

The SCAMPER Technique

by Olivier Serrat

Ideas are not often plucked out of thin air. The SCAMPER brainstorming technique uses a set of directed questions to resolve a problem (or meet an opportunity). It can also turn a tired idea into something new and different.

Rationale

A problem is a situation, condition, or issue that remains unresolved and makes it difficult to accomplish a desired objective. It is recognized as such when an individual, group, or organization becomes aware of a significant difference between what is desired and what actually is. Trying to find a solution to a problem is known as problem solving.

Problem solving is the process by which a situation is analyzed, a workable solution is determined, and corrective action is taken. The common milestones of problem solving are to

- Define (or clarify) the problem.
- Analyze causes.
- Generate ideas (identify alternatives).
- Weigh up ideas (assess alternatives).
- Make a decision (select an alternative).
- Determine next steps to implement the solution.
- Evaluate whether the problem was solved or not.



The SCAMPER Technique

Every problem invites a solution and, needless to say, problem-solving techniques are numerous.¹ The SCAMPER technique, for one, uses a set of directed, idea-spurring questions to suggest some addition to, or modification of, something that already exists.² It has also received much attention as a learning tool that fosters awareness, drive, fluency,

¹ They include Affinity Diagrams (organizing ideas into common themes); the Ansoff Matrix (understanding the different risks of different options); Appreciation (extracting maximum information from facts); Appreciative Inquiry (solving problems by looking at what is going right); the Boston Matrix (focusing effort to give the greatest returns); Brainstorming (generating a large number of ideas to solve a problem); Cause-and-Effect Diagrams (identifying the possible causes of problems); Core Competence Analysis (get ahead, stay ahead); Critical Success Factors (identifying the things that really matter for success); the Five Whys Technique (quickly getting to the root of a problem); Flowcharts (understanding how a process works); the Greiner Curve (surviving the crises that come with growth); Lateral Thinking (changing concepts and perception); the Marketing Mix and the 4 Ps (understanding how to position a market offering); the McKinsey 7Ss (making sure that all the parts of an organization work in harmony); PEST (Political, Economic, Sociocultural, and Technological) Analysis (understanding the big picture); Porter's Five Forces (understanding where power lies); the Reframing Matrix (examining problems from distinct viewpoints); Risk Analysis; Systems Diagrams (understanding the way factors affect one another); Root Cause Analysis (identifying the root causes of problems or events); SWOT Analysis (analyzing strengths, weaknesses, opportunities, and threats); and USP (Unique Selling Propositions) Analysis (crafting competitive edge).

² The principles of the SCAMPER technique were first formally suggested by Alex Osborn and later arranged by Bob Eberle as a mnemonic in 1991 to increase interest in the perceptive, imaginative, and creative abilities of children.

flexibility, and originality. The stimulus comes from being asked to answer queries that one would not normally pose. The changes that SCAMPER stands for are

- S—Substitute (e.g., components, materials, people)
- C—Combine (e.g., mix, combine with other assemblies or services, integrate)
- A—Adapt (e.g., alter, change function, use part of another element)
- M—Magnify/Modify (e.g., increase or reduce in scale, change shape, modify attributes)
- P—Put to other uses
- E—Eliminate (e.g., remove elements, simplify, reduce to core functionality)
- R—Rearrange/Reverse (e.g., turn inside out or upside down)

Help Guide to the SCAMPER Technique³

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|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substitute | Think about substituting part of the product or process for something else. |
| | Typical questions: What else instead? Who else instead? What other materials, ingredients, processes, power, sounds, approaches, or forces might I substitute? Which other place? |
| Combine | Think about combining two or more parts of the product or process to make something new or to enhance synergy. |
| | Typical questions: What mix, assortment, alloy, or ensemble might I blend? What ideas, purposes, units, or appeals might I combine? |
| Adapt | Think about which parts of the product or process could be adapted or how you might change the nature of the product or process. |
| | Typical questions: Does the past offer a parallel? What else is like this? What other idea does this suggest? What might I adapt for use as a solution? What might I copy? Who might I emulate? |
| Magnify, Modify | Think about changing part or all of the product or process, or distorting it in an unusual way. |
| | Typical questions: What other meaning, color, motion, sound, smell, form, or shape might I adopt? What might I add? |
| Put to Other Uses | Think of how you might put the product or process to another use or how you might reuse something from somewhere else. |
| | Typical questions: What new ways are there to use this? Might this be used in other places? Which other people might I reach? To what other uses might this be put if it is modified? |
| Eliminate | Think of what might happen if you eliminated parts of the product or process and consider what you might do in that situation. |
| | Typical questions: What might I understate? What might I eliminate? What might I streamline? What might I make smaller, lower, shorter, or lighter? |
| Rearrange, Reverse | Think of what you might do if parts of the product or process worked in reverse or were sequenced differently. |
| | Typical questions: What might be rearranged? What other pattern, layout, or sequence might I adopt? Can components be interchanged? Should I change pace or schedule? Can positives and negatives be swapped? Could roles be reversed? |

³ Litemind's blog on *Creative Problem Solving with SCAMPER* (available: <http://litemind.com/scamper/>) suggests more than 60 questions that can be asked, along with almost 200 words and expressions one can create associations with.

Caveat

The SCAMPER technique is used to produce original ideas. The creative process thrives on preparation, concentration, incubation, illumination, and verification. In organizations, its fruitful application depends on the existence of an enabling environment. Of course, personal blocks⁴ to creativity exist but these can often be overcome. Supervisors who foster creativity listen, are willing to absorb the risks borne by their subordinates, are comfortable with half-developed ideas, do not dwell on past mistakes, expect subordinates to succeed, capitalize on the strengths of subordinates, enjoy their jobs, and make quick decisions. They must then help sell ideas to senior management. This involves assessing the “sellability” of ideas⁵ and developing persuasive arguments.⁶

Further Reading

ADB. 2008a. *The Reframing Matrix*. Manila. Available: www.adb.org/documents/information/knowledge-solutions/the-reframing-matrix.pdf

_____. 2008b. *Appreciative Inquiry*. Manila. Available: www.adb.org/documents/information/knowledge-solutions/appreciative-inquiry.pdf

_____. 2009. *The Five Whys Technique*. Manila. Available: www.adb.org/documents/information/knowledge-solutions/the-five-whys-technique.pdf

Litemind. 2009. *Creative Problem Solving with SCAMPER*. Available: <http://litemind.com/scamper/>

For further information

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⁴ I do not want to look foolish. I do not want to fail. I am not creative. This is not my area (e.g., skill, style, job, etc.). I am not paid to have fun!

⁵ Will the idea work? Will people accept it? Is it timely?

⁶ This requires that the proponents relate the idea to a recognized need, appeal to positive values, anticipate objections, get others involved, and advertise their credibility.

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