

The Foundations of Quality Improvement in Health Care

Don Berwick, Lloyd Provost & Lisa McKenzie

Session Plan

Go to [slido.com](https://www.slido.com)
Event code [#IHIBMJFORUM](#)

1. Reflecting on our foundations

- Revisit an improvement classic
- Science of Improvement

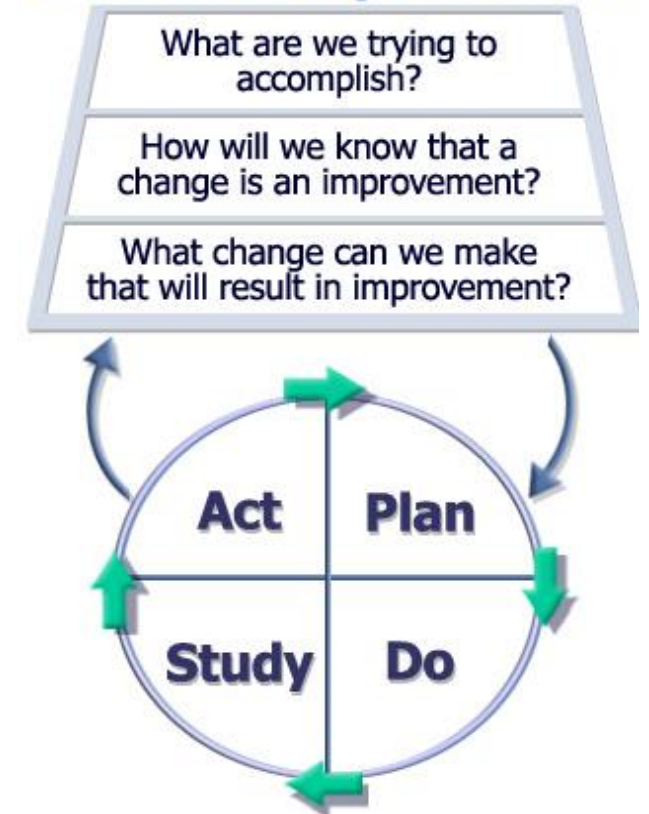
2. Models that have stood the test of time

- System of Profound Knowledge
- Model for Improvement

3. Learning from the past to improve our future

- Q & A - Applying foundational models to achieve improvement

Model for Improvement



The **Red** Bead Game

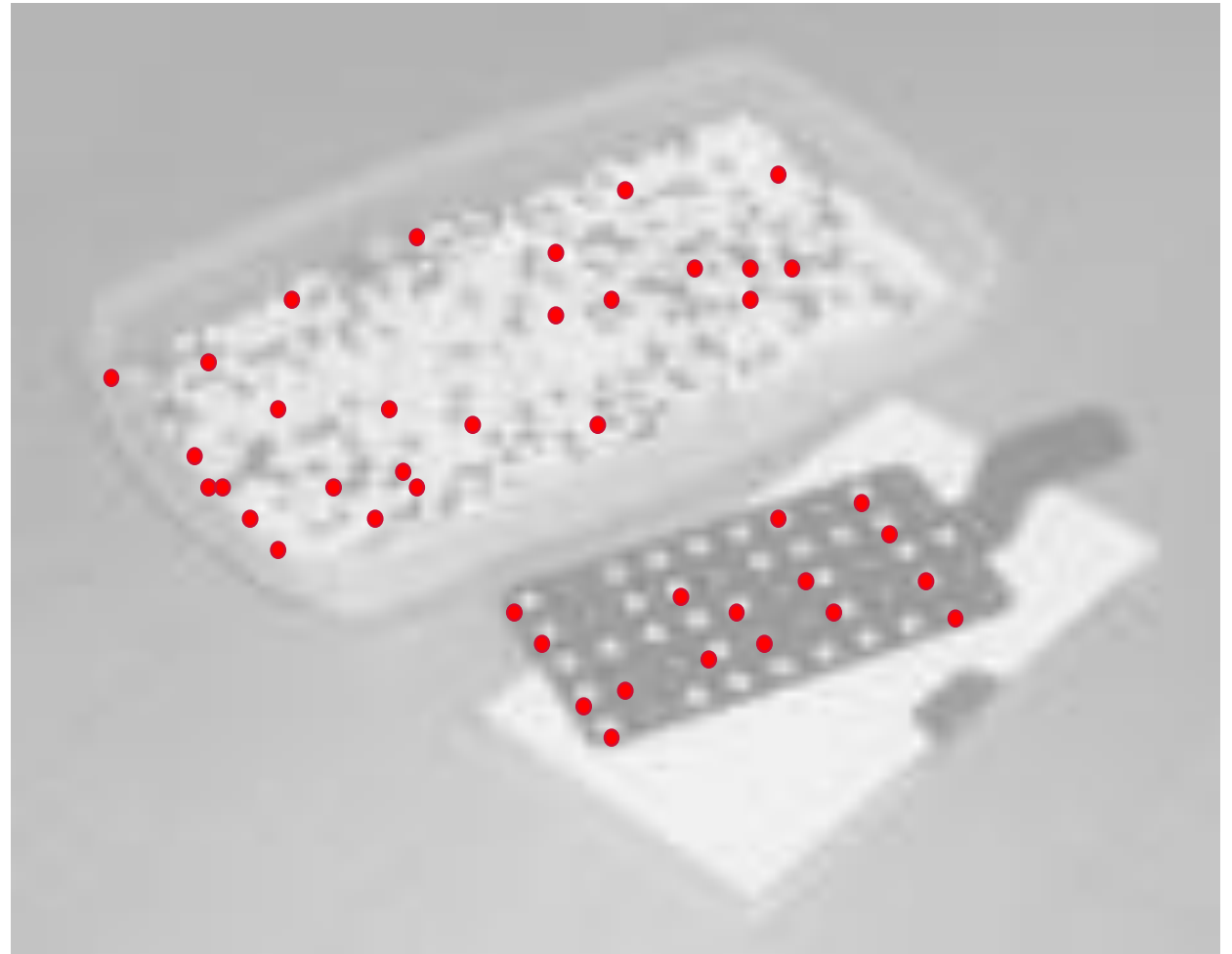


Parable of the Red Beads

All of Deming's key points are contained in the parable of the Red Beads



W Edwards Deming
(1990 – 93)



