



# Quality Improvement: The Basics & Making it Work

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# Intention for Session

- **Provide a basic understanding of QI**
  - **System improvement**
  - **PDSA**
- **Discuss difference between QI & QA**
- **Share example of how PDSA used**
- **Provide opportunity for discussion**

# Vision



A culture of continual learning and improvement that advances state public health laboratory system practice to an exemplary level

# Values

- ◆ We respect diversity of state/local systems and need for multiple strategies to achieve aims/goals
- ◆ We support an environment of continuous learning, sharing lessons learned without recrimination
- ◆ We understand change is constant, improvement will be ongoing and training is most effective on a “need to know” basis resulting from improvement work
- ◆ We commit to listen actively in order to understand interests, put aside assumptions, and work collaboratively
- ◆ We honor the work that has come before and recognize it makes success in our work more achievable

# Values

- ◆ We understand, to be effective, our communities must be partners
- ◆ We recognize the necessity of sharing our experiences, including successes, failures, and lessons learned
- ◆ We support the use of evidence based practices and acknowledge and the importance of utilizing good data in measurement, priority setting, and evaluation
- ◆ We strive to understand the diversity within our public health community, and to assure that our efforts address the diversity within our communities
- ◆ We are hard on the issues, and don't take perspectives different from our own as personal affronts

# Comparing Quality Improvement and Quality Assurance

## Quality Improvement

Aim: **improvement**

### Methods:

- ◆ Assumption: improvement
- ◆ Test observable
- ◆ Just enough data
- ◆ Adaptation of the changes
- ◆ Sequential tests

## Quality Assurance

Aim: **compliance**

### Methods:

- ◆ Assumption: compliance
- ◆ Often regulatory
- ◆ Required data
- ◆ Fixed
- ◆ Periodic tests

# Comparing Quality Improvement and Research

## Quality Improvement

Aim: **improvement**

### Methods:

- ◆ Assumption: improvement
- ◆ Test observable
- ◆ Stable bias
- ◆ Just enough data
- ◆ Adaptation of the changes
- ◆ Sequential tests

## Research

Aim: **new knowledge**

### Methods:

- ◆ Assumption: no difference
- ◆ Test blinded
- ◆ Eliminate bias
- ◆ Just in case
- ◆ Fixed hypotheses
- ◆ One large test

# Examples of Quality Improvement Programs & Activities

- **Conference calls on targeted issues**
- **Learning Sessions: Case Reviews**
- **ORC sharing lessons learned**
- **Exercises**
- **Courses**
- **Publications**
- **State, Regional or National Forums**



