



# CQI Learning Lunch

## Six Sigma

## Plans & Pitfalls

Host - Dennis Sergent  
517-285-5500

December 8th, 2011  
10:30 AM to 2:00 PM

*University Club of Michigan State*  
3435 Forest Road, Lansing, MI 48909  
517-353-5111





# Sponsoring Organizations



- Higher Quality - Lower Costs - Better Workplaces -

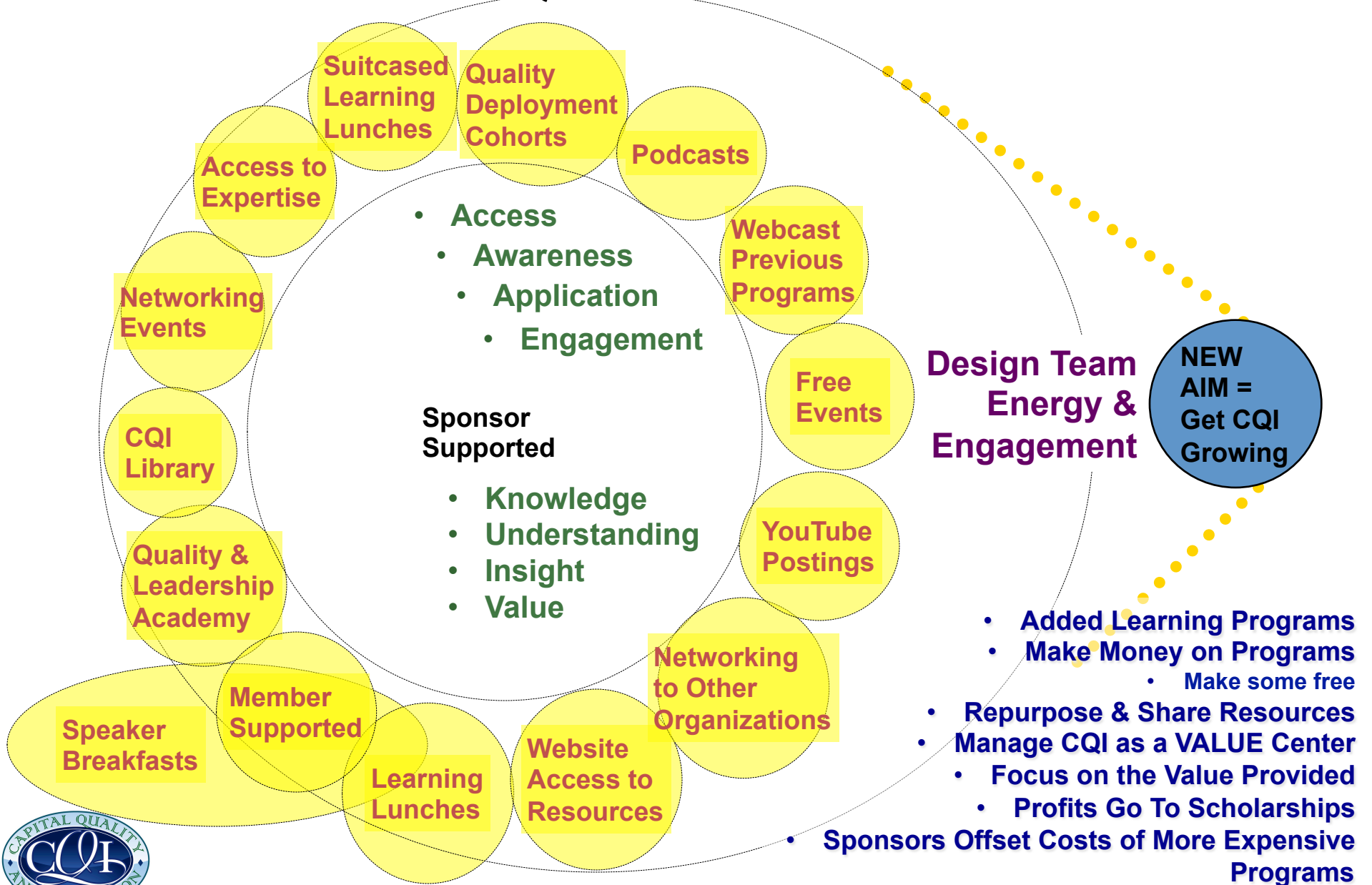
# 2012 CQI Programs



- **Jan 6 - Learning Lunch**
  - Continuous Improvement Paradigms & Principles
- **Jan 30 - Learning Lunch**
  - Innovation through Accelerated Learning and Quality
- **FEBRUARY 7 – BREAKFAST PROGRAM**
  - Ian Bradbury – Design & Control of Quality
- **Feb 21 - Learning Lunch**
  - Six Thinking Hats
- **MARCH 14 - BREAKFAST PROGRAM & SEMINAR**
  - Joe Raelin – The Leaderful Organization & Why It Matters
- **Apr 5 - Learning Lunch**
  - Multi-Cultural & Virtual Teams
- **Apr 27 - Learning Lunch**
  - Appreciative Inquiry
- **May 7 - Learning Lunch**
  - Idealized Design
- **May 16 - BREAKFAST PROGRAM**
  - Lisa Toenniges – Get the People Performance You Need: Six Questions to Ask
- **May 28 - Learning Lunch**
  - Continuous Investment
- **Jun 19 - Learning Lunch**
  - Why Best Efforts Are Not Enough
- **QUALITY, INNOVATION & LEADERSHIP ACADEMY – TBD**
- **Jul 10 - Learning Lunch**
  - Treating Human Error as an Effect, Not Cause
- **Aug 1 - Learning Lunch**
  - Performance Analysis and Root Causes
- **Aug 23 - Learning Lunch**
  - Cultural Influences on Change
- **Sep 14 - Learning Lunch**
  - Organizational Development
- **THIRD QUARTER BREAKFAST PROGRAM & SEMINAR**
  - Speaker To Be Determined
- **Oct 8 - Learning Lunch**
  - Leadership versus Management
- **Oct 23 - Learning Lunch**
  - Balancing Actions & Thinking
- **Nov 13 - Learning Lunch**
  - Having Difficult Conversations - Principles and Tools
