Process Improvement
For Public Health Professionals

SUSTAINABLE MANAGEMENT DEVELOPMENT PROGRAM
Introduction

SUSTAINABLE MANAGEMENT DEVELOPMENT PROGRAM

SMDP works with ministries of health, educational institutions, nongovernmental organizations, and other partners to strengthen leadership and management skills and systems to improve public health in low resource countries.

Program Strategy

SMDP strengthens leadership and management skills and systems through—

- Integration with country public health priorities.
- Strategic partnerships.
- Technical assistance and training.
- Policy and systems development.
- Advocacy and education.
- Evaluation.

For more information, visit http://www.cdc.gov/globalhealth/SMDP/.

ACKNOWLEDGEMENTS

Dr. Hailu Negassa, CDC Ethiopia

Dr. Tekeste Kebede, CDC Ethiopia

Donald M. Berwick, MD, MPP, FRCP, President and CEO Institute for Healthcare Improvement

Lloyd Provost, Associates in Process Improvement

Dr. Elliot Raizes, Medical Officer, Care & Treatment, GAP
Course Overview

ABOUT THIS FACILITATOR’S GUIDE

This guide is designed to provide you the materials and direction to successfully deliver the Process Improvement workshop in a classroom environment. It assumes a basic level of understanding and skill of the content that is presented. It is strongly recommended that you participate in a process improvement project in the local public health environment before teaching this workshop.

This guide includes notes about what to say and do during the class, as well as materials to help you prepare and conclude the course.

Please read the description of the target audience carefully, as well as the learning objectives. By correctly positioning the course you can set reasonable expectations for the participants.

TARGET AUDIENCE

This course is designed for supervisors and managers in public health services, typically at district-level. You will probably manage a small team of staff. You are responsible for delivering essential public health services. You and your staff always want to do a better job. Sometimes your manager will define a problem that you have to resolve.
LEARNING OBJECTIVES

This workshop will introduce tools and techniques to complete seven steps to improve work processes in a public health organization.

When participants complete this workshop they will be able to:

- Define a process.
- Measure process performance.
- Analyze causes of variation.
- Generate and plan improvement ideas.
- Implement changes.
- Study the results of changes.
- Act according to the results of the study.
- Apply at least three process improvement tools to achieve the above objectives.
## MATERIALS AND EQUIPMENT

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For the Instructor:</strong></td>
<td><strong>For the Instructor:</strong></td>
</tr>
<tr>
<td>• This Facilitator Guide.</td>
<td>• LCD projector.</td>
</tr>
<tr>
<td>• 1 flip chart &amp; stand per participant team.</td>
<td>• Computer with MS PowerPoint®.</td>
</tr>
<tr>
<td>• 2 flip charts &amp; stands for instructor.</td>
<td>• Digital camera.</td>
</tr>
<tr>
<td>• Whiteboard.</td>
<td>• Tennis ball or equivalent and stopwatch.</td>
</tr>
<tr>
<td>• Icebreaker materials.</td>
<td></td>
</tr>
<tr>
<td>• Exercise materials.</td>
<td></td>
</tr>
<tr>
<td>• 3 envelopes each containing a different dataset.</td>
<td></td>
</tr>
<tr>
<td><strong>For the Participant:</strong></td>
<td><strong>For the Participant:</strong></td>
</tr>
<tr>
<td>• Participant Workbooks.</td>
<td>None needed.</td>
</tr>
<tr>
<td>• Ample supply of sticky notes.</td>
<td></td>
</tr>
<tr>
<td>• Pens and paper.</td>
<td></td>
</tr>
<tr>
<td>• Comment Cards.</td>
<td></td>
</tr>
</tbody>
</table>

Copies of PowerPoint slides are not needed and should not be given out.
## WORKSHOP SCHEDULE

<table>
<thead>
<tr>
<th>TIMES</th>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>8:30 – 12:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Introduction and Overview</td>
<td>• Review Day 1</td>
<td>• Review Day 2</td>
</tr>
<tr>
<td></td>
<td>• What is a process?</td>
<td>• Flowcharts</td>
<td>• Pareto Chart</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Analyzing causes for variation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Fishbone Diagrams</td>
</tr>
<tr>
<td></td>
<td>• Process boundaries and levels</td>
<td>• Present flowcharts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Listing processes</td>
<td>• Summary of Step 1/Introduce Step 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Selecting process to improve</td>
<td>• Measuring good practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Types of measures</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Selecting a critical cause</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afternoon</td>
<td>1:00 – 4:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Defining customers</td>
<td>• Identifying measures</td>
<td>• Generating and selecting improvement ideas</td>
</tr>
<tr>
<td></td>
<td>• Identifying products and services</td>
<td>• Selecting a measure</td>
<td>• Planning an improvement project for your selected idea</td>
</tr>
<tr>
<td></td>
<td>• Listing customer wants and needs of products and services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Identifying stakeholders</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discussion and questions Day 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Run Chart – the process tells its story</td>
<td>• Implementing Change and studying its results</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Preparing problem statements and improvement objectives</td>
<td>• Discussion and questions-Day 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discussion and questions-Day 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td>Read measurement good practice</td>
<td>Read Check Sheet, Stratification and Pareto Chart</td>
<td>Review and evaluate workshop</td>
</tr>
</tbody>
</table>

**BREAK**

- "Process boundaries and levels"
- "Listing processes"
- "Selecting process to improve"
- "Present flowcharts"
- "Summary of Step 1/Introduce Step 2"
- "Measuring good practice"
- "Types of measures"
- "Selecting a critical cause"
CLASS PREPARATION CHECKLIST

<table>
<thead>
<tr>
<th>TASK</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain &amp; test LCD projector.</td>
<td></td>
</tr>
<tr>
<td>Obtain and test computer.</td>
<td></td>
</tr>
<tr>
<td>Obtain and test digital camera.</td>
<td></td>
</tr>
<tr>
<td>Obtain adequate number of flipchart packages, including stands, paper, and markers (one for every team of participants).</td>
<td></td>
</tr>
<tr>
<td>Obtain adequate supply of sticky notes, graph paper, pens, and paper.</td>
<td></td>
</tr>
<tr>
<td>- Obtain tennis ball and stopwatch.</td>
<td></td>
</tr>
<tr>
<td>Copy participant materials. For each participant:</td>
<td></td>
</tr>
<tr>
<td>- Participant Workbook.</td>
<td></td>
</tr>
<tr>
<td>- Applied Learning Project workbook.</td>
<td></td>
</tr>
<tr>
<td>- Workshop Evaluation forms.</td>
<td></td>
</tr>
<tr>
<td>- Prepare envelopes with datasets for exercise 16 (see appendix).</td>
<td></td>
</tr>
</tbody>
</table>

CLASSROOM SETUP

- Create teams of 4-6 people.
- Organize the teams around shared processes, if possible.
- Group by type of organizations or programs if it is not possible to organize teams by shared process.
- It will be easier if everyone can relate to the process the team will select.
- Arrange the room so that each team has one desk/table.
- Arrange the seats so that everyone can see the screen.
- Set 1 flipchart and pad at each desk/table.
- Place plenty of sticky notes and pens on each desk.
Resources

INTERNET SITES

WHO MAKER (Managers taking Action based on Knowledge and Effective use of resources to achieve Results.)