**“Knowing is not enough;  
we must apply.**

**Willing is not enough;  
we must do.”**

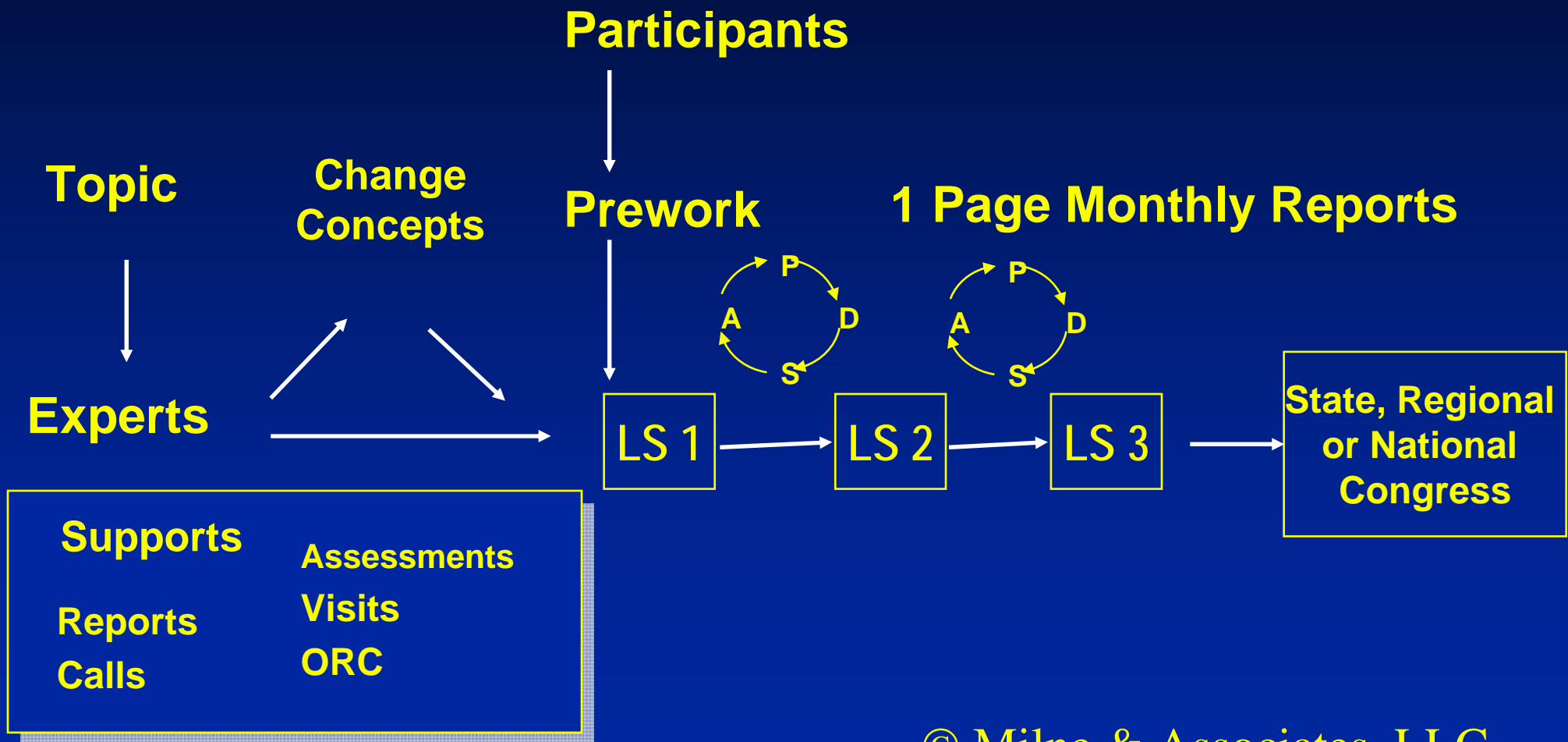
**- Goethe**

# Topic Selection

- ◆ **Gap between science and practice**
  - ◆ Current practice deviates from best available scientific knowledge
  - ◆ Evidence (3-4 articles)
- ◆ **Examples of better performance exist**
  - ◆ At least one “sentinel” organization
- ◆ **Lower costs/improved outcomes**

Berwick DM. Eleven worthy aims for clinical leadership of health system reform. JAMA 1994; 272: 797-802.

# Collaborative Series

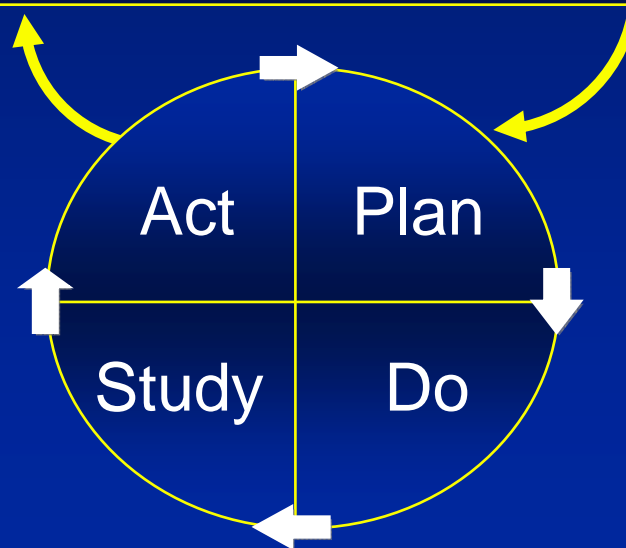


# Model for Improvement

**What are we trying to accomplish?**

**How will we know that a change is an improvement?**

**What changes can we make that will result in an improvement?**



# Model for Improvement

- Clear statement of aim
- Measures related to aim with data plotted over time
- Most important changes identified
- Rapid cycle tests used to learn and build change

# QI: The basic steps

- Find out where problems are--name them!
  - Ask users, review competencies and essential services
- Find colleagues willing to engage in improvement projects
- Engage senior leadership

# QI: The basic steps

- Set an aim
- Choose a simple measure and routinely track it
- Start with small-scale changes most likely to be effective
- Start to test changes with small numbers
- Ask for help