- **Dec 6 - Learning Lunch**
  - Brainstorming
- **FOURTH QUARTER BREAKFAST PROGRAM – Date TBD**
  - Speaker To Be Determined
- **SECOND HALF QUALITY DEPLOYMENT COHORT – TBD**
- **CQI PREVIEWS @ 9:00 AM – Every Learning Lunch Morning**



# New CQI Business Model



- Higher Quality - Lower Costs - Better Workplaces -



# Today's Process

- **A Short Review**
  - **There are Synergies with Deming's Quality Perspective**
    - System of Profound Knowledge (SoPK)
    - Also Fourteen Points For Managers and PDSA/PDCA
  - **Some Differences**
  - **Research & Writings** (downloadable from CQI Website)
    - David Wayne's Paper
    - Bill Bellow's Paper
  - **Your Dialogue & Considerations**
- **Table Discussions**
  - **Sticky Notes to Define**
    - What adds value to you and your organization?
    - What are the positive attributes you can use?
    - What are the differences which influence your thinking?

# Six Sigma - 10 Rules That Synch With Quality



1. View performance from the position of the customer
2. Understand the process
3. Make decisions based on data and analysis
4. Focus on the most important issues
5. Use statistical models
6. Pay attention to variation
7. Use standard methodologies
8. Select projects for financial impact (Some Disagree)
9. Establish project governance structure
10. Enlist senior management support



# Deming's 14 Points For Management

Deming's 14 points are paraphrased here:

**1. Create constancy of purpose towards improvement.**

- Replace short-term reaction with long-term planning and replace fad-driven management with fact-led decisions and directions.

**2. Adopt the new philosophy.**

- Management should walk the talk and demonstrate they respect the people and the system they manage.

