

Creative Problem Solving

Six Steps of Creative Problem Solving Process

The Creative Problem Solving Process uses six major steps to implement solutions to almost any kind of problem. The steps are:

- Information Gathering, or understanding more about the problem before proceeding
- Problem Definition, or making sure you understand the correct problem before proceeding
- Generating Possible Solutions using various tools
- Analyzing Possible Solutions, or determining the effectiveness of possible solutions before proceeding
- Selecting the Best Solution(s)
- Planning the Next Course of Action (Next Steps), or implementing the solution(s)

Understanding Types of Information

There are many different types of information.

The following list includes information you will need to consider when beginning the creative problem solving process:

- Fact
- Opinion
- Opinionated Fact
- Concept
- Assumption
- Procedure
- Process
- Principle

Identifying Mental Blocks

There are many types of mental blocks. Most blocks to problem-solving fit into the following categories.

- **EMOTIONS:** Emotional blocks can include anything from a fear of risk taking to a tendency to judge or approach the problem with a negative attitude.
- **DISTRACTIONS:** Too much information, irrelevant information, or environmental distractions can prevent a productive brainstorming session.
- **ASSUMPTIONS:** If problem solvers assume there is only one correct solution, they will be unable to generate additional ideas. Assumptions also become mental blocks from stereotypes or perceived boundaries where none exist.
- **CULTURE:** Culture defines the way we live and limits the ideas we may generate or consider. However, not every culture is the same. Sometimes the cultural blocks are unnecessary, and sometimes we do not consider cultural limitations when we should.
- **COMMUNICATION DIFFICULTIES:** If we cannot communicate our ideas in some way – speaking, writing, or pictures – these communication difficulties can block our progress in generating ideas.

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The Six Thinking Hats

- **WHITE HAT – FACTS AND INFORMATION:** This hat includes Information collected or identified as missing.
- **RED HAT – FEELINGS AND EMOTION:** This hat includes feelings, including gut reactions to ideas or items identified in another area.
- **BLACK HAT – CRITICAL JUDGMENT:** This hat includes details about obstacles to solving the problem or other negative connotations about an item or idea. Since people are naturally critical, it is important to limit black hat thinking to its appropriate role.
- **YELLOW HAT – POSITIVE JUDGMENT:** This hat is the opposite of the black hat. It includes details about the benefits of an idea or issue, or thoughts about favoring an idea. It is still critical thinking and judgment, as opposed to blind optimism.
- **GREEN HAT – ALTERNATIVES AND LEARNING:** This hat concerns ideas about new possibilities and thinking about implications rather than judgments. Green hat thinking covers the full spectrum of creativity.
- **BLUE HAT – THE BIG PICTURE:** This hat serves as the facilitator of the group thinking process. This hat can be used to set objectives both for the problem solving process and the thinking session itself.

Gathering Information

Here are some of the ways you can collect information about a problem:

- Conduct interviews.
- Identify and study statistics.
- Send questionnaires out to employees, customers, or other people concerned with the problem.
- Conduct technical experiments.
- Observe the procedures or processes in question first hand.
- Create focus groups to discuss the problem.

Determining Where the Problem Originated

Successful problem solvers get to the root of the problem by interviewing or questioning anyone who might know something useful about the problem. Ask questions about the problem, including questions that:

- Clarify the situation
- Challenge assumptions about the problem
- Determine possible reasons and evidence
- Explore different perspectives concerning the problem
- Ask more about the original question

If you did not define the problem, find out who did. Think about that person's motivations. Challenge their assumptions to dig deeper into the problem.