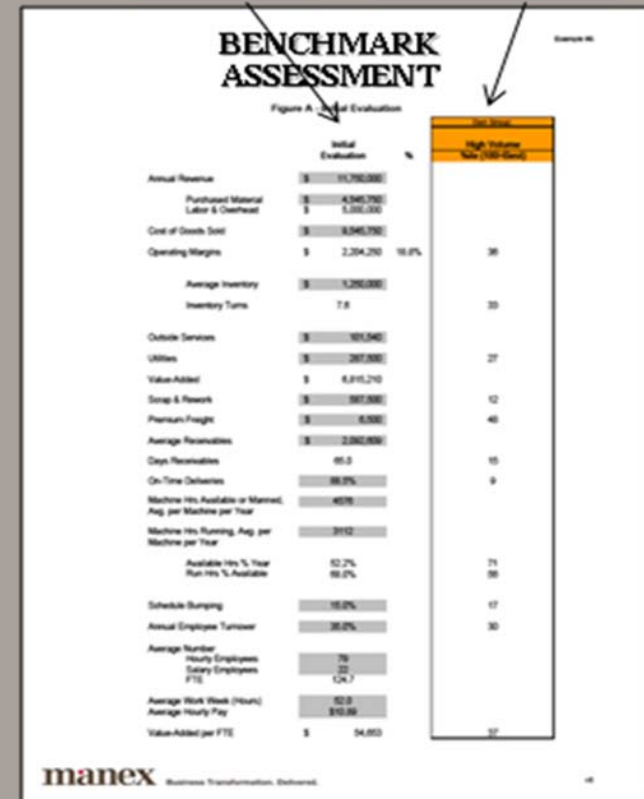
- ❑ Operating margins (as a % of sales)
- ❑ Inventory turns
- ❑ Scrap and freight
- ❑ Equipment run hours
- ❑ Equipment availability & utilization
- ❑ Employee turnover
- ❑ Value-add (output) per employee

Output includes the value of each improvement, in this case more than \$1.4 million per year

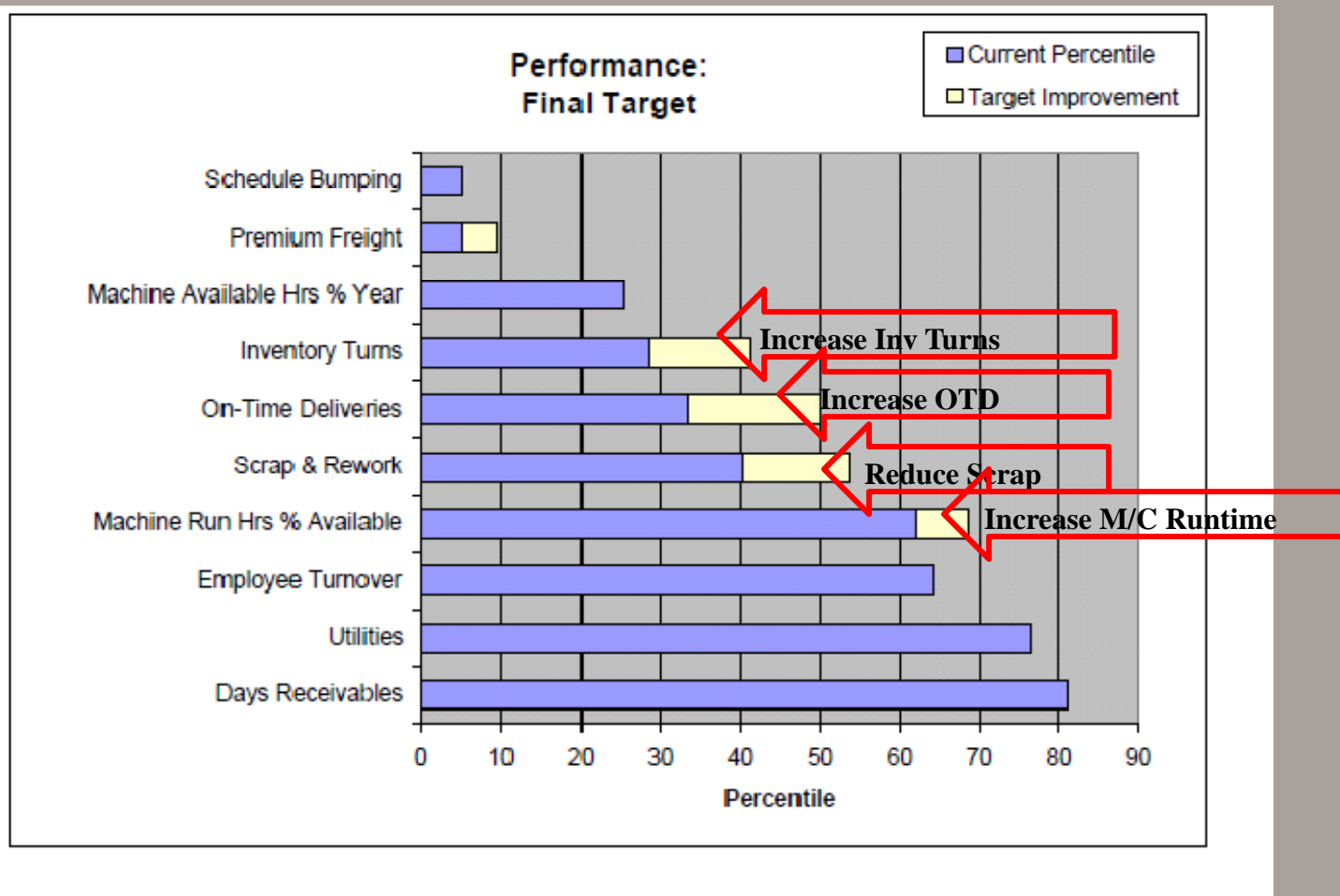
Database is comprised of more than 11,000 companies. Each analysis includes a peer (comparables) base of 25 – 65 companies.