**3. Cease dependence on inspection.**

- Managed variation eliminates the need to inspect for defects.

**4. Move towards a single supplier for any one item.**

- Multiple suppliers mean variation between feedstocks.

**5. Improve constantly and forever.**

- Constantly try to understand common cause variation and manage special cause variation. More special cause variation causes more waste.

**6. Institute training on the job.**

- Adequately trained staff will all work the same way, and reduce variation.

**7. Institute leadership.**

- Mere supervision is quota- and target-based, engage workers in the processes they work within.

**8. Drive out fear.**

- Long term, fear prevents workers from acting in the organization's best interests.

**9. Break down barriers between departments.**

- Use the 'internal customer' definition that each department serves other departments that use its output.

**10. Eliminate slogans.**

- It's not people who make most mistakes - it's the process or system they are working within.

**11. Eliminate "management by objectives".**

- Production targets encourage the delivery of poor-quality goods and services "on time" or "on budget".

**12. Remove barriers to pride of workmanship.**

- Management's job is to manage the system and eliminate the other problems which reduce worker engagement, satisfaction and retention.

**13. Institute education and self-improvement.**

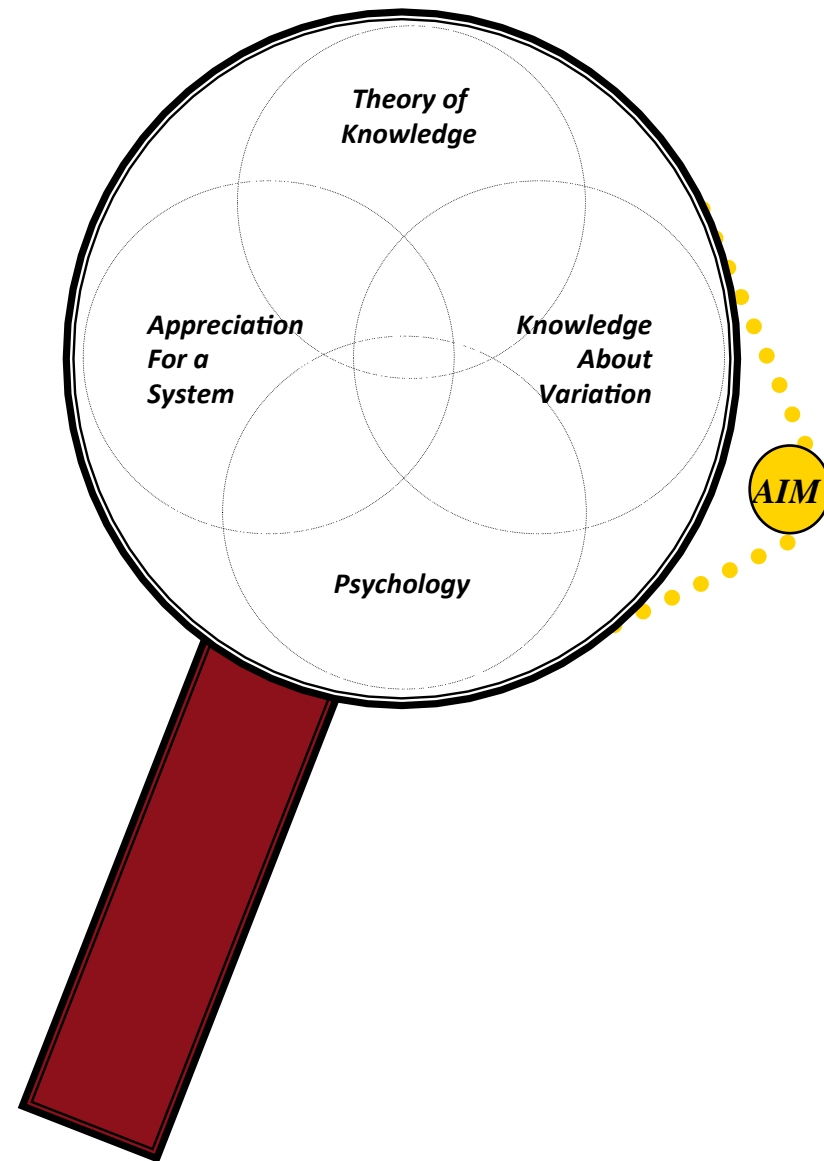
- Harassing the workforce without improving the processes they use is tampering and counter-productive.

