Transforming HR Results Through Six Sigma

Fuller, Jones & Associates, Inc.
Agenda

- What is Six Sigma?
- The Nature of HR Problems
- Optimizing Six Sigma for HR
- HR’s Role in The Organizational Selection and Deployment of Six Sigma
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Six Sigma as a measurement standard can be traced back to Carl Frederick Gauss (1777-1885) who introduced the concept of the normal distribution / curve.

Six Sigma as a measurement standard in product variation can be traced back to the 1920's when Walter Shewhart introduced statistical control charts.

In the early and mid-1980s with Chairman Bob Galvin at the helm, Motorola wanted to measure the defects per million, instead of thousands, opportunities.

Motorola developed this new standard and created the methodology and needed cultural change associated with it.

Leaders such as Larry Bossidy of Allied Signal (now Honeywell), and Jack Welch of General Electric Company popularized the approach in the US.
Evolution Of Six Sigma

Motorola Six Sigma:
- Problem Solving

GE Six Sigma:
- Running The Business
- Leadership Development

- Standard Six Sigma
- Transactional Six Sigma
- Design For Six Sigma
- Etc

- Lean Six Sigma
- Standard Six Sigma
- Transactional Six Sigma
- Design For Six Sigma
- Etc

Customized Six Sigma

Six Sigma Has Undergone Many Reinventions
Key Advantages of Six Sigma

- Establishes a Common Language and Approach to Problem Solving
- Systematic Approach to Problem Solving
- Provides New Capabilities for Problem Solving
- Establishes Focus on Reduction of Variability and Waste Elimination

Six Sigma “can” Take Problem Solving to a New Level
Traditional Lean Six Sigma Requires Significant Dedicated Resources and The Use Of Artificial Organizational Constructs
Lean Six Sigma Tool Focus

Emphasizes the majority of tools across Lean Manufacturing and Six Sigma, regardless of frequency of use.

Tool Examples

Many BB’s & Proj.’s
Statistical Hypothesis
“LEI” Value Stream Maps
Statistical Test(s)
Test P-value
Control Chart

Select
Define
Measure
Analyze
Improve
Control

The Tool Focus Creates a Caste System of Knowledge
Application Opportunities

Typically Only Used For BIG Problems, “3-6 months”
## Impact of the Drawbacks

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Traditional Lean Six Sigma</th>
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<tbody>
<tr>
<td>Training time</td>
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Because the Drawbacks Are Significant, Most Six Sigma Programs Don’t Last Beyond 3-4 Years
What is Six Sigma?

Nature of HR Problems

Optimizing Six Sigma for HR

HR’s Role in The Organizational Selection and Deployment of Six Sigma
Types of Problems

- Processes are not well defined
- End-to-end process outcome thinking (and accountability) is not prevalent
- Data is mostly qualitative and discrete
- Process Performance data (defect levels, cycle time, etc) does not exist and is difficult to access
Useful Concepts and Tools

- Process Mapping
- Process 5-Why
- Multi-Level Pareto’s
- Lean Concepts Targeting Waste Elimination and Cycle Time Reduction
- Value-add and Non-Value Add For Outsourcing

Customization to HR and the Organization is Key, The Concepts and Tools Needed Mostly are Far Less Than the Standard Six Sigma Program
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What To Consider To Ensure Success

- Transforming problem solving behaviors

- How leaders can lead (“what ever is interesting to my boss is completely fascinating to me”)

- The nature of the problems

- The choices of tools and approaches

Optimizing Six Sigma for the HR is Key
Many choices to the approach, which are essentially the same. Any Framework Will Work, But Choose Best Practice Deliverables That Fit

<table>
<thead>
<tr>
<th>Deming</th>
<th>Center For Quality Mgmt</th>
<th>Toyota, LEI, Juran, Etc.</th>
<th>Motorola, GE, etc</th>
<th>Theory of Constraints</th>
<th>Lean Mfg, JIT, DFT</th>
<th>Six Sigma “DMAIC”</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDCA</td>
<td>8D</td>
<td>7-Step</td>
<td></td>
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<tr>
<td>PLAN</td>
<td></td>
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<tr>
<td>1st Discipline - Form Team</td>
<td>1. Define and Contain the Problem</td>
<td>Identify Constraint</td>
<td>Identify cycle time and WIP reduction as major issue</td>
<td>Define Problem</td>
<td></td>
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<tr>
<td>2nd Discipline - Define Problem</td>
<td>2. Measure the Problem</td>
<td>Establish cycle time and WIP baselines</td>
<td></td>
<td></td>
<td>Measure Baseline</td>
<td></td>
</tr>
<tr>
<td>4th Discipline - Contain the Problem</td>
<td>3. Root Cause Analysis</td>
<td>Decide How To Exploit Constraint</td>
<td>Conduct Analysis: Value Stream Eliminate Waste</td>
<td></td>
<td>Analyze Analysis</td>
<td></td>
</tr>
<tr>
<td>1st Discipline cont.</td>
<td>4. Plan and Implement Improvement</td>
<td>Subordinate Everything To The Above</td>
<td>Improve and verify effectiveness</td>
<td>Improve Solution</td>
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<tr>
<td>DO</td>
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<tr>
<td>5th Discipline - Permanent CA Plan</td>
<td>5. Evaluate effectiveness</td>
<td>Establish controls</td>
<td>Control Controls</td>
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<tr>
<td>CHECK</td>
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<tr>
<td>6th Discipline - Verify Effectiveness</td>
<td>6. Standardize &amp; Control</td>
<td></td>
<td></td>
<td>Establish Controls</td>
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<tr>
<td>ACT</td>
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<tr>
<td>7th Discipline - Prevent Recurrence</td>
<td>7. Realize &amp; Reflect</td>
<td></td>
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<tr>
<td>8th Discipline - Congratulate Team</td>
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Many choices to the approach, which are essentially the same. Any Framework Will Work, But Choose Best Practice Deliverables That Fit...
## Transforming Behaviors Thru Deliverables