12 Key Metrics

Best-in-class Comparison



Benchmark Key Objectives for action



Know Where You Stand (KPIs)

Delivery Performance

- Scheduled Orders to Customer Request
- Delivery Performance to Request Date
- Delivery Performance to Commit Date

Order Fulfillment Lead Time

- Customer Signature/Authorization to Order Receipt
- Order Receipt to Order Entry Complete
- Order Entry Complete to Start Manufacture
- Start Manufacture to Order Complete Manufacture
- Order Complete Manufacture to Customer Receipt of Order
- Customer Receipt of Order to Installation Complete
- Total Order Fulfillment Lead Time

Upside Production Flexibility Metrics

- Upside Production Flexibility: Principal constraint
- Key Components or Material Availability
- Direct Labor Availability
- Internal Manufacturing Capacity

Supply Chain Response Time

- Forecast Cycle Time
- Re-plan Cycle (Sales & Operations Planning) Time
- Intra-Manufacturing Re-plan Cycle Time
- Total Sourcing Lead Time
- Release-to-Ship Time

Total Supply Chain Management Costs

- Order Management Cost
- Material Acquisition Cost
- Inventory Carrying Cost
- Supply-Chain-Related Finance and Planning Cost.
- Supply-Chain-Related IT Cost
- Total Supply-Chain Management Costs

Fill Rate for Ship-From-Stock Products

- Fill Rate by Order
- Fill Rate by Line

Cash-to-Cash Cycle Time

- Days Sales Outstanding
- Average Payment Period for Production Materials
- Total Inventory Days of Supply
- Inventory Days of Supply (Raw, WIP, Finished Goods)
- Inventory Turns

Value Added Productivity

- Value Added Productivity per Employee
- Value Added Productivity per Payroll

Transition from Knowing to Improving

1. **Set the Foundation – learn more and perform research before doing anything else; knowing the benchmark will result in targets**
2. **Train, Train, Train – grow your people**
3. **TC/PC/IC – See table below to understand how to implement changes and improvements throughout the organization**

Stages of a Concept	Description
Teach the Concept (TC)	Before starting, explain the change to all affected (what/why/how)
Prove the Concept (PC)	Whether during training or on the shop floor, prove why it's better
Implement the Concept (IC)	Have everyone perform an activity that results in "lean & green"

