How to Improve Your Laboratory System & Get The Results You Want

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Objectives for Session

Participants will:

- set system priorities
- identify core components of a Charter that will fit for their system
- identify aims, measures and changes for their system QI Plan
- hear colleagues share practical QI applications and resources

5 Critical QI Activities

- Maintain continuous communication with all who need to be involved
- Address obvious problems
- Look upstream for problem causes
- Document progress and concerns
- Measure and monitor changes

Determining Priorities

- System Assessment
  - L-SIP, NPHPSP or other
- Identify areas for improvement
- Where is the passion & interest
  - System partners, within your own organization
- Look for what is already planned for or being implemented
- Consider organizational priorities

Work Group: Determining Priorities

- Handout & Exercise
- Tools for determining priorities
  - What is the impact or importance?
  - What issues are already slated for improvement?
  - Where is the interest, energy and commitment?
  - What resources are available that can be leveraged?

The Charter:

a roadmap for improvement and a way to communicate

- Vision
- Mission
- Values
- Measurable Objectives
- Plan for monitoring and sharing results
- Getting commitment

Charter Mission

Clarity of Mission = System partners understand why improvement is important

Charter Vision

Clarity of Vision = System partners understand what is intended around improvement work

Charter Values

Clarity of Values = System partners know the culture and are in agreement with it

Work Group Activity: Charter

- Handout of Charter template
- Handout for:
  - Charter Mission
  - Charter Vision
  - Charter Values
- Other Charter Options

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
- Base target on data identifying the problem (e.g. L-SIP Assessment)
- Send a strong message - Set stretch goals

Topic Selection

- Gap between science and practice
  - Current practice differs from best available scientific knowledge
  - Evidence (research, published articles)
- Examples of better performance exist
  - At least one “sentinel” organization
- Improved outcomes/Lower costs

Examples of Team Aims

- All community players are involved in preparedness practices; elected officials are present and involved
- Workforce competencies and expectations are clear for all laboratory workforce categories in system laboratories
- The SPHL system has a mechanism in place to share research info and innovative solutions of laboratory system issues
- 100% of identified & selected system partners participate in regular meetings of State Laboratory “Advisory” Committee

Selecting a Team Aim

Do:

- Identify an aim that the team is interested in
- Choose a process (not a desired solution)

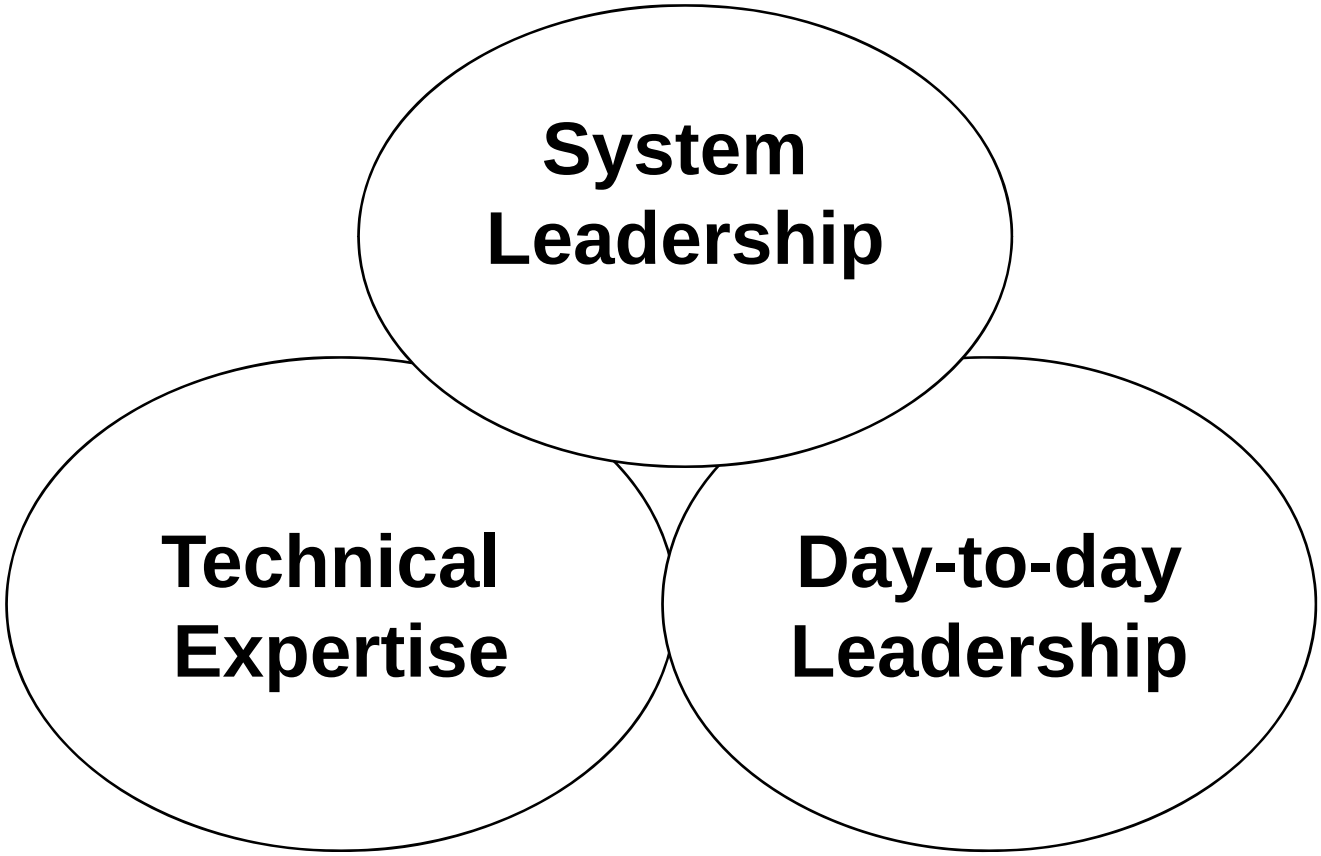
Don't:

- Select a process in transition
- Select a system to study

Work Group: What's your aim?

- Handout
- Key Elements
- Other

Three Ingredients of an Effective Team



Examples of Teams

- Health Department-based: lab director, epidemiologist, health educator, health officer
- Community-based: PH laboratory director, health officer, school superintendent, county sheriff, chamber of commerce, faith community leader, hospitalist, pulmonologist, public health lawyer

Team composition can change over time, there can be more than one team focusing on the same topic

Work Group: Who's on the Team?