# Examples of Team Aims

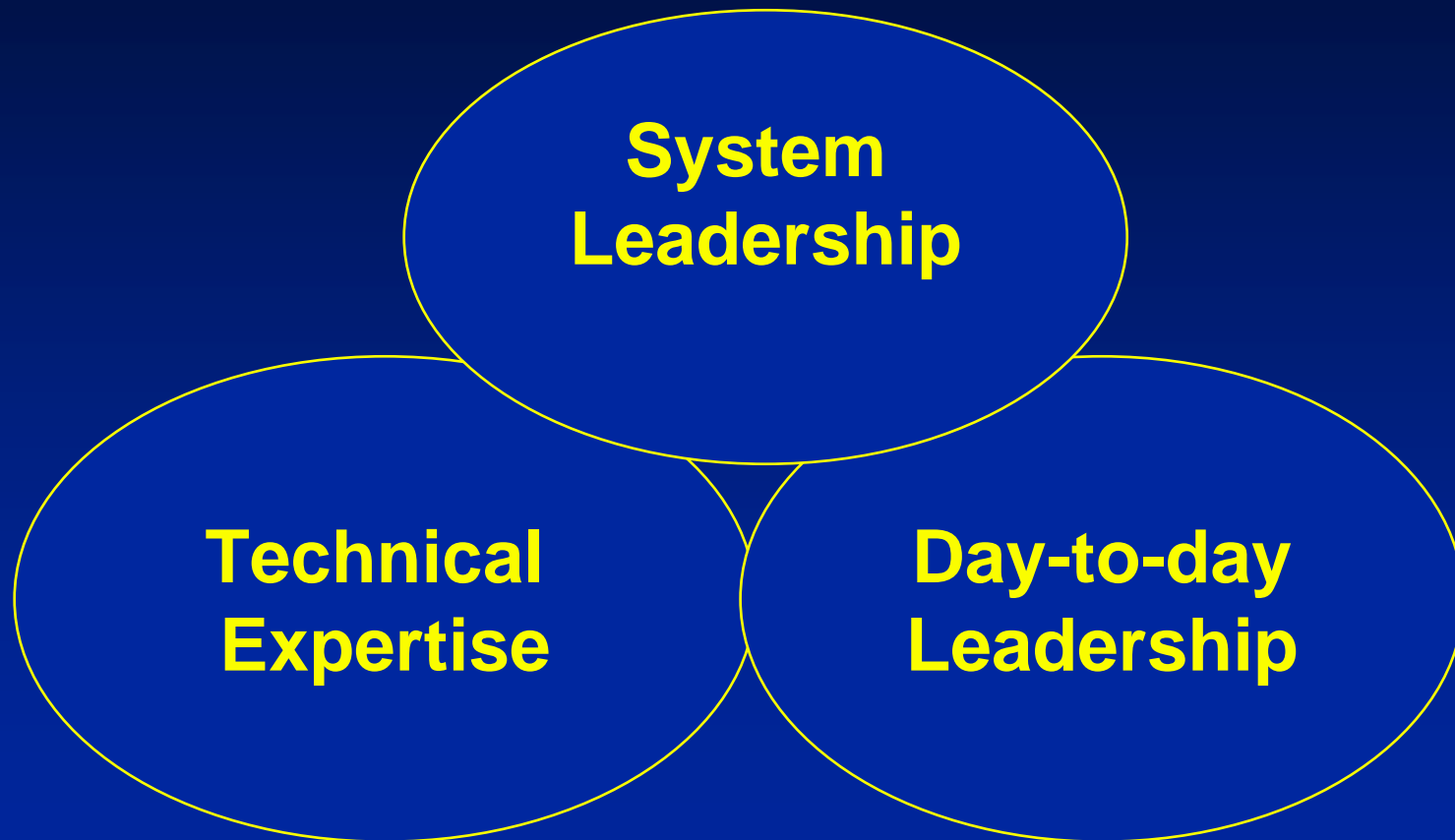
- **All community players are involved in BT preparedness practices; elected officials are present and involved.**
- **The top two priorities in the L-SIP results are moved into the “yes” range.**
- **The rate doubles at which users of state public health laboratory services report that they are very pleased with the services they received.**
- **100% of identified & selected system partners participate in regular meetings of State Laboratory Advisory Board**



# Establishing the Team's Aim

- ◆ **Improvement relies on the intention to improve**
  - ◆ **Involve senior leaders - align aim with strategic goals of the organization and/or community**
- ◆ **Make the target for improvement unambiguous**
- ◆ **Send a strong message - Set stretch goals**

# Three Ingredients of an Effective Team



# Examples of Teams

- ◆ **Health Department-based:** lab director, epidemiologist, health educator, health officer
- ◆ **Community-based:** health officer, school superintendent, county sheriff, chamber of commerce, faith community leader, PH lab director, pulmonologist, public health lawyer
- ◆ **Team composition can change over time, there can be more than one team focusing on the same topic**

# A bit of info on measurement, change and improvement?

- ◆ The key measures should monitor an outcome that benefits those receiving service, contributes to public health competencies, essential services, etc.
- ◆ Integrate measurement into the daily routine
- ◆ All improvement requires change, but not all change is an improvement
- ◆ What will be measured to know the aim has been achieved?
- ◆ Measures are used to guide improvement
  - ◆ Not for judgment
  - ◆ Not for research