4. **Market Your Improvements – Make more money from all of these improvements and investments**
5. **Lower your prices to gain market share, new efficiencies will allow it while still increasing profits**

Step Two: Invest in Your Operations



Do you have environmentally sound operations? If you do, you're likely running more efficiently than competitors *and* you have more to "market"

Invest in your people

*Most companies can increase profits by
\$12k – \$15k per employee*

Invest in Your Office



Before

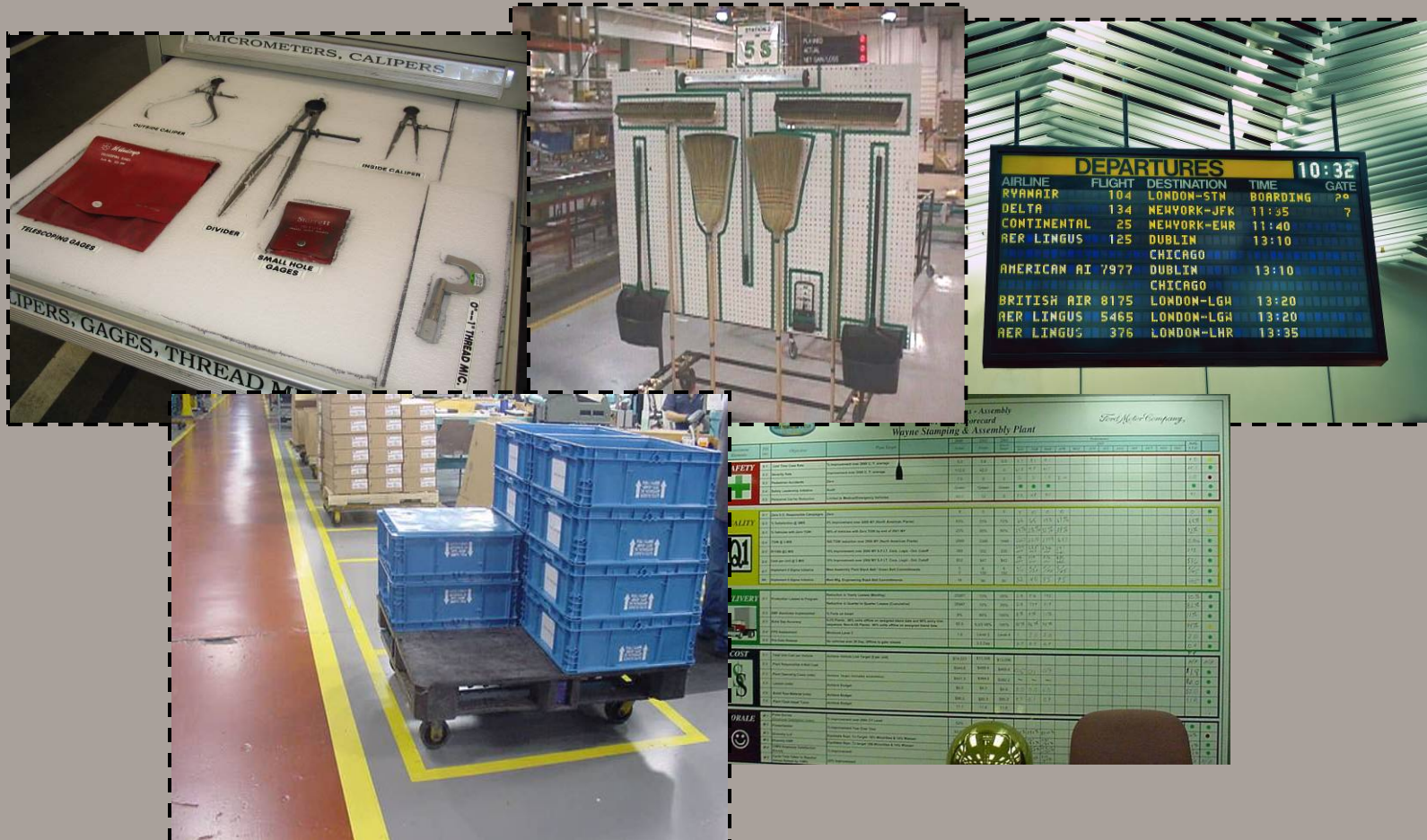


After

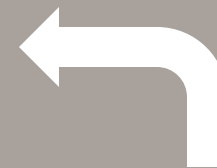
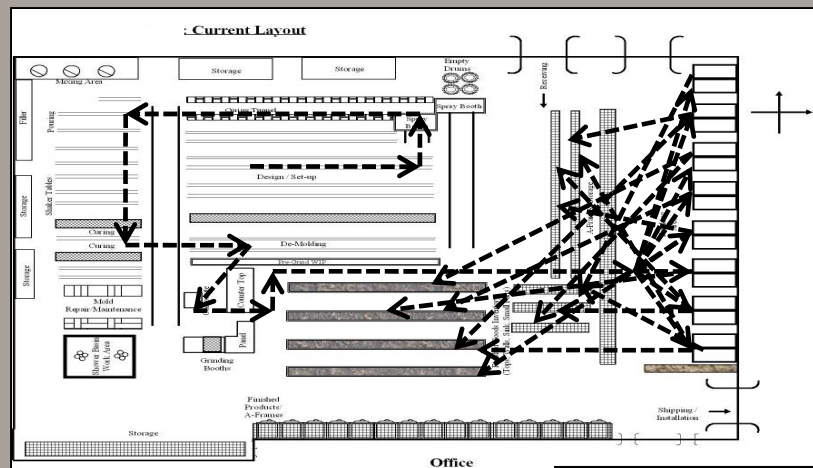
An unorganized office, or unorganized people will damage your organization:

- 1. Errors, leading to waste, which results in**
- 2. More energy consumption and more pollution, all the while**
- 3. Decreasing marketability, and performance, resulting in**
- 4. Declining sales and lower profitability**

Invest in Clarity & Standardization

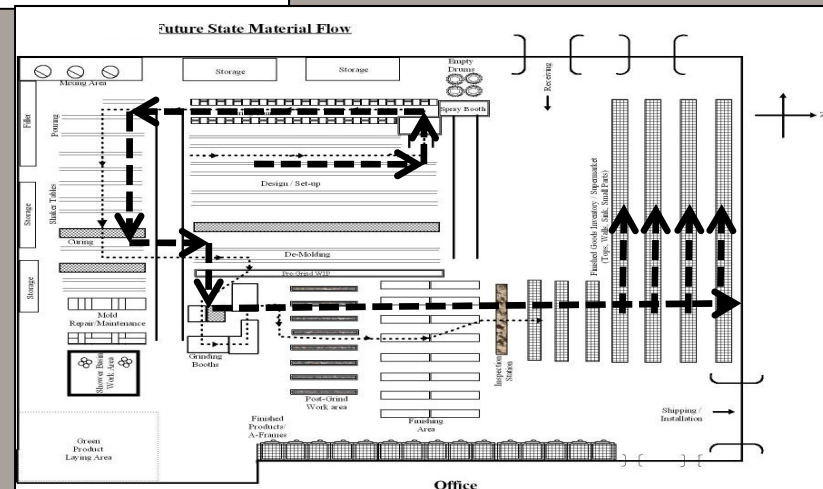


Invest in “Best in Class” Projects



Current State (Before Lean Implementation)

Future State (After Lean Implementation)



Step Three: Start Small, but Start Now

- **Pick A Single Area for a Quick Win (Fruit Already on Ground)**
 - Eliminate a bottleneck
 - Workplace organization
 - Compelling and/or simpler marketing message
 - Internet transactions
- **Implement a Successful Change**
 - Remove the bottleneck
 - Improve your messaging and/or marketing
 - Identify support programs and ask for help
- **Reinvest Some of the Savings or Extra Profit Into Project #2**
 - Develop your own **self-funding model**
 - Invest no less than 35% of the extra money back into the co.
- **Start on project #2**

Solutions, Tools & Methodologies

Strategy

- Corporate Strategy & Business Planning
- Supply Chain Strategy
- Marketing Strategy
- Organizational & Operational Design
- Mergers & Acquisitions Advisory;
Post M&A Integration; Valuation
- New Product Development and Innovation
- Product Line Extensions/Rationalization
- Manufacturing, Distribution & Channel
Strategy
- Customer Satisfaction, Loyalty & Retention

