



## Using Fishbone Diagrams for Problem-Solving and Projecting into the Future

### Overview

A “fishbone” diagram is a visual way of thinking through *cause and effect*. It is often used in business but can be equally effective in thinking about social innovations. The aim is to use the diagram to *deconstruct* and, possibly, *reconstruct causal relationships* between different factors in decision-making. So, a Fishbone Diagram is very helpful in a testing environment.

Usually, a Fishbone Diagram has the “head” on the right-hand side of the page if you are deconstructing a problem. If you are trying to think about future consequences, you can use a Fishbone Diagram with the head on the left-hand side. FIT has included a copy of each version for your use. You may also find other uses for it!

### Deconstructing Cause and Effect

You have based your FIT project on a hypothesis that by carrying out a certain testing initiative you will create change in gender equality in the Global South. This suggests that you are trying to solve a certain “problem” through your project. However, most social problems have complex root causes and some of them may be outside the control of your project. If your hypothesis is too broad, you will therefore not be able to deliver evidence of success. That’s why it’s so important to have a carefully considered, achievable hypothesis. It’s better to have a narrower focus and achieve it fully than to have a wide focus that isn’t achievable.

In a testing environment you may not be as certain about exactly the domains in which you will experience the greatest change but you still want to focus on making a difference in gender equality by coming up with new program development and innovative ideas. You also want to make sure that you understand the root causes of a situation so that you can address them. The Fishbone Diagram can help you do this.

Fishbone analysis can be done on paper, with digital software, or even in the sand. It can be used by individuals, in project team meetings, or with focus groups. Because it’s a simple visual, it can also be used with stakeholders with lower literacy levels. We have provided you with one version, but there are many versions online. You can also easily create your own.



## Fishbone Analysis for Problem-Solving

Write down a very succinct, clear, plain language version of “the problem” on the head of the fish. You can use wording like “The problem is that ...” if it helps you focus. This may be a problem that your concept is trying to solve or any other problem you have experienced in the design, test execution, or data collection. Then, brainstorm all the possible causes of this problem along the “fish bones”. Write one cause on each line. Don’t worry about whether they’re big or small causes. You can sort them out later. The goal is to list a wide range of causes that directly and indirectly cause the problem. Stay practical though, because you’re trying to identify causes that you can do something about with your project. If you run out of room, add lines. If you have a really complicated problem to deconstruct, use additional copies of the diagram. As categories emerge, you can label a particular fishbone and go into further detail with that category on a fresh Fishbone diagram.

## Analyzing the Fishbone Diagram

- Take a look now at the causes and categories that you’ve identified. Which causes and categories are technical/functional and which are cultural/political?
- Which causes are linked to individual, family, community or systemic issues?
- Which domains seem to be represented the most (education, health care, economics, politics, etc.)?
- Which factors can you have some influence on through your testing project? What do you do about root causes that fall outside the scope of your project?
- Do certain risks emerge for which you need to create contingency plans?
- Can the factors in your diagram inform resource allocation?
- Can the factors in your diagram inform stakeholder engagement or data collection?
- Can you use the fishbone analysis process or diagram for collaborative learning with certain stakeholders?

## Fishbone Analysis for Projecting into the Future

If you use the diagram with the head on the left-hand side, you can imagine some of the likely consequences of a situation. Just write the situation you are thinking about on the head of the fish and brainstorm various consequences. You will quickly see whether there are risks you need to keep in mind or positive effects you’d like to maximize. You can also apply the same kind of analysis to the future as mentioned above for problem-solving.



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## More Information

The use of the Fishbone diagram in strategic project management is described in Grundy and Brown's book "Strategic Project Management: Creating Organizational Breakthroughs" (London, UK: Thomson Learning, 2002).