- System partners
- Internal team partners
- Other

The basic steps are:

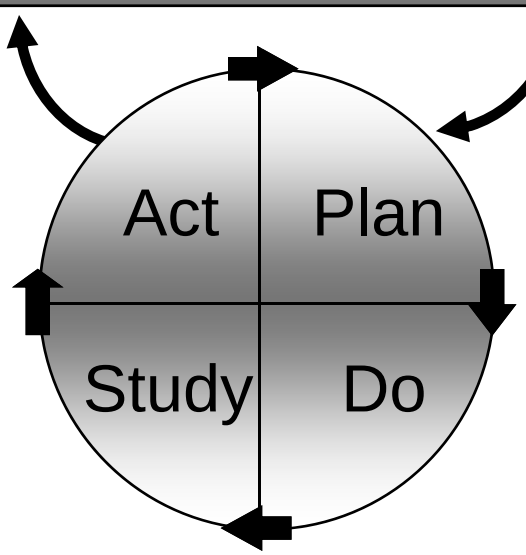
- Identify the problems--name them!
- Find colleagues willing to engage in improvement projects
- Engage senior leadership
- Set an aim and specific objectives
- Choose simple measures and routinely track
- Start with small-scale changes most likely to be effective
- Start to test changes with small numbers (pilot)
- Ask for help and support whenever necessary

Model for Improvement

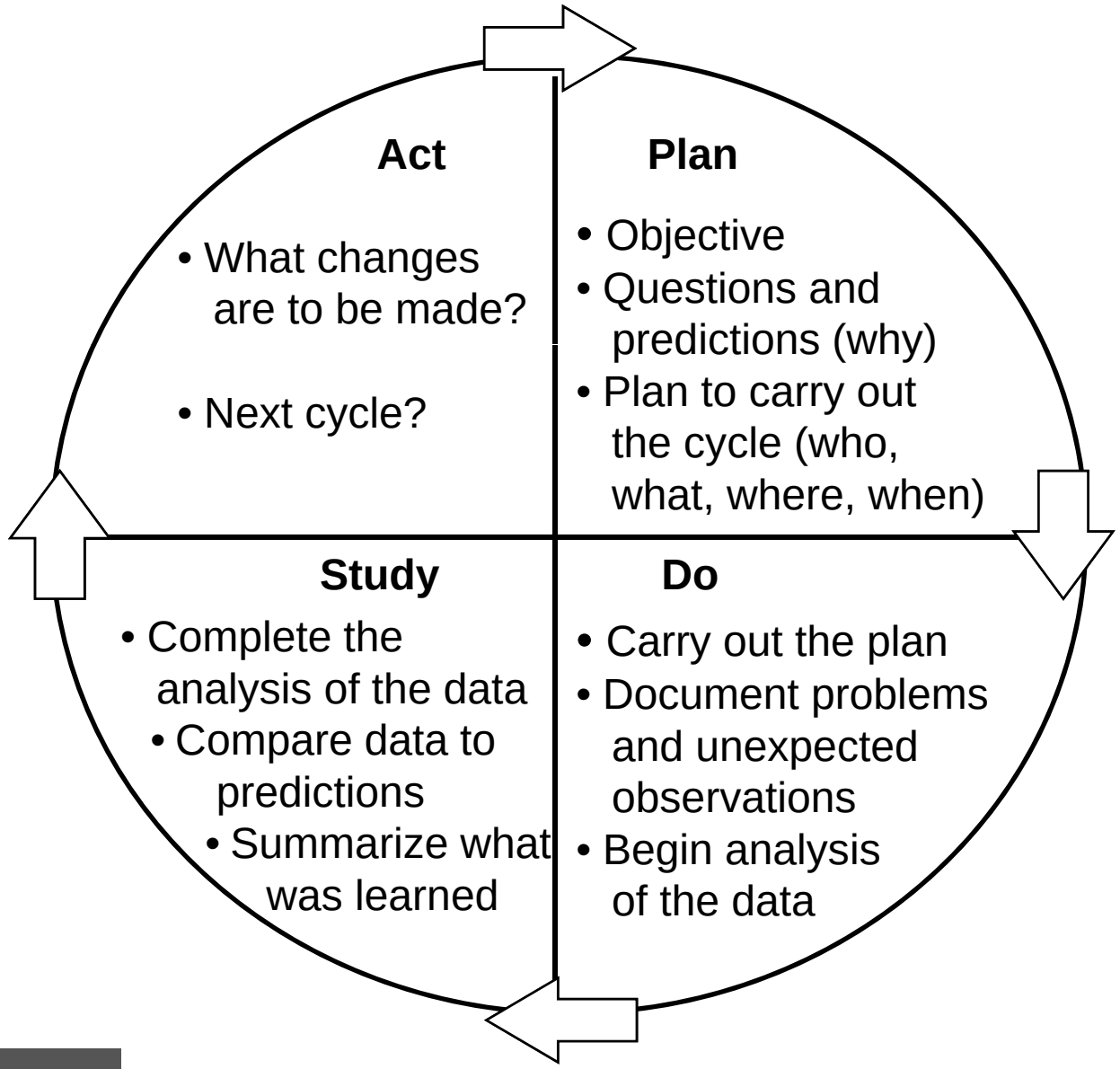
What are we trying to accomplish?

How will we know that a change is an improvement?

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



The PDSA Cycle for Learning & Improvement



Model for Improvement

- Clear statement of the aim and objective(s)
- Measures related to the objective with data plotted over time
- Most important changes identified
- Tests used to learn and build change

Measureable Objectives

Clarity of measurement = Partners will know where things are headed, how things are going and what specific improvements are intended

Tips on Measurement

Critical:

- What information is to be collected
- By whom
- Over what period of time
- For what specific purpose

Make sure that what you are using as a measure accurately reflects progress toward the desired change!