Institute for Healthcare Improvement. http://www.ihi.org/ihi
http://www.ihi.org/ihi

American Society for Quality.
http://www.asq.org/

Creativity Techniques.
http://www.mycoted.com/Category:Creativity_Techniques

Mind Tools.
http://www.mindtools.com/

Baldrige National Quality Program.
http://www.quality.nist.gov/

iSix Sigma.
http://www.isixsigma.com/

Deming Electronic Network.
http://deming-network.org/

National Quality Center inc., HIVQUAL Project.
http://www.nationalqualitycenter.org/

TEXTBOOK


FURTHER READING


The Memory Jogger II (Spiral-bound) by Michael Brassard (Author), Diane Ritter, Goal/QPC; 1st edition (January 15, 1994).
Instruction Notes

The following notes refer to slides in the PowerPoint presentation: Process Improvement.ppt. Suggested actions and script for the instructor are located in this guide. Also included are references to the slide number and page number in the participant workbook, as well as instructions on when and how to use the exercises. Use these materials as you prepare for your session and to guide you during the workshop. Make sure you provide the appropriate page number as you progress through the content.

Script for the facilitator to SAY is written like this.

Instructions for the facilitator to DO are written like this.

Possible answers are written like this.

ICON GLOSSARY

SPECIFIC SLIDE FOR USE DURING THE EXPLANATION

FLIPCHART USE

SUPPLEMENTAL INFORMATION TO HELP PERFORM A TASK MORE EASILY

SMALL GROUP EXERCISE

QUESTION FOR FACILITATOR TO ASK PARTICIPANTS

VIDEO PRESENTATION
Course Instruction

DAY ONE
Introduction and Overview
Expected Time: 30 minutes

WORKSHOP INTRODUCTION

SCRIPT/KEY POINTS

- Welcome class and introduce yourself.
- Introduce any dignitaries.
- Allow dignitaries to present.
- Have participants introduce themselves and their expectations for the workshop. Record explanations on flipchart.
- Explain any housekeeping, such as break times, fire drill, and restroom location.
- Explain their workbook: they will use it to complete exercises and take notes.
- Copies of PowerPoint slides are not needed and should not be given out.
- Conduct icebreaker if needed.
LEARNING OBJECTIVES

WORKBOOK PAGE: VI

SCRIPT/KEY POINTS

- Review the learning objectives.

- Explain that you will break the class into groups based on common processes, programs or organizations.

- Participants will remain in the assigned groups throughout the workshop.
SCHEDULE

WORKBOOK PAGE: VII

SCRIPT/KEY POINTS

- Review schedule.
- Stress flexibility.
- Stick to time, especially on feedback from exercises.
- Explain applied learning projects, technical assistance, and requirements for graduation.
SCRIPT/KEY POINTS

- Process improvement should be driven by real data not guess work.
- Sometimes data is not available; therefore, qualitative methods must be used.
- The key to process improvement is making things better for the customers.
- Process improvement is a continuous process; it never ends.
- It usually involves teams.
- But what do we mean by quality?

- Allow 5 minutes for some brainstormed ideas.
- Summarize ideas on flip chart.
QUALITY

SCRIPT/KEY POINTS

- Our definition of process improvement has two dimensions.
  - Customer perspective.
  - Technical standards.
- Can anyone give an example of a want or need?
- Meeting technical standards is a minimum requirement.
- Can anyone think of a situation where the customer’s requirements conflicted with meeting the technical standards?
THE SEVEN STEPS

WORKBOOK PAGE: 1

SCRIPT/KEY POINTS

- Process improvement comprises 7 steps.
- Let’s review the steps on page 1. You can follow along on the slide.

1. We begin with step 1 by looking at an important process and answering basic questions about the process: “Who are the customers?” and “How does the process work?”

2. In step 2, we look at how to measure the performance of the process.

3. In step 3, we ask “Why is the process not performing as desired?” to determine what is causing this variation.

4. This moves us into the plan, do, study, and act circle.

5. Here is where we come up with ideas for improvement.

6. We select one or two of the ideas and then plan how to implement them.

7. Once implemented, we study the results and decide how to act.

- How might we act when we have studied the results?

- Give a brief example of Plan, Do, Study, Act (PDSA) from your experience – like arrange this training.
THE SEVEN STEPS (continued)

WORKBOOK PAGE: 1

SCRIPT/KEY POINTS

• What do you think might be some of the guiding principles on which process improvement is founded?

• Some principles may include:
  
  o Most people come to work to do a good job.
  
  o Most problems are due to the process, not people.
  
  o Every process can be continuously improved.
  
  o Customers may not always be right; however, they make judgments on the quality of the products and services we deliver.
  
  o Fear blocks innovation and improvement.
  
  o Leaders must lead by example, not words.
  
  o Process improvement is used in public health to improve key work processes that ultimately impact health.

• Summarize ideas on flipchart. Encourage people to record in their workbooks.
PUBLIC HEALTH EXAMPLES

PROCESS IMPROVEMENT has practical applications to Public Health

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>IMPROVEMENT</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocate pediatric ward beds</td>
<td>Structured protocol on interdepartmental referrals and collaboration</td>
<td>Availability of beds balances demand</td>
</tr>
<tr>
<td>Direct patient education</td>
<td>Health officer &amp; patient education</td>
<td>Increase in TB patients having sputum collected</td>
</tr>
<tr>
<td>Prevent spread of infectious diseases in hospital setting</td>
<td>Implemented patient/ community support systems</td>
<td>Reduced relapses caused by medication non-compliance</td>
</tr>
</tbody>
</table>

SCRIPT/KEY POINTS

- Present each real example and allow discussion.
- Ensure students understand the distinctions between process, improvement and result.
CASE EXAMPLE

WORKBOOK PAGE: 3

SCRIPT/KEY POINTS

- We will use a real case example.

- You will see how the 7 steps of process improvement are applied to the delivery of anti-retroviral therapy (ART) in a rural health clinic.

- After several concepts or tools, you will see how they are applied to ART.

- If I asked you to come up with ideas, you would be able to list solutions immediately, but we will follow the 7 steps of process improvement to determine the most appropriate solutions.
Define the Process
Expected Time: 1 hour 5 minutes

STEP 1: DEFINE PROCESS

WORKBOOK PAGE: 5

SCRIPT/KEY POINTS

1. We will start with the first of the 7 steps: Define the process.
2. Select a process.
3. Identify the customers, their wants and needs, and other stakeholders.
4. Flowchart the existing process.
EXERCISE 1: TENNIS BALL GAME

WORKBOOK PAGE: 6

SCRIPT/KEY POINTS

- The purpose of this exercise is to provide an appreciation for dramatic improvements that can be made to a process.
- Materials needed for this exercise:
  - Tennis ball or bean bag.
  - Stopwatch.
  - Flipchart and markers.
- If there are more than 25 students, more than one team will be required and materials will be needed for each team.
- Clear a large, safe area in the classroom.
- Assign a quality officer(s) for each team. The remaining students will be part of the work process.

