Basic Tools for Process Improvement

BRAINSTORMING

What is Brainstorming?

Brainstorming is a tool used by teams to bring out the ideas of each individual and present them in an orderly fashion to the rest of the team. The key ingredient is to provide an environment free of criticism for creative and unrestricted exploration of options or solutions (Viewgraph 1).

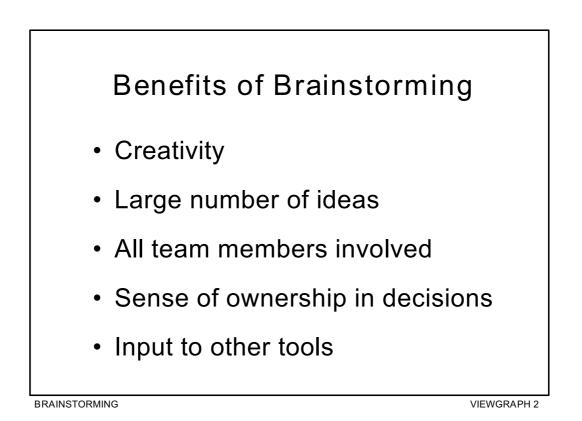
Why should a team do Brainstorming?

Brainstorming helps a team break free of old, ineffective ideas. This free-wheeling technique for generating ideas may produce some that seem half-baked, but it can lead to new and original solutions to problems. Some of the specific benefits of Brainstorming (Viewgraph 2) are that it

- Encourages creativity. It expands your thinking to include all aspects of a problem or a solution. You can identify a wide range of options.
- Rapidly produces a large number of ideas. By encouraging people to offer whatever ideas come to mind, it helps groups develop many ideas quickly.
- Equalizes involvement by all team members. It provides a nonjudgmental environment that encourages everyone to offer ideas. All ideas are recorded.
- Fosters a sense of ownership. Having all members actively participate in the Brainstorming process fosters a sense of ownership in the topic discussed and in the resulting activities. When the people on a team contribute personally to the direction of a decision, they are more likely to support it.
- Provides input to other tools. You may want to affinitize the brainstormed ideas. And, if appropriate, you can work with the team to reduce the number of ideas by Multivoting.

Brainstorming is useful when you want to generate a large number of ideas about issues to tackle, possible causes of problems, approaches to use, or actions to take.





What are the ground rules for Brainstorming?

For all participants to enjoy a creative and productive Brainstorming experience, the facilitator needs to review and get team members' buy-in on the ground rules for the session. These are the rules (Viewgraphs 3 and 4):

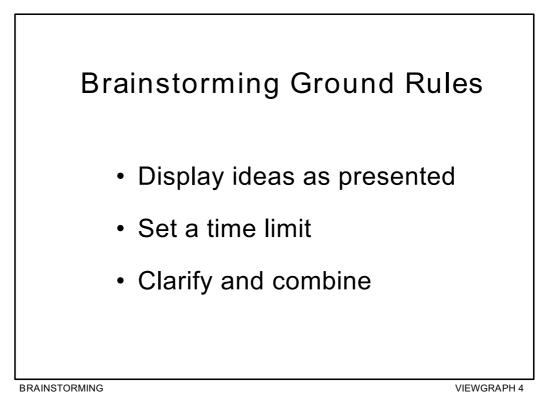
- Active participation by all team members. Everyone expresses his or her ideas, even if they seem silly or far out.
- No discussion—criticisms, compliments, or other comments—during the brainstorm.
- Build on ideas generated by other team members.
- All ideas written exactly as presented and displayed where everyone can see them.
- Set a time limit.
- Clarify ideas. After the brainstorm, go over the list to make sure that all team members understand the ideas. Remember that you are only clarifying the ideas, not making judgments about them.
- Combine ideas. See whether two or more ideas that appear to be the same can be combined.

How is a Brainstorming session conducted?

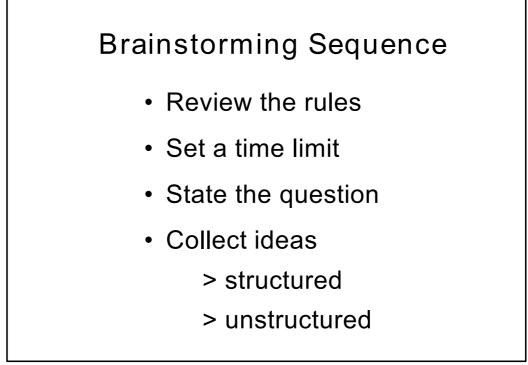
The recommended sequence for conducting Brainstorming (Viewgraphs 5 and 6) and some suggestions for conducting the session effectively are provided below:

- Review the rules for Brainstorming. Describe how this session will be conducted by going over the points below.
- Set a time limit for Brainstorming, assign a timekeeper and data recorder, and start the clock. Brainstorming should be a rapid generation of ideas, so do it quickly; 5-15 minutes works well. If the time limit has expired and ideas are still being generated, you can extend the time limit at five-minute intervals.
- State the topic to be brainstormed in the form of a question. Write it down and post it where everyone can refer to it. Ensure that everyone understands it.



