



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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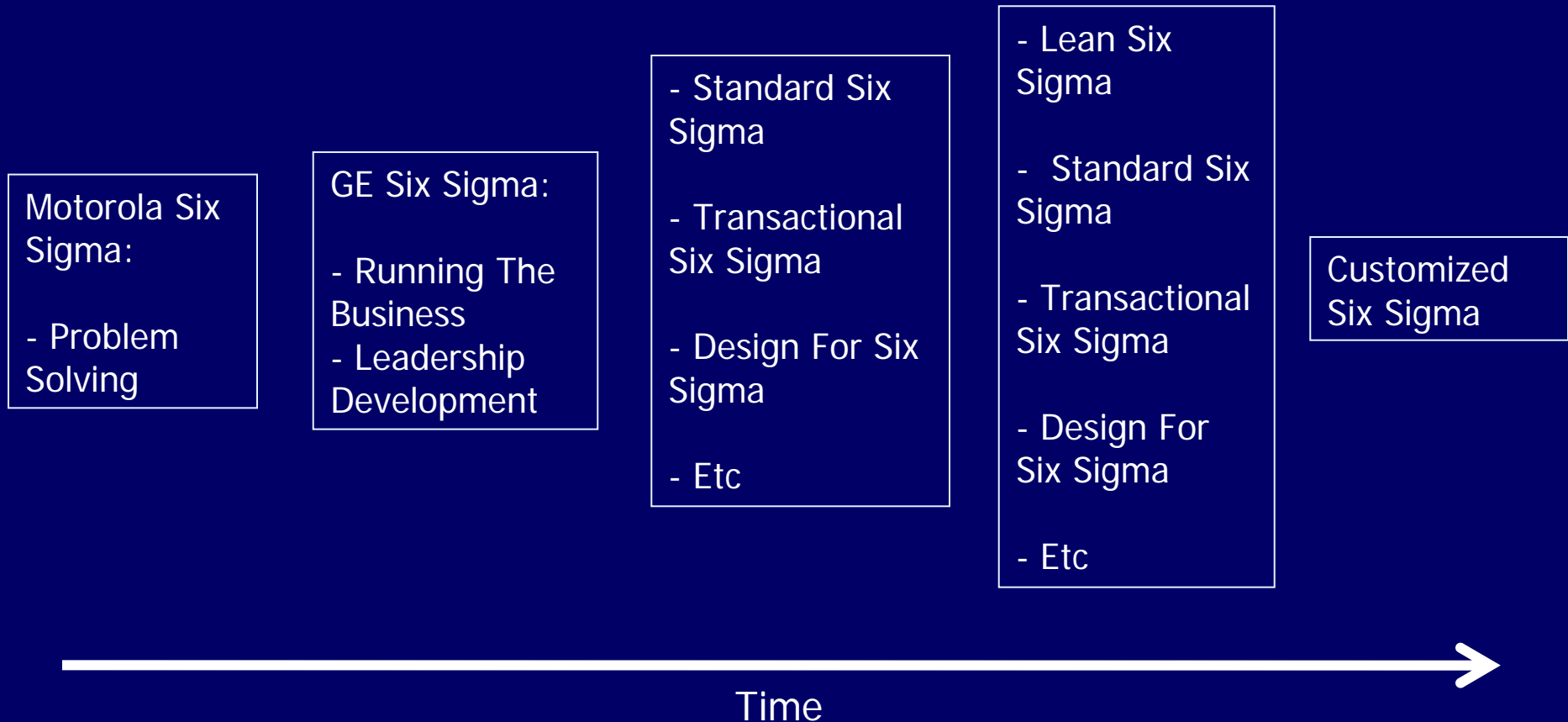