Results: Number of Red beads by worker

| Willing Worker | Day 1 | Day 2 | Day 3 | Day 4 |
|----------------|-------|-------|-------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| SUM | | | | |



Juran Trilogy



Joseph M. Juran
(1904 - 2008)

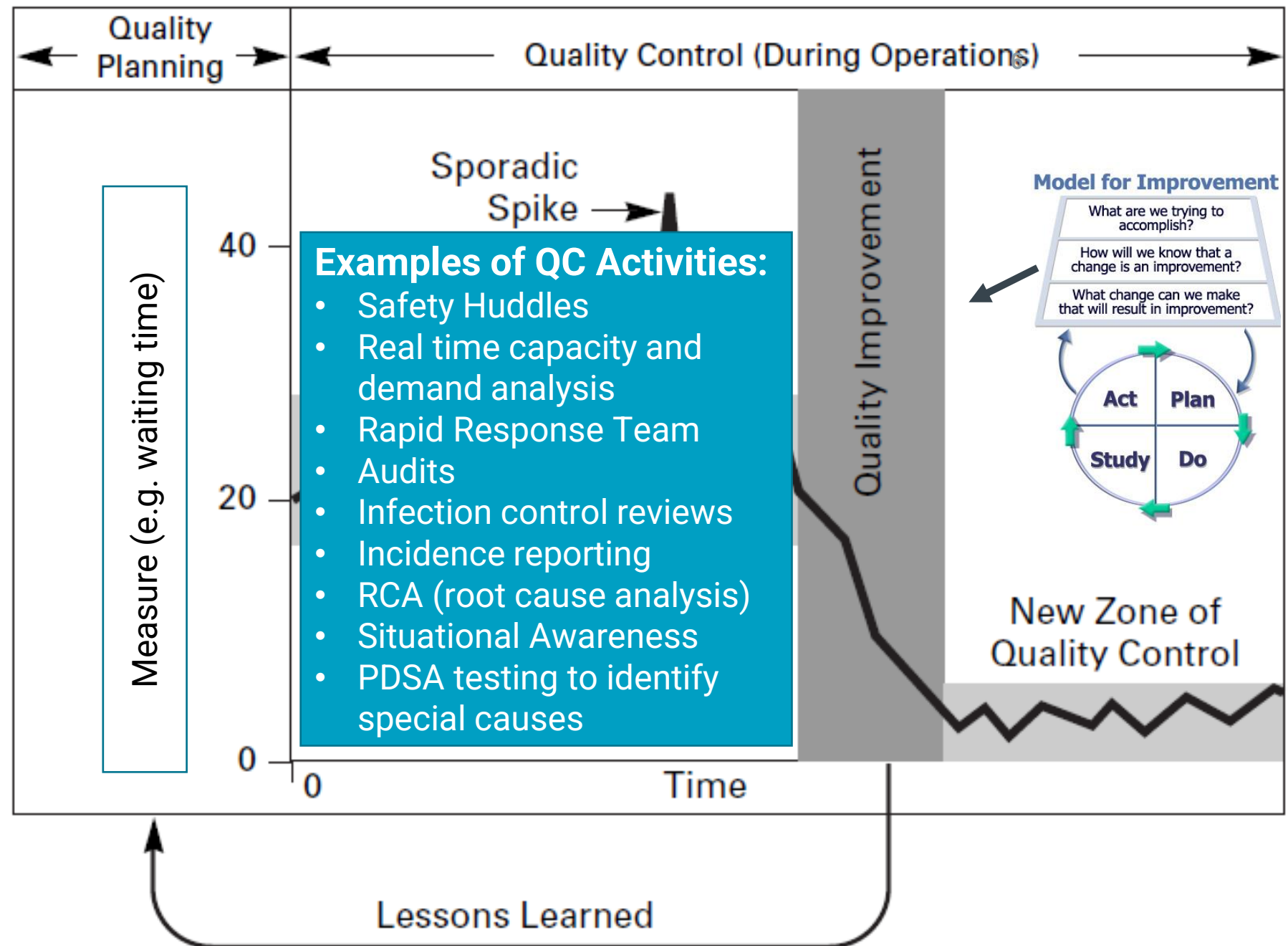
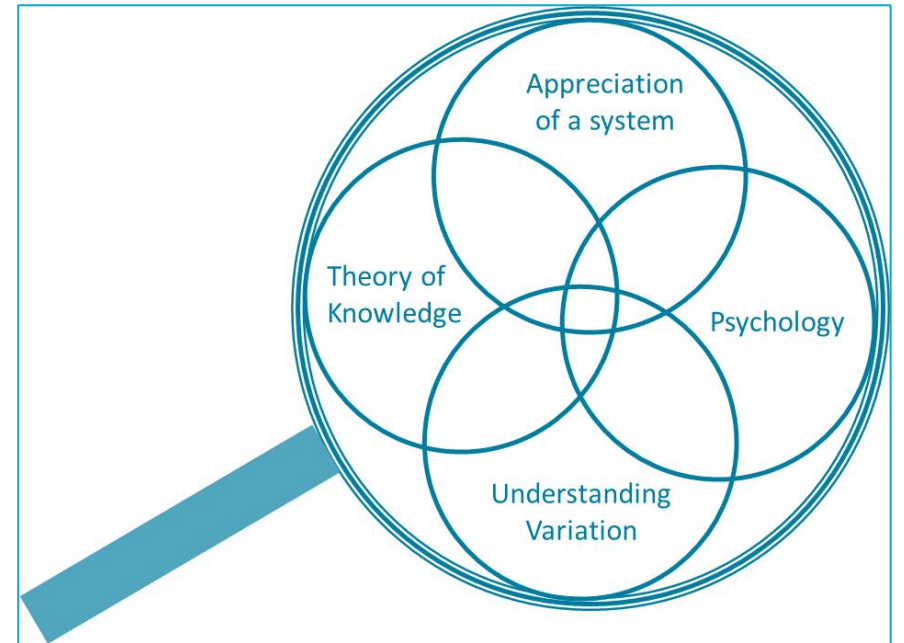


FIGURE 4.1 The Juran trilogy diagram. (Juran Institute, Inc., Wilton, CT.)

