
LESSON 2. THE DECISION-MAKING PROCESS

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Lesson 2. The Decision-Making Process

Unit Objectives

At the end of this lesson, the participants will be able to:

- Identify attributes associated with an effective decision maker.
 - Describe the steps of the analytical problem-solving model.
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Scope

- Introduction
 - Keys to Effective Decision Making
 - Analytical Approach
 - Step 1: Identify the Problem
 - Step 2: Explore Alternatives
 - Step 3: Select an Alternative
 - Step 4: Implement the Solution
 - Step 5: Evaluate the Situation
 - Case Study: Sebring County
 - Summary and Transition
-

Methodology

In this lesson, the instructors begin by identifying the keys to effective decision making: clarity of values, quality of information, and analytical approach.

The instructors then describe a five-step analytical approach model designed to improve decision making. Finally, participants apply the model to the Sebring County case study introduced in the previous lesson.

Materials

- PowerPoint visuals 2.1 – 2.15 and a computer display system
 - Instructor Guide
 - Student Manual
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Lesson 2. The Decision-Making Process

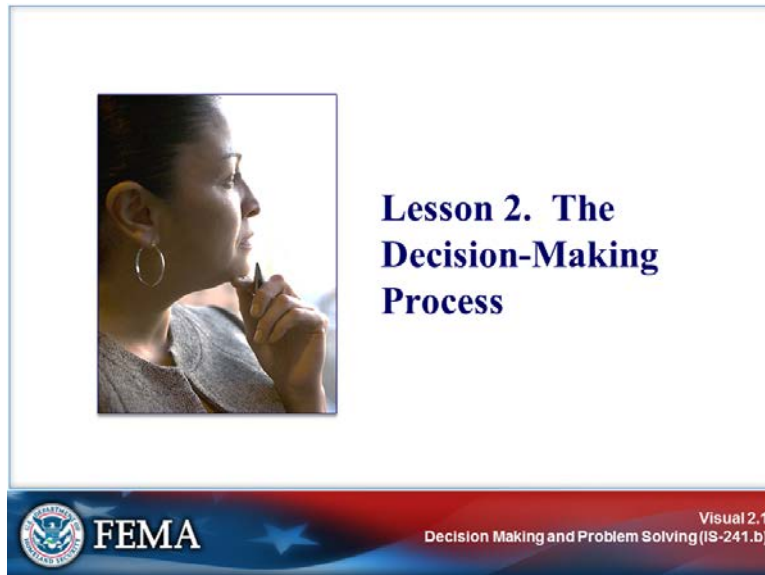
Time Plan

A suggested time plan for this lesson is shown below. More or less time may be required, based on the experience level of the group.

Topic	Time
Introduction	3 minutes
Keys to Effective Decision Making	7 minutes
Analytical Approach ▪ Step 1: Identify the Problem ▪ Step 2: Explore Alternatives ▪ Step 3: Select an Alternative ▪ Step 4: Implement the Solution ▪ Step 5: Evaluate the Situation	20 minutes
Case Study: Sebring County	28 minutes
Summary and Transition	2 minutes
Total Time	1 hour

INTRODUCTION

Visual 2.1



Instructor Notes: Present the following key points.

Whether making ordinary day-to-day decisions or critical, time-sensitive decisions in an emergency, using a standard problem-solving model will help ensure that your decisions are rational and logical.

In this lesson, you will learn a five-step, problem-solving model.

INTRODUCTION

Visual 2.2

Lesson 2 Objectives

- Identify attributes associated with an effective decision maker.
- Describe the steps of the analytical problem-solving model.



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Visual 2.2
Decision Making and Problem Solving (IS-241.b)

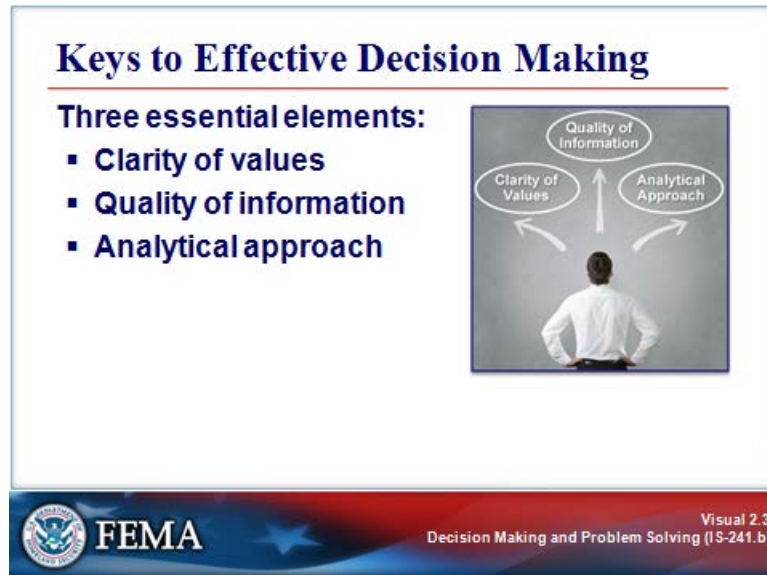
Instructor Notes: Present the following key points.