Historical Background Of Six Sigma

- 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



Six Sigma Has Undergone Many Reinventions



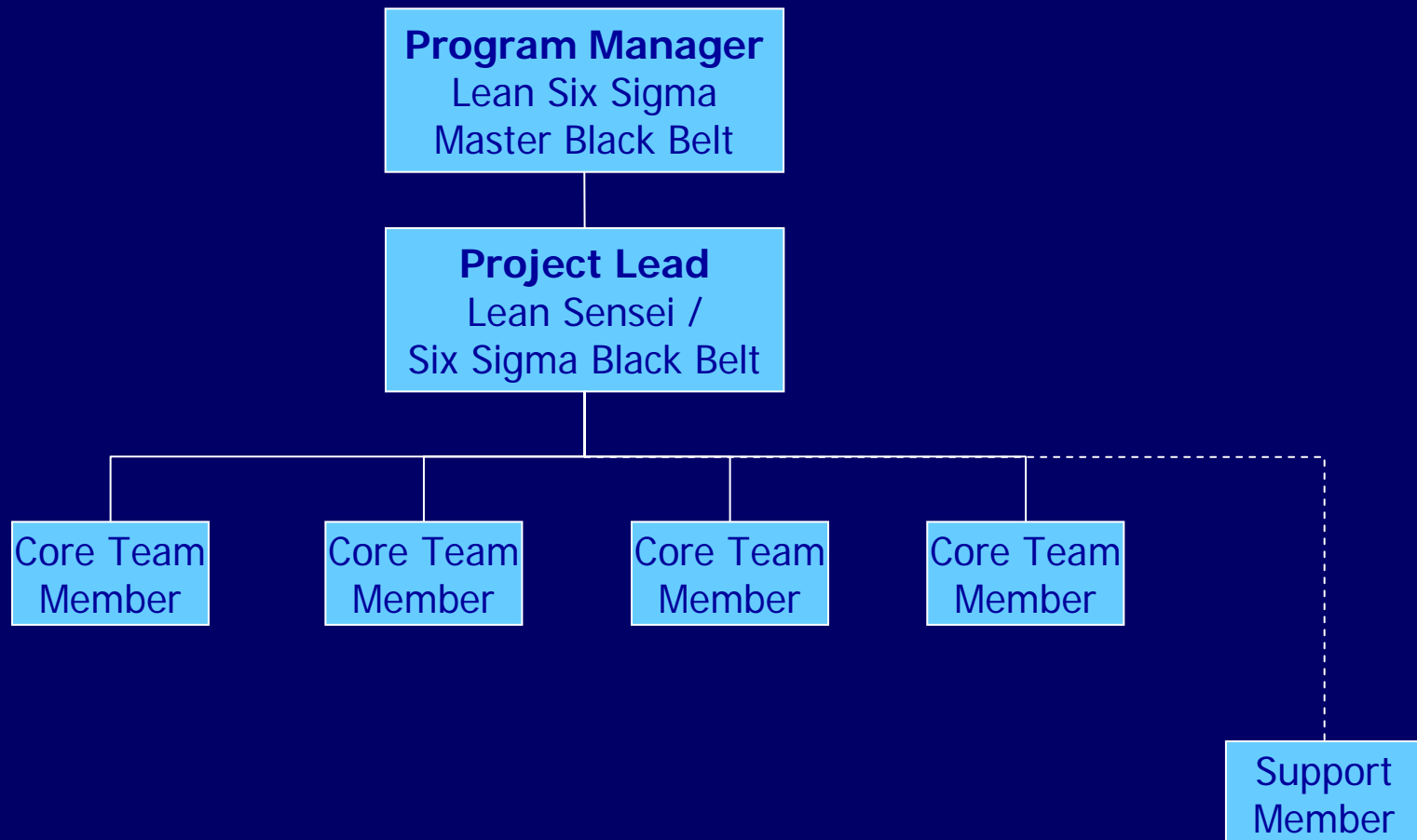
Key Advantages of Six Sigma

- 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



Six Sigma Infrastructure Requirements



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

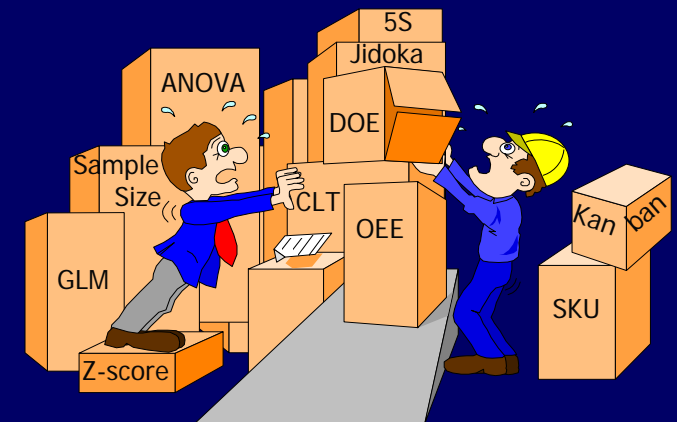
Define

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

Criteria	Traditional Lean Six Sigma	
	Training time	80~160 hours
Trainers	External Experts	
Organizational Construct	A "Fifth Column" of Internal Experts	
Org. Knowledge Transfer	Low – stays with a few experts	
Project Cycle time	4 - 6 months	
Program Scalability	Few "Experts"	
Focus	Tool Knowledge	

Because the Drawbacks Are Significant, Most Six Sigma Programs Don't Last Beyond 3-4 Years



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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

HR Problems Are Transactional In Nature, and Process Performance Info is Sparse



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



Similarities Between PDCA, 7 Step, 8D, TOC, Lean and Performance Excellence

Deming

Auto Industry,
Etc.

Center For
Quality Mgmt

Goldratts

Toyota,
LEI, Juran,
Etc.




Motorola, GE, etc
"Most Recognized"

PDCA	8D	7-Step	Theory of Constraints	Lean Mfg, JIT, DFT	Six Sigma "DMAIC"
PLAN	1st Discipline - Form Team 2nd Discipline - Define Problem 4th Discipline - Contain the Problem 1st Discipline cont.	1. Define and Contain the Problem	Identify Constraint	Identify cycle time and WIP reduction as major issue	Define <ul style="list-style-type: none"> Define Problem Define Scope Define Goal
		2. Measure the Problem		Establish cycle time and WIP baselines	Measure <ul style="list-style-type: none"> Establish the Baseline
	3rd Discipline - Root Cause Description	3. Root Cause Analysis	Decide How To Exploit Constraint	Conduct Analysis: Value Stream Eliminate Waste	Analyze <ul style="list-style-type: none"> Root Cause Analysis
