STEP-BY-STEP PROBLEM SOLVING
ENSURE PROBLEMS GET AND STAY SOLVED

It sometimes seems that there is a never-ending stream of problems to solve in business. Ironically, many are not new; they are recurring problems that never seem to go away.

Problem solving in an organization is everyone’s responsibility. All teams need to know how to use problem-solving techniques. An organization benefits when everyone exhibits an attitude of ownership for the organization’s challenges and a vested interest in finding solutions.

This unit and its problem-solving techniques can help you look at and resolve the underlying causes for a problem rather than just removing the symptoms.

Learning Objectives

Upon completion of this session, you will be able to:

1. Apply a six-step problem-solving process to problems your team is facing
2. Analyze problems using problem-solving techniques/tools, and consequently, generate effective solutions
3. Implement solutions to problems and evaluate their success

Agenda

- Applying A Six-Step Problem-Solving Model
- Developing Problem-Solving Skills
- Defining The Problem
- Analyzing Potential Causes
- Identifying And Selecting The Best Solutions
- Developing An Action Plan
- Implementing Solutions And Evaluating Progress
- Applying Problem-Solving Tools

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<tr>
<th>Average time spent solving problems</th>
<th>_HRS per week</th>
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<tr>
<td>Percent of this time that is value-added</td>
<td><em>%</em></td>
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APPLYING A SIX-STEP PROBLEM-SOLVING MODEL

The following Six-Step Problem-Solving Model can guide teams at an organization toward successful solutions. A structured process for problem solving increases the likelihood of solving problems efficiently and effectively.

Although the six-step model represents a logical, systematic sequence of procedural steps, do not feel compelled to follow each step in depth for every problem-solving situation!

Six-Step Problem-Solving Model

1. Define The Problem
2. Analyze Potential Causes
3. Identify Possible Solutions
4. Select The Best Solution
5. Develop An Action Plan
6. Implement Solution And Evaluate Progress
7. Return to Define The Problem
DEVELOPING PROBLEM-SOLVING SKILLS

There are many skills required to become an effective problem solver. Most of these skills and attitudes can be acquired or developed through training or other skill-building experiences.

Some key skills and attitudes are listed below. Do you have any additions?

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<tr>
<td><strong>1. Creativity</strong></td>
<td>The Nobel Prize winning physician Albert Szent-Györgyi said, “Discovery consists of looking at the same thing as everyone else and thinking something different.” Creativity involves being open to new possibilities and change.</td>
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<td><strong>2. Judgment And Evaluation</strong></td>
<td>Critical-thinking skills are a key ingredient to evaluating alternatives and making decisions.</td>
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<td><strong>3. Planning</strong></td>
<td>Successful implementation of a solution requires a well-constructed plan—one that looks into the future and covers all bases and contingencies.</td>
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<td><strong>4. Administration And Organization</strong></td>
<td>Solving a complex problem requires a great deal of organization—schedules to meet, charts to create, meetings to manage, summaries to write, etc.</td>
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<td><strong>5. Analysis</strong></td>
<td>Though the approach of gathering and analyzing data to solve a problem seems obvious, we must make sure we ask the right questions and use all pertinent information that is available.</td>
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<td><strong>6. Ownership</strong></td>
<td>Ownership implies accountability and responsibility for results. We must own the problem and champion the solution to ensure success.</td>
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<td><strong>7.</strong></td>
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Select The Best Solution(s)

During the fourth step, a decision must be made—which solution(s) to choose. This step has three parts. First, you develop criteria and assign weights to them. Then, you apply the criteria to each of your solutions. Last, you choose the best solution(s) based on your criteria test and group consensus.

“Developing Weights” Questions
- Are these criteria equally important?
- Will everyone involved have the same understanding of what each criterion means?
- Did you weigh the criteria to reflect their importance? (Ensure that the total weights for all criteria equal 100 percent.)

“Applying Criteria” Questions
- Did you multiply the scores for each solution by the weight for each criterion?
- Do the total weighted scores for each solution seem logical when you compare them with each other?

“Final Selection” Questions
- Did you choose the solution with the highest score?
- Will you be able to persuade others that this is the right choice?
DEVELOPING AN ACTION PLAN

Now that you’ve identified the best solution(s) to your problem, it is time to develop an Action Plan.

An Action Plan is the blueprint for implementing your solutions. It allows you to divide your solutions into logical steps and plan who will do what, by when, and how.

Developing an Action Plan has two parts. First, divide your solution into sequential tasks. Then, develop contingency plans to address potential roadblocks you may encounter along your problem-solving path.

Dividing A Solution Into Sequential Tasks

When completing the first substep, consider all of the following:

- The Action Step (a brief description of the step or task)
- Responsible Person (a list of the person(s) who will be held accountable for achieving the Action Step)
- Begin Date/End Date (a start date and drop dead date)
- Estimated Hours (a best guess of the number of hours to complete a task)
- Cost (the amount of money needed to make the step happen)

The Action Plan becomes an effective tool for communicating key actions and accountability for implementing the solution(s).
SOLVING PROBLEMS

Use these worksheets to solve a problem following the Six-Step Problem-Solving Model.

Note: Before beginning the problem-solving process, utilize information-gathering tools—such as customer surveys, focus-group results, interview results, Run Charts, Control Charts, Check Sheets, Pareto Charts, Histograms, etc.—to gather the data needed to initiate a problem statement.

### STEP 1: DEFINE THE PROBLEM

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<td>Develop a problem statement that clearly describes the current condition you want to change.</td>
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<td>Is the problem stated objectively?</td>
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<td>Is the problem sufficiently limited in scope?</td>
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<td>Is there common understanding?</td>
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<td>Does the statement contain measures?</td>
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<td>Have you avoided any implied causes or implied solutions?</td>
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<td>Is the statement “short and sweet” (no more than 10-15 words)?</td>
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<td>Is the problem worth solving?</td>
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**Possible Tools:**
- Brainstorming
- Consensus Card
- Delphi Technique

### A. Problem Statement:

**How**

Identify the outcomes you hope to reach by solving the problem.

- Has the desired state been described in measurable, observable terms?
- Have you included a target date?
- Is everyone clear on whether this is a short-term or long-term desired state?

**Possible Tools:**
- Brainstorming
- Consensus Card
- Delphi Technique
- Interviewing
- Nominal Group
- Survey
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Personal Action
Plan

Key learnings:
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

I need to contact and involve the following:

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<th>Name</th>
<th>How</th>
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The specific action steps I will carry out on the job include:

1.  ______________________________________________________________  ______________
2.  ______________________________________________________________  ______________
3.  ______________________________________________________________  ______________

Additional issues/concerns I need to address:
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________