**14. The transformation is everyone's job.**

- "You do not have to do this. Survival is not compulsory."

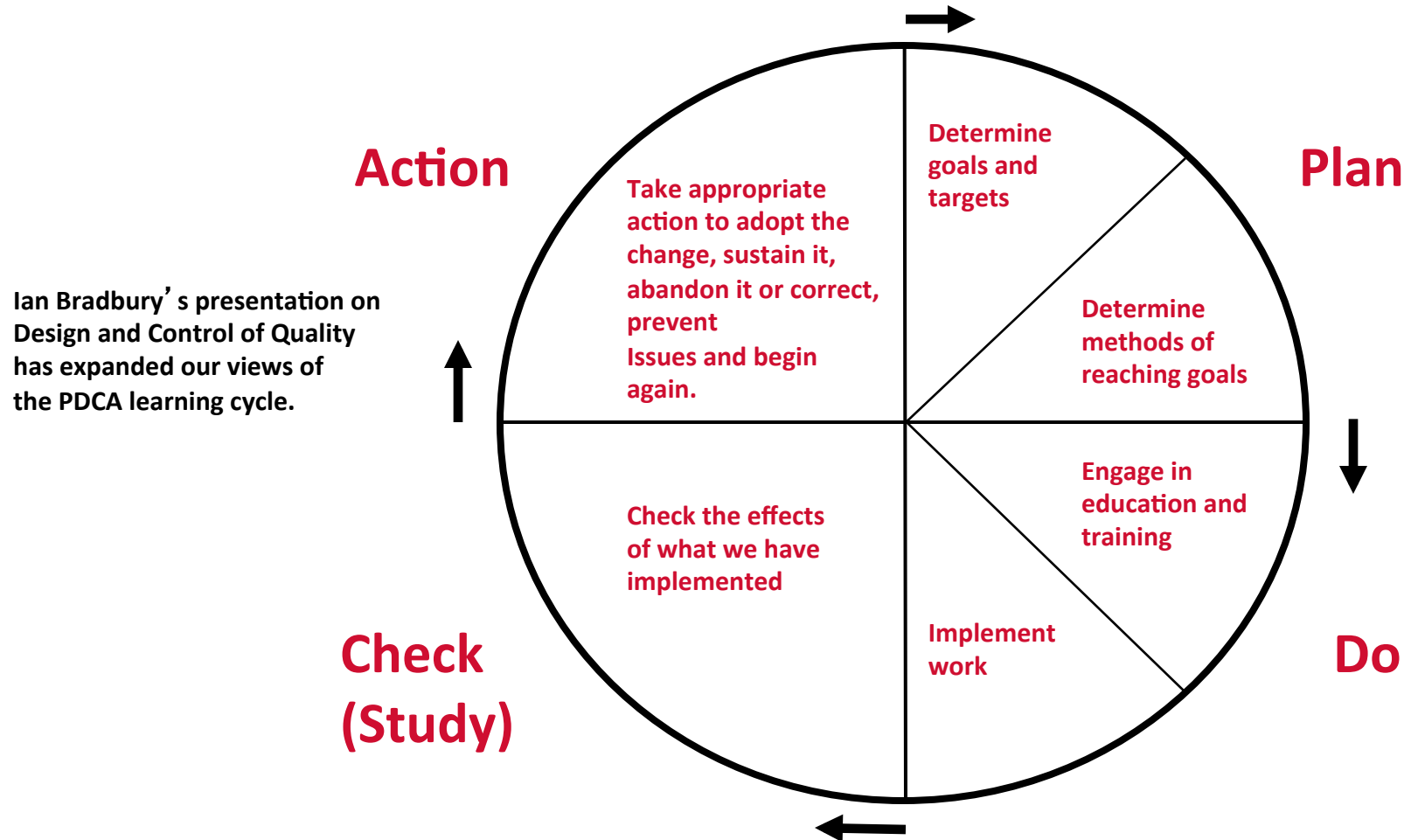
# Deming's System of Profound Knowledge (SoPK)

