
Lean Six Sigma in Healthcare

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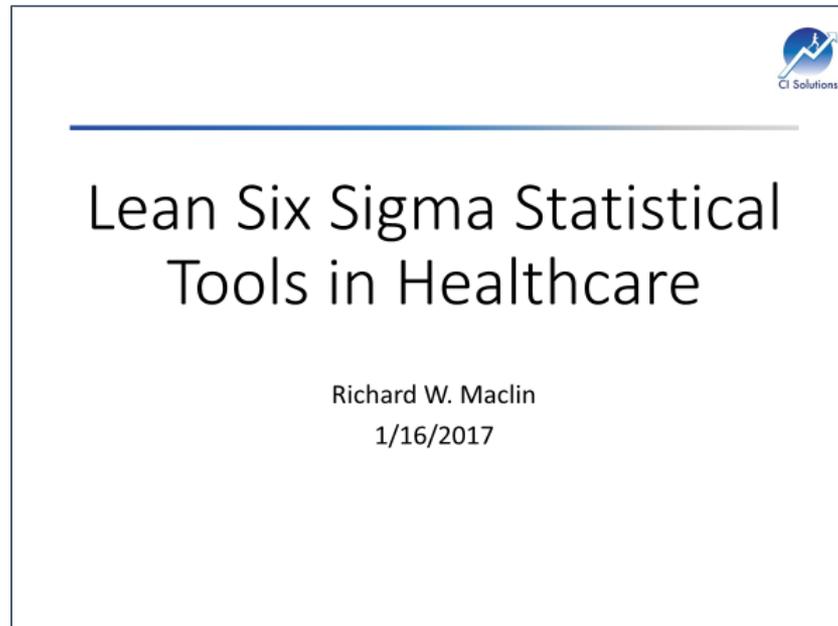
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Speaker Introduction

Richard has 25 years of continuous improvement experience. He has held roles in Quality Assurance, Supplier Development, Continuous Improvement, Product Realization, and Operations. His career has focused on reducing non-value added activities and process variation using CI approaches including Lean Six Sigma, VA/NVA, Value Stream Mapping, Theory of Constraints, 5S, and Kaizen. Richard has held positions with Toyoda Gosei, United Technologies, ArvinMeritor, Trelleborg, Superior Industries, and Gates Corporation and currently serves clients in the Automotive, Aerospace, Industrial, Nuclear, Food Service, and Consumer Products industries. He is an Adjunct Instructor at Northwest Arkansas Community College, Tulsa Technology Center, Francis Tuttle Technology Center, Arkansas State University and is a Master Black Belt for CI Solutions, LLC. He is an ASQ member, ASQ Certified Six Sigma Black Belt, and ASQ Six Sigma Forum Advisory Council Member. He and his wife, Sheila, have four children and live near Bentonville, Arkansas.

Last Year...

- At the 2017 HFMA Joint Symposium, we reviewed the use of Lean Six Sigma Statistical Tools in Healthcare.



Recall from last year...

- Healthcare is a “data-rich” environment.
- Analytical opportunities include both simple and complex methods (practices and tools)
- Organizational success depends on effective strategic decision making and problem solving.
- Finding true causes can be confusing and hard!
- Organizations make decisions with limited information, incomplete analysis, small data sets, and averages.
- Organizations using Lean Six Sigma Statistical Tools to support decision making and problem solving have avoided costly mistakes.
- Many have experienced reduced costs and increased profitability as well as expanded capacity.



Tools or Culture?

Last year was about Statistical Tools

This year let's talk about Culture Change

What is Lean Six Sigma?

Compare and Contrast Lean and Six Sigma (brief)