Intellectual Foundations for the Science of Improvement

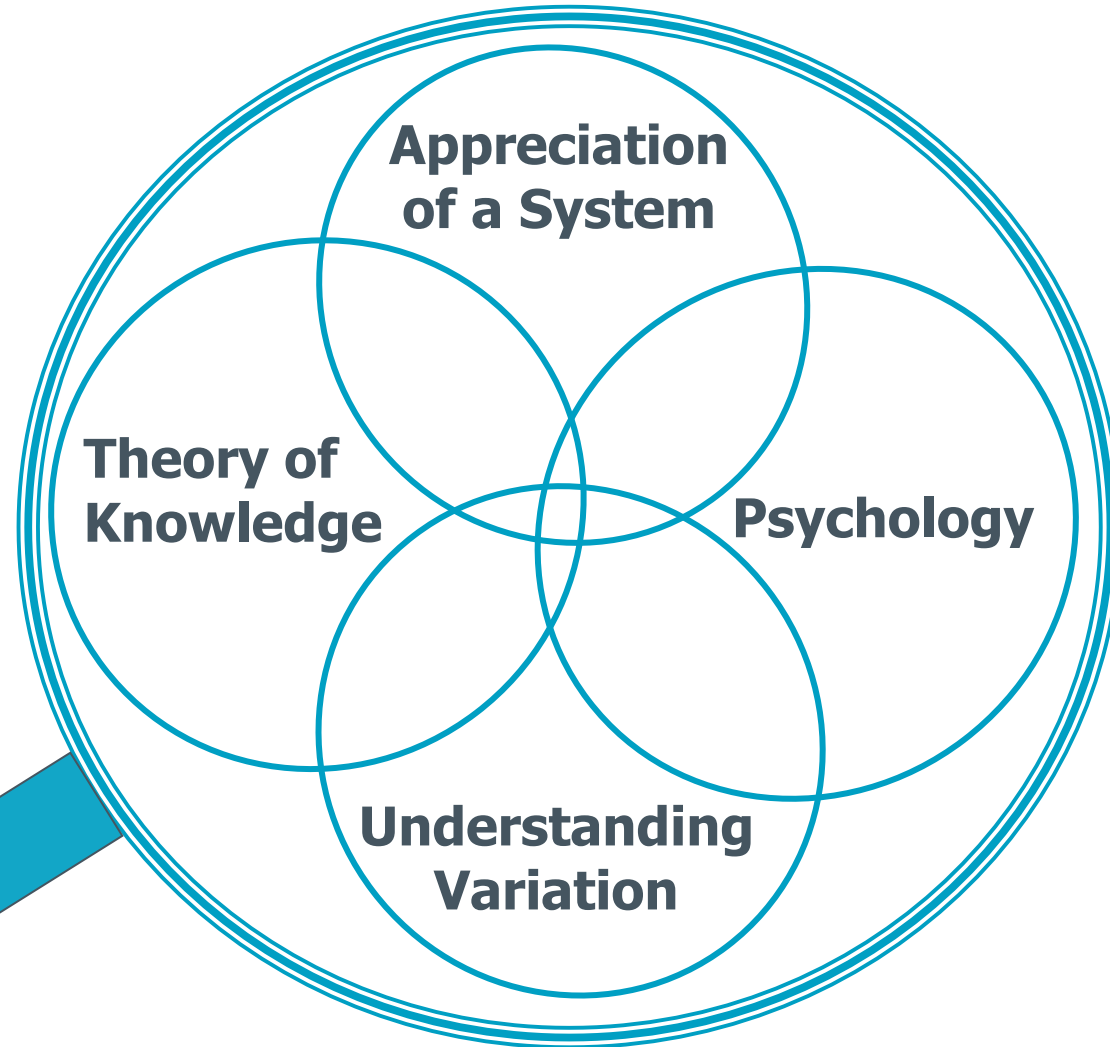
- The science of Improvement has deep roots in intellectual history.
- These intellectual foundations are not static; they develop and grow over time, as all sound science does
- “Fads” come and go as the sciences are packaged for action, but underneath the fads are unifying scientific principles... the “classics” of improvement.
- W. Edwards Deming’s framework – which he called “profound knowledge” – offers an efficient framework for building this science.



Basis for the Science of Improvement: Deming's Lens of Profound Knowledge



W. Edwards Deming
(1900 - 93)



*An outside view
– a lens for
improvement*



Two Types of Knowledge

Subject Matter Knowledge:

Knowledge basic to the things we do in life. Professional knowledge.