- “The aim . . . is to provide an outside view - a lens . . . provides a map of theory by which to understand the organizations that we work in”
- **Components of The Whole**
  - Theory of Knowledge
    - Knowledge is built on theory
  - Appreciation for a System
    - A system is a network of interdependent components that work together to accomplish the aim of the system
  - Knowledge About Variation
    - There will always be variation.....
  - Psychology
    - Individuals
    - Groups
    - Society
    - Change
- “One need not be eminent in any part of profound knowledge in order to understand and to apply it”
- “The various segments of the system . . . Cannot be separated. They interact with each other. For example knowledge about psychology is incomplete without knowledge of variation.”



# P-D-C-A - Proceed With Control

- We **PLAN** what we want to accomplish over a period of time and what we will do to get there.
- We **DO** something that furthers the strategies and goals developed in our plan.



We **CHECK (Study)** the results of our actions to make sure we achieve what we plan.

We **ACT** by developing procedures to ensure our plans continue to be successful and by changing what is needed to achieve the initial goals.

# David Wayne's Paper

## “Six Sigma, through the Lens of Dr. Deming’s Philosophy and the Science of Improvement”

- Commonalities
  - Variation in definitions of each
  - Positive effects of each
  - Top management commitment required
  - Constancy of purpose
  - DMAIC and PDSA Map well together
  - Operational Definitions Vary
    - Total Quality Management and Six-Sigma Definitions not Uniform
    - More frequently just a label which everyone disavows, an obstacle to improvement and innovation
- Differences
  - Technical issues with engineering and statistical methods
  - Implementation practices and human factors
- Effectiveness of each
  - May not be an “either/or” decision

# David Wayne - Technical Factors

## “Six Sigma, through the Lens of Dr. Deming’s Philosophy and the Science of Improvement” by David Wayne

- Differences in Technical issues with engineering and statistical methods
  - Treatment of variation Six Sigma
    - Uses of only the histogram to “what is” distributed,
    - Operational Definitions, centering error, 3.4 DPM derived from 4.5 sigma, not 6 sigma
  - Control Charts – Shewhart & Deming used over time to predict trends
  - Visibility to how variation causes losses = No control limits, no prediction
  - Defects Per Million (DPM) as commonly practiced is a ratio in Six Sigma
  - Problem Solving vs. Improvement
    - Corrective Root Cause Analysis – not Preventive Analysis
    - Process Stability neglected in Six Sigma
    - Limited understanding of variation
  - Missing three basic questions:
    1. What are we trying to accomplish?
    2. How do we know that a change is an improvement?
    3. What changes could we make that would be an improvement?

# Wayne - Implementation & Human Factors

## “Six Sigma, through the Lens of Dr. Deming’s Philosophy and the Science of Improvement” by David Wayne

- Differences in Implementation practices and Human factors
  - Arbitrary Goals and Targets lead to distortion and faking
  - Quick results from solving easiest problems first, create desire for “Instant pudding”
  - Focus on only visible figures – creates short term focus, not strategic long term focus
  - Reducing, eliminating defects does not guarantee jobs
  - Innovation must be part of the system to sustain a business or organization
  - No defects (or zero defects), can be expensive and eliminate jobs
  - Basic questions that are unasked in Six Sigma:
    - What business are we in?
    - What is the need of society need we serve?
    - How could we do it better for our customers and potential customers?
- Definition of Problem
  - Statistical definition – Process out of control with special cause variation
  - Capability definition – Improvement area which may not be out of control
  - See hotel fire example in his paper