# Tips on Measurement

- ◆ Seek usefulness not perfection
- ◆ Use paper and pencil

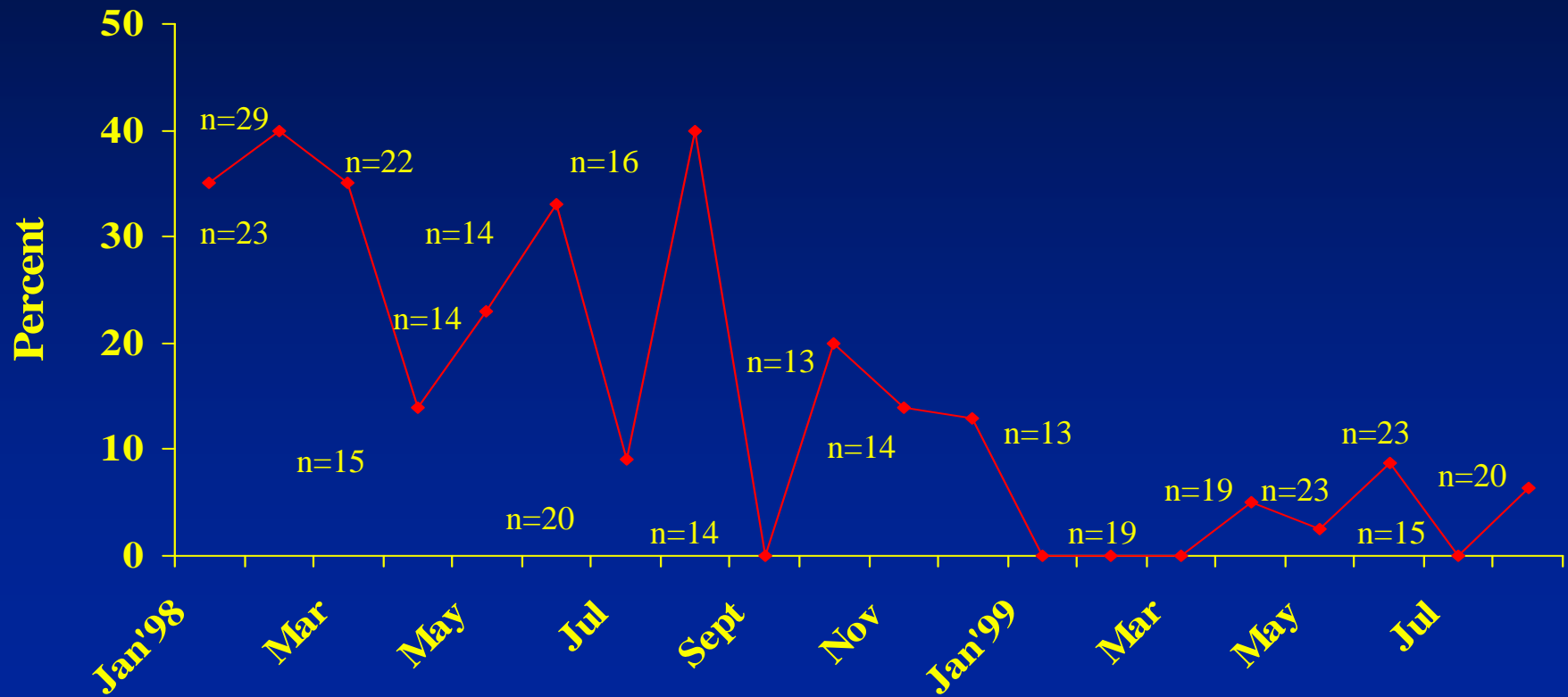
- ◆ Use sampling
- ◆ Plot data over time (annotated run chart)

# Examples of Measures

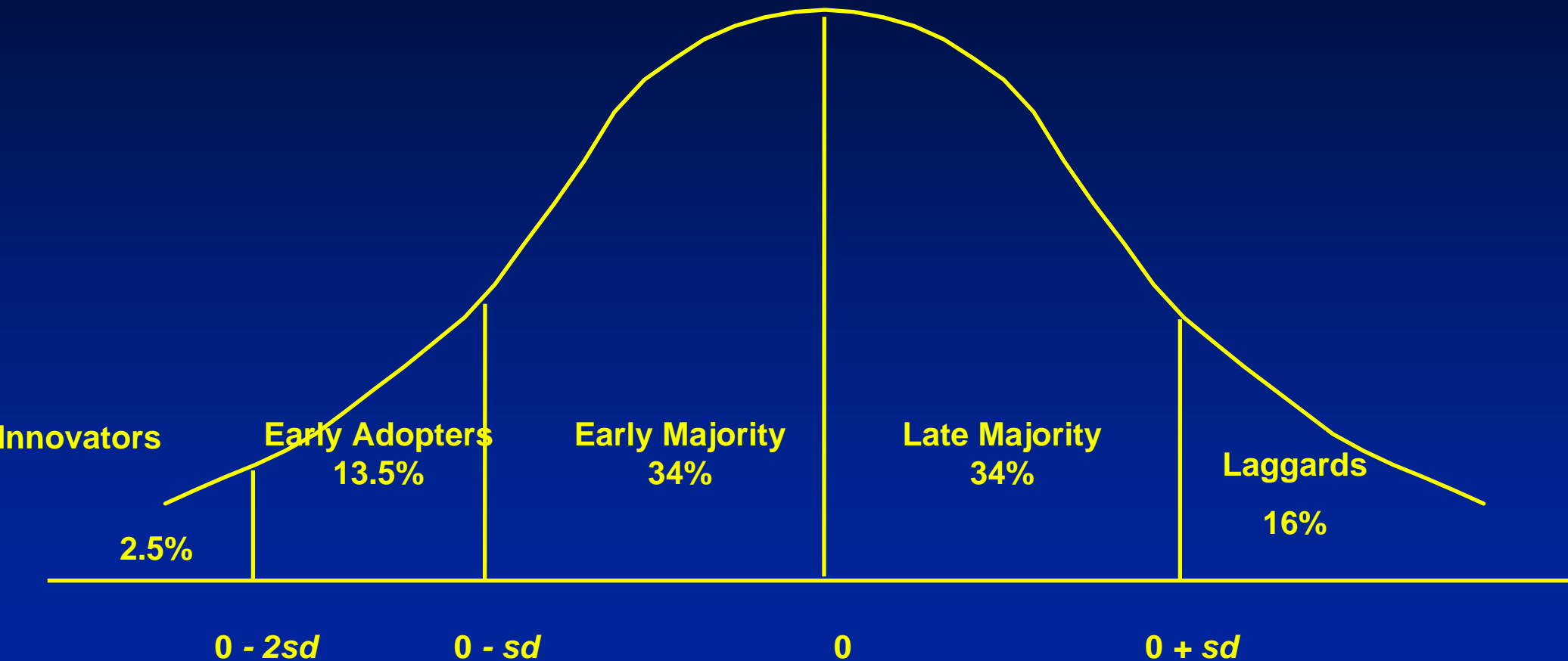
- ◆ **The number of L-SIP assessment measures in the “75-100%” range**
- ◆ **Percent highly satisfied with state public health laboratory services**
- ◆ **Time between identification of communicable disease, reporting, testing, treatment, follow up and containment**
- ◆ **Percent of staff reporting highly satisfied with their work; rate of retention**