Subject Matter Knowledge

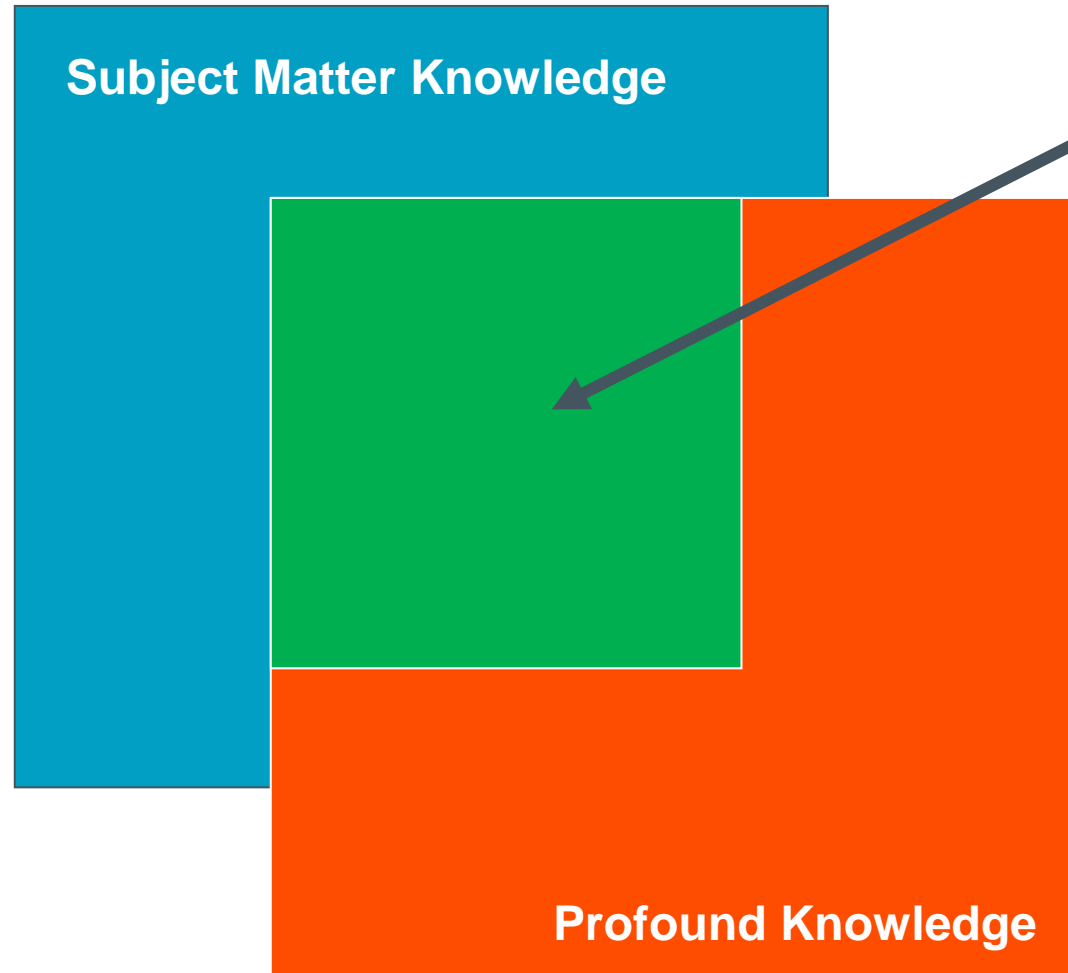
Profound Knowledge

Profound Knowledge:

The interaction of the theories of systems, variation, knowledge and psychology.



Knowledge for Improvement



Improvement:

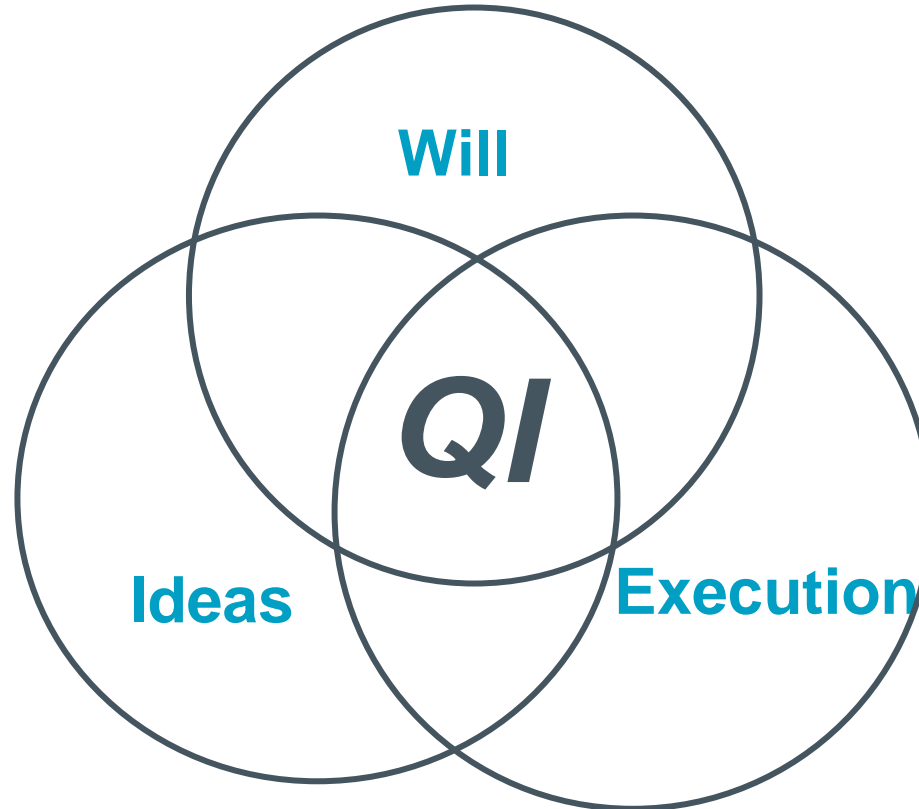
Learn to combine subject matter knowledge and profound knowledge in creative ways to develop effective changes for improvement.