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 system partners actively involved in a high level laboratory system advisory group
- Percent of lab users 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 employee retention

Information on measurement, change and improvement

- What will be measured to know the aim/objectives have been achieved?
- The key measures should monitor outcomes that benefit those receiving service, contribute to public health competencies, address essential services, etc.
- Integrate measurement into the daily routine

Information on measurement, change and improvement

- Measures are used to guide improvement
  - Not for judgment
  - Not for research
- All improvement requires change, but not all change is an improvement

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

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

Work Group:
Putting It Together

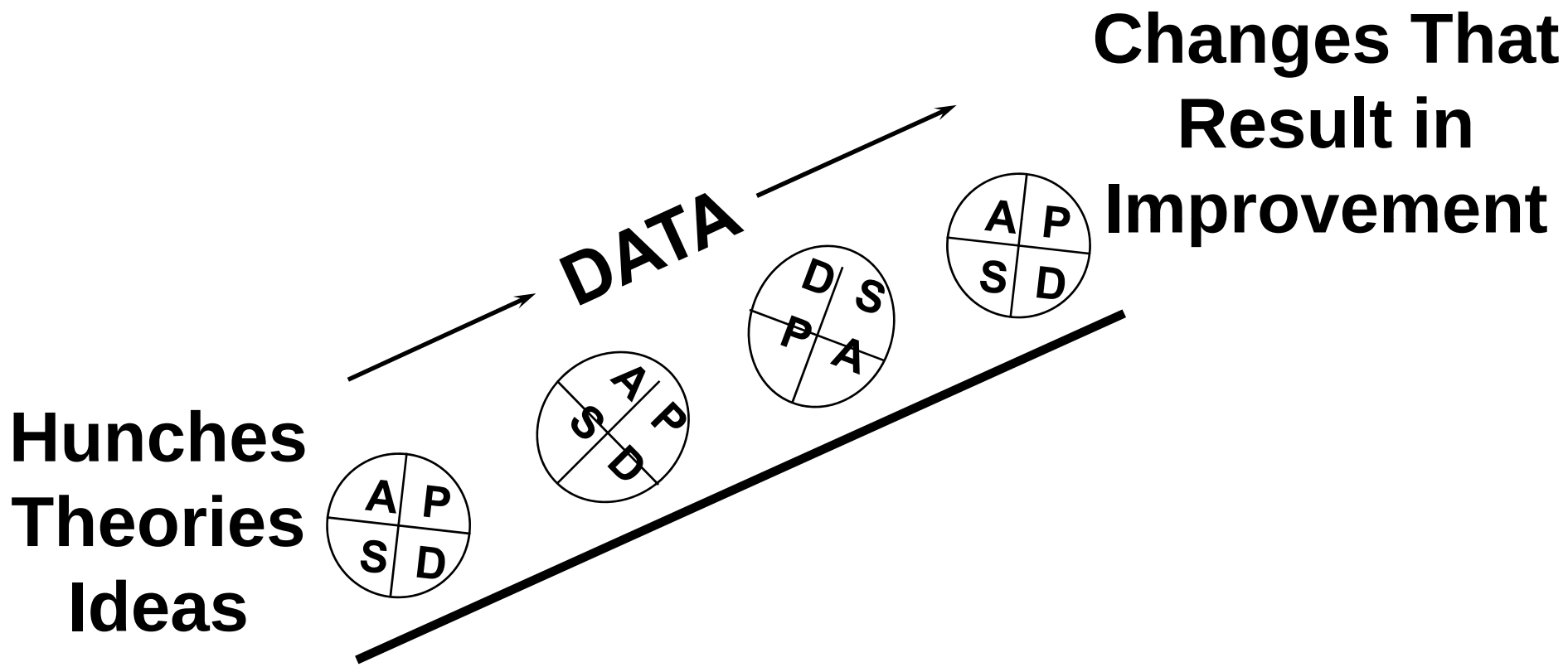
Handout

- Aim
- Objectives
- Measures
- Changes

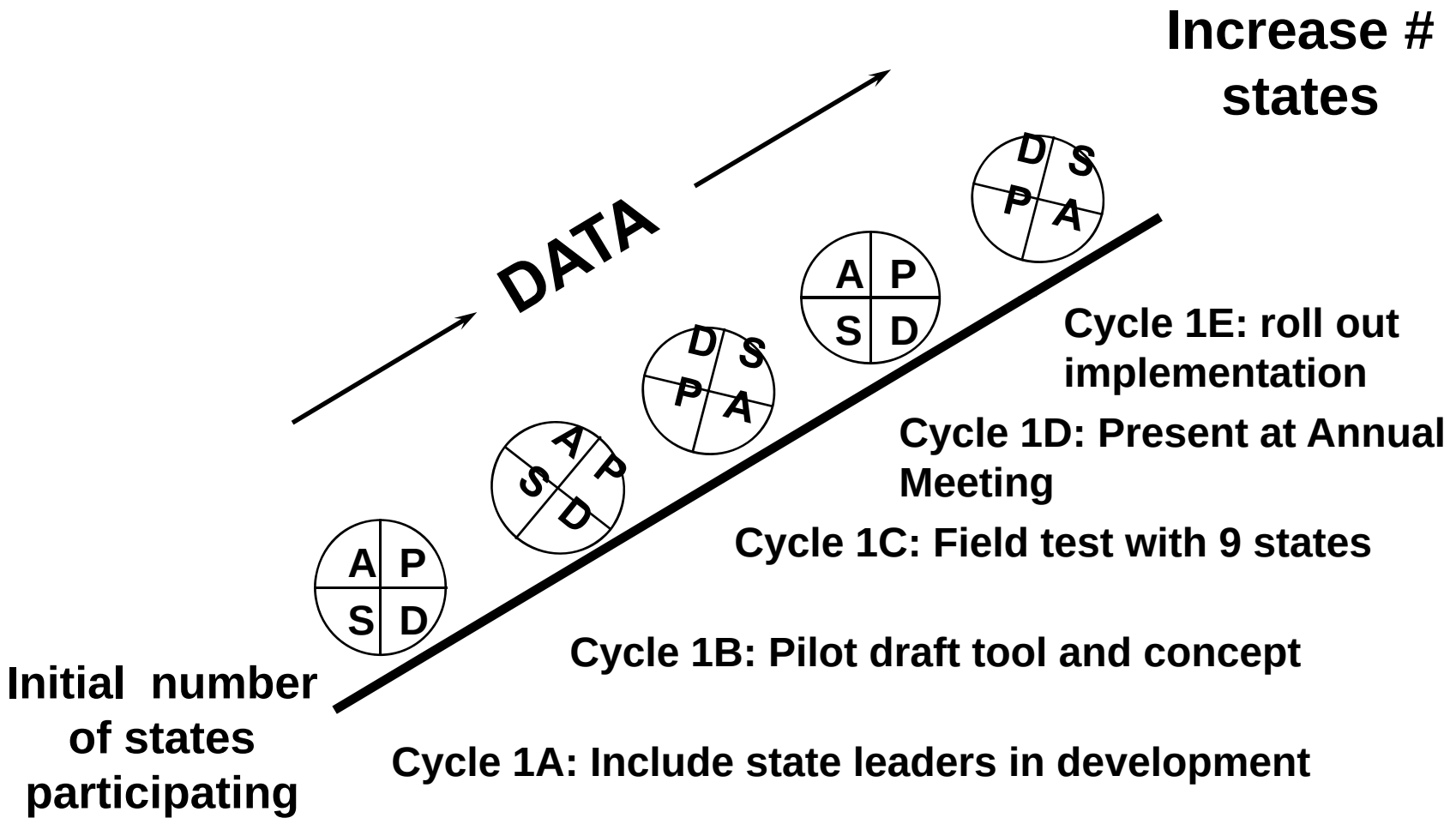
Why Test?