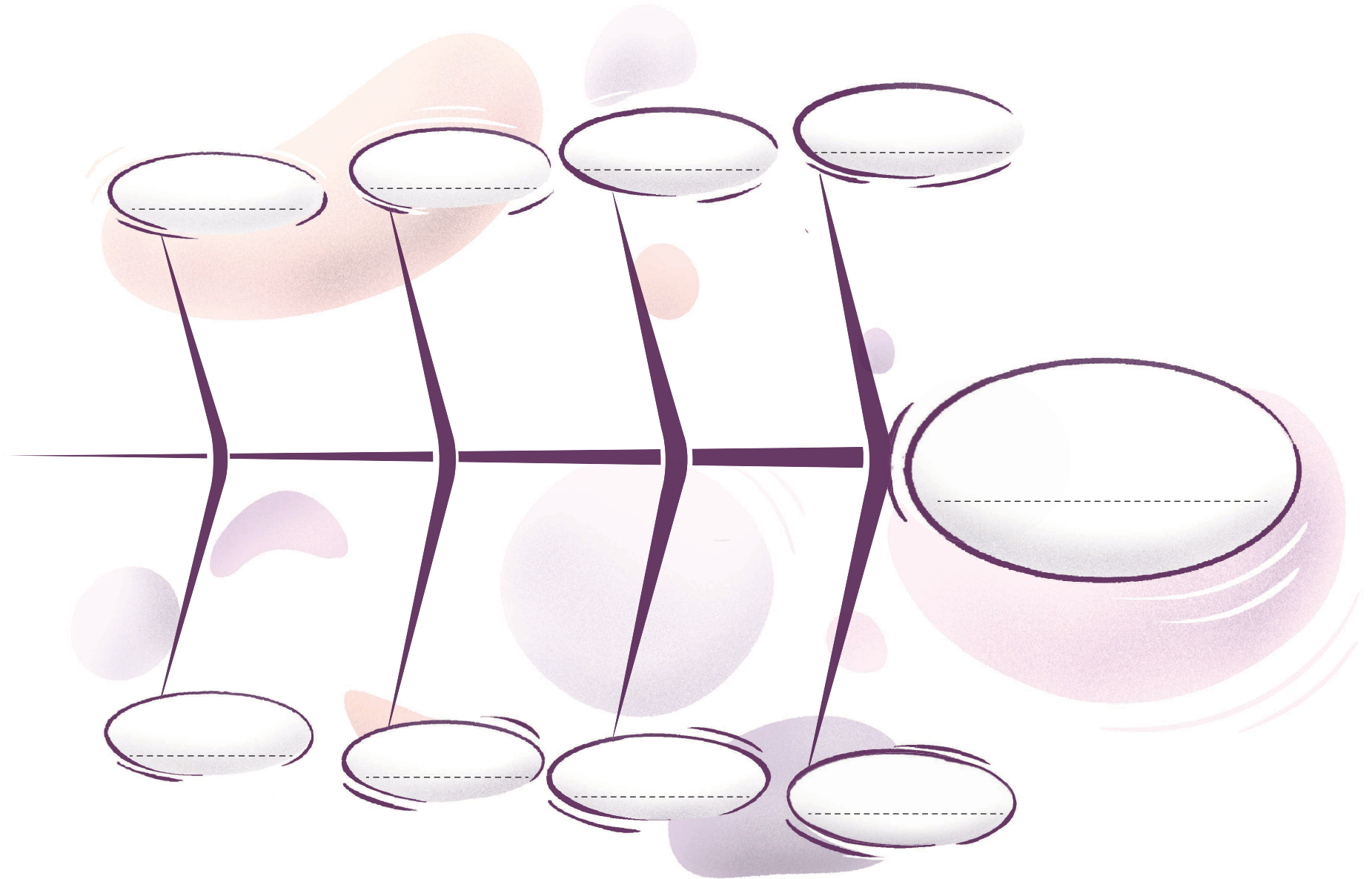
You can also watch the FIT's webinar on Fishbone Analysis.