The Essential Drivers of Improvement

Having the Will (desire) to change the current state to one that is better

Developing Ideas that will contribute to making outcomes better



Applying theories, tools and techniques that enable the Execution of the ideas



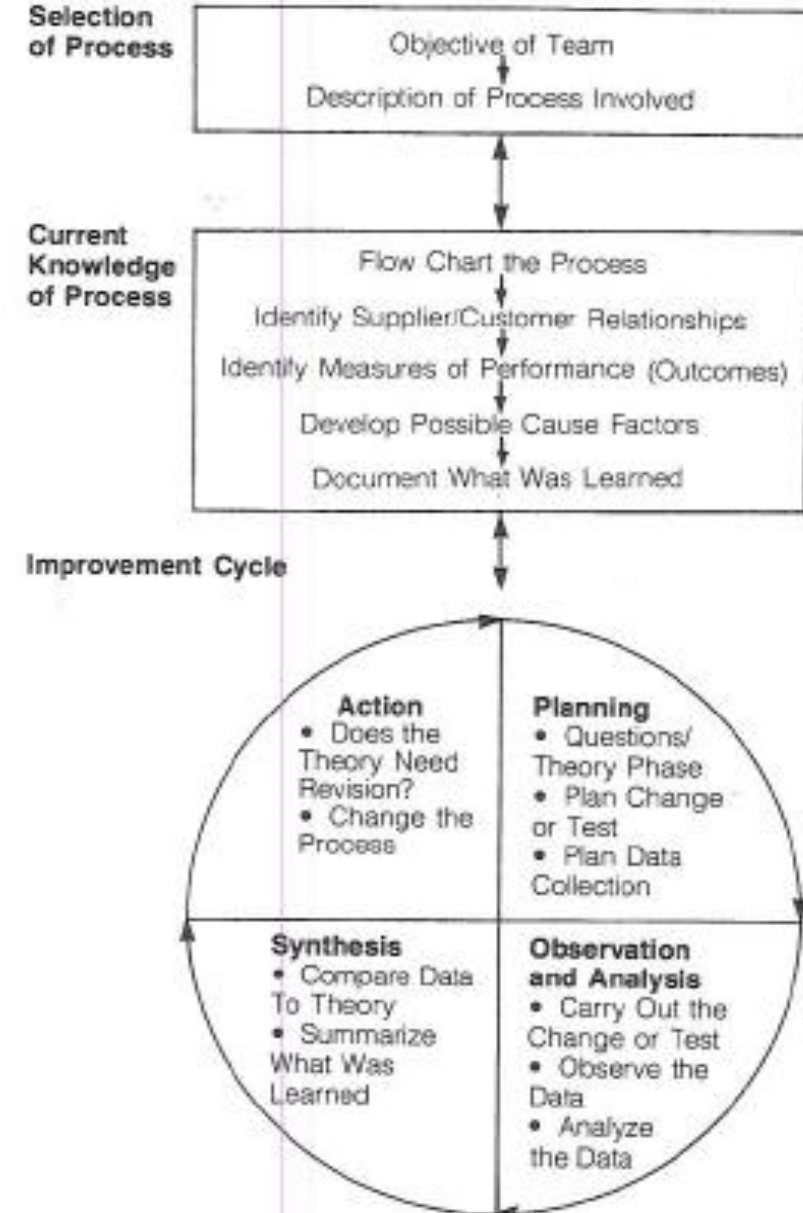
First Publication of MFI, 1987

Process Improvement