1. Stand in a circle to form a large group.
2. The quality officer should stand outside the circle but still be able to see the process.
3. The first person with the tennis ball inside the circle will pass it to the person across from him/her (remembering to whom the ball was thrown).
4. The receiver passes the tennis ball to another person, also remembering to whom it was thrown.
5. The last person to receive the ball must pass it to the person who began play.
6. This sequence will be followed with each “patient cycle.” That is, the ball starts and ends with the same person.
EXERCISE 1: TENNIS BALL GAME (continued)

WORKBOOK PAGE: 6

SCRIPT/KEY POINTS

7. The duties of the quality officer are to:
   - Ensure the ball is not dropped.
   - Ensure the group follows the same sequence of steps with each patient cycle.
   - Ensure the ball starts and ends with the same person.
   - Record the time from start to finish for the entire process.

8. Play must start over if the ball is dropped or if the sequence of steps is not properly executed.

9. We will practice once to establish the sequence of the steps.
   - Conduct the process once to practice establishing the sequence of the steps.
   - Restart the game if the ball is dropped or if the sequence of steps is not properly executed.
   - The quality officer times the process and records the results on the flipchart.
   - How can the process be improved? Can the time be reduced?
   - Repeat the cycle several times and review the results.
   - What did you experience? Did your time get better? How did you operate as a team?
WHAT IS A PROCESS?

WORKBOOK PAGE:  6

SCRIPT/KEY POINTS

- The customer is the most important person.
- Inputs are transformed by the process to create outputs for the customer.
- We meet their wants and needs by ensuring the process works correctly and appropriate inputs are provided.
- The process must also meet the technical standards.
- Many factors influence the process.
- Click.
- Provide examples of how factors can positively or negatively affect quality.
VCT EXAMPLE OF PROCESS

WORKBOOK PAGE: 6

SCRIPT/KEY POINTS

1. Does this example from voluntary care and treatment comply with the definition of a process?

2. Why or why not?
VCT EXAMPLE OF PROCESS (continued)

WORKBOOK PAGE: 7

SCRIPT/KEY POINTS

- It is really important to distinguish between processes (verbs) and outputs (nouns).
- Read the scenarios on page 7 and reflect on the question asked.
- **Allow time for students to write their answers in their workbooks.**
- The process is dispensing drugs.
- The output is the drugs.
- **Ensure the students understand why.**
- What is the problem in this situation?
  - The problem is the long delays.
  - We must be precise in determining the problem.
- Read the scenario on page 7 and answer what process is failing.
- **Allow time for students to write their answer in their workbooks.**
- The process is HIV/AIDS testing.
- The output is the result.
  - The problem is pregnant women are not being tested.
WHAT IS PROCESS IMPROVEMENT?

- A systematic, data-based method for improving the quality of work processes.
- It uses team decision-making to improve processes that affect the quality of services or products for a customer.

SCRIPT/KEY POINTS

- Remind students of the definition of process improvement.
- Are there any points that need further clarification or discussion?

BREAK
Process Boundaries and Levels
Expected Time: 1 hour

ART BOUNDARIES
WORKBOOK PAGE: 8

SCRIPT/KEY POINTS

- This is a very important concept in process improvement.
- Consider example 1 on the left hand side of the diagram, managing VCT/ART from the manager’s perspective.
- This is a high-level view of VCT/ART management.
- Will someone read the activities for Example 1?
- Notice the dotted line around the activities.
- This is the boundary which defines the steps of our process.
- You will see later that the boundary defines more than the steps of the process. It is very important to carefully define the boundary.
- Now consider the process of “Delivering VCT & ART” from the client and counselor perspective.
- This is a lower-level view of VCT/ART delivery.
- Will someone else read the activities for Example 2?
- The boundary for this example is different and encompasses a lower-level of activity. Can someone give me another example?
- All processes can be viewed from different levels. The boundary is key!
EXERCISE 2: LIST YOUR PROCESSES

WORKBOOK PAGE: 9

SCRIPT/KEY POINTS

- Allow time for students to divide into previously assigned teams. If the students come from different organizations, a fictional organization can be created for which the entire team works.

- The purpose of this exercise is to define common processes within an organization.

1. Divide into your assigned groups.

2. Identify common processes and note these on a flipchart.

3. Select a spokesperson to present your results.

- Allow 15 minutes for groups to list their processes.

- Allow five minutes per group for each group to present results.

- Ensure the groups identify well-defined processes (e.g., order supplies) rather than generic activities (e.g., write reports).
PROCESS SELECTION CRITERIA

SCRIPT/KEY POINTS

- How do you know which processes are worth improving?
- **Allow time for students to suggest some ideas.**
- Here are four criteria for selection.
- Would anyone like to guess how many resources are typically wasted in a health care operation?
- Experts estimate up to 40% of an organization’s budget!
- What types of waste have you experienced?

- *You might expect some of the following answers:*
  - Inadequate or excessive inventory of medical supplies.
  - Excessive staff and patient moves due to poor layout.
  - Multiple handling of paperwork and supplies.
  - Excessive waiting time for patents and staff.
  - Multiple recording of information and data.
  - Wasted time, confusion, or even death due to errors such as misreading a person’s name.
  - Inadequate use of full range of staff skills and knowledge.
OTHER IMPORTANT QUESTIONS

WORKBOOK PAGE: 10

SCRIPT/KEY POINTS

- There are other important questions to consider, or prerequisites.
- You should think very carefully about whether or not to initiate process improvement if you answer no to any of these questions.
- You may need to address these issues up front.
- How might you address questions to those who may have answered “no”?

Italic=Answer  Bold=Instructions  Plain=Script
Selecting Processes to Improve  
Expected Time: 35 minutes

EXERCISE 3: SELECT PROCESS TO IMPROVE  
WORKBOOK PAGE: 11

SCRIPT/KEY POINTS

- The students will review previously listed processes and select one for process improvement.
- The purpose of this exercise is to identify a process improvement focus for the remainder of the training session.

1. You will now review your list of processes you identified in Exercise 2.
2. Consider the potential impact on customer and stakeholder satisfaction, waste, and compliance with technical standards.
3. Identify one process that your group will focus on for process improvement. Select a spokesperson to present your selected process.

- **Allow 15 minutes for groups to select a process.**

- **Allow 3 minutes per group for each group to present their results.**

- **Ensure the groups refer to the 4 criteria as they identify an area for process improvement.**

5. Would any of your selected processes fail the prerequisite questions?

6. Write your team’s selected process in your workbooks.

BREAK
Defining Customers
Expected Time: 35 minutes

CUSTOMERS
WORKBOOK PAGE: 12

SCRIPT/KEY POINTS

- Customers receive products or services from your process.
- Customers are the people you serve.
- There often are not any financial transactions in the world of public health.
- You may have internal or external customers, depending on your process boundary.
- We have to meet technical standards as a prerequisite.
- Do any of you use words other than customer?
- Look at the ART customers on page 12 of your workbook.
- Can you think of any other ART customers?
EXERCISE 4: DEFINE CUSTOMERS

WORKBOOK PAGE: 13

SCRIPT/KEY POINTS

- The purpose of this exercise is for each group to identify the customers of their selected process.

1. As a group, list the customers of the process you selected in Exercise 3.

2. List a maximum of 5 customers for the selected process.

- Allow 15 minutes for groups to identify their customers.

- Allow 3 minutes per group for each group to present their results.

- Ensure the groups define customers specifically for their selected process.