Finally, you can find out more online by using search words like:

- Fishbone Diagram
- Fishbone Analysis
- Ishikawa Diagram

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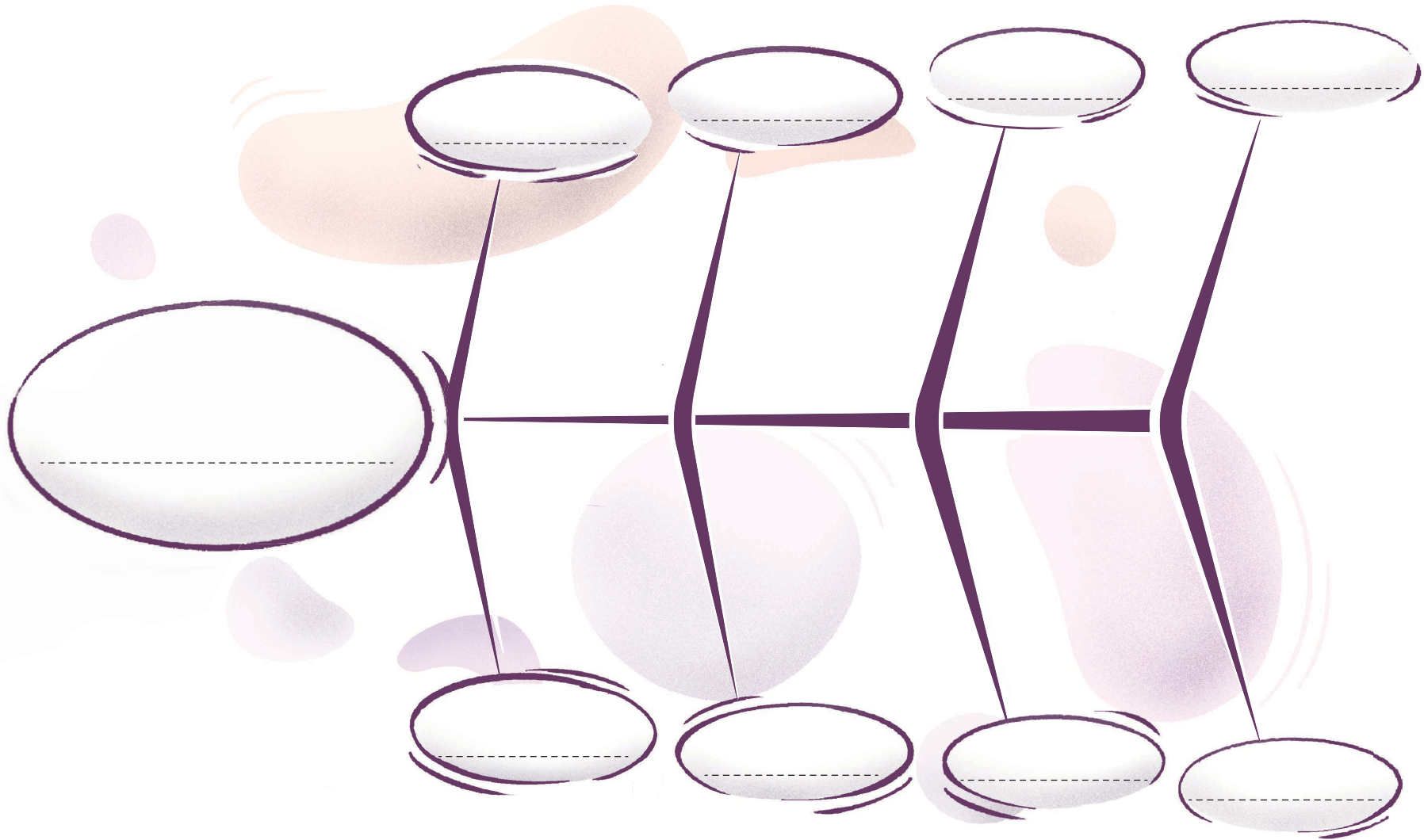
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## Fishbone Analysis for Deconstructing Cause and Effect



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## Fishbone Analysis for Projecting into the Future

