Reverse Brainstorming

Problem
How to identify ideas to solve a problem?
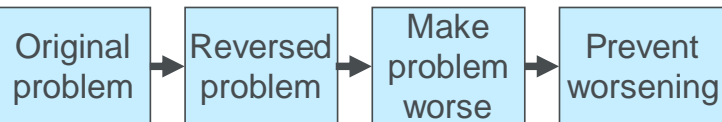
Difficulty
Easy to use

- Instead of directly solving a problem, **reverse brainstorming** reverses the problem to focus on causes of the original problem or how to achieve the opposite of what is desired.
- The ideas for the reverse problem, which worsen the original problem, are analyzed to determine how to solve the original problem.

Problem statement → **Reverse Brainstorming Process** → Problem improvements

Original problem → Reversed problem → Make problem worse → Prevent worsening

1. Clearly identify the problem to be solved.
2. Reverse the problem statement in one of two ways
   A. Instead of "How do I solve this problem?" create the reverse problem "How could I cause the problem?"
   B. Instead of "How do I achieve these results?" create the reverse problem "How could I achieve the opposite results?"
3. Brainstorm answers to solve the reverse problem (do not reject any ideas).
4. For each of the reverse problem ideas, attempt to find solutions to the original problem.
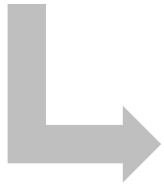5. Prioritize the solutions to the original problem.

Reverse Brainstorming – Example – Web Site Visits

- **Problem**: How to have more visitors to the 6in6 website (www.sixsigmainsixminutes.com)?
- **Reverse problem**: *How to drive visitors away from the 6in6 web site?*

Potential solutions to the reverse problem
1. Have a lengthy software license that users must agree to.
2. Put in many paid advertisements that take up much screen real estate.
3. Required a complicated log-in procedure with a required long password.
4. Have dead links that do not go anywhere.
5. Host the website on a very slow server.
6. Use many distracting features like flashing text and moving figures.
7. Make the web site hard to read (confusing text, small text, difficult to read fonts)
8. Make it difficult to find desired content.

Potential solutions to the original problem
1. Have no required software license.
2. Have no advertisements.
3. Do not require users to log in.
4. Confirm that all the links work.
5. Use the fastest affordable server.
6. Adopt UX (user experience) best practices; remove distractions.
7. Use simple language and large easy-to-read fonts.
8. Use a simple navigation paradigm.

Reverse Brainstorming – Notes

Slide 1

1. Reasons that Reverse Planning works:
   A. Many find it easier to be critical than to be constructive.
   B. Switching to the reverse problem gives a new perspective which can lead to new ideas.
2. Reverse Planning is also called the "double reverse" process since a reverse problem is created and then the solutions to the reversed problem are themselves reversed to find solutions to the original problem.
3. Strengths
   1. This mentor is sometimes easier than traditional forward brainstorming.
   2. This mentor can be introduced and used in the same barnstorming session
   3. This mentor can be used with remote team members.
   4. This mentor can help with un-motivated or burnt out teams.
4. Weaknesses:
   1. The two-step process can take longer than traditional forward brainstorming.

Slide 2

1. The results of this example apply to the design of any website.
2. In this example, there is a 1-to-1 correspondence between solutions to the reverse problem and solutions to the original problem. Often, there can be multiple solutions, or none, to the forward problem for each solution to the reverse problem.