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<th>Steps</th>
<th>Deliverables</th>
<th>Tools</th>
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<tr>
<td>Select Problem</td>
<td>Measure Problem Solving Behavior…</td>
<td>Typically Requires Only <em>Basic</em> Tools Such As</td>
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<tr>
<td>Define and Contain the Problem</td>
<td>… Through Key Deliverables …</td>
<td>▪ Run Charts,</td>
</tr>
<tr>
<td>Measure the Problem</td>
<td></td>
<td>▪ Pareto Charts,</td>
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<td>Root Cause Analysis</td>
<td></td>
<td>▪ 5-Why Analysis,</td>
</tr>
<tr>
<td>Implement and Assess Solution</td>
<td>… At Every Step</td>
<td>▪ Value Stream,</td>
</tr>
<tr>
<td>Control and Standardize Solution</td>
<td></td>
<td>▪ Risk Analysis,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ As Needed Statistics</td>
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<tr>
<td></td>
<td></td>
<td>▪ etc</td>
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Focusing on Key Deliverables Needed Most of the Time, Rather Than Tools That are Rarely Needed
Benefits of Customization

The Evolution of Process Improvement

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<td>6 - 8 weeks</td>
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<td>Enterprise-wide</td>
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<td>Tool Knowledge</td>
<td>Deliverables That Drive Behavior</td>
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Customization Is the Key to More Results in a Shorter Time, and The Programs Long-Term Adoption
HR Process Improvement Success Stories

- **Hiring Cycle Time:**
  - The hiring cycle time is too long causing work-arounds, misclassifications, rework and organizational frustration.
  - Estimated impact is $1.1M
  - Analysis revealed that batch processing and undefined critical fields were causing most of the delays

- **Data Integrity:**
  - The employee information contained in the HR System of record (e.g. personal and job related information) differs from Payroll information. This results in the inability to properly account for department headcount and the associated employee costs along with causing excessive rework to both Payroll and HR systems.
  - Estimated impact is $1.6M
**Process Improvement Success Stories**

- **Finance:** Seamless Outsourcing of RTR -> $2.5M  
  - Conventional Wisdom: Outsource all activity having faith that those taking ownership know what to do  
  - Reality: Identified value-add activity to be kept in-house and established precise SLA’s for non-value add to be outsourced

- **Software:** Improved Customer Fulfillment to 99.3% from 89% -> $10M  
  - Conventional Wisdom: Most orders arriving were incomplete  
  - Reality: Showed missing information not an issue; equipment, timeliness of information and order structure were the major obstacles

- **Medical Device:** Reduced Complaint Resolution Time from 300 to 39 days -> $M’s  
  - Conventional Wisdom: Not enough resources  
  - Reality: Identified a constraint that created a large batch process (+100 complaints) at Evaluation, which hindered the flow of information

- **Manufacturing:** Reduced Cycle Time Avg, Variability & WIP 50% -> $30M  
  - Conventional Wisdom: Testing equipment was a bottleneck, needed to purchase more equipment and hire more people  
  - Reality: Showed test equipment idle ~50% of the time; upstream product grouping and synchronization were the primary issues

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**All Results Achieved Within 6-8 Weeks, by Regular Staff as Part of Their Normal Work Activity!**
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HR’s Input to Considering Six Sigma

Why Can’t We...

- Leverage existing people/practices
- Have management actively lead their employees
- Leverage program to identify and develop future leaders
- Deploy in many areas at once, with focus on key problems
- Use your existing infrastructure
- Reduce problem solving cycle time
- Generate results beyond traditional expectations
- Connect many efforts into one
- Use the approach for all types of challenges
- Integrate best practices from Six Sigma, Lean, TOC, etc
- Transform management and staff behaviors

HR has a Major Role to Play in Guiding The Organization’s Approach to Six Sigma
Thank You!
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- Corporate VP of Quality & Reliability – SanDisk
- Corporate VP of Quality & Operational Excellence – Solectron Corporation
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- Manager, Process Improvement – LifeScan, a Johnson & Johnson Co.
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- Ph.D. in Quality Engineering, M.S. in Math/Statistics
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- Sr. Examiner, Baldrige National Quality Program
- Six Sigma Program Manager, Master Black Belt
- MBA, International Business