A step-by-step approach to analyzing and improving a process

by
Ronald D. Moen and Thomas W. Nolan

Figure 5.
Strategy for process improvement



The Foundation of Improvement

Quality Progress / June 1994 81

Figure 3. The Model for Improvement

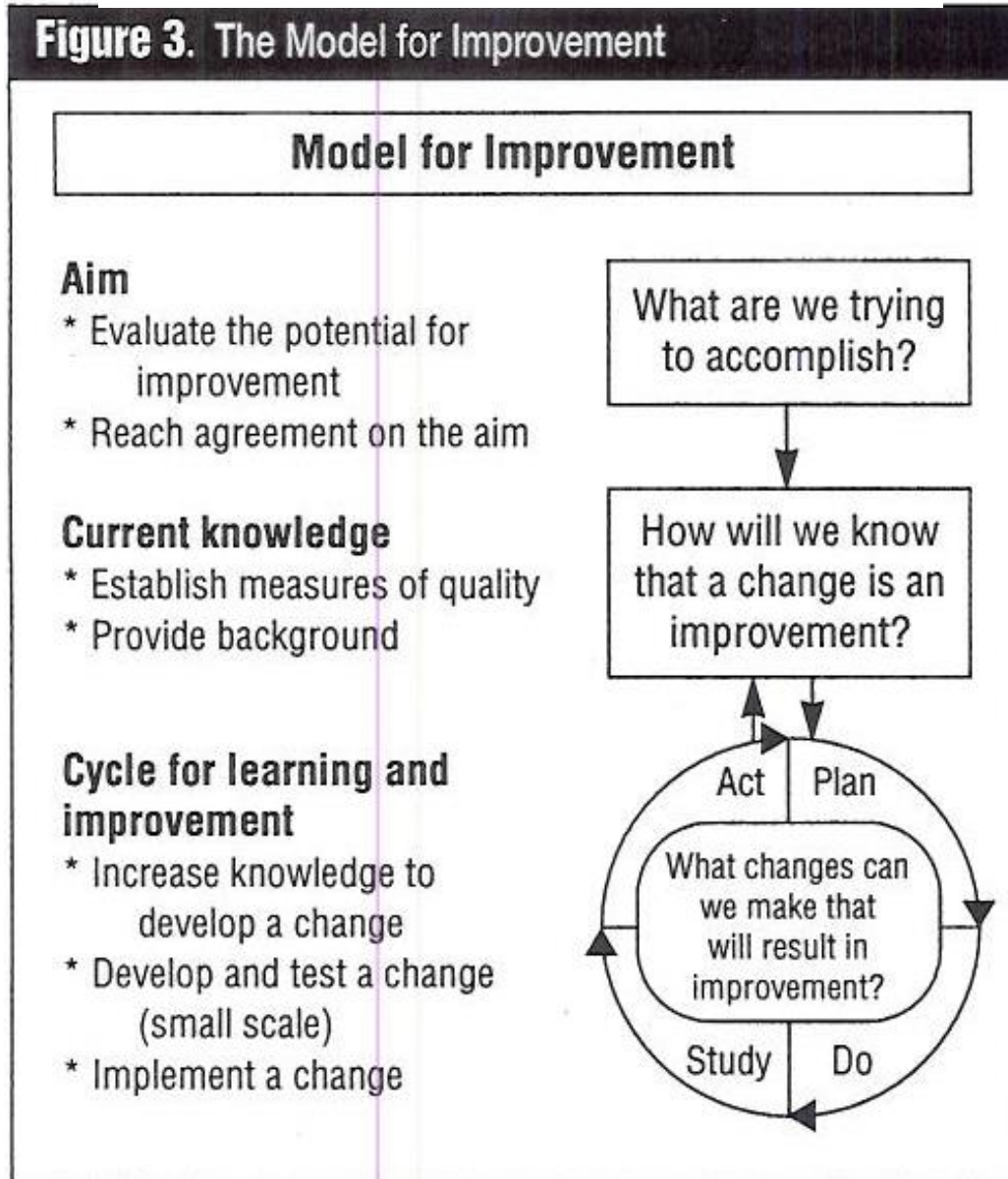
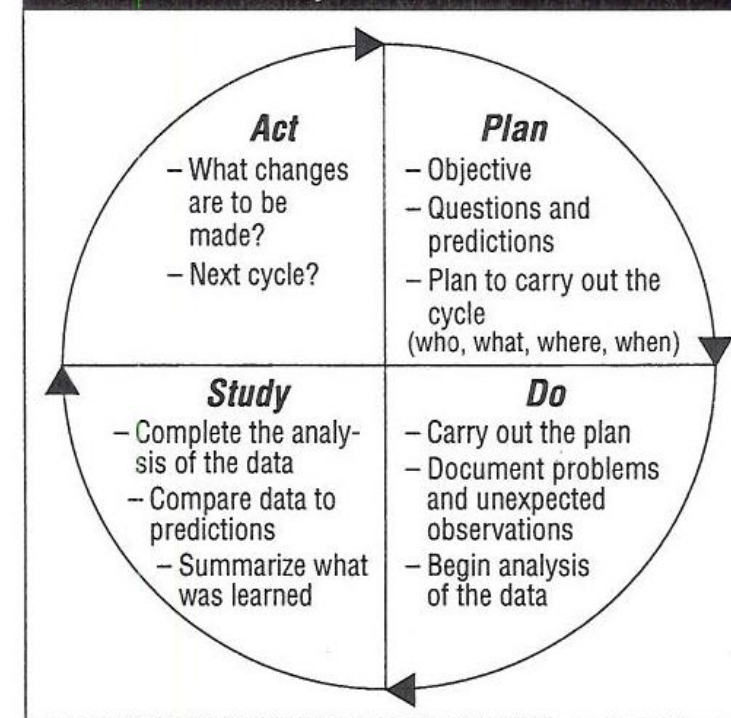
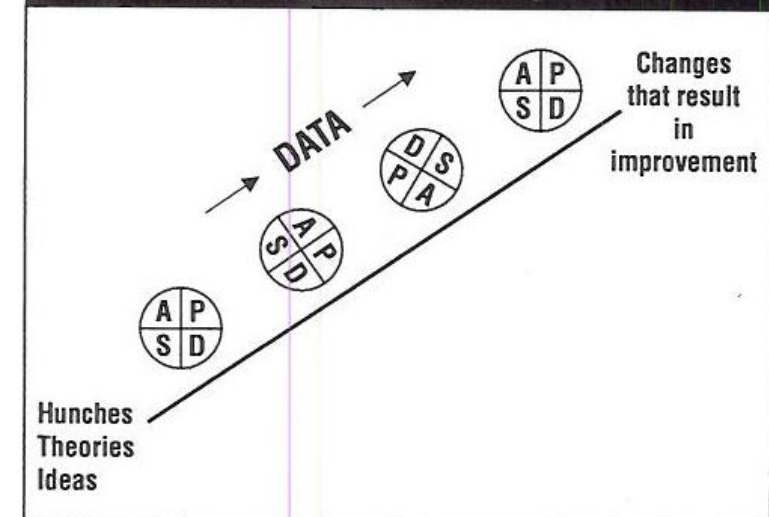