At the end of this lesson, the participants will be able to:

- Identify attributes associated with an effective decision maker.
- Describe the steps in the analytical problem-solving model.

KEYS TO EFFECTIVE DECISION MAKING

Visual 2.3



Instructor Notes: Present the following key points.

Three key elements are essential for effective decision making:

- Clarity of values
- Quality of information
- Analytical approach

Let's examine what each element entails.

KEYS TO EFFECTIVE DECISION MAKING

Visual 2.4

Clarity of Values

- Many factors may influence decision making.
- Priorities may shift and strategies change over time.
- Regardless, the underlying values must be clear.



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Visual 2.4
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

Many factors may influence decision making, including political, safety, financial, environmental, and ethical factors.

Unless you have a clear view of your values—what you want to achieve, preserve, and prevent—and keep them in mind at each step in the process, it can become difficult to balance these factors in a meaningful way.

Although priorities may shift, and how you implement strategies may change over time, the underlying values must be clear.

KEYS TO EFFECTIVE DECISION MAKING

Visual 2.5

Quality of Information

- Data must be accurate and reliable.
- Failure to verify information can lead to serious consequences from poor decisions.



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Visual 2.5
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

Data used in decision making must be accurate and reliable. The old standby, “Garbage In = Garbage Out” (GIGO), is especially true in decision making. You can’t start with faulty or inadequate information and hope to reach the best decisions.

Failure to verify information can lead to poor decisions—sometimes with serious consequences.

Thoroughly screen the information used in making decisions!

KEYS TO EFFECTIVE DECISION MAKING

Visual 2.6



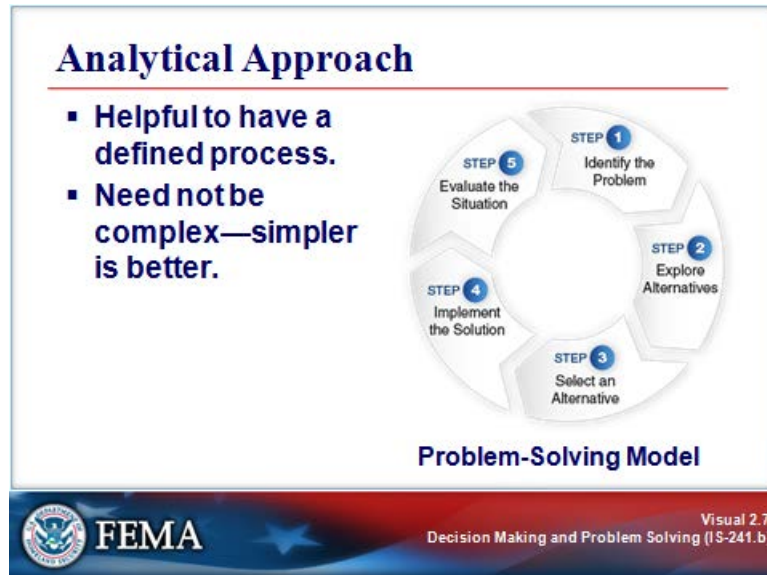
Instructor Notes: Present the following key points.

Tips for ensuring quality information:

- **Do your research:** Use the Internet, books, libraries, and people as sources of information. Find out if others have tried to solve this problem or a related problem. Build on lessons learned.
- **Use trusted sources** as the primary sources of information, but talk to secondary sources as well. They can help build a broader picture.
- **Validate your information:** Is it true? Is it accurate? Differentiate fact from rumor.
- **Collate and cross-check** against baseline data and against reports received from other sources. Carefully review conflicting opinions, and reconcile any discrepancies.

KEYS TO EFFECTIVE DECISION MAKING/ANALYTICAL APPROACH

Visual 2.7



Instructor Notes: Present the following key points.

It is helpful to have a defined process that leads to a solution or a decision. The process needn't be complex—in fact, in many cases simpler is better.

There are many different decision-making models to choose from. A commonly used five-step process is shown on the visual.

