Tools for Creating Innovative Ideas

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Overview

There is little need to state that good ideas are invaluable. Some of them have led to world class inventions or re-engineered the way business is done or brought about dramatic improvements in products or services offered.

It is imperative that we do not lose any new ideas when they are being generated and that we organize and prioritize them, based on the business need, value addition etc.

It is said that Newton got the idea of gravity when he was hit on the head with an apple while sitting under an apple tree. Need we sit under a tree waiting for an apple to fall & thus an idea to be generated? Of course not. We can produce our own chance events.

Want to come up with new ideas or organize several ideas? Read on..

Techniques

There are several tools for creative thinking e.g.

- Mindmapping
- Storyboarding
- Brainstorming
- Affinity Diagram
- Nominal Group Technique
- Benchmarking
- Metaphorical Thinking
- DO IT! Method
- etc,

I will focus on a few of these..

The following tools can be useful to us when we wish to come up with new ideas and to organize them as well.

Brainstorming

This is a technique of generating a large number of creative ideas in a short duration. Though there are several variations of brainstorming, the basic version is called a free-form or an unstructured brainstorming. This technique is preferred when participation of the entire team is desired.

Procedure:

Materials needed

Flipchart, marking pens, tape and blank wall space.

Steps

a) Review the rules of brainstorming with the entire group:

- No criticism, no evaluation, no discussion of ideas.
- There are no stupid ideas. The wilder the better.
- All ideas are recorded.
- Piggybacking is encouraged: combining, modifying, expanding others' ideas.

b) Review the topic or problem to be discussed. Often it is best phrased as a "why," "how," or "what" question. Make sure everyone understands the subject of the brainstorm.
c) Allow a minute or two of silence for everyone to think about the question.
d) Invite people to call out their ideas. Record all ideas, in words as close as possible to those used by the contributor. No discussion or evaluation of any kind is permitted.
e) Continue to generate and record ideas until several minutes' silence produces no more.

Important to note

Don't hold back any ideas, however unconventional they might seem to be, since some of the craziest ideas are very creative. Their perspective may vary.

Affinity Diagram (Also called: affinity chart, K-J method)

This tool was created in the 1960s by Japanese anthropologist Jiro Kawakita.

a) The affinity diagram organizes a large number of ideas into their natural relationships. This method takes into consideration, a team's creativity and intuition.
b) This method is used when there are too many issues and complex ones at that.
c) This is also used when consensus of the group is needed.
d) This is typically done after a brainstorming exercise.
e) A typical situation when this method would be used is when survey results need to be analyzed.

Procedure:

Materials needed:

Sticky notes, marking pens, large work surface (white board / wall)

Steps

a) Record each idea with a marking pen on a separate sticky note. (During a brainstorming session, write directly onto sticky notes if you know you will be following the brainstorm with an affinity diagram.) Randomly spread notes on a large work surface so all notes are visible to everyone. The entire team gathers around the notes and participates in the next steps.
b) It is very important that no one talk during this step. Look for ideas that seem to be related in some way. Place them side by side. Repeat until all notes are grouped. It's okay to have "loners" that don't seem to fit a group. It's all right to move a note someone else has already moved. If a note seems to belong in two groups, make a second note.
c) Now the talking can start. Participants can discuss the shape of the chart, any surprising patterns, and especially reasons for moving controversial notes. A few more changes may be made. When ideas are grouped, select a heading for each group. Look for a note in each grouping that captures the meaning of the group. Place it at the top of the group. If there is no such note, write one. Often it is useful to write or highlight this note in a different color.
d) Combine groups into "supergroups" if appropriate.

Important to note

a) The affinity diagram process lets a group move beyond its habitual thinking and preconceived categories. This technique accesses the great knowledge and understanding residing untapped in our intuition.
b) Very important "Do nots": Do not place the notes in any order. Do not determine categories or headings in advance. Do not talk during step b of the Procedure described above. This should be strictly observed, though it may be tough to control at some points of time.

Example

The Project X team can use an affinity diagram to organize list of causes that led to defects.

Causes for Defects found
• Code • Detailed Design • Unit test / Documentation • System Requirements • Bug Fix breakage • Legacy • High Level design • Third party code • Module requirement