DO	5th Discipline - Permanent CA Plan	4. Plan and Implement Improvement	Subordinate Everthing To The Above	Improve and verify effectiveness	Improve <ul style="list-style-type: none"> Develop Solution Assess Risk of Implementing Solution Demonstrate Solution, Validate Primary Metrics
CHECK	6th Discipline - Verify Effectiveness	5. Evaluate effectiveness	Elevate Constraint		
ACT	7th Discipline - Prevent Recurrence	6. Standardize & Control		Establish controls	Control <ul style="list-style-type: none"> Establish Controls and Action Plans
	8th Discipline - Congratulate Team	7. Realize & Reflect			

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

Steps	Deliverables	Tools
Select Problem	Measure Problem Solving Behavior...  ... Through Key Deliverables ...  ... At Every Step 	Typically Requires Only <i>Basic</i> Tools Such As <ul style="list-style-type: none"> ■ Run Charts, ■ Pareto Charts, ■ 5-Why Analysis, ■ Value Stream, ■ Risk Analysis, ■ As Needed Statistics ■ etc
Define and Contain the Problem		
Measure the Problem		
Root Cause Analysis		
Implement and Assess Solution		
Control and Standardize Solution		

Focusing on Key Deliverables Needed Most of the Time,
Rather Than Tools That are Rarely Needed



Benefits of Customization

The Evolution of Process Improvement

Criteria	Measures Of Success & Deployment	
	Traditional Lean Six Sigma	Customized Six Sigma
Training time	80~160 hours	12 - 14 hours
Trainers	External Experts	Managers and Leaders
Organizational Construct	A "Fifth Column" of Internal Experts	Leaders Lead
Org. Knowledge Transfer	Low – stays with a few experts	High – deploys across an enterprise
Project Cycle time	4 - 6 months	6 - 8 weeks
Program Scalability	Few "Experts"	Enterprise-wide
Focus	Tool Knowledge	Deliverables That Drive Behavior

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

Customization Allowed for Fast Project Cycle Times



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

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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