Lean

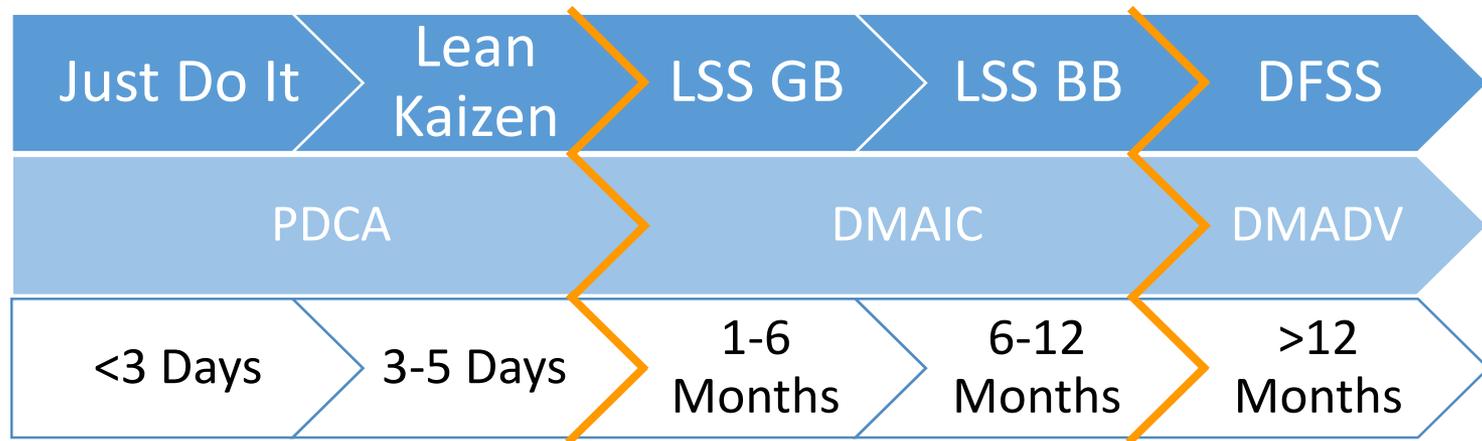
- Focus: Reduce Waste
- Identify Value Added & Non-Value Added activities
- Some data
- Low-level stats
- Quick events
- PDCA
- Origin:
Ford (1913); Toyota (1930); Womack (1990)

Six Sigma

- Reduce Variation
- Optimize & Control Variation Sources
- High data required
- High-level stats
- Longer projects
- DMAIC
- Motorola (1987)

Not all problems are the same...

Which problem solving path should we choose?



Lean and Six Sigma do not have to be different paths, but extensions of each other in a single approach.

Kaizen Overview



“*Kaizen*” is used in any of three ways:

- A single, simple improvement action
- A multi-day event focused on reducing Non-Value Added activities
- A description of a culture that promotes continuous process improvement
- Kaizen uses the standard PDCA approach
 - Four (4) phases (cyclic, iterative)
 - Team-based (cross-functional)
 - Observation-focused problem solving

Plan

Do

Check

Act

PDCA



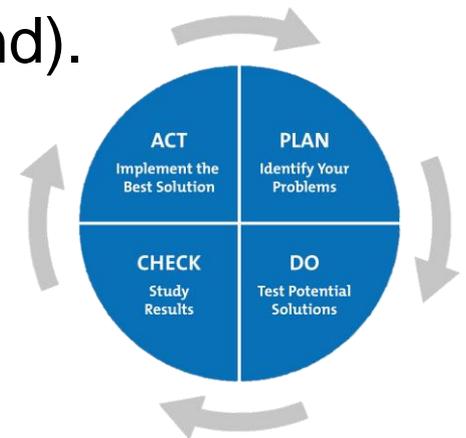
What are the PDCA phases?

Plan – Identify the problem(s) to be solved.

Do – Test potential solutions.

Check – Collect and evaluate the results of the trials.

Act – *Permanently* implement the best solutions
(until a better solution is found).



Plan

Do

Check

Act

Six Sigma Overview



Most Six Sigma projects will follow the standard DMAIC structure.

- Five (5) phases (cyclic, long time-frame)
- Team-based (cross-functional)
- Data-focused problem solving
- Statistical tools used extensively throughout

Define

Measure

Analyze

Improve

Control

DMAIC



What are the DMAIC phases?

Define – Identify the problem with the product or process to be solved.

Measure – Identify current / needed process metrics and collect data.

Analyze – Process data to find the root cause(s).

Improve – Implement and verify process changes.

Control – The new process and monitor it over time to hold the gains.

Define

Measure

Analyze

Improve

Control

Culture Change?