Figure 1: Brainstorming for affinity diagram example

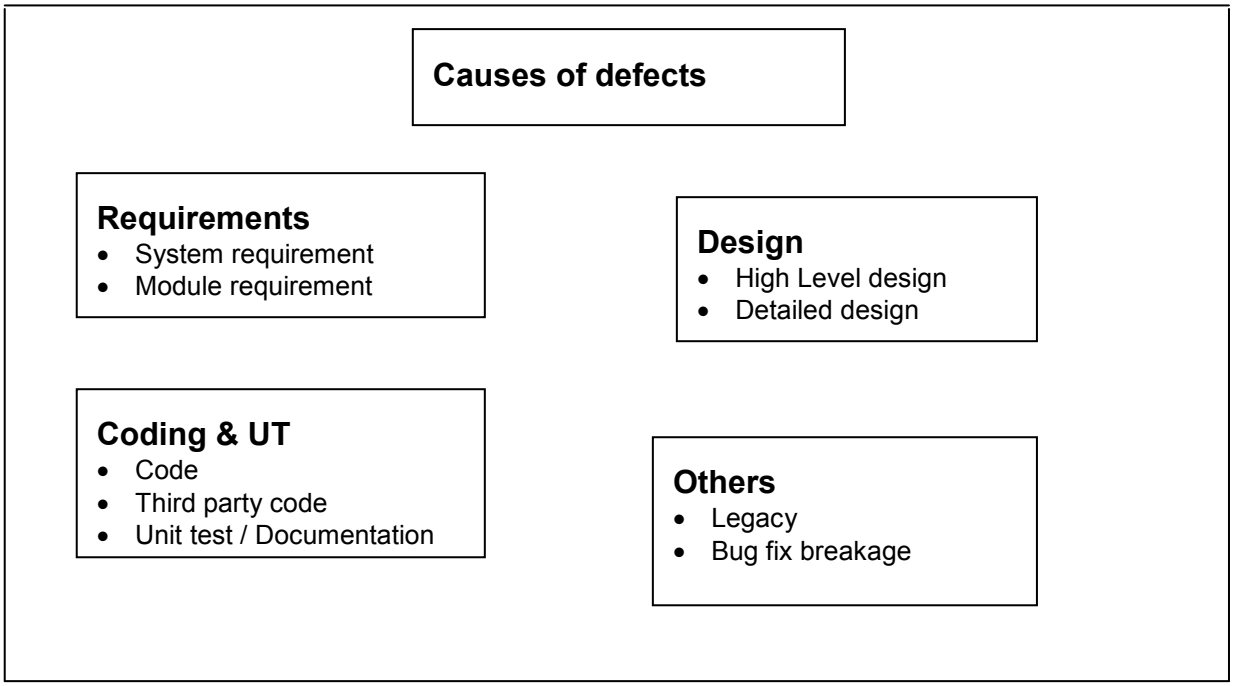
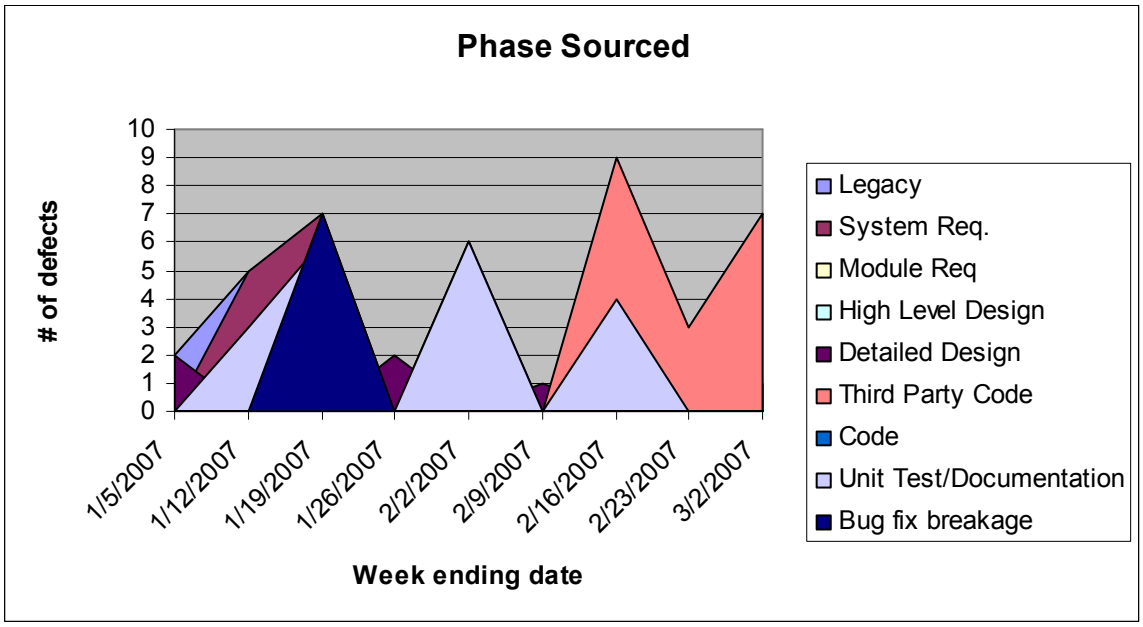


Figure 2: Affinity diagram example

Then the distribution of the **number of defects phase-wise over the time scale** can be further analyzed, by looking at the graph below:



Nominal Group Technique (NGT)

This is a structured method for group brainstorming that encourages contributions from everyone. This tool is used when

- Some group members are more vocal than others, some think better in silence or when there is a concern about some members not participating.
- When there is a shortage of ideas generated by the team or when all or some of the team members are new.
- When there is a conflict about an issue.