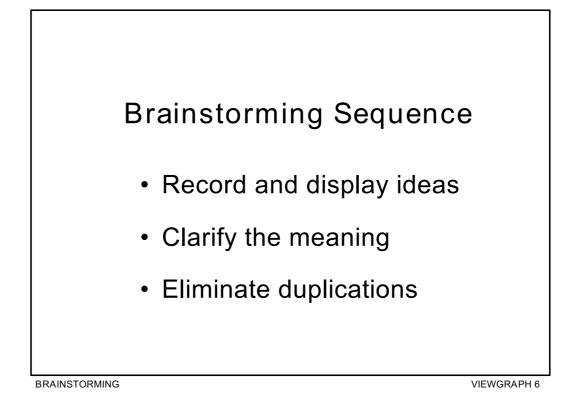


- Collect everyone's ideas. After allowing a few minutes for the participants to think about the question, ask them to give their ideas. Establish either a structured or unstructured format for calling out ideas:
 - Structured: The facilitator establishes a rotation that enables each person in the group to contribute an idea in turn. Any individual who is not ready with an idea when his or her turn comes can pass until the next round, when he or she may offer an idea or pass again.
 - > Unstructured: Team members call out ideas as they come to mind. This method calls for close monitoring by the facilitator to enforce the ground rules and ensure that all team members have a chance to participate.
- Record ideas on a chartpack as they are called out, or collect ideas written by team members on post-its[™]. Display the ideas where everyone can see them. Having the words visible to everyone at the same time avoids misinterpretation and duplication and helps stimulate creative thinking by other team members.
 - > When recording ideas, ensure that they are written down exactly as spoken by the team member. Don't interpret.
 - > Try to generate as long a list as possible. Keep Brainstorming until all participants have passed or the allotted time has expired.
- Clarify each idea after all ideas have been presented, to ensure that all members have the same understanding of it. Pointing to each idea on the chartpack in turn, ask the participants whether they have any questions about its meaning. You may have to ask the contributor to explain the idea in a different way.
- Eliminate duplications. If two or more ideas appear to mean the same thing, you should try to combine them or eliminate the duplicates. Before you can wrap the like ideas into a single item or eliminate any items on the list, all of those who contributed the similar ideas must agree that they mean the same thing. Otherwise, they remain as separate items.



BRAINSTORMING

VIEWGRAPH 5



How can we practice what we've learned?

Some practical exercises will enable you to apply the skills you've just learned. The first exercise is sketched out in detail. When you have completed that, you can try Brainstorming one or two other topics from the list provided below.

DETAILED EXERCISE: A team of recycling experts from throughout the base was assembled to address the issue of increasing command awareness of the recycling program. They were asked to brainstorm the following question (Viewgraph 7):

What can be done to ensure proper disposal of recyclable material on the base?

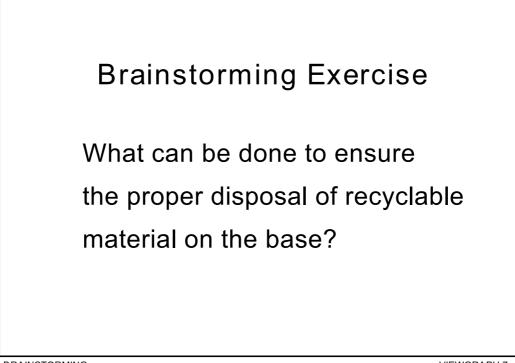
The team clarified the topic by defining the terms used in it:

- Recyclable material is defined as white paper, aluminum cans, cardboard boxes, glass bottles, and plastic containers not contaminated by food.
- Proper disposal means that all recyclable material is placed in containers designated for that purpose and segregated so that different types of recyclable material aren't mixed; for instance, paper is not mixed with cans.
- On the base is defined as inside the perimeter fence that surrounds the property of the base.

Apply the ground rules and sequence for Brainstorming to generate ideas on this topic for 5 minutes. A list of ideas of the kind that might be generated during such a Brainstorming session is provided as an example at the end of this module.

OTHER EXERCISE TOPICS:

- > How can we improve the readiness of the command?
- > What can be done about the state of readiness of the fire control systems?
- > Why is our ship dragging anchor in heavy weather?
- > What things do we need to consider in planning a perfect meeting?
- > What can be done to improve the productivity of our meetings?
- > How can information flow be improved within our organization?
- > Why are the organization's vehicles getting poor gas mileage?
- > How can we reduce the time it takes the pharmacy to fill a prescription?
- > What activities should we plan for the unit Christmas party?



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VIEWGRAPH 7

Detailed Exercise Example of List of Brainstormed Ideas

The following list is not the "right answer" to the exercise. Rather, it is an example of the kind of large list of diversified solutions that might be brainstormed during a session such as the one in the Detailed Exercise.

Use metal detectors on all trash leaving the command. Pass monetary gains back to the individual. Hold mandatory training for all hands. Place more recycling bins throughout the command. Station a watch next to the trash cans. Have remote cameras monitoring the trash cans. Throw an annual picnic using the money from recycling. Have a contest between base commands. Place recycling bins next to wastebaskets. Remove wastebaskets from all office areas. Inspect wastebaskets at the end of each day. Make it an honor offense not to recycle. Educate personnel on why we need to recycle. Make recycling violators perform community service. Post signs throughout the command encouraging recycling. Use computers to make the command paperless. Have instant cash rewards for people who recycle. Don't pick up trash if it has recyclable material inside. Find a way to recycle yellow post-its[™]. Put up signs at all soft drink machines. Remove all soft drink machines.

REFERENCES:

- 1. Brassard, M. (1988). The Memory Jogger, A Pocket Guide of Tools for Continuous Improvement, p. 69. Methuen, MA: GOAL/QPC.
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- 3. Scholtes, P.R., et al (1988). The Team Handbook, pp. 2-37 2-39. Madison, WI: Joiner Associates.