Figure 1. The PDSA Cycle



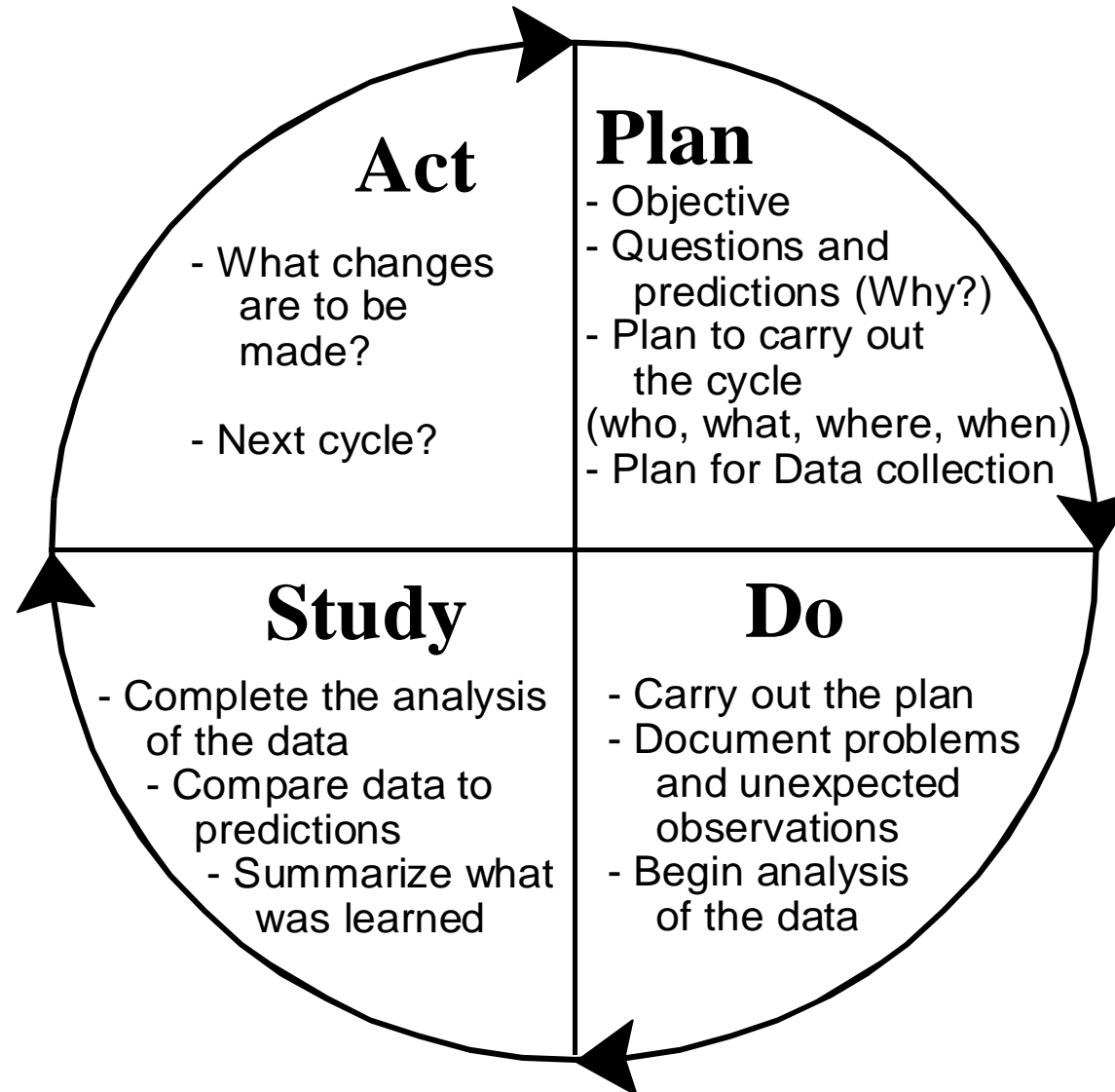
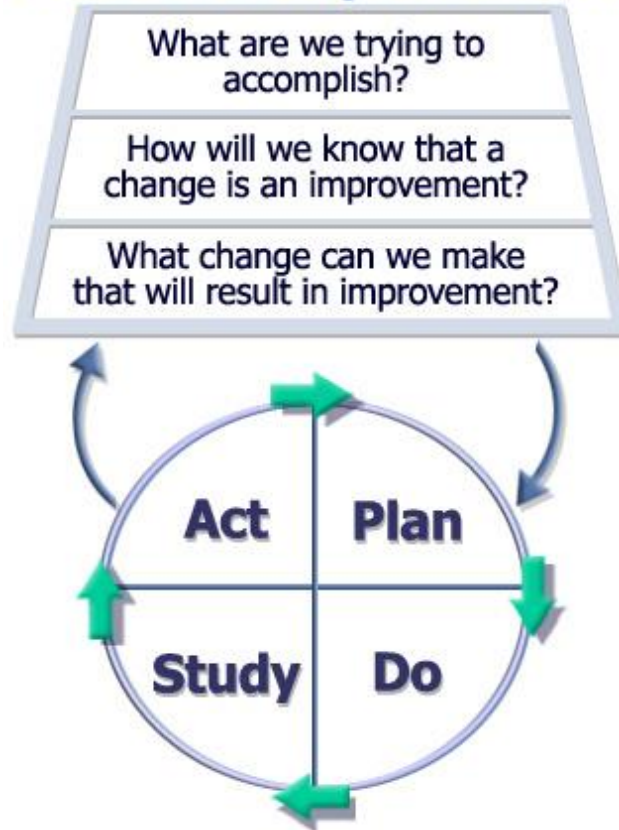
Quality Progress / June 1994 81