Procedure:

Materials needed:

Paper and pen or pencil for each individual, flipchart, marking pens, tape.

Steps

a. State the subject of the brainstorming. Clarify the statement as needed until everyone understands it.
b. Each team member silently thinks of and writes down as many ideas as possible in a set period of time (5 to 10 minutes).
c. Each member in turn states aloud one idea. Facilitator records it on the flipchart.
d. No discussion is allowed, not even questions for clarification.
e. Ideas given do not need to be from the team member's written list. Indeed, as time goes on, many ideas will not be.
f. A member may "pass" his or her turn, and may then add an idea on a subsequent turn.
g. Continue around the group until all members pass or for an agreed-upon length of time.
h. Discuss each idea in turn. Wording may be changed only when the idea's originator agrees. Ideas may be struck from the list only by unanimous agreement. Discussion may clarify meaning, explain logic or analysis, raise and answer questions, or state agreement or disagreement.
i. Prioritize the ideas using multi-voting or list reduction.

Important to note..

- Discussion should be equally balanced among all ideas. The facilitator should not allow discussion to turn into argument. The primary purpose of the discussion is clarification. It is not to resolve differences of opinion.
- Keep all ideas visible. When ideas overflow to additional flipchart pages, post previous pages around the room so all ideas are still visible to everyone.

Benchmarking:

This method involves five phases:

a. **Planning:** The following must be planned, i.e. what is to be benchmarked, whom must we benchmark against and how the data will be collected.
b. **Analysis:** The analysis phase must involve a careful understanding of our current process and practices, as well as those of the organization(s) being benchmarked.
c. **Integration:** Integration is the process of using benchmark findings to set operational targets for change.
d. **Action:** Convert benchmark findings, and operational principles based on them, to specific actions to be taken.
e. **Maturity:** Maturity will be reached when best industry practices are incorporated in all business processes, thus ensuring superiority.

Steps

The **benchmarking process steps** are shown in **Figure 3 below**.

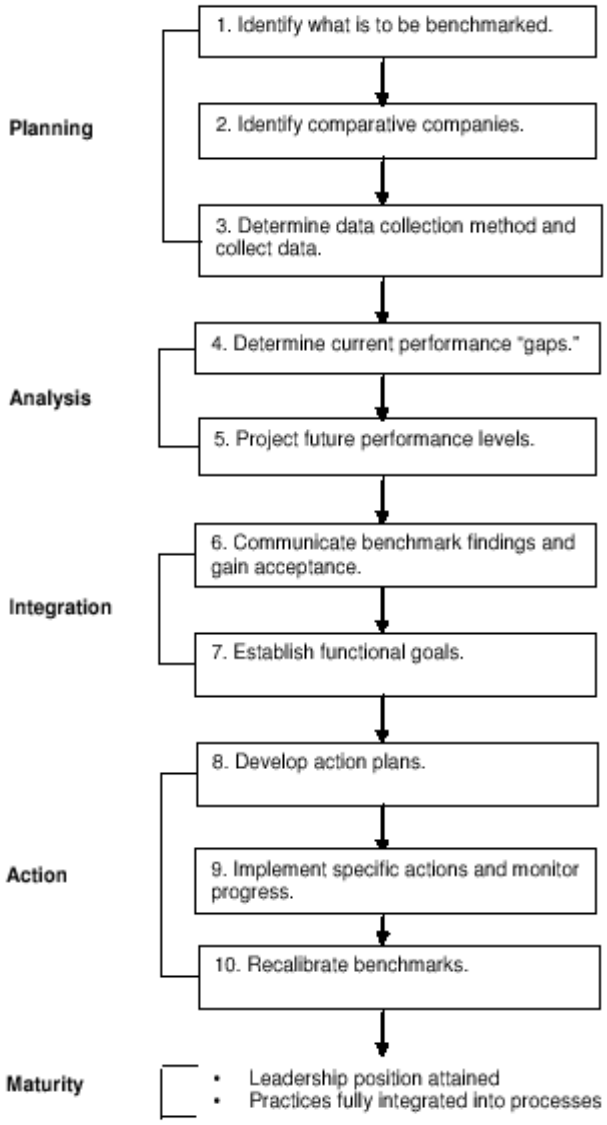


Figure 3: Benchmarking process steps

Conclusion

Innumerable novel ideas can be generated through the techniques mentioned above. However, each technique of idea generation is unique in itself and can be used either singly or in tandem with other techniques to produce the best of results.

About the Author:

Shilpa Lingaraj has approximately 12 years experience in IT. She joined Accenture in Apr 2006, and works in the Software Quality Assurance function as Associate Manager. She is a B.Tech. (Elect Engg) and has an MBA (with specialization in Quality Management).

Prior to Accenture she worked with Motorola, and earlier with HCL Technologies. Her experience is in Software Quality (defining Quality Processes; CMMI, ISO implementation; providing process consultancy; ensuring process compliance etc); and also has experience in development and testing.

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