3. Write your team’s identified customers in your workbooks.
Identifying Products and Services
Expected Time: 20 minutes

PRODUCTS AND SERVICES
WORKBOOK PAGE: 14

SCRIPT/KEY POINTS

- Reinforce definition.

- ART products and services include:
  
  - ART medications.
  
  - CD4 count test results.

  - Condoms.

  - ART treatment information.

  - On-going counseling.
EXERCISE 5: IDENTIFY PRODUCTS AND SERVICES
WORKBOOK PAGE: 15

SCRIPT/KEY POINTS

- The purpose of this exercise is for each group to identify the products and services generated by their selected process.

- Reinforce the definition of products and services.

1. As a group, list the products or services generated by the process you selected in Exercise 3.

- Allow 15 minutes for groups to identify products and services.

- Ensure the groups identify products and services specifically for their selected process.

2. Write your team’s identified products and services in your workbooks.
Quality
Expected Time: 1 hour 5 minutes

DEFINITION OF QUALITY
WORKBOOK PAGE: 15

SCRIPT/KEY POINTS

• Review the definition of quality.

• The customer will judge quality based on the products and services received from your process.

• An example of a want for a VCT customer would to be treated courteously in a reasonable amount of time.

• What are some examples of a technical standard? Are there conflicts?

• We need to understand what the customer’s wants and needs are.

• Customers should not let their “voice” be interpreted for them.

• Customer opinions may be based on feelings and beliefs. This may not seem fair or reasonable, but you have to listen.
EXERCISE 6: CUSTOMER WANTS AND NEEDS

WORKBOOK PAGE: 16

SCRIPT/KEY POINTS

- The purpose of this exercise is for each group to identify a customer’s wants and needs for products and services pertaining to the selected process.
  
1. As a group, select an important customer from those identified in Exercise 4.

2. There may be more than one group of customers for a specific process. For this exercise, choose the most important customer group.

- Allow 30 minutes for groups to list customer wants and needs.

- Allow 5 minutes per group for groups to present their results.

- Ensure the groups focus on customer wants and needs relating to the products and services generated specifically for their selected process.

4. Write your team’s identified customer wants and needs in your workbooks.

- How do you listen to your customers? *Answers may include:*

  - *Village meetings.*
  - *Questionnaires.*
  - *Focus groups.*
  - *Listening forum (for listening only-not responding)*

---

BREAK
Identifying Stakeholders
Expected Time: 45 minutes

STAKEHOLDERS
WORKBOOK PAGE: 17

SCRIPT/KEY POINTS

- The customer is one type of stakeholder. There are three other categories:
  - Suppliers.
  - Providers.
  - Controllers.

- Stakeholders are identified by their relationship to the process boundary.
SUPPLIERS

WORKBOOK PAGE: 17

SCRIPT/KEY POINTS

- Present definition.
PROVIDERS

WORKBOOK PAGE: 17

SCRIPT/KEY POINTS

- Present definition.
SCRIPT/KEY POINTS

- **Present definition.**
- Controllers are usually the hardest to agree upon.
- The term can seem negative. In our context it is not.
- It is important to understand what defines, regulates, and controls your process.
- Controllers have specific requirements, which may be in conflict with other stakeholders.
SCRIPT/KEY POINTS

- This template can help you identify the stakeholders related to your process.

- Can I have a volunteer to read out the stakeholders?

- Are any stakeholders missing?

- Could a stakeholder fit into more than one category? It is very common for a stakeholder to fit more than one category.

- What can you do if a stakeholder fits more than one category?
  
  - One approach is to place the stakeholder in more than one group.
  
  - A better approach is to consider the stakeholder’s main relationship to the process and use this classification.
IN Volving Your Stakeholders

Script/Key Points

- How can you involve your stakeholders in improvement activities?

- Answers may include:
  - Email.
  - Surveys.
  - Questionnaires.
  - Observing stakeholders, especially customers.
  - Visits.
  - Experiencing the service as a customer.
EXERCISE 7: IDENTIFY STAKEHOLDERS

WORKBOOK PAGES: 19 & 20

SCRIPT/KEY POINTS

• The purpose of this exercise is for each group to identify the stakeholders for their selected process.

1. As a group, identify the customers who may have a stake in your selected process.

2. Use the stakeholder analysis template on page 19 of your workbook to help you identify your stakeholders.

3. Discuss how you will engage each stakeholder group (page 20).

4. List your stakeholders.

5. It is very common to find that one group may fit into more than one stakeholder category. For example, a patient is often a customer, but a patient may also be a supplier of information to the process.

6. The patient’s most significant relationship to the process would be that of a customer.

• Allow 15 minutes for groups to identify stakeholders.

• Each group should present a different stakeholder group (e.g., first group presents controllers, second group presents suppliers, etc.).

• Allow 15 minutes for groups to present their identified stakeholders.
CLOSE OF DAY ONE

SCRIPT/KEY POINTS

• **Summarize activities of Day 1.**

1. Today, we have covered Step 1 of the process improvement steps, define the process.

2. We have defined the terms “process” and “process improvement.”

3. We have examined process levels and boundaries.

4. We completed several exercises:
   
   o Defined common processes within an organization.
   
   o Identified a process to improve.
   
   o Identified customers.
   
   o Identified products and services.
   
   o Identified customer wants and needs.
   
   o Identified stakeholders.

• **Distribute comment cards and allow time for students to write questions, concerns, or issues.**

5. Use the comment cards provided to write down any questions or concerns you have. I will review these and use your comments for discussion tomorrow.

• **Assign homework activity on next page.**
CLOSE OF DAY ONE (continued)

SCRIPT/KEY POINTS

6. Read the section on measuring good practices on page 28 of your workbooks.

7. Use the notes section in your workbooks (page 29) to record any questions you have as a result of your reading.

- **Allow time for students to complete the Day 1 evaluation sheets (page 105 in workbook).**

8. Be sure to complete the evaluation sheets for today’s session. Thank you for your attention and hard work today.
DAY TWO
Review Day 1
Expected Time: 15 minutes

REVIEW OF DAY ONE

SCRIPT/KEY POINTS

- What were the main learning points from yesterday’s training?

- Allow adequate time for class discussion.

- Answers may include:
  - Most problems are with the process, not people.
  - Every process can be continuously improved.
  - Customer – any person who receives a product or service.
  - Process – repetitive sequence of activities leading to desired outcomes for the benefit of the customer.

- What is the definition of quality?

- What is the definition of process improvement?
REVIEW OF DAY 1 (continued)

SCRIPT/KEY POINTS

- Review cards that were submitted.
- Provide answers for any logistical issues.
- Ask the class for feedback for any learning issues.
- Allow adequate time for class discussion.
- If there is a correct answer, share it. Otherwise, allow time for class discussion.
Flowcharts
Expected Time: 1 hour 15 minutes

FLOWCHART
WORKBOOK PAGE: 21

SCRIPT/KEY POINTS

- Turn to page 21 in your workbooks.
- Stress the various uses of a flowchart, including its use for designing new processes.
- The flowchart is an invaluable tool.
SCRIPT/KEY POINTS

- Here is the beginning of a flowchart, using the ART example.
- **Click.**
- START and STOP actions are placed in rounded rectangles.
- **Click.**
- Arrows link symbols and show directions of the flow.
ACTIVITY SYMBOL

WORKBOOK PAGE: 21

SCRIPT/KEY POINTS

• A subsequent activity follows.