# Example of a Time Run Chart

Percent of \_\_\_\_\_ Requiring \_\_\_\_\_



# Adopter Categorization on the Basis of Innovativeness





# Successful Cycles to Test and Adapt the Changes

- **Scale down size of test (# of people, location)**
- **Test with willing volunteers**
- **Do not try to get buy-in, consensus, etc.**
- **Be innovative to make test feasible- simulate**
- **Collect useful data during each test**
- **Test over a wide range of conditions**
- **Plan multiple cycles to test and adapt change**

# Assumptions about Time: Two Orders of Magnitude LESS

Year

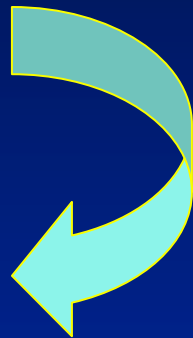
Quarter

Month

Week

Day

Hour

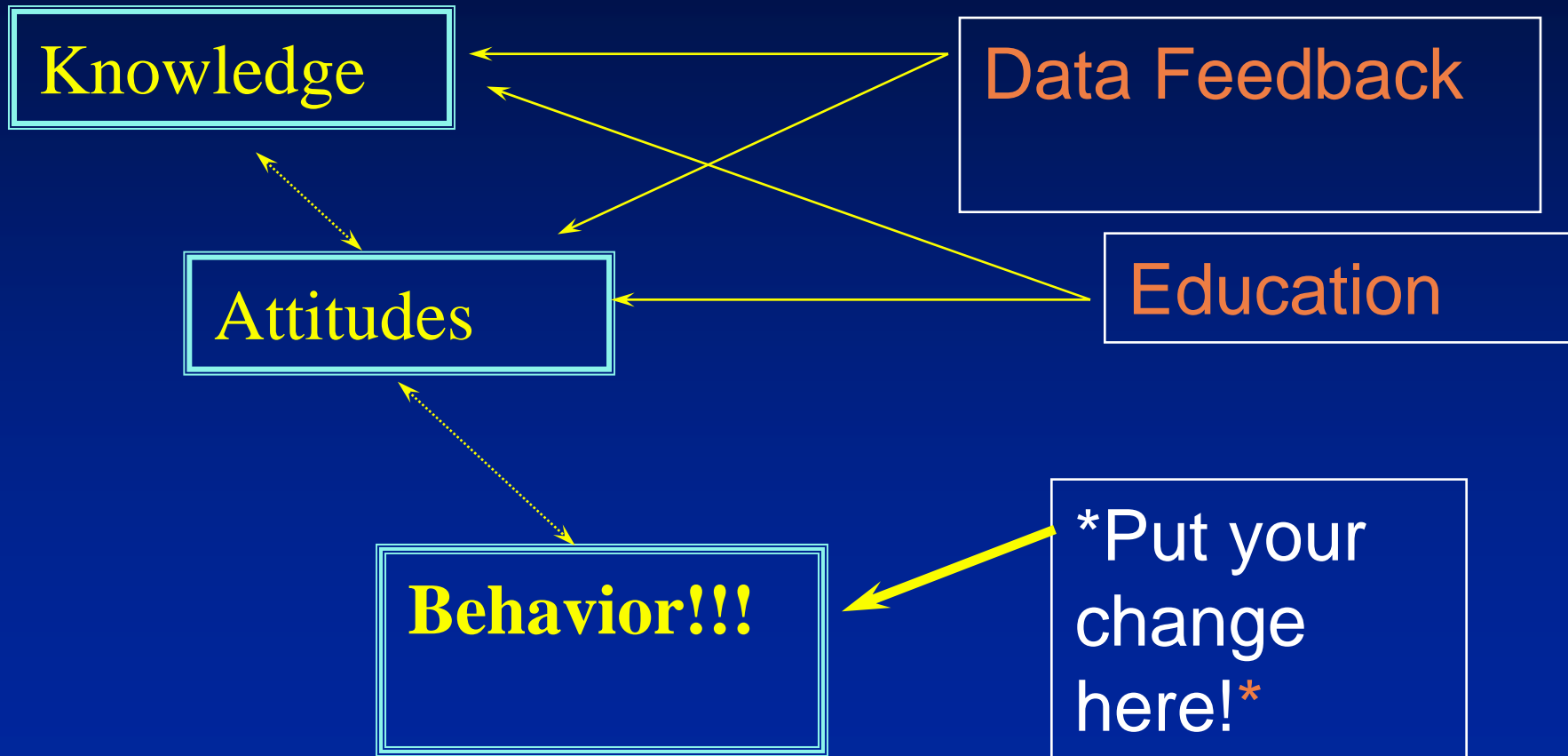


*“If I can do it in a month, what can I do in a day?”*

# What changes can we make that will lead to improvement?

- Use existing knowledge
- Ask for suggestions
- Adapt to local conditions
- Learn from other colleagues and partners
- Be strategic: set priorities based on the aim, known problems, and feasibility

