



UNIT-3

Management Tools for Generating Ideas

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Describe the various quality management tools.
- ✓ Describe incremental and breakthrough improvements and understand the methodologies of continuous improvement projects.

Unit 3

Management Tools for Generating Ideas

The generation of ideas is important to the Six Sigma process. As a result, there are a number of methods to generate ideas as well as to reduce the number of ideas to get better consensus.

In this session, you will explore brainstorming, affinity diagrams and other tools for generating ideas. You will also be introduced to consensus-building tools.

Brainstorming and Affinity Diagrams

Brainstorming. Brainstorming is a well-known but often forgotten technique to get ideas about a particular project, problem, solution or issue. In brainstorming a group of people, preferably from a wide cross-section of the division or organization who are free to share their thoughts and ideas, get together to exchange ideas. The free part is important. This must be an uninhibited flow of ideas. It is important that all ideas are welcome and kept free from criticism. This is a technique to collect the ideas. Decisions around routes to take, ideas to explore or things to implement are not made at the brainstorming session. That will come later.

To reduce the volume of responses the facilitator can use a number of tools after everyone has had their chance to give ideas. These include:

Consensus Building.

Consensus means selecting a proposal that every member of the team finds reasonably acceptable, and no one opposes. It does not mean finding the proposal that is preferred by the majority, nor does it mean finding a proposal that everyone is totally satisfied with.

There are various methods of achieving a consensus. Informal ways exist in which the team members discuss the issues, listen carefully to each other's contribution and strive to understand the other person's point of view.

With the right spirit of cooperation and respect the group gradually arrives at a solution that everyone can live with. The team as a whole must stand behind their proposal. The one thing that you should not do is to argue until you have a majority vote!

Multi-voting.

The idea of multi-voting is to cut down the extensive list of ideas to a smaller number that can be discussed in more detail.

In multi-voting you first combine the items that are very similar. You then let each member vote for the items that he or she would like to consider further. Allow each member a number of choices. Tally up the number of votes for each item and then eliminate the items with the fewest votes.

Do the process again until the list is reduced down to a workable size. At this stage you either try to reach a consensus through informal discussion of the short-listed items or you take one final vote.

Nominal Group Technique.

After ideas have been generated from brainstorming the team members discuss the ideas and ask questions. The person who suggested the idea should be the person who answers the question. The purpose of this is to clarify and understand the ideas. Ideas that are similar are then combined.

The next step is to reduce the number of ideas down to a workable number. The facilitator hands out cards, and asks each team member to assign a point value to each of the items based on their preference. The cards are collected and the point values are tallied. The item that comes up with the highest value is the item selected.

The group reviews the results and if the team agrees that the selected item is the one that everyone can live with then the session is ended. If they don't agree they continue the discussion and focus on the few items that have the highest votes.

Affinity Diagrams. Like brainstorming, affinity diagrams are a way that groups can gather information. However, it also puts structure to the ideas and solicits ideas, opinions and issues related to the topic being considered. It can also be used to get consensus around an issue or it can be used to look at the various aspects of a large issue.

An affinity diagram usually starts with a brainstorming session about the problem or issue being considered. The facilitator records all of the brainstorming ideas on a flip chart or sticky notes. When everyone has had a chance to say what they want, the ideas are grouped into related ideas and themes are identified.

Other Idea Generating Techniques

Benchmarking. Companies who want to excel at what they do or who want to fix a problem in their organization turn to benchmarking. Simply put, benchmarking is looking at what the competition does well and instituting it in your organization.

The simplest form of benchmarking (and the easiest to do) is internal benchmarking. This is where you compare a high performing department or division in your company to an under-performing one to learn how to improve. Data is easy to obtain and is usually directly applicable to the improvement project.

However, external benchmarking is not a simple process. First, a company must identify the processes they want to improve and then see how the best companies are dealing with the issue (this is called competitive benchmarking). Having said this it is sometimes difficult to get another company to tell you what it does within its building - especially if you are the competition. In this situation many companies will contact leading companies in other fields - ones they do not compete directly with. This is especially good if it is a process that is conducted by many companies (e.g. payroll, detection of errors, etc.). This is called generic benchmarking if it is an un-related company and functional if it is a company who is in a related but different field (e.g. an airline benchmarking with a bus transport company to look at scheduling processes).

Others turn to third parties who conduct benchmarking on organizations without identifying the organization. These fee-for-service companies have sprung up because of the need of organizations for benchmarking. Others will hire senior executives from competitors to gain insight into the workings of the company. Benchmarking is one of the most important activities conducted within the continuous improvement efforts of almost every company - large or small.

Quality Audits. Whether you have an ISO-based quality system or a company-designed system, internal audits are an extremely valuable tool for continuous improvement. Existing company employees are trained in auditing and work in teams to determine whether what the company said it was doing, is being done. Even though the audit is just a snapshot of the company the auditors will get to know what is really going on in the company. They ask questions like: "Are there problems in the processes being conducted?" and "Are there failures occurring which result in substandard products or services?" Further to this, good audit teams will also isolate the problem when found and initiate corrective actions.

From this objective evidence (traceable, unbiased) an auditor can have a number of findings:

- major nonconformance – these are areas of the operations that are not meeting the requirements that the company set out and that have a high probability of a customer receiving substandard products or services (e.g. In a food distribution company: food cans with passed due 'best before' dates were not placed in the designated quarantine or marked as non-conforming. They could easily be added to outgoing shipments).
- minor nonconformance – these are areas of the operations that are not meeting the requirements that the company has set but would not likely result in a customer receiving substandard products or services (e.g. of minor nonconformance finding in an engineering company: incomplete job files as required by company procedure).
- opportunity for improvement – these are areas that are not having problems but the findings indicate that the area could be improved. (e.g. In an oil burner installation company: Acme Burner Services may want to look at multi-perspective customer satisfaction indices that incorporate qualitative and quantitative measures).

Further Reading:

- ✓ *Idea management revisited: A review of the literature and guide for implementation, (11/2017), Sophia Gerlach*