Figure 2. Repeated Use of the PDSA Cycle

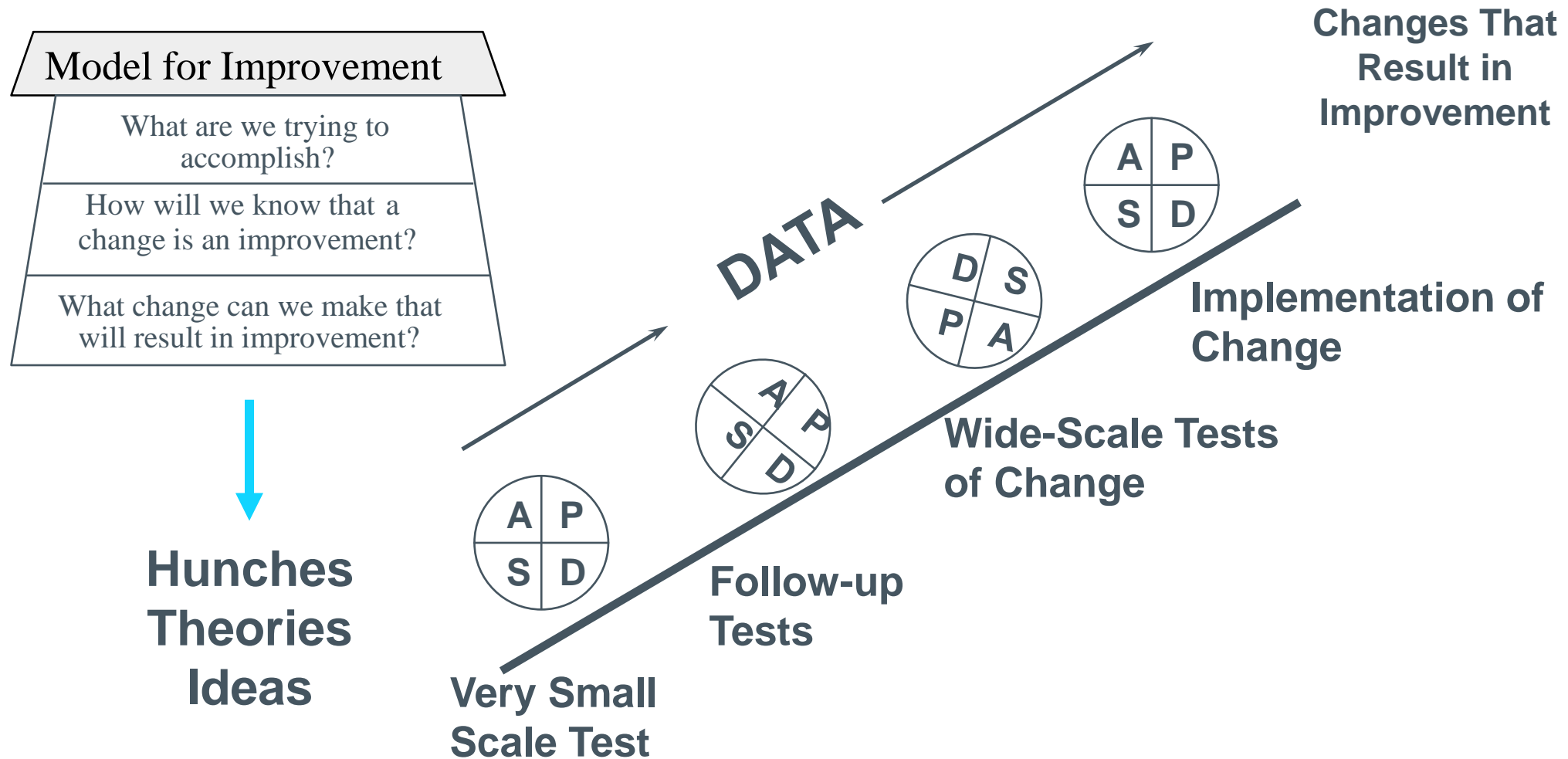


The PDSA Cycle for Learning and Improvement

Model for Improvement

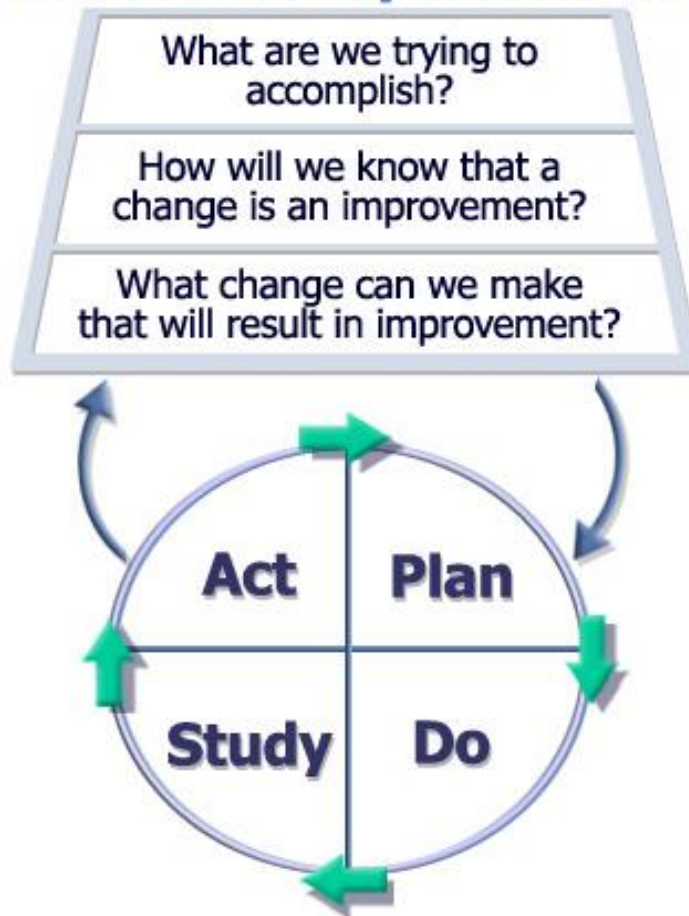


MFI with Repeated Use of the PDSA Cycle



Six Skills to Support Improvement

Model for Improvement



- Supporting Change with Data
- Developing a Change
- Testing a Change
- Implementing a Change
- Spreading Improvements
- The Human Side of Change

Go to [slido.com](https://www.slido.com)

Event code [#IHIBMJFORUM](https://twitter.com/IHIBMJFORUM)



APPENDIX



Deming's 14 Points for top leaders

1. Create consistency of purpose
2. Adopt a new philosophy
3. Cease dependence on inspection
4. Stop awarding business based on \$\$ alone
5. Continuous improvement of production processes
6. Modernize on the job training
7. Institute leadership
8. Drive out fear
9. Break down department barriers (silos)
10. Eliminate slogans that do not provide a method
11. Eliminate quotas and work standards
12. Remove barriers that rob pride from the individual
13. Institute programs for education and training
14. Get everyone involved in the transformation



Lessons: Curing Health Care (Berwick et al)

- Lesson 1:** Quality Improvement Tools Can Work in Health Care
- Lesson 2:** Cross-Functional Teams Are Valuable in Improving Health Care Processes
- Lesson 3:** Data Useful for Quality Improvement Abound in Health Care
- Lesson 4:** Quality Improvement Methods are Fun to Use
- Lesson 5:** Costs of Poor Quality Are High and Savings are Within Reach
- Lesson 6:** Involving Doctors is Difficult
- Lesson 7:** Training Needs Arise Early
- Lesson 8:** Non-clinical Processes Draw Early Attention
- Lesson 9:** Health Care Organizations May Need a Broader Definition of Quality
- Lesson 10:** In Health Care, as in Industry, the Fate of Quality Improvement Is First of All in the Hands of Leaders