- Reinforce the belief that the change will result in improvement
- Determine if refinements are needed
- 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

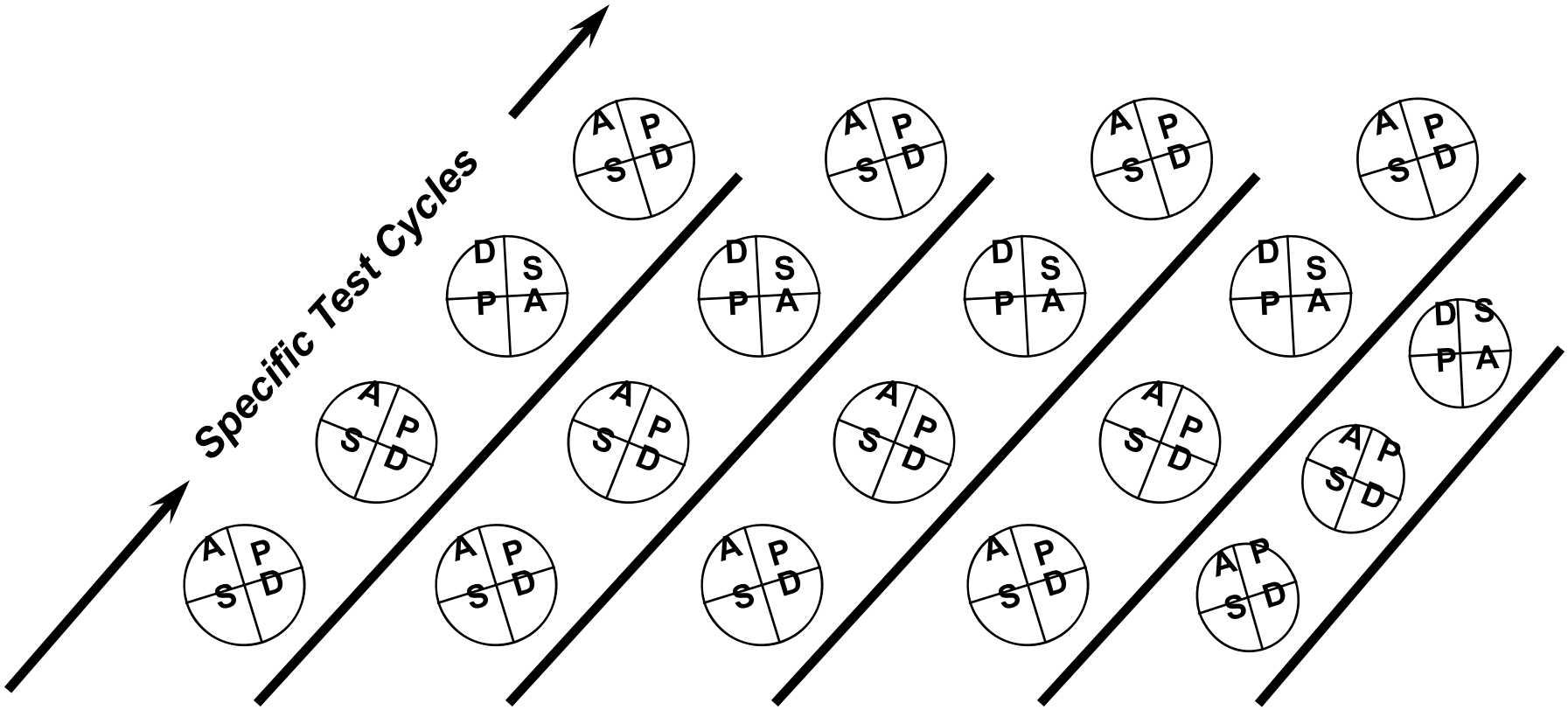
Repeated Use of the Cycle



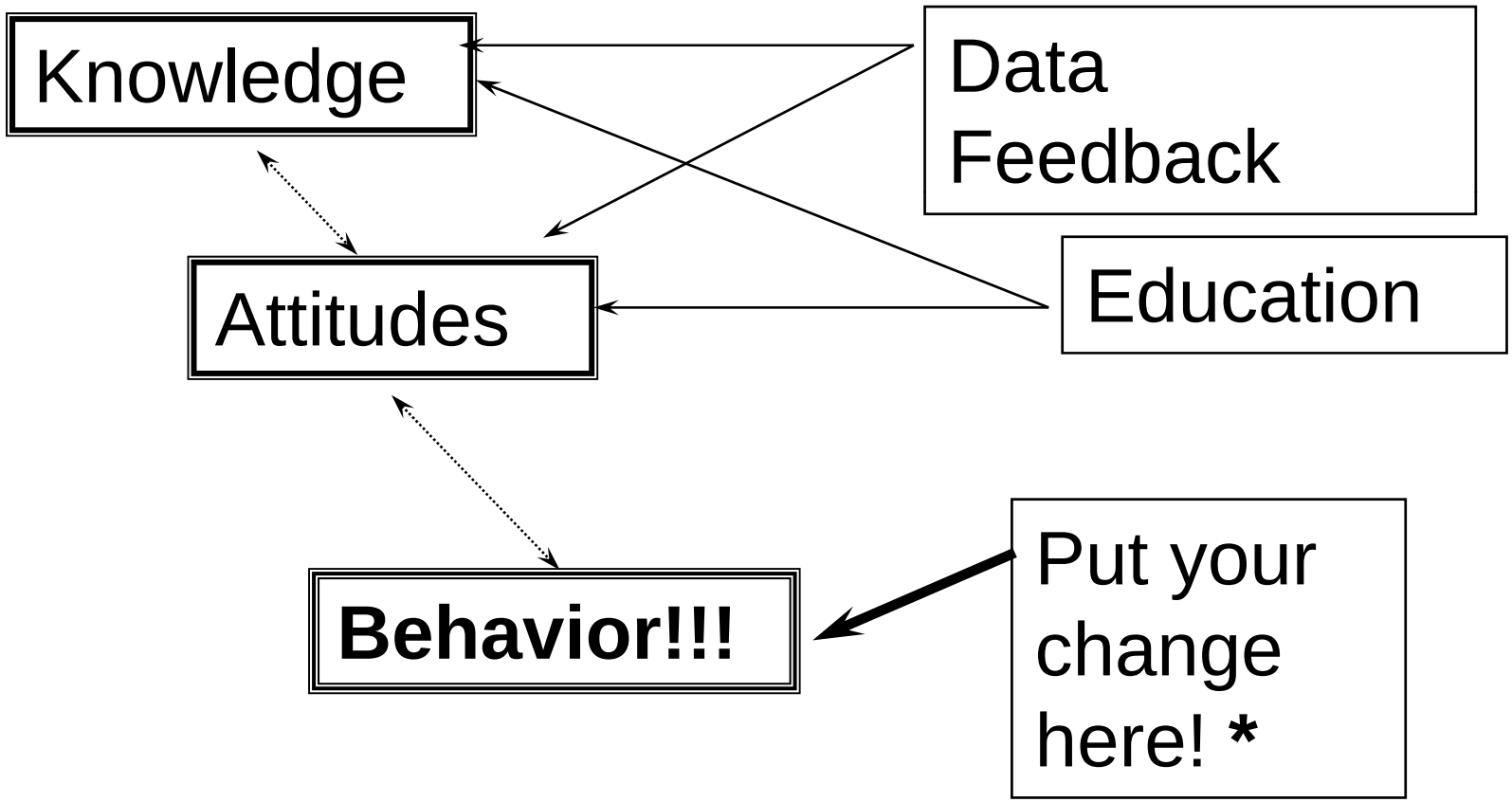
Test: States are engaged in L-SIP



Increase number of states involved in L-SIP



What Makes a Change Powerful?