- Lean and Six Sigma are:
 - Problem solving approaches
 - Collections of tools
 - Methods to expose sources of:
 - Waste
 - Unnecessary costs
 - Customer dissatisfaction
 - Great together! Referred to as “Lean Six Sigma” to capitalize on the strengths of both approaches
 - Used to change the culture of organizations, often unsuccessfully – But why?
 - Organizations implement Lean Six Sigma but fail to change the culture at all!

Culture Change?

- Why do culture change campaigns not achieve the desired results or do so too slowly?
 1. Lack of communication – What culture do we want?
 2. Lack of focus (likely related to # 1)
 3. Need tools / training to change
 - Or Train too many too fast
 4. No organizational support
 5. No money
 - Or Throw \$ at the problem
 6. Distractions
 - Try to fix too many problems
 7. Others?



Results?

Poor Communication / Lack of Focus / Distractions



Results?

Need Tools or Training

Dude! Sure wish we had a paddle!



Problem made worse:
Stranded in the middle of the
ocean with an empty toolbox!



Results?

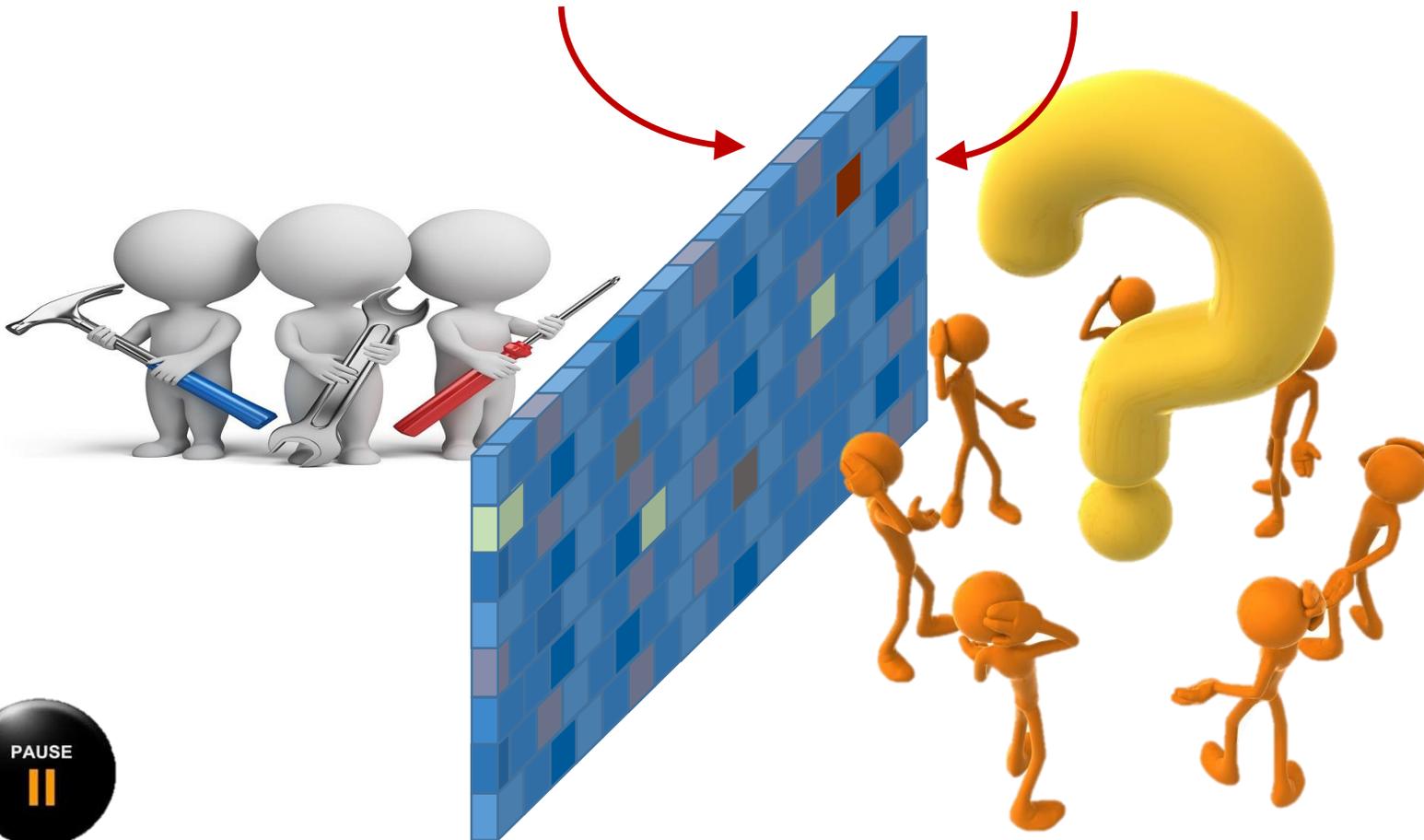
How about the other extreme? Train everyone!