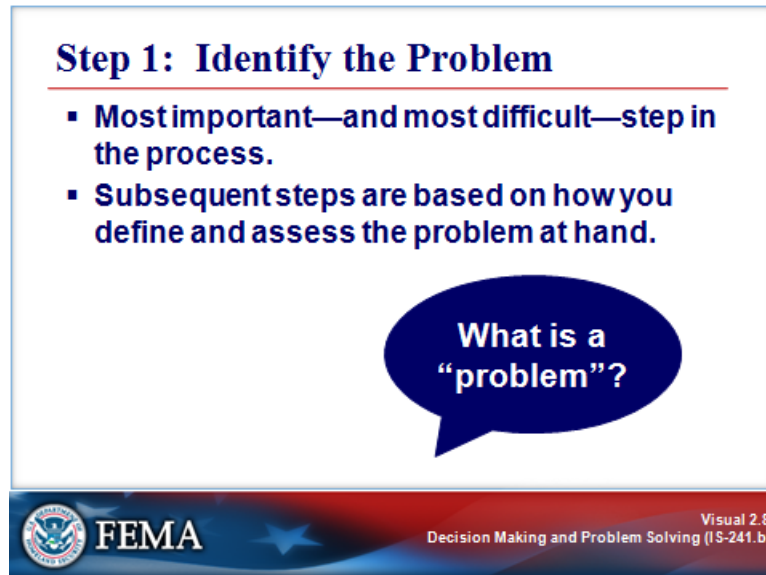
Although this process is circular, the steps are not necessarily completed in sequence. For example, knowledge gained during one step might send you back to a prior step before moving forward.

The steps of the process will be described in more detail in this lesson. In addition, there are several detailed job aids at the end of this lesson to aid you in applying the model.

Instructor Note: Refer participants to the job aid at the back of the Student Manual. It is not necessary to cover them in detail.

ANALYTICAL APPROACH

Visual 2.8



Instructor Notes: Present the following key points.

This step is the most important—and most difficult—step in the process. Subsequent steps are based on how you define and assess the problem at hand.

Answer the question: What is a “problem”?

Instructor Note:

Problem: A situation or condition that will exist in the future and is considered undesirable by members of the organization.

Problem or Solution?

In carrying out Step 1, distinguish between a problem and its solution. The most common error in problem solving is defining problems in terms of their solutions.

Here’s an example: Someone might say, “The problem is that we don’t have an EOC.” The problem, however, is not that there is no EOC.

- The problem is really that the emergency management community cannot coordinate communications adequately during the response phase.
- Establishing an EOC is a solution.

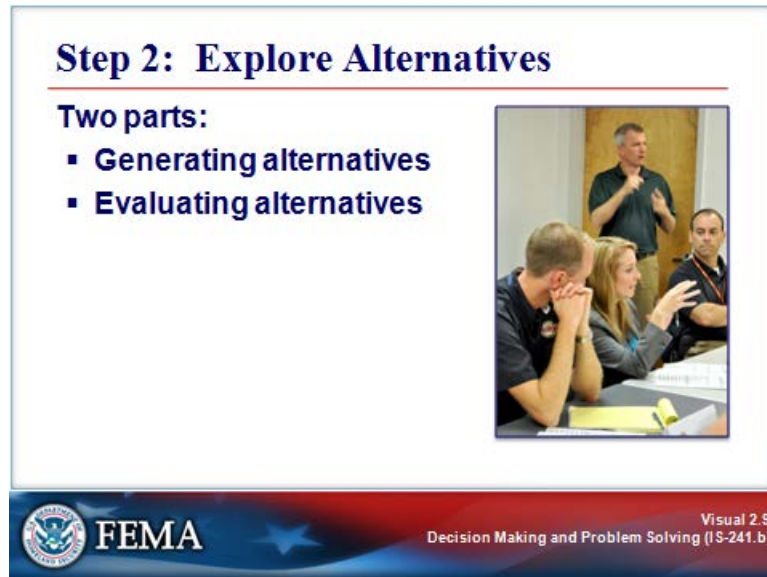
Delineating the Problem Parameters

Identifying the problem also involves analyzing the situation to determine the extent of the problem, including:

- What is happening (and is not happening)?
- Who is involved?
- What are the stakes?

ANALYTICAL APPROACH

Visual 2.9



Instructor Notes: Present the following key points.

This step includes generating alternatives and evaluating them.

Techniques for Generating Alternatives: You can generate alternatives through:

- Brainstorming
- Surveys
- Discussion groups

Criteria for Evaluating Alternatives

After you have generated alternative solutions, you must have some means of evaluating them. Alternatives should be evaluated using a consistent process.

Another part of evaluation is identifying contingencies—what could go wrong. Think in terms of Murphy's Law ("If anything can go wrong, it will.") and identify what could get in the way of solving the problem you are facing.