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Assumptions about Time: Two Orders of Magnitude LESS

Year

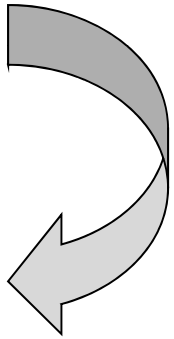
Quarter

Month

Week

Day

Hour



"If I can do it in a month, what can I do in a day?"

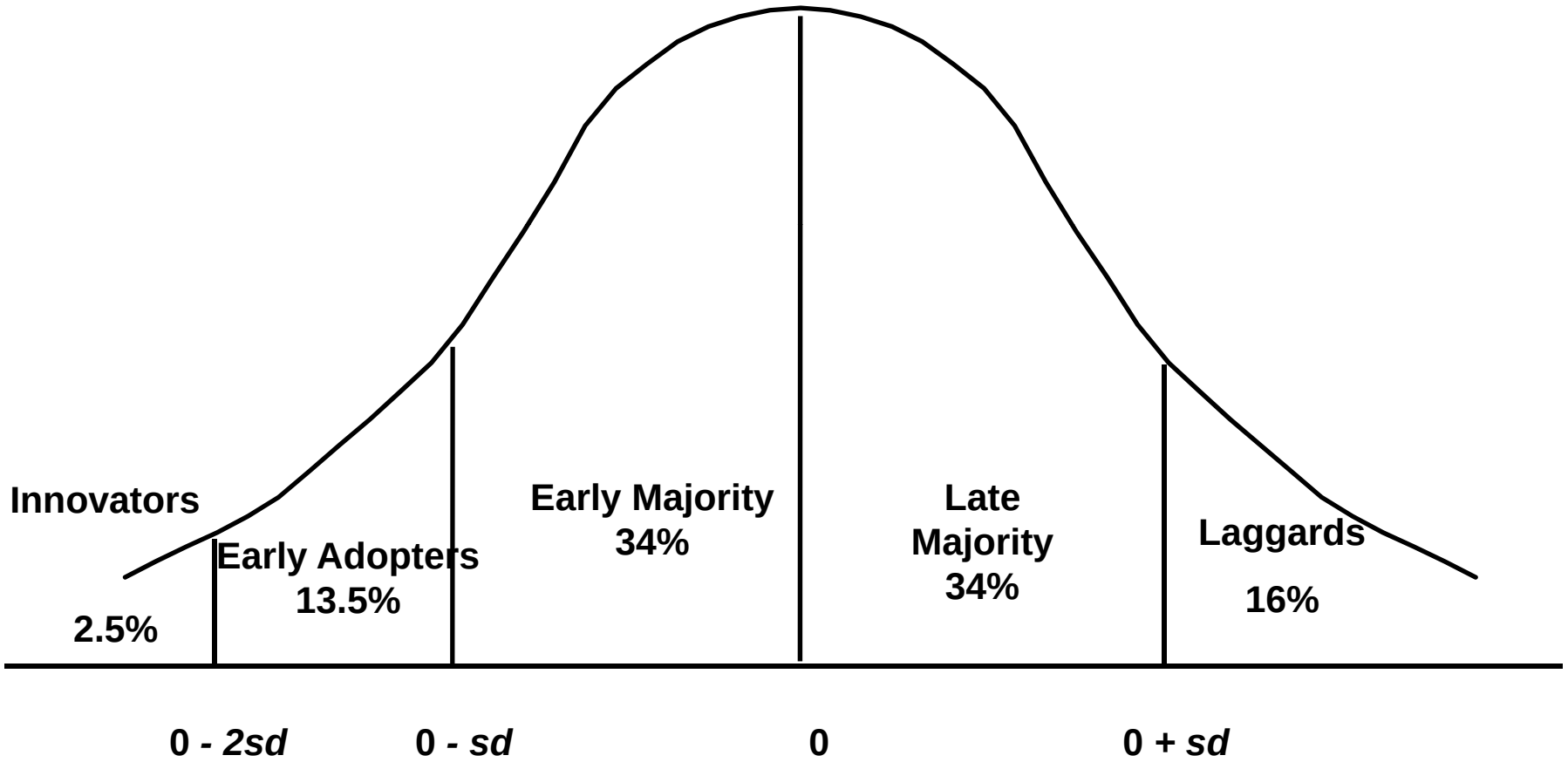
Work Group:
Putting It All Together

- Aim
- Measurable Objective
- Measures
- Possible Changes
- Timelines for tracking
- Handout of 1 Page Monthly Report
- Review of Charter for any additions

