**Plan, Do, Check & Act Cycles   
for Improvement Teams in Stronger2 Project**

**Introduction**

This brief note is prepared for Stronger 2 Partners to understand how to continually improve their training sessions. While we present a step by step approach, you are free, and encouraged, to deviate from these steps. In this regard, Batalden and colleagues write:

"At any point, it is possible - and may be desirable - to step out of the prescribed step and begin an improvement trial using a Plan-do-check and act (PDCA) method. The worst that might happen is that the experiment may fail. If the trial is small scale, little harm would have been done, the need for a new change trial would have been identified, and learning would have been advanced."

**Objectives** **of this Quality Improvement Training**

This training in quality improvement has the following objectives:

* Describe the PDCA cycle of improvement.
* Describe how trainee’s comments help in identifying what problem to solve
* Describe the importance of understanding the process that needs to be improved.
* Describe why it is helpful to list more than one possible solution.

**Before You Start**

Before you start improving the training sessions, your organization’s leaders should have made a commitment to some of the key principles of continuous improvement. This includes the following:

1. **No one is at fault.** Improvement teams should not blame anyone for poor performance of the training. The data collected about the training sessions should not be used for firing a person or changing a person’s responsibilities.
2. **System change is needed.** System change is a change in how a training session is organized. For example, a change in whether the session is after work hours, or online, or in small groups. Improvement teams are not asking people to increase their effort, to be on time, or to be clear. None of these steps are system changes. System changes are changes that change the environment and methods of training.
3. **Data are needed.**  Improvement teams should not rely on their own personal insights about what is problematic in the training sessions. They should, instead, rely on what is bothering the individuals they are training. To make sure that these data are available, improvement teams have access to comments made by the trainees. Some of these comments may not be related to training sessions. For example, a client may complain about parking and not the training session. Improvement teams should address whatever is bothering their clients and not what they think is problematic.
4. **Solution must involve others inside the organization**. The search for solution does not depend on just the person giving instruction. Other people inside the organization need to also contribute. These individuals may be involved in scheduling the training session, in marketing the training session, and in other aspects of delivering an effective training session.

Before you start, we are assuming that the leaders within your organization have approached you and designated the members of the improvement team. The organizational leaders should have also looked at the data and asked the improvement team to address specific client’s complaints or data trends. If they have not done that task, it is up to the improvement team to look at the data and define which problem they want to solve. Of course, any problem should be solved and any defect should be improved. But given the resources available, organizational leaders and improvement teams should focus on the more important problems first.

**Step 1:  Describe the Training Process**

The training content and training process are two different things. Improvement teams need to describe the training process before trying to address a problem. Training process refers to the way training was marketed, the way clients arrive at training session, the steps in the training (e.g. brief didactic lecture followed by small group discussions). In this section, we describe why the training process should be described and how to do so.

Many individuals jump into the solution before understanding the problem and bringing other members of improvement team along with you. No problem can be solved unless it is understood. Think about it. Smart people have set up this training, if the problem is so apparent that you can solve it quickly, why was it not solved before. All these smart people you work with, and you yourself, have organized training sessions that do not do well. By understanding the process of training, you will have new ideas about how it can be improved. Often the improvement team members are surprised at how much more goes into a process besides what they are intimately familiar with.

The best way to understand a process is to make a list of periodic events (and exceptions) that occurs in the training sessions. Trace the clients view of these events. For example, the client sees our advertisement or hears from a friend about our program. Then the client registers. Then the client shows for the session. In the session, there is a slide presentation. Then there is a group discussion. All along, things may go wrong and there may be exceptions.

List of events and exceptions is an easy want to focus the improvement team’s attention on repetitive tasks and work norms.  Periodic lists are based on the principle that any system or process is best understood in terms of its “steady states;” that is in terms of events that keep recurring.  Work is not a random heap of events.  Some events reoccur and are referred to as routines.  We refer to these reoccurring events as the “steady state” of the system. Systems are changed by changing the steady state of the system. By listing periodic events, a person can see the steady state for his or her work.  The focus shifts from fringe or rare events to central and repetitive elements of the training process.  The focus shifts to the small percent of activities that describe most of the observed outcomes.  By listing periodic events, the training process and structure is revealed.  There are many recurring events in training sessions.  Any given work process, starts with employees coming to work and ends with them leaving.  In between clients arrive, information is exchanged, presentations are made, meetings are kept, and numerous other activities are accomplished.  The purpose of listing work routines to identify the key activities that occur within a process. The first step is to list the periodic events.

It is not that non-routine events do not matter, exceptions matter. The impact of routines events is, by definition, more frequent.  If routine events can be understood, a big part of training process is understood.  In order to list periodic events, the most useful tool is to follow a client through the process and list discrete events that happen.   Listing routines is easy because it lists events in the sequence they occur. The easiest way to make lists like this is go round robin around the improvement team and ask them to identify one event that should be listed.

The exercise of listing routines can be more difficult than it appears.  Some activities, like answer phone calls from clients, seem to follow clear patterns.  Clients tend to call more on Monday mornings.  Frequency of calls drops around meal time.  Other activities, like disputes among employees, are not so typical and may not necessarily reoccur with a clear frequency.  It is important to include all periodic events, even if they do not always occur at the same frequency.  For activities with variable periods, record the average time of reoccurrence.  We acknowledge that events do not necessarily occur at fixed intervals.  This makes the task of recognizing what is routine and what is rare one-time event difficult.  Even more difficult is identifying events that occur with irregular frequencies.  But the benefit is that when the exercise is finished, a person should be able to understand the training process much better.   The steps in constructing a list of periodic events are as follows:

1. Walk through the training process as if you are the client. Start with the first contact with the client.
2. Identify events that occur inside the organization to make the first contact possible
3. Go round-robin around the team and ask each person to identify additional events that occurs for the client and related organizational events that occur to make it possible.
4. For each event, list the event for the client, the related organizational events that make it possible, and the estimated (guessed) frequency of the occurrence of the event.
5. Check the depth of the list.  It is not helpful to list very broad events (e.g. client shows, trainers teach, client leaves) is a list of sorts but not very informative.  Enough details should be present that could help understand what leads to the process outcomes.
6. Check accuracy of the list.  The accuracy of the list is checked by carrying the list around and checking that events listed do occur and no other major event does occur.  Another way of checking the accuracy of the list is to share it with other team members and have them independently contribute to it.