• Click.

• Activities are placed in rectangles.
DECISION SYMBOL

WORKBOOK PAGE: 22

SCRIPT/KEY POINTS

- Click.
- Decisions to be made are placed in diamonds.
- Yes/no outcomes are provided.
- This is the first of four key questions.
- The flow of the diagram depends on which outcome is chosen.
FEEDBACK AND CONNECTORS
WORKBOOK PAGE: 22

SCRIPT/KEY POINTS

• Here is a complete chart for this example.

• Click.

• Connectors are shaped like pentagons. They are noted with numbers, which allow you to go over many pages.

• Click.

• You can see how the decisions can affect the flowchart. If they agree to more counseling, the flow loops back into providing more pre-test counseling. Additional questions are asked to determine if the flow loops back to the previous decision or if another path must be followed.
READ A FLOWCHART
WORKBOOK PAGE: 24

SCRIPT/KEY POINTS

- Turn to page 24 in your workbooks to see a complete flowchart of VCT.
- Ask for a volunteer to take the class through the process flow.
- How do you think this flowchart could be improved?
EXERCISE 8: FLOWCHART YOUR PROCESS

WORKBOOK PAGE: 25

SCRIPT/KEY POINTS

- The purpose of this exercise is for each group to flowchart their selected process.
- Using the selected process from Day 1, each team will flowchart that process.
- Define the boundaries of the process – the beginning and the end.
- Write the beginning step (boundary) in a rounded rectangle.
- Determine what happens next and add the step in a rectangle.
- Continue mapping out the required steps and adding them in rectangles. Connect steps with one-way arrows.
- When a decision point is reached, write the decision in the form of a question inside a diamond.
- Develop the decision results paths, keeping in mind that each path must reenter the process or exit somewhere. Repeat steps 4-7 until the last step in the process is reached.
- Write the ending step (boundary) in a rounded rectangle.
- Select a spokesperson to present the group’s flowchart to the class.
- *Allow 60 minutes for groups to complete their flowcharts.*
- *Circulate around the classroom and provide help, as needed.*
- *Allow 30 minutes for groups to present their completed flowcharts after break.*

BREAK
EXERCISE 8: FLOWCHART YOUR PROCESS (continued)

SCRIPT/KEY POINTS

- Allow 30 minutes for groups to present their completed flowcharts.
STEP ONE: SUMMARY

WORKBOOK PAGE: 26

SCRIPT/KEY POINTS

- Reinforce certain learning.
- Review Step 1.
- How can we improve this training session so far?
- Do you expect any obstacles to using the skills or processes you learned about in this step?
Measuring Good Practice
Expected Time:  20 minutes

STEP TWO: MEASURE PROCESS PERFORMANCE
WORKBOOK PAGE: 27

SCRIPT/KEY POINTS

- Now that you have defined the process, it is time to understand how well it is performing.

- Who did their homework last night?
GOOD PRACTICE

WORKBOOK PAGE: 28

SCRIPT/KEY POINTS

- Points appear one by one. Click to reveal each point on the slide.
- Are there any questions or observations concerning the points you read last night?
GOOD PRACTICE
WORKBOOK PAGE: 28

SCRIPT/KEY POINTS

- Points appear one by one. Click to reveal each point on the slide.
- Are there any questions or observations?
- Is anything missing from the list?
- Allow a maximum of 15 minutes for discussion.
THE PERFORMANCE GAP
WORKBOOK PAGE: 30

SCRIPT/KEY POINTS

- The performance gap is the difference between the desired and current performance.

- Measures show how well we are meeting our technical standards and customer needs.

- Good measures help us focus our improvement activities.

- We need to understand the definition behind a measure before we use it.
Types of Measures
Expected Time: 50 minutes

SOURCES OF MEASURES
WORKBOOK PAGE: 30

SCRIPT/KEY POINTS

1. There can be up to 4 sources of measures in most processes.

2. Use your customer and stakeholder analysis along with the flowchart to help you identify the sources of measure.
CUSTOMER MEASURES
WORKBOOK PAGE: 31

SCRIPT/KEY POINTS

- Customer measures are generated from the voice of the customers, in terms of their wants and needs.
STAKEHOLDER MEASURES

WORKBOOK PAGE: 31

SCRIPT/KEY POINTS

- Stakeholder measures are often related to the funding agency’s priorities.
Technical Measures

- Generated from best practices as defined by scientific research.
- These measures are often case-specific and based on medical protocols.

SCRIPT/KEY POINTS

- Technical measures are generated from best practices.
PROCESS MEASURES
WORKBOOK PAGE: 31

SCRIPT/KEY POINTS

- Process measures have a significant impact on process outcomes but are not usually of direct interest to customers and stakeholders.
CASE EXAMPLE: ART MEASURE
WORKBOOK PAGE: 32

SCRIPT/KEY POINTS

- Turn to page 32 in your workbooks for an example for ART measures.
- Briefly explain the measures for each of the four categories.
- There may be multiple measures for each category. There is no rule about how many measures to include, although you do not want too many.
- Concentrate on the critical measures.
Identifying Measures
Expected Time: 35 minutes

EXERCISE 9: IDENTIFY MEASURES
WORKBOOK PAGE: 33

SCRIPT/KEY POINTS

• The purpose of this exercise is for each group to flowchart their selected process.

1. Refer to your completed flowchart for this exercise.

2. Consider customer measures first. What would you wish to measure?

3. Write 1-2 measures and reasons for selections in the table on page 33 of your workbooks.

4. Write an operational definition for this measure.

5. Repeat this process for stakeholder, technical standards, and process measures.

• Allow 30 minutes for this exercise.

• Circulate around the classroom and provide help, as needed.

BREAK
FACTORS IN SELECTING MEASURES
WORKBOOK PAGE: 34

SCRIPT/KEY POINTS

- Focus on collecting data on the important measures.
- Use data collection to drive process improvement.
- Selecting measures to monitor may depend on these factors:
  - The difference between actual and desired performance.
  - The feasibility of making a dramatic improvement.
  - The importance set by customers and stakeholders.
  - The impact that an improvement could have on the overall performance of the process.
  - The feasibility of measurement.
Selecting Measures
Expected Time: 1 hour

EXERCISE 10: SELECT MEASURE
WORKBOOK PAGE: 35

SCRIPT/KEY POINTS

- The purpose of this exercise is to select a single measure for the selected process from Exercise 3.

- **Ask a volunteer to read the factors in selecting measures on page 34 of the participant’s workbook.**

1. Review your completed table of measures from Exercise 9.

2. Consider each measure against the factors in selecting measures.

3. As a team, select one measure to be the focus for the rest of the workshop.

4. Select a spokesperson to present your selected measure.

- **Explain that the tonight the participants’ homework is to read about the measurement tools (check sheet, stratification, Pareto) from pages 35 to 39 of your workbooks. That is why we are jumping to page 41 and note questions on page 42.**
VARIATION – SPECIAL AND COMMON CAUSES

WORKBOOK PAGE: 42

SCRIPT/KEY POINTS

- Variation exists in all data. The key question is “What is the variation telling us?”
- In process improvement we refer to two types of variations:
  o Common causes.
  o Special causes.
- Read the definition for common cause. Ask for volunteers to read the definition for special cause.
- The majority of critical causes of variation come form the process itself – common causes.
- What happens if we don’t reduce the common causes?
  - The process will remain the same with no change in variation. There will be no long-term improvements.
- We do want to address special causes to distinguish between special and common causes. Reducing or removing common causes will lead to sustained improvement.
- How can we tell if we have really improved the process?
  - The tool we used is called the Run Chart.
- Turn to page 42 in your workbook and read the section on Run Charts.
- Allow time for students to read the pages on Run Charts in their workbooks.