Other QI Tools

- Fishbone Diagrams
- Flow Charts
- Lean
- Check sheets
- Pareto Charts
- Dot Plots & Stem-and-Leaf Displays
- Time Plots
- Scatter Diagrams
- Annotated Run Charts

Adopter Categorization on the Basis of Innovativeness

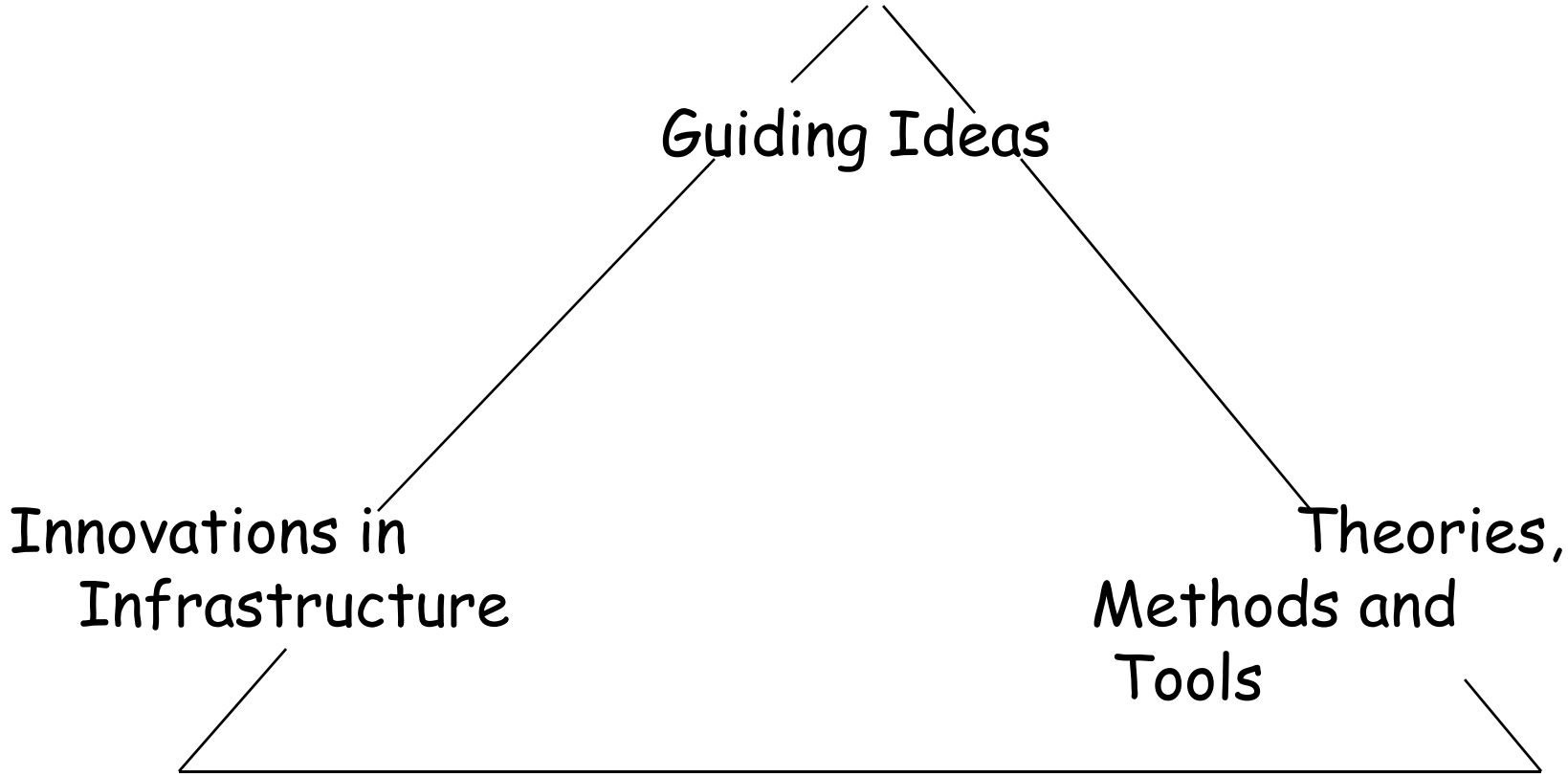


Learning Together

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 Communities: Architecture of Action



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*

Collaboration

To make system improvement work, there MUST be collaboration

Successful Collaborations: Characteristics

- The 5 foundations are in place

Vision, Mission & Values: to clarify what's intended and how people will act

Leadership: marked by commitment and inclusion

Commitment: a pledge to achieving specified outcomes and to support and build the collaboration

Action: includes a plan, defined responsibilities, resources and timelines

Diversity: assuring that diverse perspectives, opinions and cultural experiences are represented