**Step 2:  Suggest Changes****, then Select One**

Once the process is understood, it is time to suggest changes. To find out what should the improvement team implement, it is important to collect ideas from each team member.  There should be an organized approach for collecting ideas, listing them, and evaluating them. Often people express an idea and evaluate it immediately afterwards. Research shows that brainstorming ideas before evaluating them is more productive: more ideas are expressed and better ideas are expressed. Before you select an idea to implement, you should make a list of possible changes. Do not evaluate these changes until a list has been prepared. Go around the team and ask each person to come up with an idea. List the ideas but do not evaluate them. Do not laugh at bizarre ideas. Do not say you like an idea. Just make a list of the ideas.

Once the list has been prepared, discuss the possible changes and ask the team to select their top choices. Do not force the consensus. Once preferred ideas have been identified, then go back to discussion of the top 3 ideas. Avoid coming to an early conclusion. Keep talking, re-asking for top choices, and then talking again, until consensus emerges.

**Step 3:  Check & Act**

The last phase of the Plan, Do, Check and Act (PDCA) is to introduce the change and check that changes that have been introduced have actually improved the situation and if not act to implement other changes that could improve the situation.  Many act and decide that the improvement will follow.  They do not collect data to verify whether they have succeeded.

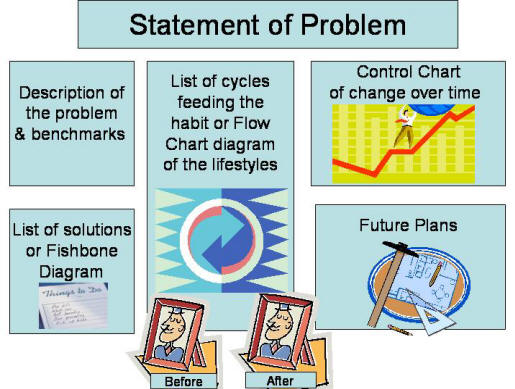
Data is needed to correct our experiences and insights. Data is also needed for communicating the problem and its solution to others. Without data there is no arbitrator among the various ideas. Different team members will claim solutions that in reality do not work. Gathering data is time consuming. The Stronger2 project gathers many data items for you. These include clients’ complaints, reports of number of people participating in training sessions, and other data. Use these data items to see if you are making a difference.

**Step 4:  Show and Tell and Celebrate Success**

Effective change requires clear communications.  When you tell others about your efforts, you become more committed to them.  How do you tell, is up to you.  Some use paper and pencil diaries, others use emails, still others use slides.  Whatever you do, keep in mind that successful ideas and efforts will die and disappear if they are not communicated clearly, vividly and using multiple media. One way to do so is to create a story board and post it somewhere inside your organization. The purpose of a story board is to summarize and visually present the impact of the improvement.  It serves as a communication medium to others around you.  It also serves the project team as a documentation of their progress to date. Story boards is also a celebration of success and in this manner it provides a positive environment for change. Here are brief steps to follow if you are constructing a story board.   Divide the story board into the following sections:

1. Title of the project or statement of the problem.  Include the project's name and list the team members.  If the information is provided publicly, as it often is, avoid using contact information.
2. Permission for display.  Include a statement from project participants whether the story board can be in public domain
3. Description of the problem.  A problem is best articulated using data and a vivid quote from the customer. In addition to displaying the customer's words or voice, also include data that documents the extent of the problem
4. Process description. Describe the current situation using list of routines
5. List of possible solutions.  List possible solutions examined and mark the solutions implemented.
6. Data on success.  Provide data on impact of the change and display the data visually so others can understand the magnitude of the change
7. Future plans & conclusions.

Here is a layout of what goes where if the sections were included in one large poster:



Here are simple steps you can take to make your storyboard better:

1. Put your storyboard where you and others can see it on a daily basis.   No point in telling a story if there is no one who sees it.
2. Add sections as they become available. The idea is to generate a sense of anticipation and unfolding as the story is told.
3. Organize the story well. Put time into keeping a chronicle of what happens to the patient and how their experience has improved.
4. Write little and show more by pictures and drawings. Have fun in the design and content.
5. Include some pictures of team members working together.
6. Leave the story board up for several months even after the change has been adopted. Data shows that post-sales activities help improve adoption of innovations.  A continued exposure to a story board will remind employees of the effort that was made and the success that was achieved.
7. Allow for input from others. Let them write on the storyboard directly and modify it as they see fit.  People like what they participate in creating.

Many improvement projects fail to create a story board. Or if they do, they create the board only after the fact. This is a mistake and these projects are not taking advantage of an important communication tool.  When you make the storyboard on the first day of the project, it begins to tell others that something is up.  As time goes on, it unfolds a story about what the team is up to. The climax of the story is reached when data is presented on success of the project.  Story boards are the team's public minutes.  It helps integrate others into the team’s deliberations. Without the storyboard, others are not aware and cannot contribute to planned changes.