Six Sigma And Other Quality And Corporate Initiatives

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Module Objective

- By the end of this module, the participant will able to:
  - Understand the impact of numerous quality guru's on the six sigma movement
  - Compare six sigma corporate initiative with other corporate and quality initiatives
  - Understand how to manage six sigma with other initiatives

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Quality Leaders

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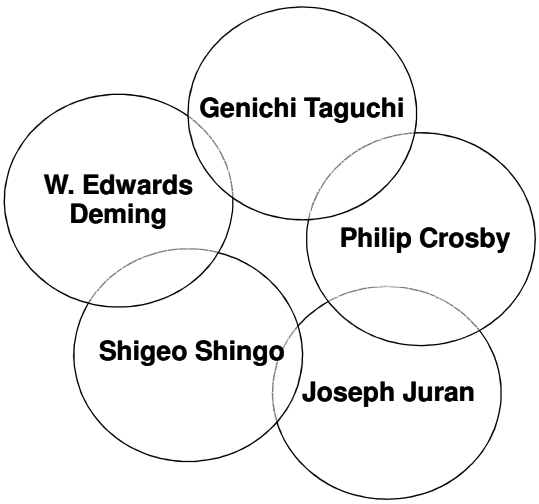
Quality Leaders



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Deming

Teachings

- Importance of understanding variation in work processes
- Role of management in leading for quality
- Application of statistics to measure performance in ALL areas
- Plan-Do-Check-Act
- Deming's *Fourteen Points* and *Seven Deadly Diseases*

Shortcomings

- Communication style alienated senior managers
- Emphasized eliminating performance reviews
- Emphasized eliminating numerical quotas, targets and goals

> "Sound understanding of statistical control is essential to management, engineering, manufacturing, purchase of materials and service."
>
> W. Edwards Deming

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Juran

Teachings

- Breakthrough performance
- Pareto effect (1937)
- Importance of management principles and role during the improvement process
- Quality by design and planning

Shortcomings

- Implementation at working team level is weak
- Emphasis on quality professionals over front line

> "Product and service quality requires managerial, technological, and statistical concepts throughout all the major functions in an organization."
>
> J.M. Juran

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Crosby

Teachings

- Customer requirement is performance standard
- Preventive action as basic approach
- Importance of management role during the improvement process
- Team based

Shortcomings

- Lack of statistical approach in methodology
- Simple tools, very generic and non-mathematical in nature
- Conformance is not a competitive business goal

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Taguchi

Teachings

- Variance-reduction strategies
- Introduced "loss function"
- Robust design techniques
- Design control is more important than production control
- Comprehensive set of experimental design decision-making tools
- Statistical applications

Shortcomings

- Analysis method ignores interacting variables
- Product robustness is viewed as a cost of design
- Some statisticians believe techniques will lead to erroneous conclusions

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Shingo

Teachings

- Poka-yoke (POH-kah YOH-kay) concept
- Design processes to prevent mistakes from occurring
- Develop a detection device signal to immediately identify when a mistake has occurred

Shortcomings

- Relies on 100% inspection
- Does not link inputs to outputs

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Corporate and Quality Initiatives

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Corporate And Quality Initiatives

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Malcolm Baldrige Award

Malcolm Baldrige

- Framework for assessing and measuring performance
- An award presented by U.S. Department of Commerce and American Society of Quality
- Physical presentation of award by the President of the United States
- All award recipients based on *application* process only
- Core values and concepts for Performance Excellence measured via point system

Six Sigma

- Business and management behavior and culture change
- Internal performance measurement system (via CTQ and customer satisfaction)
- NOT an award presented by an internal or external agency
- Strategic and systematic approach and commitment of daily business operations
- Focus on ALL aspects of a business

Being a Baldrige winner has not been shown to be a predictor of overall long-term business success

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ISO 9000

ISO 9000	Six Sigma
• A benchmark for global competition	• Strategic and systematic approach and commitment of daily business operations
• Series of mandated standards	• A methodology of reducing process defects and variation to meet customer CTQ
• Accurate documentation of *actual* process flow, not necessarily the *best* process	• Accurate documentation of *optimum* process flow relative to the target CTQ
• International Quality Standards (ISO)	

ISO ensures that processes are documented and followed, but does not ensure optimum results

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Lean Manufacturing

Lean Manufacturing	Six Sigma
• Focus on variation in manufacturing operations only	• Focus on variation, defects and meeting CTQs for ALL aspects of a business
• Co-locate all equipment, workstations and processes in sequential order (standardization and physical arrangement)	• Uses problem-solving techniques to understand and reduce variation for specific processes (product, service or information)
• Focus on small lot, continuous flow production	• Statistically data driven
• Practices just-in-time (JIT) techniques both internally and externally (suppliers)	• Optimizes processes that address both internal and external customers needs
• Compliments Six Sigma methodologies	• Strategic approach to increase both customer satisfaction and an organizations bottom line

Lean drives standardization of manufacturing operations only

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Total Quality Management

TQM

- Quality driven initiative separate from business strategies and performance goals
- Focus of quality improvements on product and manufacturing functions
- Departmentalized activity
- Target primarily internal issues and change driven by many small improvements
- Emphasis on TQM tools, but not a lot regarding application of tools

Six Sigma

- Corporate initiative driven by CEO resulting in culture change
- Systematic performance metric
- Strategic approach to increase both customer satisfaction and an organizations bottom line
- Focus on ALL aspects of a business
- Established infrastructure roles for practitioners and leadership
- A disciplined approach (DMAIC phases) for reducing defects, variation and improving customer satisfaction

TQM focuses on local quality conditions, not bottom line

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Kaizen

Kaizen

- Team approach to focus on problems solving
- Advocate communication to workers
- Focus on overall detailed process flow
- Use of visual indicators
- Create a blameless environment
- Understand the thought process and then do it

Six Sigma

- Quantitative approach of improving processes
- Internal performance measurement system (via CTQ and customer satisfaction)
- Validation and verification of data to support decision making
- A disciplined approach (DMAIC phases) for reducing defects, variation and improving customer satisfaction

Kaizen focuses on the basics of how work is accomplished

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Managing 6 Sigma With Other Initiatives

- Effective communication of quality policies
- Identification and allocation of resources
- Strategic plan and project plan well established
- Validated metrics and data driven findings
- Proactive action based on fact
- Organizational alignment

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Class Exercise

- As a team, list other corporate and quality initiatives for your business or functional area.

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Key Learning Points

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Objectives Review

The participant should be able to:

- **Understand the impact of numerous quality leaders on the six sigma movement**
- **Compare six sigma corporate initiative with other corporate and quality initiatives**
- **Understand how to manage six sigma with other initiatives**

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