People

- Management Leadership Training
- LEAN Operations & Six Sigma Training
- ISO 9001-2008 Implementation &
Certification
- State Training Funds

Process

- LEAN Operations
- Six Sigma Quality Management
- Activity Based Management
- Process Design
- Supply Chain Management
- Procurement
- Quality Management Systems
- RCA, TQM, HACCP and cGMP

Performance

- Executive Decision Support Systems
- Internal/External Benchmarking
- Management Dashboards & Scorecards
- Activity Based Cost/Profit Management
- Key Performance Indicators (KPIs)
- Profit Optimization

Step Four: Tell Your Story

manex The Company for Maximizing Business Performance Through Business Transformation. Delivered.

Work with the best in the business, the very best in the business.
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Current State (Before Lean Implementation)

Future State (After Lean Implementation)

Indisputable information accompanied by explanations and fact

Objective, scientific perspective

Call to action with sense of urgency built in

Market Your Story

OVERCOMING HURDLES

What are our product features?

What are our products credibility's?

What is the overt benefit our products provides?

	Features	Credibility	Overt Benefit
Product	<p>25% faster cure times vs. 80% of the competition.</p> <p>30% less labor required for same coverage area</p> <p>65 more color options</p> <p>0 VOCs on over 95% of product lines</p>	<p>70 years of industry leading experience.</p> <p>Over 50 million square feet of sanitary floor and wall finishes.</p> <p>A leading provider in Bio Tech applications, with over 500 biotech customers in the last 5 years</p>	<p>My floor is done and I won't have to think about it for years.</p> <p>I don't have to worry about a thing if I select us.</p> <p>If I use our products my biotech customer will be my customer for life.</p>

Example of a Compelling Story



These were used truck and passenger tires. Until a few years ago, nearly 100% of tires were burned or “land filled.” Now, more than 74% is recycled into new, long-life products!

Little new virgin material is consumed, and these replace the products made from virgin materials. Cost of ownership is lower than sand/dirt/grass combination over 5 year period.

Countless stories of parents whose children did not die; environment is protected. Emotional!

Step Five: Look for Support

- Less than 2% of manufacturers even know of all the tax and incentive programs available to them (there are dozens)
- There is more than \$100 million available in CA alone, for energy efficiency/reduction/sustainability projects
- CIWMB RMDZ, TBAP, other programs; IDBs through EDCs/etc.
- USDA, EPA, DOL, DOE loans and grants to developing enterprises
- Your local SB organizations provide free or discounted courses; sessions are worth at least \$500 per person, per day

Do you know the value chain of the stimulus package as it relates to your organization?

Identify Support Services

Benchmark Assessment

\$3k - \$25k

From 12-metric benchmark study to full-blown 50-metric study

Revenue Enhancement

\$3k - \$75k

Market research to full-blown strategy with operating business plan

Operational Efficiency

\$10k - \$60k

Value stream map, deep-dive assessment, roadmap, or all of the above

Training

\$2 - \$90k

Lean, Six Sigma, Lean Sigma, Curriculum Development

Not Just Service – But REAL Support

Benchmark Assessment

\$3k - \$25k

From 12-metric benchmark study to full-blown 50-metric study

Revenue Enhancement

\$3k - \$75k

Market research to full-blown strategy with operating business plan

Support up to 50%,
20 – 30% is common

Operational Efficiency

\$10k - \$60k

Value stream map, deep-dive assessment, roadmap, or all of the above

Support up to 100%,
30 – 60% is common

Training

\$2 - \$90k

Lean, Six Sigma, Lean Sigma, Curriculum Development

Support up to 100%,
60 – 90% is common

ROI Question

What would be the return for a company that moved forward on a 6 to 1 ROI project, let's say it was \$100k in cost, if they received \$60k of funding support and sold in a market that valued their business at 7x cash flow?

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Net Cost: \$40k

Annual ROI: \$600k

Benefit: $\$600k \times 7 = \4.2 million in additional valuation!

ROI: 10,400%

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