BREAK
Run Charts: The Process Tells Its Story
Expected Time: 20 minutes

RUN CHART
WORKBOOK PAGE: 42

SCRIPT/KEY POINTS

● Run charts are graphs in which a process measure is plotted over time.
● A completed chart can show if an implemented improvement idea was successful.
RUN CHART (continued)

WORKBOOK PAGE:  42

SCRIPT/KEY POINTS

- A run exists when a number of consecutive points lie on one side of the mean.

- Whether or not a run is significant depends on the number of data points plotted.

- A long run might be a signal of a special cause or the beginning of a common cause shift.

- Get a volunteer to read out the run guidelines on page 43.

- These guidelines are a “rule of thumb” to help distinguish between a special and common cause.
SCRIPT/KEY POINTS

- The data are from a VCT clinic.
- The measure is the number of people attending per month.
- There are 30 data points in total, so a significant run would be 7 points on one side of the mean.
- Can you see anything significant in the data?

- The only significant point is the very high attendance in December 2008.
- This is likely a special cause and might be attributable to a special event.
- Why do you think this might have been?

- This data point is excluded from the calculation of the mean to avoid skewing the result.
FIRST COMMON CAUSE SIGNAL

WORKBOOK PAGE: 44

SCRIPT/KEY POINTS

- How many points fall on one side of the mean if we freeze the mean at April 2009?
- What does this signal?
- A common cause increase in the number of people attending the clinic.
- What do you think would have caused this?
- This was when the mayor of the city appeared on television receiving pre-test counseling and a rapid AIDS test.
- The data run was maintained.
- We can conclude the mayor’s test encouraged a sustained number of people to come forward for voluntary testing.
- Now let’s move forward in time to October 2010.
SCRIPT/KEY POINTS

- This time let’s freeze the mean at October 2006.
- How many points now fall on one side of the mean?
- What does this signal?
- Again a common cause increase in the number of people attending the clinic.
SCRIPT/KEY POINTS

- A new national HIV awareness campaign began in October 2009.
- The run chart shows how successful this campaign was.
- Overall, the run chart shows the data contained two common cause changes, which increased attendance.
- The run chart helps you see the signals within the data.
ART ADHERENCE RUN CHART
WORKBOOK PAGE: 46-47

SCRIPT/KEY POINTS

- Turn to page 47 in your workbooks.
- This run chart shows self-reported ART adherence.
- The definition of adherence is the percentage of ART patients who self-report adherence to the prescribed regimen over the last 3 months.
- Are there any signals in these data?
- No.
- We will use this run chart later in the workshop to determine whether or not improvements were made.
Preparation of Problem Statements & Improvement Objectives
Expected Time: 50 minutes

PROBLEM STATEMENT
WORKBOOK PAGE: 48

SCRIPT/KEY POINTS

- A good problem statement concisely communicates the process problem in terms of who, what, when, where, and how many.
  - Who is affected by the problem?
  - What does the problem appear to be?
  - When does the problem occur?
  - Where does the problem occur?
  - How many times has the problem occurred over the defined period?
SCRIPT/KEY POINTS

- A good improvement objective summarizes the problem and describes your intent in measurable terms.
  - What is the problem?
  - Where is it?
- An improvement objective communicates goals:
  - What do we want to do?
  - By when?
ART CASE EXAMPLE

WORKBOOK PAGES: 48-49

SCRIPT/KEY POINTS

- Here are good examples of a problem statement and improvement objective from the ART case example.

- Are there any improvements we can make to either statement?
EXERCISE 11: PREPARE A PROBLEM STATEMENT AND AN IMPROVEMENT OBJECTIVE

WORKBOOK PAGE: 50

SCRIPT/KEY POINTS

- The purpose of this exercise is to write a problem statement and an improvement objective for the selected process.

1. Write a problem statement that includes who, what, when, where, and how many using the data for your selected process.

2. Write an improvement objective that includes what and where is the problem, and what needs to be done by when.

3. Select a spokesperson to present your problem statement and improvement objective.

- Allow 30 minutes for this exercise.
CLOSE OF DAY TWO
WORKBOOK PAGE: 51

SCRIPT/KEY POINTS

• **Summarize the activities of Day 2**
  1. Today, we have covered Step 2 of the process improvement steps, measure process performance.
  2. We have discussed flowcharts, measures, variations, problem statements, and improvement objectives.
  3. We completed several exercises:
     o Flowcharted the process.
     o Identified measures.
     o Selected a measure.
     o Prepared a problem statement and an improvement objective.

• **Distribute comment cards and allow time for students to write questions, concerns, or issues.**
  4. Use the comment cards provided to write down any questions or concerns you have. I will review these and use your comments for discussion tomorrow.

• **Assign homework activity.**
  5. Read the sections on measurement tools (check sheet, stratification, Pareto) from pages 35 to 39 of your workbooks.
  6. Use the notes section in your workbooks to record any questions you have as a result of your reading.

• **Allow time for student to complete the Day 2 evaluation sheets.**
  5. Be sure to complete the evaluation sheet on page 107 for today’s session. Thank you for your attention and hard work today.
DAY THREE

Review Day 2
Expected Time: 30 minutes

REVIEW OF DAY TWO

Review of Day 2
- What were the main learning points from yesterday’s training?
- Allow adequate time for class discussion.
- What information does a flowchart provide?
- What are the four sources of measures?

- Answers may include:
  - Information from a flowchart:
    - Understanding how a process works.
    - Sequence of steps.
    - Data collection points.
    - Ideas for improvement
  - Sources of measures: customers, stakeholders, technical and process
REVIEW OF DAY TWO (continued)

WORKBOOK CLOSED

SCRIPT/KEY POINTS

- Review cards that were submitted.
- Provide answers for any logistical issues.
- Ask the class for feedback for any learning issues.
- If there is a correct answer, share it. Otherwise allow time for class discussion.
Pareto Chart
Expected Time: 5 minutes

PARETO CHART

SCRIPT/KEY POINTS

- Did everyone complete the homework assignment?

- Are there questions about checklists, stratification, or Pareto Charts?

- Who can give me an example of a Pareto Chart?

- 20 percent of a dentist's patients account for 80 percent of the dental work.

- 20 percent of lab supplies might account for 80 percent of the shortages.

- 20 percent of your staff might account for 80 percent of tardiness.

- Pareto is not just a tool but a principle as well.

- It can be used as a mind set without a chart if data are not available.

  It is often referred to as the 80/20 rule or the critical few.

- You should be thinking critical few all the time. Which are the critical few customer wants and needs, which are the critical few measures, which are the critical causes and which are the critical improvement?
Analyzing Causes for Variation
Expected Time: 5 minutes

STEP 3: ANALYZE CAUSES OF VARIATION

WORKBOOK PAGE: 53

SCRIPT/KEY POINTS

• Your team now has a clear improvement objective based on the analysis of your process.