# What Makes a Change Powerful?



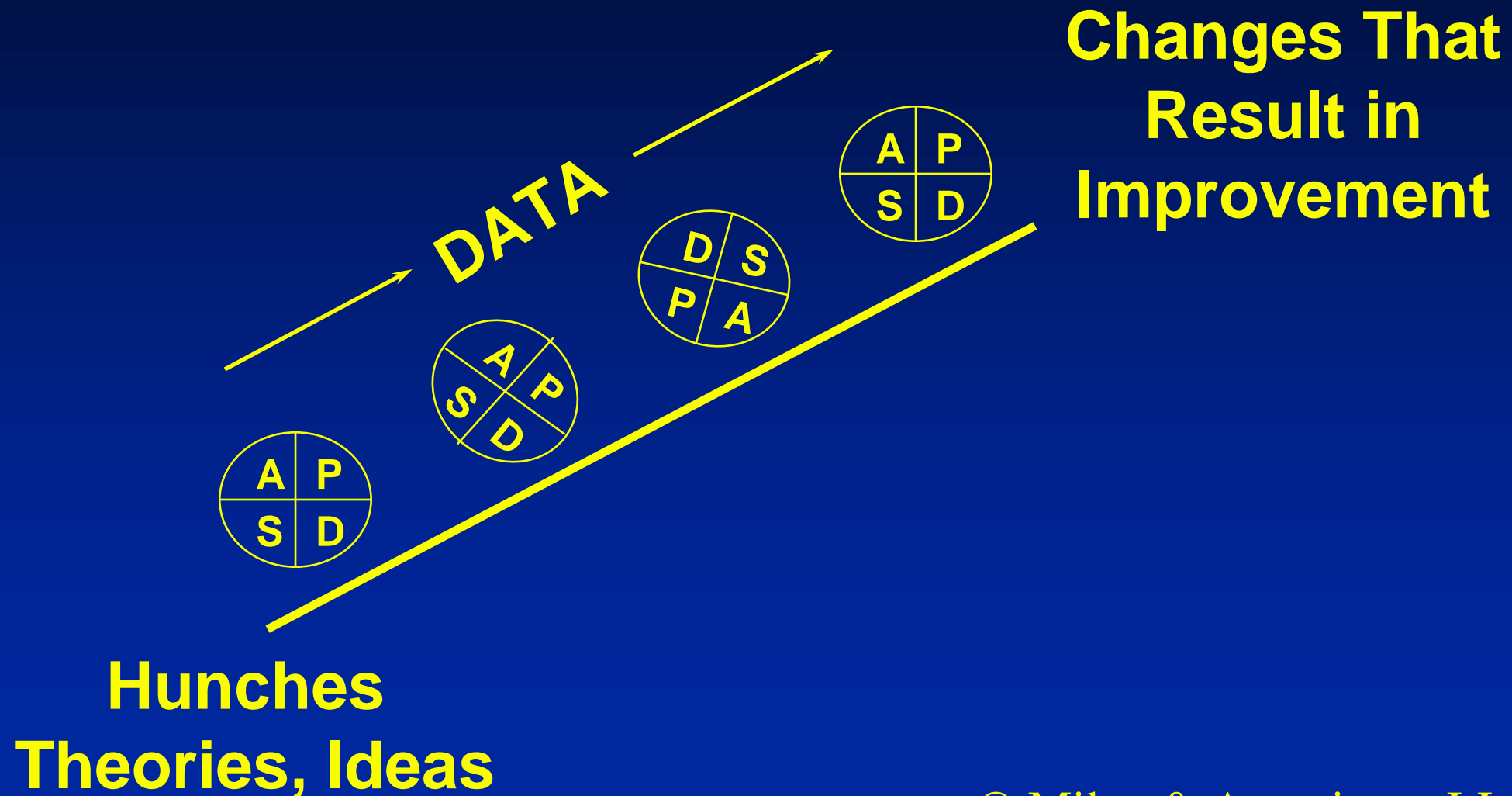
# The PDSA Cycle for Learning and Improvement



