Fishbone Diagram

PARTNERS IN PUBLIC INNOVATION TOOLBOX

What is a fishbone diagram?

A fishbone diagram shows multiple root causes of a problem. The problem is shown at the head of the fish, and branches of the diagram (the "fishbones") are categories of causes. The original six categories (measures, people, materials, environment, methods, and machines) were intended to encompass all possible causes of a problem.

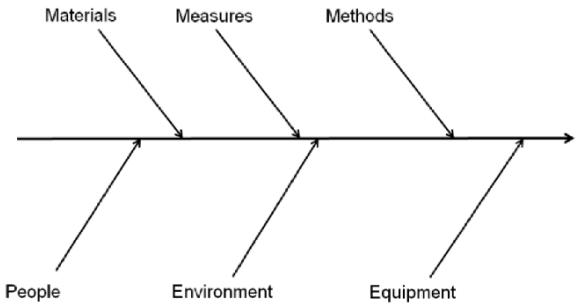
When should I use it?

- When you suspect that multiple issues may be contributing to a problem
- When a team is stuck on only one solution and needs to broaden their thinking
- When you have many people who can contribute ideas
- After process mapping, to identify possible causes of an obstacles on a specific process step

How do I facilitate or create it?

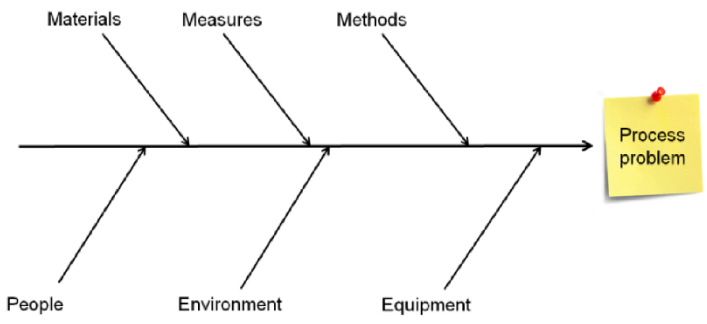
1. Draw your fish

The basic categories are measures, people, materials, environment, methods, and machines. You can use different categories if you prefer or leave the fishbones blank and fill in from categories that emerge as you perform the analysis.



2. Choose a problem to focus on and place at the head of the fish

If you have a process map with identified obstacles, you can start with a pink sticky (obstacle) from a problematic process step.



3. Have the team brainstorm

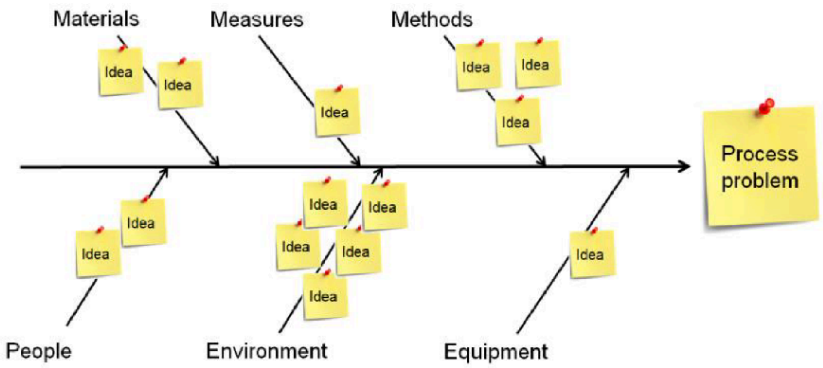
Everyone should have sharpies and sticky notes. Ask the team, “What are all the issues that might contribute to this problem?” Encourage everyone to come up with as many possible solutions as possible, one per sticky. Quantity over quality is valuable here.

4.Encourage thinking along new lines

During brainstorming, ask the team to broaden their thinking from what they assume the problem is. “Is there anything about the form itself that could be a problem? What about the physical layout of our office? What about how we communicate with each other?”

5.Categorize ideas

Get volunteers to sort everyone’s ideas into categories. It is not necessary to fill every bone of the fish. If you began with a blank fishbone, give labels to the categories that arise naturally.



6.Debrief with the team

Have a team member read through the ideas. Where did the team begin to think differently about possible causes? Are some of these root causes easier to fix than others? Which are in your control vs. not in your control?

7. Capture diverse voices

If there are other staff (or customers) who are involved in the process, but not part of the exercise, you might run the diagram by them to see if they have other ideas.

Tips

- Problem categories on your fishbone diagram can become rows for tracking errors on a tally sheet (see Tally Sheets).
- Problems identified on the fishbone could be prioritized on an Impact-Effort Matrix.
- While the team may have consensus around a few major root causes (repeated stickies), it's important to also consider root causes identified by only a single team member. Sometimes these are a result of good out-of-the-box thinking.