# Bill Bellows Paper

## “Conformance to Specifications, Zero Defects, and Six Sigma Quality – A Closer Look”

- Commonalities
  - Quality the purpose of both and usually the result of Six Sigma
  - Accelerating improvements in processes
- Differences
  - Philosophies are different
    - Parts focus with Six Sigma, not systems focused like Deming
  - Technical aspects are different
    - DPM (ratio) versus Enumerative Control Charts
  - “One size fits all”
    - Deming Approach Can Fit All Because of SoPK, 14 Points, Broad Scope
    - Six Sigma has “everything we do” and “Flavor of the Month” Appeal
      - But does not work as the only tool for improvements and innovations
  - Six Sigma’s limited focus, not broadly strategic as Deming
    - Ignores downstream impacts and Taguchi’s Quality Loss Function
  - Six Sigma Quality varies from Motorola standard
  - Six Sigma’s conformance to specifications
    - Considered a “nostrum” by Deming
    - Parts, not whole
    - Acceptability based thinking, not thinking based on desirability
    - Variation is ignored with “bad” vs. “good” thinking
- Effectiveness of each is a matter of prevailing style of management

# Other Thoughts

## “Is Six Sigma Dead?” from Quality Progress, October 2011

- Will fail without:
  - Leadership commitment
  - Implementation strategy – must be integrated
  - Correct accounting methods
  - Cultural integration
  - Lean preceding Six Sigma “Lead with Lean, Clean up With Six Sigma”
  - Vice versa considered “Lead with Six Sigma, Clean Up With Lean”
- To build better processes, use tools from all the quality toolboxes

## Questions to Consider About PDSA vs. PDCA:

- What are the differences between Study and Check?
  - If you check the oil in your car or you study the oil, what is going on in each case?
  - How do they differ?
  - What is the AIM in each case?
  - If they differ, when would you use 'check' and when would you use 'study'?
- In PDCA, does something need to be measured?
- In PDSA, does something need to be measured?

# Lunch!

- **Let's collect our lunch!**
- **Room will be secure**
- **Staff will take your drink orders**
- **While you dine, continue the dialogue**
- **Make sure everyone is heard from**
- **Be prepared to share your answers to the following questions!**

# Table Discussions

## AT EACH TABLE DISCUSS:

- **WHAT ARE OUR NEXT ACTION STEPS?**
  - **What did I learn here?**
  - **What do we need to discuss next?**
  - **Who else should be here?**
  - **What will we do with our learning?**

## Future Dialogues = 3 Weeks + 1 Weekday

- **January 6th, 2012** = Continuous Improvement Paradigms & Principles
- **January 30th, 2012** = Accelerated Learning and Quality

## New 2012 Program – at 9:00 AM Before Each Learning Lunch

- **One Hour Conference Call on The Subject of The Day**
- **Free and Facilitated by CQI**
- **If you can't leave your desk for the Learning Lunch**
- **If you can't afford to come for lunch & dialogue in person**
- **If you want more than the usual time to discuss the subject**

## What Are Your Ideas?

- **Benchmarking**
- **Civility - Lack of it Costs up to \$300 Billion Annually (Pattie McNeil)**
- **Effective Measurement for Training & Development Initiatives**
- **Influence (Influencing Your Leader and Your Team)**
- **Innovation as "Phase 0" in Quality**
- **Mentoring & Partnership Between Generations (Baby Boomer, GenX, GenY, Transition to Future)**
- **Quality Assurance Through Proofing**
- **PDCA vs. PDSA Comparisons With Langford "Probletnuity" Process**



# Six Sigma - Learning Lunch



+ • Do more

• Do less

-



# Sponsoring Organizations



- Higher Quality - Lower Costs - Better Workplaces -

The logo for Sergent Results Group features a thick, dark red curved line on the left side. To its right, the words "SERGENT RESULTS GROUP" are stacked vertically in a bold, dark blue, sans-serif font.

**SERGENT  
RESULTS  
GROUP**



**Performance  
Begins Here**

# **CQI LEARNING LUNCH**

## **Six Sigma**

### **- Plans & Pitfalls -**