Problem made worse:
Everyone has a tool trying to solve
the same problem at once!



Results?

No Organizational Support / No Money (Barriers)



About Culture Change...

! In describing culture, Stephen Hacker, ASQ* points to an organization's

- Mission & Vision – What we do – Our future – Why
- Values – The things that are most important to us
- Strategic Goals / Objectives – How we measure success
- Incentives – How we reward performance
- Behaviors – The ways we act & react
- Innovation – Stay ahead of the competition
- Continuous Improvement – Being the best we can be

*(Culture of Quality, Forbes Insights in association with American Association for Quality)

About Culture Change...

! Similarly, Ken Shead, Boeing,* says an organization must:

- Know their Product or Service
- Know their Customer
- Understand the Customers' Expectations
 - Requirements + Basics + Others [Written and Unwritten]
- Measure performance to those Expectations
 - Take actions when performance does not meet expectations (continuous improvement)

*(Culture of Quality, Forbes Insights in association with American Association for Quality)

About Culture Change...

! Lean Six Sigma is only part of the organizational culture change strategy.

- Training and using Lean Six Sigma, alone, will not bring lasting culture change.

! Successful Culture Change requires:

- Clear understanding of the desired new cultural aspects
- Knowing how they connect to the organization's Mission & Vision, Values, and Strategic Objectives
- All levels equipped and empowered to address problems based on severity or importance
- Unwavering focus on Customer satisfaction

Countermeasures?

- Keys to success?

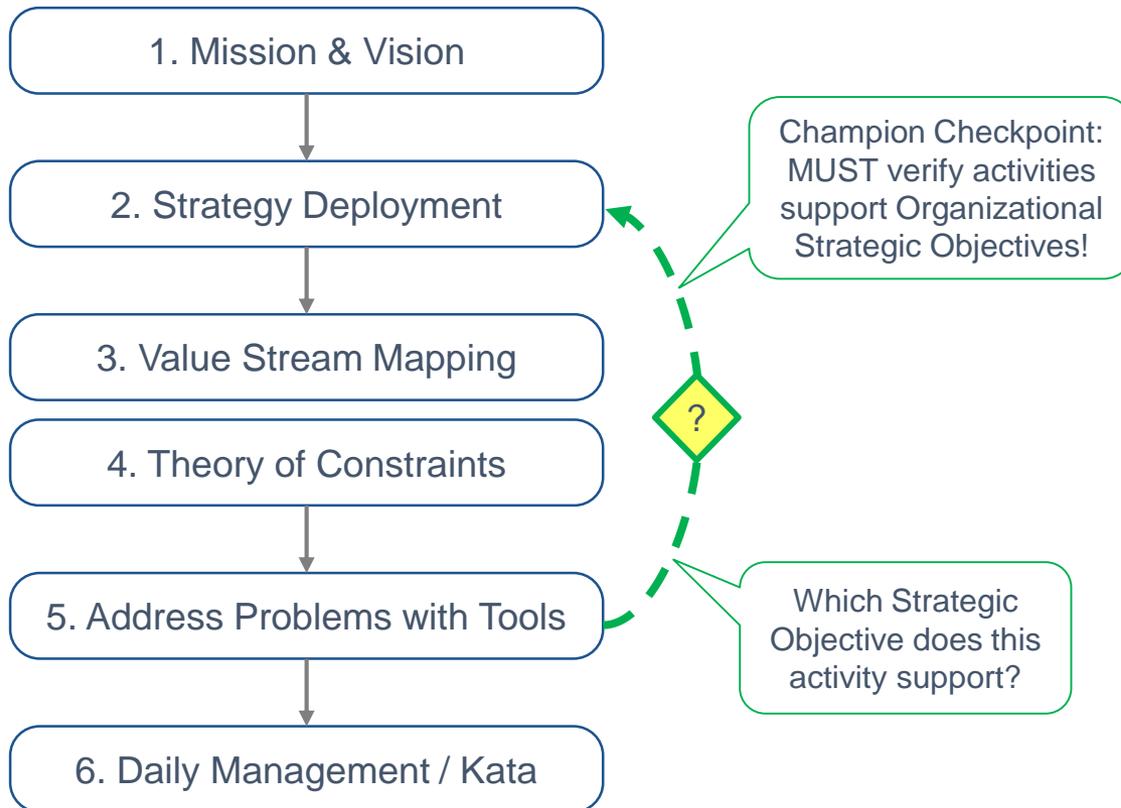
1. Organizational Alignment
2. Start Small (Simple)
3. Grow Toward Complex
4. Focus on building a Culture of Excellence