# Why Test?

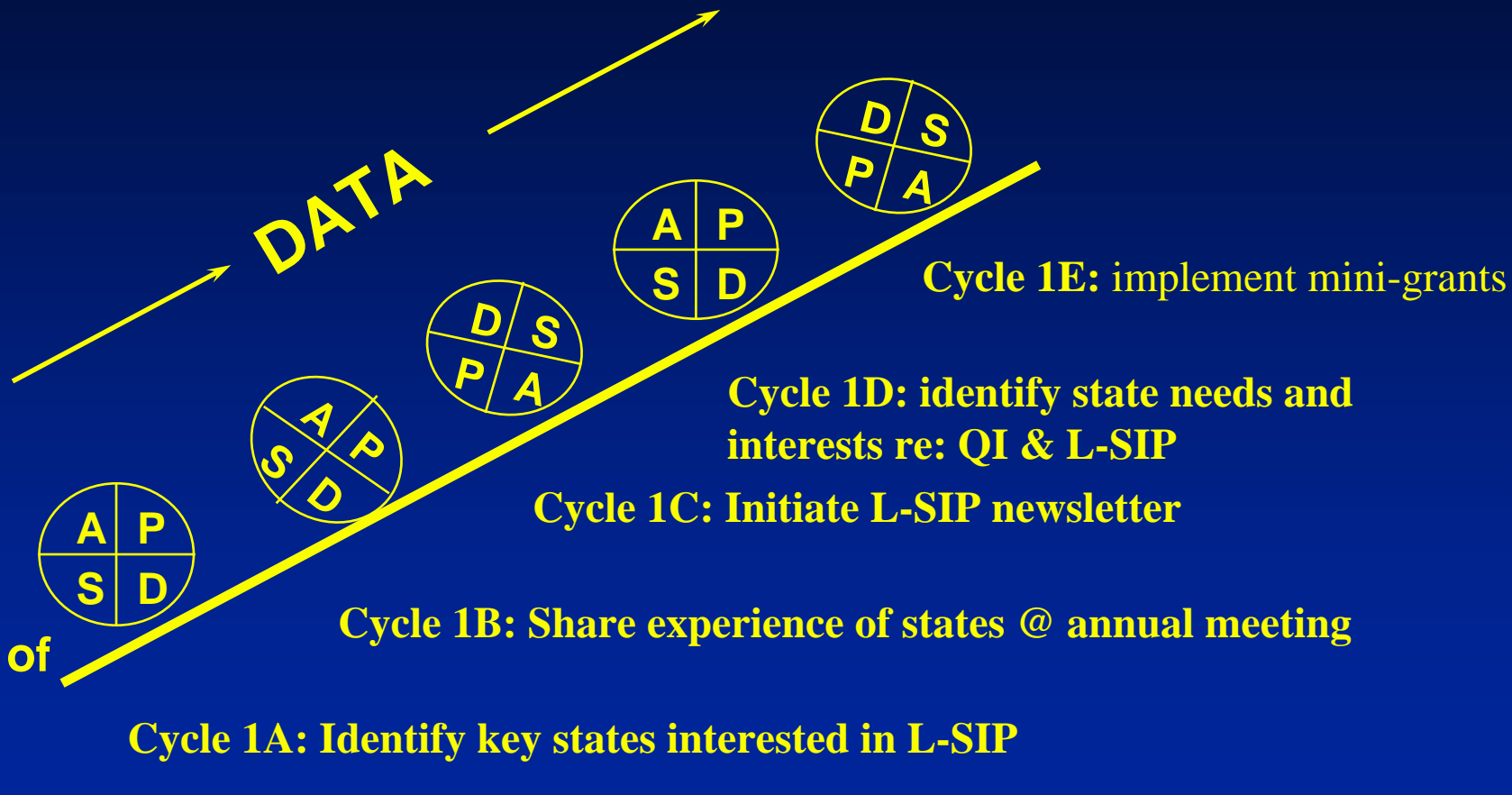
- **Increase the belief that the change will result in improvement**
- **Predict how much improvement can be expected from the change**
- **Learn how to adapt the change to conditions in the local environment**
- **Minimize resistance for implementation**