• Now you need to explore why there is variation from the desired level of performance.

• Asking “why” is the basis of cause-and-effect analysis.

• A useful tool for analyzing cause and effect is the fishbone diagram.
Fishbone Diagrams
Expected Time: 1 hour 45 minutes

BUILD A FISHBONE DIAGRAM
WORKBOOK PAGE: 57

SCRIPT/KEY POINTS

- The problem statement is written in the “head” of the fishbone diagram. In this case, the problem statement is: “VCT Clinic not able to meet the new targets set by the Ministry of Health.”

- Next, brainstorm possible causes. These can be done on sticky notes.

- Why do we use brainstorming?

- What are the golden rules of brainstorming?

- Record your answers on page 55 of your workbook.

- After brainstorming, we are ready to group the possible causes on the “bones” of the fishbone diagram.

- **Click.**

- “High turnover of nurses” is placed on any of the bones.

- **Click.**

- The next possible cause is “shortage of space.” This is not similar to the shortage of nurses, so it should be placed on a different bone.

- **Click.**

- “Power outages” is similar to “Shortage of space” in that it relates to environment, so it can go on the same bone as “Shortage of space.”
BUILD A FISHBONE DIAGRAM (continued)

WORKBOOK PAGE:  57

SCRIPT/KEY POINTS

- Click.

- We continue this process until all possible causes have been grouped together.

- Click, click, etc.

- Finally, we assign a name to each of the bones to represent the major cause category (e.g., Records, Staffing, Lab Supplies, and Environment).
SCRIPT/KEY POINTS

- After brainstorming and completing the Fishbone Diagram, there will be many possible causes.
- You need to reduce this to a small number that you can address.
- We use a method called TPN.
- TPN is designed for you to select those causes over which you have most control.
- Your team now decides whether an individual cause is:
  - Totally (T) within your control to improve,
  - Partially (P),
  - Or not (N).
- Focus on T and P causes initially.
- Assign N causes to teams or individuals who have control over them.
ADHERENCE FISHBONE
WORKBOOK PAGE: 62

SCRIPT/KEY POINTS

- Review the Adherence Fishbone on the slide or page 62 of your workbook.

- Which possible causes did the team think were totally or partially within their control?

- Do you agree?
EXERCISE 12: EXPLORE THE CAUSES
WORKBOOK PAGE: 63

SCRIPT/KEY POINTS

- The purpose of this exercise is to complete a Fishbone Diagram and a TPN analysis.

- Review the problem statement and improvement objective created in Exercise 11.

- As a team, brainstorm possible causes of the problem. Write your ideas on sticky notes, and strive for quantity of ideas.

- After brainstorming, draw a fishbone structure with 4-6 bones.

- Write your problem statement in the head of the fish.

- Group the sticky notes on the bones.

- Determine names for the bones that represent all the causes on that bone.

- Conduct a TPN analysis for each cause to determine control.

- Mark each sticky note accordingly.

- Select a spokesperson to present your problem statement and improvement objective.

- Select a spokesperson to present your results.

- **Allow 45 minutes for this exercise.**

- **Allow 5 minutes per group to present the main findings of their exercise.**
MULTI VOTE

WORKBOOK PAGE: 64

SCRIPT/KEY POINTS

- Turn to pages 64 of your workbooks.
- Read the section on Multivote.
- Can you see other stages in process improvement where this might be useful?

  *Answers may include:*

  - Selecting a process, measure or improvement.

BREAK
Selecting a Critical Cause
Expected Time: 45 minutes

EXERCISE 13: SELECT A CRITICAL CAUSE

WORKBOOK PAGE: 65

SCRIPT/KEY POINTS

• The purpose of this exercise is to select a critical cause.

• As a group, conduct a full multi-vote using the causes identified in Exercise 12.

• Focus on the T and P causes.

• Focus on causes that will have the biggest impact on quality.

• Remember Pareto principle: 20% of interventions will have 80% impact.

• Complete the multi-vote tables on page 65 of your workbook.

• Total the votes to determine the cause to address.

• Select a spokesperson to present your results.

• **Allow 30 minutes for this exercise.**
STEP THREE: SUMMARY

WORKBOOK PAGE: 67

SCRIPT/KEY POINTS

- Reinforce certain learning.
- Review Step 3.
- How can we improve this session?
- Do you expect any obstacles to using the skills or processes you learned about in this step?
Generating and Planning Improvement Ideas
Expected Time: 45 minutes

STEP FOUR: GENERATE AND PLAN IMPROVEMENT IDEAS
WORKBOOK PAGE: 69

SCRIPT/KEY POINTS

- You have explored causes of variations.
- You have determined a critical cause.
- Now you can explore possible improvement ideas.
- Be as innovative and creative as possible.
- Keep your mind open.
- Generate many possible improvement ideas.
- Select one or two of the ideas and plan how to implement them.
EXERCISE 14: GENERATE IMPROVEMENT IDEAS
WORKBOOK PAGE: 70

SCRIPT/KEY POINTS

• The purpose of this exercise is to generate ideas for improvement to address critical causes.

• As a group, brainstorm all possible ways to address your critical causes identified in Exercise 12.

• Group similar ideas.

• Ensure your groupings do not overlap.

• Conduct a multi-vote to select improvement ideas.

• If implemented, these ideas should have the most impact on reducing the critical cause of the problem.

• Total the votes to determine which one or two ideas to implement.

• If you only generate a small number of ideas, all of which you may implement, it is not necessary to conduct a multi-vote.

• Select a spokesperson to present your results.

• Allow 30 minutes for this exercise.
PLAN, DO, STUDY, ACT
WORKBOOK PAGE: 71

SCRIPT/KEY POINTS

- The Shewhart-Deming circle is internationally recognized for continuous process improvement.
- The circle is typically applied to an improvement idea:
  - Plan how to implement.
  - Do it (on a small scale at first).
  - Study the results.
  - Act on the results.
WORK BREAKDOWN STRUCTURE (WBS)

WORKBOOK PAGE: 72

SCRIPT/KEY POINTS

- Start with the end in mind.
- Organize and define what needs to be done.
- Define when the activities need to be completed and who will complete them.
Planning an Improvement Project for Your Selected Idea
Expected Time: 35 minutes

EXERCISE 15: PLAN IMPROVEMENT PROJECT
WORKBOOK PAGE: 74

SCRIPT/KEY POINTS

- The purpose of this exercise is to plan an improvement idea to address a critical cause.
- Select a change you wish to implement and record the improvement idea for it in the template on page 75 of your workbook.
- Determine what main activities are needed to complete the change and record these in the template under Activities.
- Consider each activity and list the tasks needed to complete each one under Tasks.
- Use the task table list template on page 76 of your workbook to record who is responsible for completing the task and by when.
- Add any additional comments in the space provided.
- A separate task table list would be used for each task.
- **Allow 30 minutes for this exercise.**
STEP FOUR: SUMMARY
WORKBOOK PAGE: 77

SCRIPT/KEY POINTS

- Reinforce certain learning.
- Review Step 4.
- How can we improve this session?
- Do you expect any obstacles to using the skills or processes you learned about in this step?