Organizational Alignment



1. Use a Roadmap for Organizational Alignment



Start Small



2. If your organization is new to the Excellence Journey, start with small, simple problems to build confidence and momentum.
 1. Start with Lean principles and projects
 2. Develop Participants AND Practitioners AND Sponsors
 1. Participants need awareness & tools
 2. Practitioners need tools, leadership, & facilitator skills
 3. Sponsors need awareness, tools, & Sponsor Role training
 4. All need clear Strategy Deployment direction (Alignment)
 3. Focus on Culture, as well as practical process change
 1. Remember, how do cultures change? --- SLOWLY!

Grow Into the Complex

6σ

3. After some important successes have been experienced using Lean (Kaizen) tools then move to more complex Six Sigma improvement tools.
 1. Confidence and momentum has become contagious
 2. “Low hanging” opportunities have been addressed
 3. Expectation of improvement exists
 4. Green and Black Belts have been trained both in PDCA (Lean) and DMAIC (Six Sigma)
 5. Champions (Sponsors) have been trained to support Participants, Practitioners, Green and Black Belts
 6. Statistical analysis is readily accepted

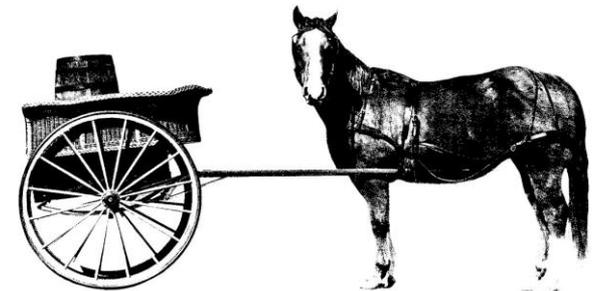
Grow Into the Complex

6σ

? Why not start with Six Sigma? Let's not get the cart before the horse!

- Well-trained Green and Black Belts have struggled in organizations where their training did not include Lean principles and Kaizen first.
- Processes still had many Non-Value Added activities that made using higher level statistical tools more difficult.
- Complicated or unreliable stats tools were met with distrust.
- DMAIC projects took too long to complete and interest was lost.

CART BEFORE THE HORSE



Build a Culture of Excellence

- Know what we do
- Set measurable objectives
- Measure performance
- Take actions to improve performance

Commitment...

- We heard Mike Eruzione tell us yesterday to:
 1. Decide to be the best
 2. Commit to it and work hard every day
 3. Know your job and do it right
 4. Don't be afraid to change what you do
 5. Measure performance
 6. Take action to get better
- So, take 60 seconds to write down your commitment to begin the Excellence Journey.

Key Learning Points

- Come away with the do's and don'ts of how best to develop improvement practitioners
- Explore the reasons why cross functional basic events are the best way to help others see it for themselves
- Discuss the culture change pitfalls like throwing training at people, as if it is the magic pill
- Understand why it is critically important to develop leaders for those that will be trained so that their new skills can best be used to support culture change



What questions do you have?

Acronym List

Acronym	Explanation
BB	Black Belt
DFSS	Design for Six Sigma
DMADV	Define Measure Analyze Design Verify / Validate
DMAIC	Define Measure Analyze Improve Control
GB	Green Belt
LSS	Lean Six Sigma
NVA	Non-Value Added
PDCA	Plan Do Check Act
VA	Value Added
VSM	Value Stream Mapping

Contact me...



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