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Brainstorming

Brainstorming is a simple and effective way of generating ideas within a team. Early in a project, you might use brainstorming to identify process inputs, potential causes of variation within the process, or experimental factors.

When you have an understanding of the process and what's causing the problem, you might use brainstorming to identify potential solutions. A successful brainstorming session allows team members to be creative, enabling the team to generate a wide range of ideas.

To establish an open and creative environment for brainstorming, there are several important ground rules. Emphasize quantity over quality. In brainstorming, it's important to focus on the quantity of ideas. The more ideas the better.

Don't criticize or evaluate ideas. Brainstorming is a creative exercise. Criticism and evaluation can turn off the creativity and stop the flow of ideas.

Encourage participation. Everyone in the brainstorming session is there for a reason, and everyone's ideas are equally important. In a brainstorming session, there is no rank or position. All team members are equal. Welcome exaggeration.

Sometimes the best ideas come from ideas that seem the most outlandish or wild. Creative, out-of-the box thinking is often needed to solve difficult problems. Record all ideas. You can record ideas on a flip chart, on a white board, or on a computer screen that is projected or shared.

Everyone should be able to see the ideas as they are recorded. Build on ideas. Recording all ideas in full view of the group enables team members to build on ideas that have already been offered. Seeing the brainstormed list often triggers new ideas.

With so many ideas, and so much creative energy, it's easy to get off topic. Because of this, brainstorming sessions are most effective when guided by a facilitator. The facilitator's role is to keep the team focused on the task and manage the group during the brainstorming process.

First, the facilitator defines the topic. For example, the topic might be reasons for late shipments. It helps to write the topic on a flip chart or a white board, and then to discuss the topic as a group to make sure everyone clearly understands the purpose of the brainstorming session.

Note that it's a good idea to notify team members before the meeting to give them a chance to come prepared. This also helps ensure that the right people are included in the brainstorming session.

Then the facilitator gives everyone a few minutes to think about the problem and generate individual lists of ideas (in silence).

The facilitator can pass out note cards or sticky notes, so the team members can record their ideas. Now you're ready for the ideas to start coming in. The facilitator invites everyone to offer their ideas, one participant and one idea at a time.

The ideas are recorded by the facilitator in full view of the team. Or the ideas are posted by the contributing team member. Each idea is clarified as it's offered, but only if needed. Otherwise, the ideas are not evaluated or judged.

When the ideas stop flowing, with no new ideas coming for more than a few minutes, the group takes a break to recharge. The team might take a coffee or tea break, or they might continue the meeting on another day. There is usually a second flurry of ideas, and taking the time to step away and think can often lead to the generation of more ideas.

When the team reconvenes, it continues the brainstorming session until no further ideas are generated. What happens next is determined by the purpose of the brainstorming session and where it falls within the

problem-solving process.

For instance, if you use brainstorming to identify process inputs or factors, you might sort the inputs into process steps on an input/output map. Your next step might be to narrow down the list of inputs to the most critical few. To do this, you can use multi-voting. You learn about multi-voting in the upcoming video.

For more information about the effective use of brainstorming in problem solving, see the Read About It for this module.

Statistical Thinking for Industrial Problem Solving

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