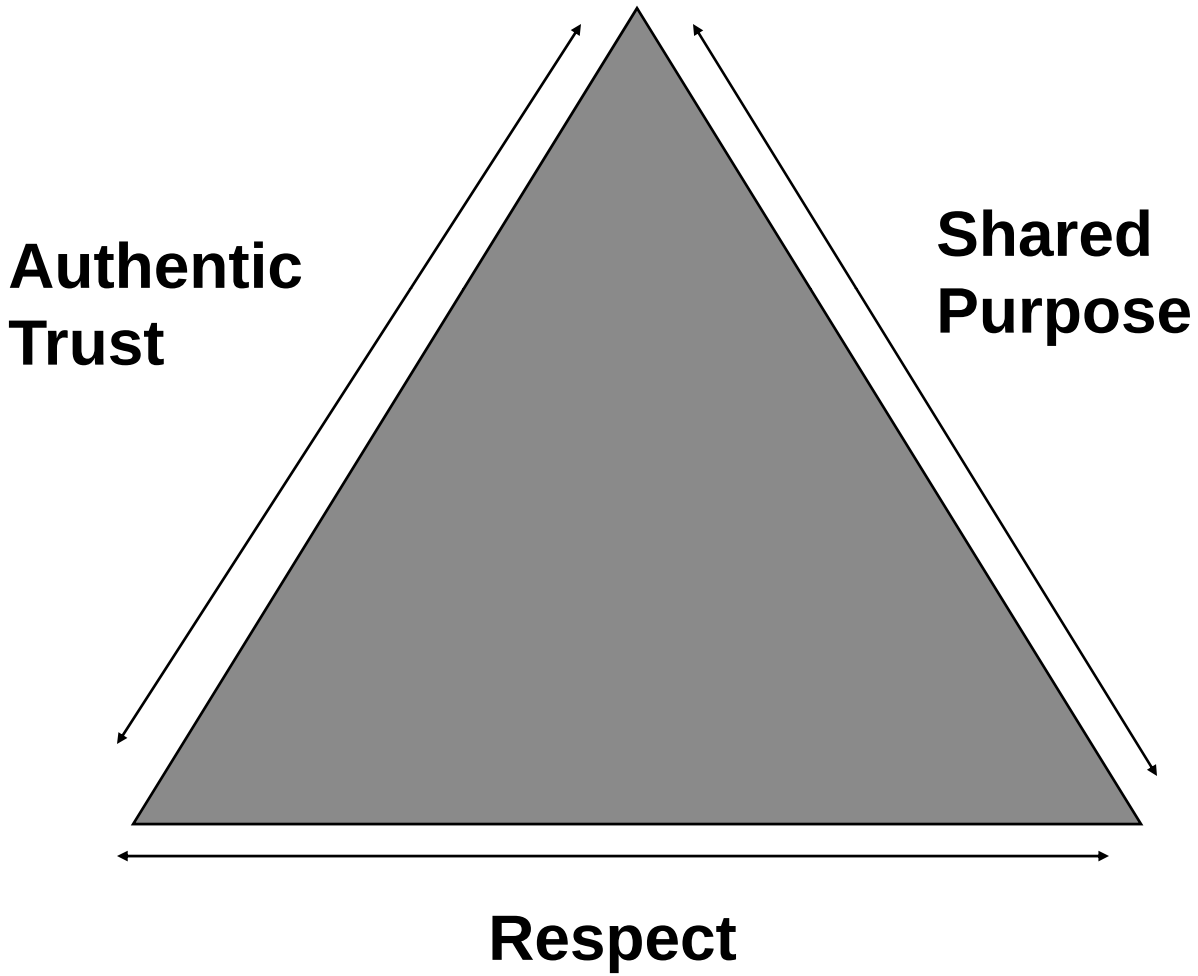
Successful Collaborations: Characteristics

- Partners are open to growth and change
- Safe environment for learning
- Creativity is embraced
- There is a willingness to take risks
- Contributions are acknowledged
- Results are evaluated
- Success are celebrated

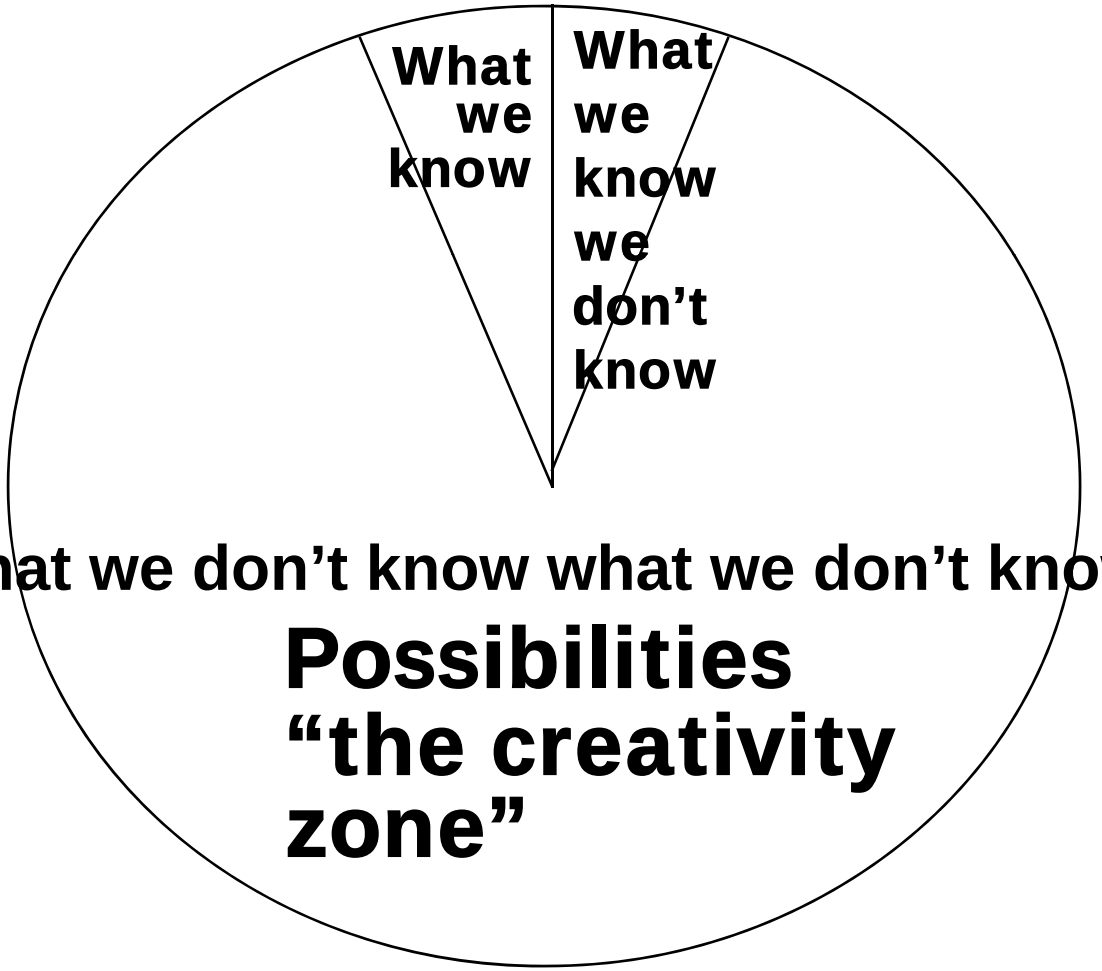
What is the single most important element in collaboration?