BREAK
Implementing Change and Studying Its Results
Expected Time: 1 hour 30 minutes

STEP 5: IMPLEMENT CHANGE
WORKBOOK PAGE: 79

SCRIPT/KEY POINTS

- In this step, you are ready to implement the improvement idea.
- Communication is key – everyone involved should know what they are doing and why.
- Data gathered will be used in Step 6 – study the results of change.
- Consistency is important in data collection:
  - Use comparable time periods for measurement.
  - Use equal data collection tools.
  - Select an appropriate frequency of measurement.
SCRIPT/KEY POINTS

- Communication is central to an effective implementation plan.
- Data collection is used to measure the process.
- Training is conducted if needed.
STEP 6: STUDY RESULTS OF CHANGE

WORKBOOK PAGE: 81

SCRIPT/KEY POINTS

- Results are studied to determine if the change was actually an improvement.
- Quantitative data is preferred.
- Run charts can be used to determine if the idea was a real improvement.
- Qualitative methods are used in the absence of run charts.
**EXERCISE 16: HOW WELL DID YOU DO?**

**WORKBOOK PAGE: 82**

**SCRIPT/KEY POINTS**

- The purpose of this exercise is to determine how successful the improvement idea was to the process.
- The data is listed in the Appendix. One set of data shows genuine improvement. One shows no change, while the third shows a decline.
- **Divide participants into 3 groups.**
- **Distribute envelopes with data for the months after a change has been implemented.**
- Use the data you received in the envelope to plot the data on the Run Chart on Page 83 of your workbooks.
- The improvement objective is to increase the adherence rate from a mean of 48.5% to 70% within the time period.
- Interpret how successful your improvement was.
- **Allow 20 minutes for this exercise.**
- How successful do you think your improvement was?
- What will you do next?
STEP 6: SUMMARY
WORKBOOK PAGE: 84

SCRIPT/KEY POINTS

- Improved objective reviewed.
- Data analyzed.
- Findings communicated.
STEP 7: ACT ACCORDINGLY

WORKBOOK PAGE: 85

SCRIPT/KEY POINTS

- Use what you have learned in the previous 6 steps to inform future decisions.
THREE OUTCOMES

WORKBOOK PAGES: 85 & 86

SCRIPT/KEY POINTS

- Improvement idea was successful and improvement objective achieved.
- Some improvements were achieved.
- No improvement was achieved.
STEP 7: SUMMARY

WORKBOOK PAGE: 87

SCRIPT/KEY POINTS

- Was the improvement successful?

- Success communicated?

- Procedures updated?

- Training delivered, if required?

- Reinforce certain learning.

- Review Steps 5, 6, and 7.

- How can we improve this session?

- Do you expect any obstacles to using the skills or processes you learned about in this step?
EXERCISE 17: STORYBOARD
WORKBOOK PAGE: 87

SCRIPT/KEY POINTS

- Ask each team to stick all their work up on a wall showing the flow through the seven stages.
- Have each team present to the other.
- This can be used to present back to the dignitaries arriving to award certificates.
CLOSE OF DAY THREE

SCRIPT/KEY POINTS

- **Summarize activities of Day Three.**
- Today, we have covered the remaining step of the process improvement steps: analyze causes of variation, generate and plan improvement ideas, implement change, study results of change, and act.
- We have discussed using fishbone diagrams, TPN analysis (total, partial or no control), generating improvement ideas, planning for improvement, studying changes, and determining outcomes.
- We completed several exercises:
  - Completed a Fishbone Diagram and a TPN analysis.
  - Selected a critical cause.
  - Generated and planned improvement ideas.
  - Determined how successful the improvement idea was.
OUR EXPECTATIONS OF YOU

SCRIPT/KEY POINTS

- Read contents of slide.
PROCESS IMPROVEMENT: NEXT STEPS

SCRIPT/KEY POINTS

- **Review next steps**

- Upon completion of this workshop and return to your country, our expectations include:
  
  - Adapting these materials as appropriate.
  
  - Arranging to teach process improvement to selected in-country trainees.
  
  - Monitor and evaluate trainee’s projects.
  
  - Use SMDP TA, as needed.
  
  - Graduate trainees.

- **Distribute evaluation sheets**

- **Allow time for students to complete the Day 3 evaluation sheets**

- Be sure to complete the evaluation sheets for today’s session. Thank you for your attention and hard work during this workshop.
Appendix

Appendix A  Datasets for Exercise 16........................................................................................................109
### Dataset One:

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug-05</td>
<td>38.20%</td>
</tr>
<tr>
<td>Sep-05</td>
<td>37.70%</td>
</tr>
<tr>
<td>Oct-05</td>
<td>61.00%</td>
</tr>
<tr>
<td>Nov-05</td>
<td>46.20%</td>
</tr>
<tr>
<td>Dec-05</td>
<td>54.00%</td>
</tr>
<tr>
<td>Jan-06</td>
<td>37.80%</td>
</tr>
<tr>
<td>Feb-06</td>
<td>54.10%</td>
</tr>
<tr>
<td>Mar-06</td>
<td>44.10%</td>
</tr>
<tr>
<td>Apr-06</td>
<td>53.80%</td>
</tr>
<tr>
<td>May-06</td>
<td>44.20%</td>
</tr>
<tr>
<td>Jun-06</td>
<td>38.20%</td>
</tr>
<tr>
<td>Jul-06</td>
<td>65.00%</td>
</tr>
</tbody>
</table>
## Dataset Two:

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug-05</td>
<td>68.00%</td>
</tr>
<tr>
<td>Sep-05</td>
<td>57.00%</td>
</tr>
<tr>
<td>Oct-05</td>
<td>80.00%</td>
</tr>
<tr>
<td>Nov-05</td>
<td>64.00%</td>
</tr>
<tr>
<td>Dec-05</td>
<td>74.00%</td>
</tr>
<tr>
<td>Jan-06</td>
<td>57.00%</td>
</tr>
<tr>
<td>Feb-06</td>
<td>63.00%</td>
</tr>
<tr>
<td>Mar-06</td>
<td>64.00%</td>
</tr>
<tr>
<td>Apr-06</td>
<td>73.00%</td>
</tr>
<tr>
<td>May-06</td>
<td>64.00%</td>
</tr>
<tr>
<td>Jun-06</td>
<td>58.00%</td>
</tr>
<tr>
<td>Jul-06</td>
<td>84.00%</td>
</tr>
<tr>
<td>Date</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>Aug-05</td>
<td>28.00%</td>
</tr>
<tr>
<td>Sep-05</td>
<td>37.00%</td>
</tr>
<tr>
<td>Oct-05</td>
<td>60.00%</td>
</tr>
<tr>
<td>Nov-05</td>
<td>34.20%</td>
</tr>
<tr>
<td>Dec-05</td>
<td>14.00%</td>
</tr>
<tr>
<td>Jan-06</td>
<td>27.00%</td>
</tr>
<tr>
<td>Feb-06</td>
<td>23.00%</td>
</tr>
<tr>
<td>Mar-06</td>
<td>24.00%</td>
</tr>
<tr>
<td>Apr-06</td>
<td>13.00%</td>
</tr>
<tr>
<td>May-06</td>
<td>24.00%</td>
</tr>
<tr>
<td>Jun-06</td>
<td>38.00%</td>
</tr>
<tr>
<td>Jul-06</td>
<td>40.00%</td>
</tr>
</tbody>
</table>