ANALYTICAL APPROACH

Visual 2.10

Step 3: Select an Alternative

Selection is affected by:

- Political factors.
- Safety factors.
- Financial factors.
- Environmental considerations.
- Ethical factors.



The image shows four men in a meeting room. They are gathered around a table, looking at a map or a large document. One man is pointing at the map. They appear to be in a collaborative discussion.

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Visual 2.10
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

After you have evaluated each alternative, select the alternative that comes closest to solving the problem with the most advantages and fewest disadvantages.

Implementing the solution may not be easy. There may be repercussions, and you should complete a reality check to identify and evaluate the possible consequences of implementing the solution. Carefully consider how the solution will be implemented before selecting an alternative.

When selecting an alternative, you will encounter factors that affect your decision making. These factors may include:

- Political factors.
- Safety factors.
- Financial factors.
- Environmental considerations.
- Ethical factors.

Not all of these factors may be readily recognizable. As you examine the situation and apply the problem-solving model, be alert for these potential limits on the solutions that you can implement.

ANALYTICAL APPROACH

Visual 2.11

Step 4: Implement the Solution

Implementation involves:

- Developing an action plan (needed steps).
- Determining objectives.
- Identifying needed resources.
- Building a plan.
- Implementing the plan.



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Visual 2.11
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

Implementation involves the following:

- Developing an action plan (what steps are needed).
- Determining objectives or measurable targets.
 - Used to monitor progress and establish priorities.
 - Based on analysis of the situation and contingencies.
- Identifying needed resources (people, information, things).
 - What resources do I need?
 - Where will I get them?
 - How long will it take?
 - What can others offer?
 - Are there any special requirements?
- Identifying details of the action plan (who will do what, by when, where, and how, as applicable).
- Using the plan to put the solution in place.

ANALYTICAL APPROACH

Visual 2.12

Step 5: Evaluate the Situation

Evaluation involves:

- Monitoring progress.
- Evaluating the results.



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Visual 2.12
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

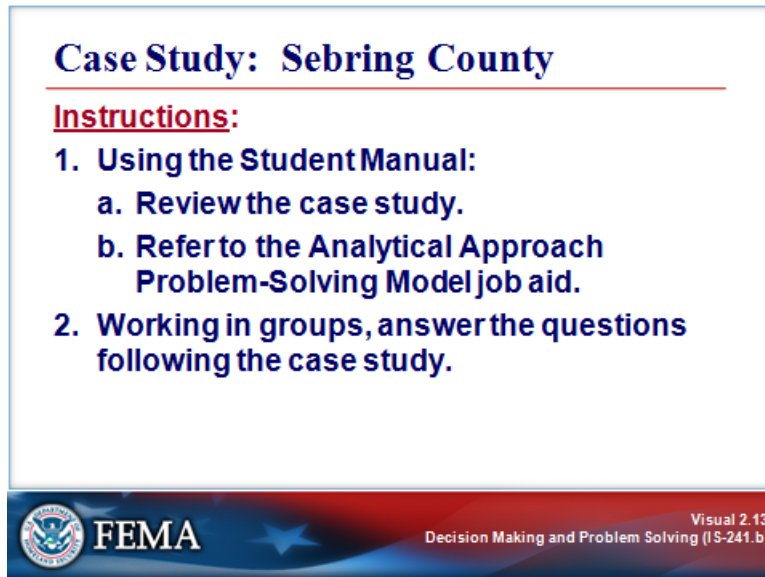
Evaluation involves monitoring progress and evaluating the decision that was made.

During evaluation, identify if the situation has changed, more or fewer resources are required, or a different alternative solution is required. Evaluation is an ongoing process.

In the remainder of this course, we will take a closer look at each of the five steps and how you can apply them to decision making and problem solving in emergencies.

CASE STUDY: SEBRING COUNTY

Visual 2.13

A presentation slide titled "Case Study: Sebring County" with a red underline. Below the title, the word "Instructions:" is written in red. There are two main numbered instructions: "1. Using the Student Manual:" and "2. Working in groups, answer the questions following the case study." Under instruction 1, there are two sub-points: "a. Review the case study." and "b. Refer to the Analytical Approach Problem-Solving Model job aid." The slide has a blue border and a red and blue footer banner. The banner contains the FEMA logo on the left, the text "FEMA" in the center, and "Visual 2.13 Decision Making and Problem Solving (IS-241.b)" on the right.