# Repeated Use of the Cycle



# Test: States are engaged in L-SIP

Increase in L-SIP





# Increase percent of the population that is fully immunized

*Specific Test Cycles*

**Assessments  
done  
routinely  
and timely**

**Special clinics  
at targeted  
times**

**Partnering with  
community  
providers on PR  
and marketing  
campaign**

**Schools kick off  
:Be wise:  
Immunize”  
Campaign**

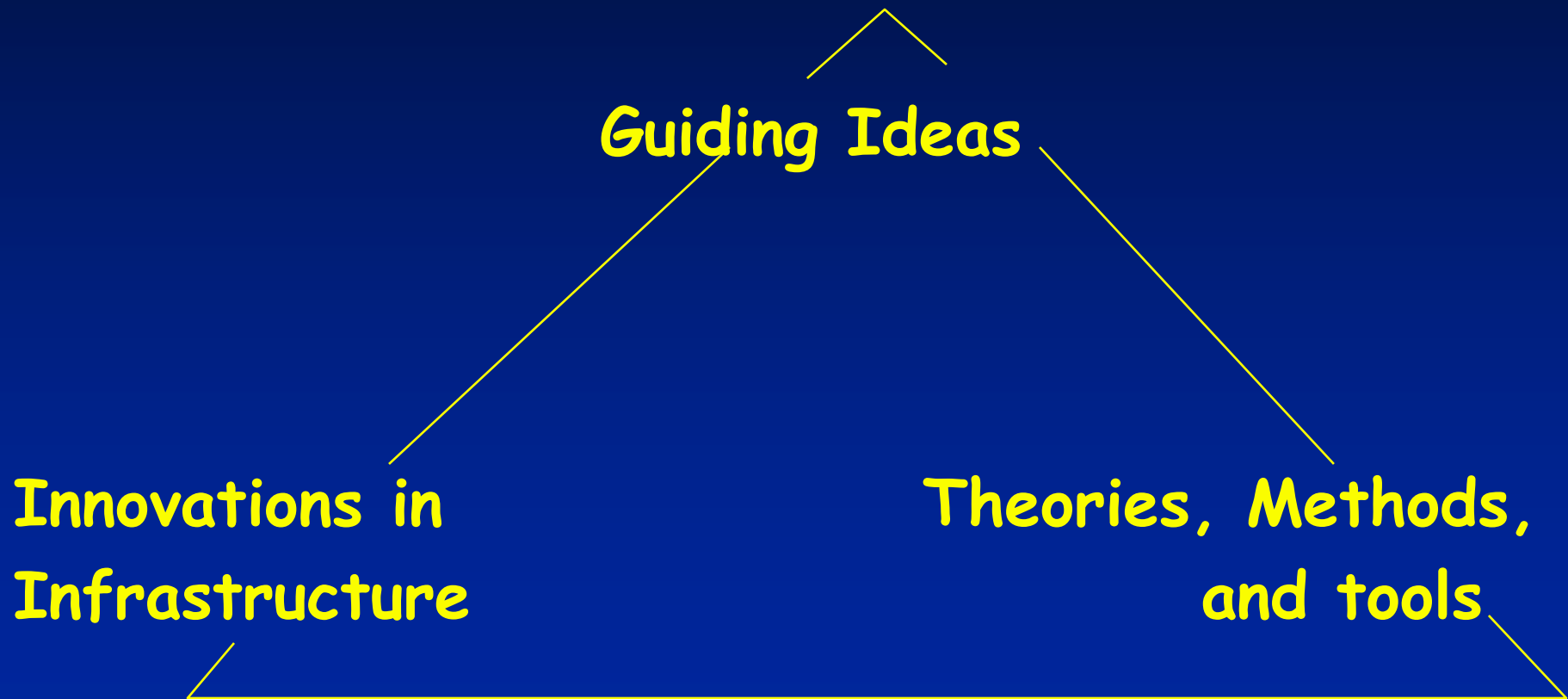
**Business  
community kicks  
off their “Match  
& Adopt”  
Program**

# Barriers and challenges to implementing improvement

- Current system
  - Dependency
  - Control
  - Fear of change
  - \$
  - Politics
- Categorical silos
- Scotomas
- Others?



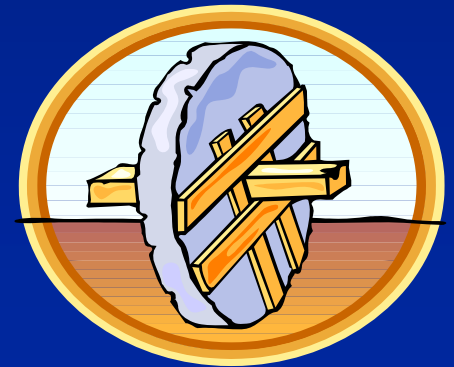
# Learning Communities: Architecture of Action



# Learning Together

More rapid learning occurs when

- There is a common vision
- Participant commitment is in place
- Successes AND failures are shared fully
- it's not necessary to reinvent the wheel



# Learning Organizations

**...a group of people, an organization, or an organization of organizations which increases its competency by**

- **sharing a common vision**
- **striving to share mental models**
- **expanding the capacity of its individual members**
- **focusing change at the system level**
- **valuing team learning**

*Adapted from Peter Senge's **The Fifth Discipline***

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Whether you think you can, or whether  
you think you can't, you're right. --Henry Ford

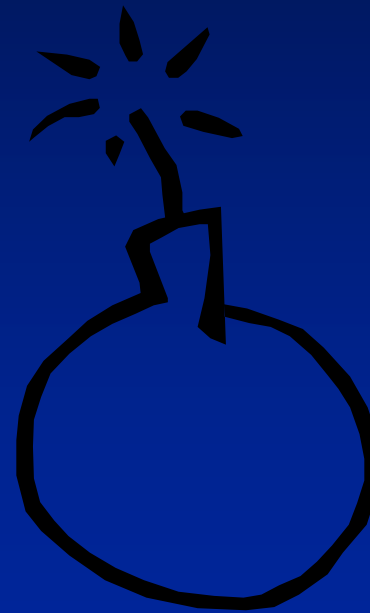
Do, or do not. There is no "try". --Yoda (The Empire  
Strikes Back)

I think I can, I think I can.....

--The Little Engine That Could

# Common Pitfalls: Watch Your Step

- studying the problem too long
- getting everyone's agreement first
- educating without changing structures or expectations
- tackling everything at once
- measuring nothing
- failing to build support for replication and spread
- assuming the status quo is OK



# It's time to get started!

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