

# InEDIC Ecodesign Manual

## Tool 10: Brainstorming

A well-known tool when searching for new ideas is brainstorming. Brainstorming sessions are held in all companies from time to time. Experts in different disciplines come together and try to contrive an answer to a question asked by the group itself. Brainstorming is a useful tool when researching environmental improvements.

Brainstorming will occasionally fail to introduce many concrete results, especially if the problem is quite complex. In many cases this is mainly due to a faulty implementation technique, rather than due to the brainstorming approach itself.

The results can be improved (both quantitatively and qualitatively) by following a number of empirical rules:

- Ask a specific question. In case the topic to be investigated proves to be complex, two brainstorming sessions will probably yield better results than just one. Split each brainstorming session into two separate parts: during the first part, generate ideas without giving any criticism whatsoever; the ideas are evaluated in the second part.
- Emphasis must be given to the initial creative part of a brainstorming session, relating on the quantity and diversity of the ideas. The chances of a brainstorming session to introduce an innovative solution to any particular problem are that much greater, depending on the number and diversity of initial ideas.
- People with a variety of backgrounds and different disciplines should be preferred. Lengthy explanations and discussion should be avoided; the views of the other members of the team should be used as stepping stones towards new ideas. The group, however, should not be too large, to facilitate the management of the brainstorming process, (a group of 3-7 people is recommended).
- Adopt a positive group attitude, welcoming even those ideas that seem illogical; they may seem ridiculous but they can lead to unexpected solutions.

## Brainstorming' steps

### 1. Preparation of the group

When starting a brainstorming session, it is necessary to prepare the entire group by explaining its purpose and by indicating the five rules that must be followed:

#### Brainstorming: basic rules

1. All ideas are good; some unexpected approaches could make a bridge to original and innovative ideas;
2. State all ideas;
3. It is forbidden to debate and criticise the ideas put forward; inhibitions and deviations in the objectives of the session should be avoided;
4. Combination of ideas has to be encouraged and at any time any person may submit an idea that is a modification or combination of ideas already presented by other members. However, the original ideas must be maintained on the board;
5. Equal opportunities are ensured; everyone has the opportunity to present their ideas.

### 2. Defining the problem

A clear definition of the problem at hand is one of the most important and often one of the most neglected steps. The central issue should be well described and to ensure that all members understand the meeting's scope, it should be written on paper and placed where it will be visible by all participants.

### 3. Generation of ideas

The maximum duration of the session should be predetermined and strictly managed by a member of the group, specifically selected for this job.

Upon commencement of activities, the group should be given a few minutes to ponder on the question; brainstorming should begin afterwards with the ideas of each person presented as conceived.

The ideas should be noted as they arise.

All ideas should be considered, whether they are presented in a structured or unstructured way.

- Structured way: the facilitator sets a rotation procedure, so that each person contributes with an idea. If the particular person has no ideas, the next one, depending on the rotation procedure, steps in.
- Non-structured way: everyone presents their ideas as these arise. This method requires more work from the facilitator, who must verify that all people had the opportunity to participate.

#### **4. Development of brainstorming**

The ideas are arranged in a flipchart and placed where it will be visible to all participants. This method eliminates misunderstandings and helps stimulate creative thinking.

The ideas are written down exactly as described and are not interpreted in any way, in an effort to gather the longest possible list.

Upon completion of the session, a review on the meaning of all the ideas presented should be distributed, to ensure that everyone has the same understanding. All brainstorming members should be asked whether they have any doubts about its meaning. If an idea needs to be clarified, the contributor can elaborate further.

During the review of ideas, overlappings must be eliminated. If two or more ideas prove to have the same meaning, they should be combined or the repetition should be eliminated with the agreement of their contributors. If the contributors disagree, the ideas must remain intact and separated.

#### **5. After the brainstorming session**

All ideas should be gathered and organized into topics and categories. Within each category, similar ideas should be combined and the best ones should be selected and examined, improved and revered.

The group should be informed of the brainstorming result and understand the value of their contributions. If necessary, a new session should be scheduled

It often becomes necessary to gather more information about various aspects of the problem. New information can then be introduced at a subsequent session. The learning process is inherent in all brainstorming activities and it can require several sessions to solve a problem.

### Sample Table

State your ideas

Ideas