

*Section 3. Problems of Methodology and Practice Management*

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### **SCAMPER TECHNIQUE FOR CREATIVE THINKING**

Creative thinking and problem-solving are essential parts of the design process to turn ideas into innovation and break the barriers against creativity. One of the successful methods used in creative thinking is the SCAMPER technique. While there are different creative thinking and problem-solving techniques such as reversed brainstorming, Hurson’s thinking model, the six hats of critical thinking and Lego Serious Play, SCAMPER is considered one of the easiest and most direct methods. The SCAMPER technique is based very simply on the idea that what is new is actually a modification of existing old things around us.

SCAMPER was first introduced by Bob Eberle to address targeted questions that help solve problems or ignite creativity during brainstorming meetings. The name SCAMPER is acronym for seven techniques; (S) substitute, (C) combine, (A) adapt, (M) modify, (P) put to another use, (E) eliminate and (R) reverse. These keywords represent the necessary questions addressed during the creative thinking meeting.

How do SCAMPER technique work?

During the need for critical thinking either alone or inside a group, forcing the mind to think in a specific flow can help emerging innovative ideas that won’t be possible to reach using a regular thinking flow. The SCAMPER technique

aims to provide seven different thinking approaches to find innovative ideas and solutions.

There are two main concepts to keep in mind before starting the brainstorming using the SCAMPER technique; yet there is no sequential flow to follow while moving from each of the seven thinking techniques. Unlike Disney's creative strategy method, SCAMPER facilitators can move between different techniques without restricted to a specific flow. Secondly, the principle of force fitting should be adapted during the thinking sessions. For example, any response to the SCAMPER technique is welcomed no matter how non-logical is it. The seven SCAMPER techniques include the following:

### **Substitute**

The substitute technique focuses on the parts in the product, service or solution that can be replaced with another. During this part of the discussion the meeting attendees focus on making decisions to substitute part of the process with another. Questions asked during this part are:

- What part of the process can be substituted without affecting the whole project?
- Who or what can be substituted without affecting the process?
- What part in the process can be replaced with better alternatives?
- Can the project time or place be replaced?
- What will happen when we replace part of the project with another?
- Where else could you sell the product?
- Could we use another alternative of X?
- Can we substitute the current device with another better one?
- Can we replace the process with simpler one?

### **Combine**

The combine technique tends to analyze the possibility of merging two ideas, stages of the process or product in one single more efficient output. In

some cases, combining two innovative ideas can lead to a new product or technology which leads to market strength. The combine technique discussion can include the following questions:

- Can we merge two steps of the process?
- Can we apply two processes at the same time?
- Can our company combine resources with another partner in the market?
- Can we mix two or more components together?
- Can we combine X and Y technologies?

### **Adapt**

Adapt refers to a brainstorming discussion that aims to adjust or tweak product or service for a better output. This adjustment can range between minor changes to radical changes in the whole project. The adapt technique brainstorming session can include the following questions:

- What would we need to change to reach better results?
- What else could be done in this specific task?
- How can we improve the existing process?
- How can we adjust the existing product?
- How can we make the process more flexible?

### **Modify, minify or magnify**

The modify technique refers to changing the process in a way that unleashes more innovative capabilities or solves problems. This change is more than just adjustment as it focuses on the overall process. The questions asked under this rubric include:

- How will modifying the process improve results?
- What if we had a double consumer base?
- If the market was different, what would the process look like?

- Can we change the process to work more efficiently?
- What if the product is double the current size?

### **Put to another use**

This technique concerns how to put the current product or process in another purpose or how to use the existing product to solve problems. For example, this technique can be used to learn how to shift an existing product to another market segment or user type. The questions in this technique can include the following:

- What other parts in the company can use the product?
- What are the benefits for the product if used elsewhere?
- What if we target another market segmentation for the current product?
- Can we add a specific step into the process to replace another?
- What are other ways can we use it?
- Can we recycle the waste for another use?

### **Eliminate or elaborate**

As the name implies, this technique aims to identify the parts of the process that can be eliminated to improve the process product or service. It also helps to explore the unnecessary parts of the project. Questions related to this part includes:

- What would happened if we removed this part?
- How can we achieve the same output without specific part of the project?
- Do we need this specific part?
- What would we do if we had to work with half the resources?

### **Reverse**

Finally, the reverse or rearrange technique aims to explore the innovative potential when changing the order of the process in the production

line. Reversing the process or part of it can help solving problems or produce more innovative output. The questions in this part include:

- What would happen if we reverse the process?
- How can we rearrange the current status for better output?
- What if we consider it backwards?
- Can we interchange elements?

### **Conclusion**

The SCAMPER technique is one of the easiest and direct methods for creative thinking and problem-solving through a number of techniques or question types; (S) substitute, (C) combine, (A) adapt, (M) modify, (P) put to another use, (E) eliminate and (R) reverse. These types can be used to explore problems from seven perspectives. This holistic technique of study helps reaching the best decision which fuels innovation and creativity.

### **References:**

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