Case Study: Sebring County

Instructions:

- 1. Using the Student Manual:**
 - a. Review the case study.**
 - b. Refer to the Analytical Approach Problem-Solving Model job aid.**
- 2. Working in groups, answer the questions following the case study.**

 **FEMA** Visual 2.13
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

This activity will give you an opportunity to follow the steps of the analytical model. Working in groups, follow the steps below to complete this activity:

1. Review the details of the case study in the previous lesson of your Student Manual.
2. Refer to the Analytical Approach Problem-Solving Model job aid at the end of this lesson.

Don't worry if you are not providing all of the details of the full process. The point of this activity is for you to consider how you would use the process.

Instructor Note: If desired, you may use another case study that more accurately reflects the composition of the class.

CASE STUDY: SEBRING COUNTY**Visual 2.13 (Continued)**

Background: Heavy rainstorms have hit, and counties across the entire State are faced with flash flooding to varying degrees. The town of Westfield, located in Sebring County, one of the hardest hit counties in the State, sits high and well away from the river, so flooding is usually not a concern. Last year, a new spillway was built to increase the capacity of the town reservoir to about 44 million gallons. Two towns downstream, Ambry and Gilson, are less than a 5-minute drive from Westfield. Each town has about 2,400 residents, most of them along U.S. Route 270.

Event Chronology:

Late afternoon	Rain begins, and weather forecasters predict it will be a strong, slow-moving storm that will produce heavy rain.
7:41 p.m.	A flash flood watch is issued by the National Weather Service.
8:00 p.m.	Heavy rains begin.
9:30 p.m.	The county engineer stations an employee on the dam to watch for and report any problems. The employee sees water pouring a good 2 feet over the spillway. (It was later estimated that the reservoir was holding 65 million gallons during and after the storm.)
11:00 p.m.	Five inches of rain have fallen over the last 3 hours.
12:30 a.m.	The employee sees a section of dirt break away.
1:00 a.m.	When water recedes below the top of the dam, county employees discover that water has eaten around the spillway and is gradually carving away the side of the earthen dam. A first attempt at closing the hole with sandbags fails when the force of the water carries the bags right through.
1:30 a.m.	The Sebring County Emergency Program Manager is now meeting with the mayor of Westfield, the county engineer, the public works director, the fire chief, and the police chief to discuss the situation.

CASE STUDY: SEBRING COUNTY

Visual 2.14

Case Study Questions

Questions:

1. What is the problem?
2. Who else might you include when developing and evaluating alternatives?
3. What factors must you consider when selecting an alternative?
4. What is your objective? What resources are potentially available to you to accomplish it?
5. How will you monitor and evaluate the situation?

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Visual 2.14
Decision Making and Problem Solving (IS-241.b)

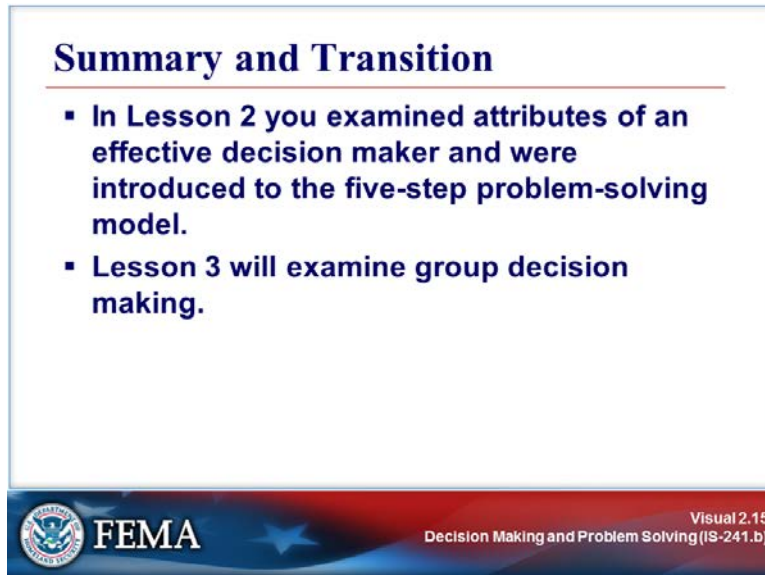
Instructor Notes: Present the following key points.

Working in assigned groups, respond to the following questions about the case study.

1. What is the problem?	
2. Who else might you include when developing and evaluating alternatives?	
3. What factors must you consider when selecting an alternative?	
4. What is your objective? What resources are potentially available to you to accomplish it?	
5. How will you monitor and evaluate the situation?	

SUMMARY AND TRANSITION

Visual 2.15



Instructor Notes: Present the following key points.

In Lesson 2 you examined attributes of an effective decision maker and were introduced to the five-step problem-solving model.

Lesson 3 will examine group decision making.