- Relationship
- Relationship
- **Relationship**
- Relationship
- **Relationship**
- Relationship

What all <u>great</u> relationships have:



What we each bring with us……



Ways to think & listen: what impact do each create?

- **Right/Wrong**
- **Win/Lose**
- **Us/Them**
- **Judge/Opinion**
- **Either/Or**
- **Agree/Disagree**
- **Skepticism/Cynicism**
- **Argue/Browbeat**
- **Good/Bad**
- **Workability**
- **Possibility**
- **Contribution**
- **Vision**
- **Appreciation**
- **Commitment**
- **Win/Win**
- **Teamwork**
- **Forward Thinking**

Common Challenges

- Power sharing
- Giving up turf
- Sharing resources
- Communications

Four Important Requirements Of Successful Collaborations

- **Integrated approaches**
- **Accountability**
- **Evaluation of Results**
- **Celebration of Successes**

Integrated Approaches

Which of these characterize integrative approaches?

- Careful definition of the problem/issue
- Review of relevant data
- Objective consideration of a range of solutions that consider many perspectives
- Inclusion of multiple, coordinated strategies to address complex problems
- Consensus on & commitment to implementing the approach

Benefits of Collaboration

1. More creative solutions to problems
2. Breakdown of old patterns that cause problems
3. Broader ownership of both the problem and its solution
4. Can build community involvement
5. Creates an environment for sharing resources

Benefits of Collaboration

6. Leverage resources with new partners
7. Strengthen the community-based public health laboratory system
8. Increase the visibility of public health laboratory issues
9. Formal agreements assure accountability
10. Decreases silo approaches to complex problems

How do these differ?

Quality Improvement
Quality Assurance
Research

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

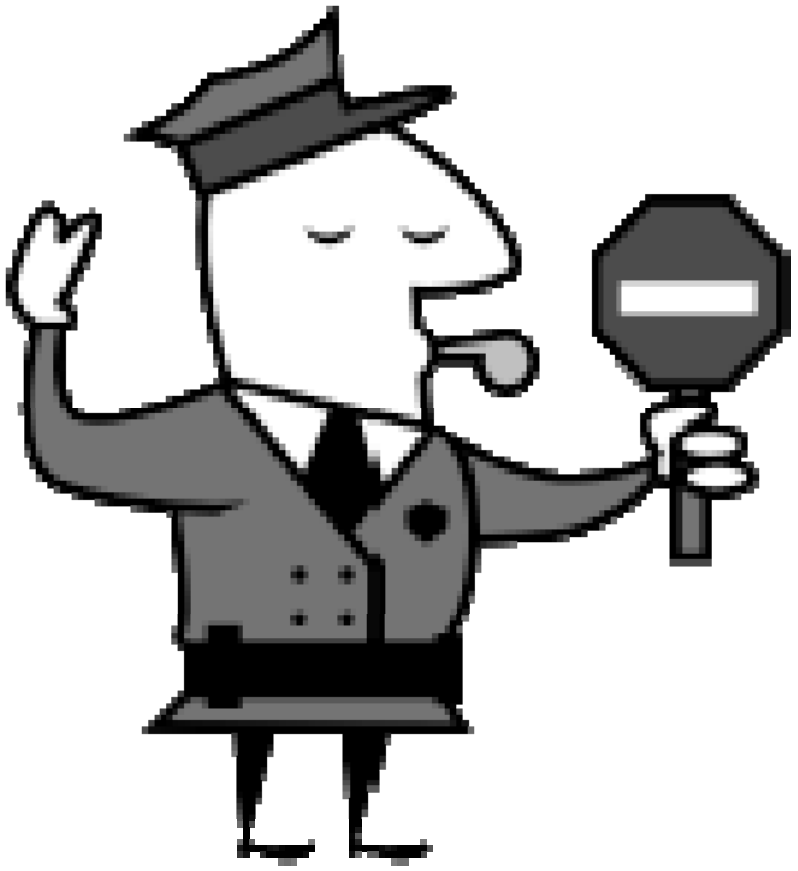
Aim: new knowledge

Methods:

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

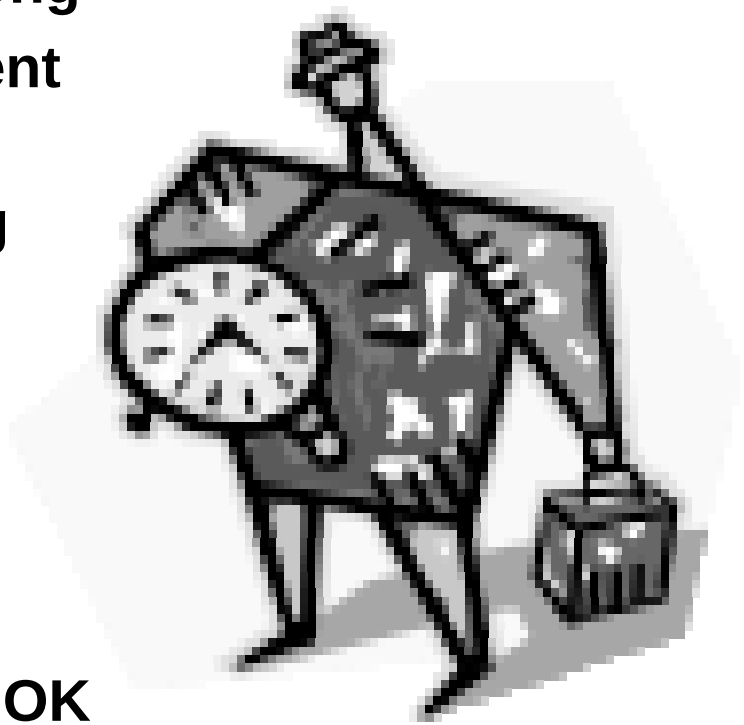
Barriers and challenges to implementing improvement

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



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**
- **assuming the status quo is OK**



Resources

- Each other
- ORC
- Web Communicator
- SharePoint
- Other APHL committees & projects
- CDC & PHF

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