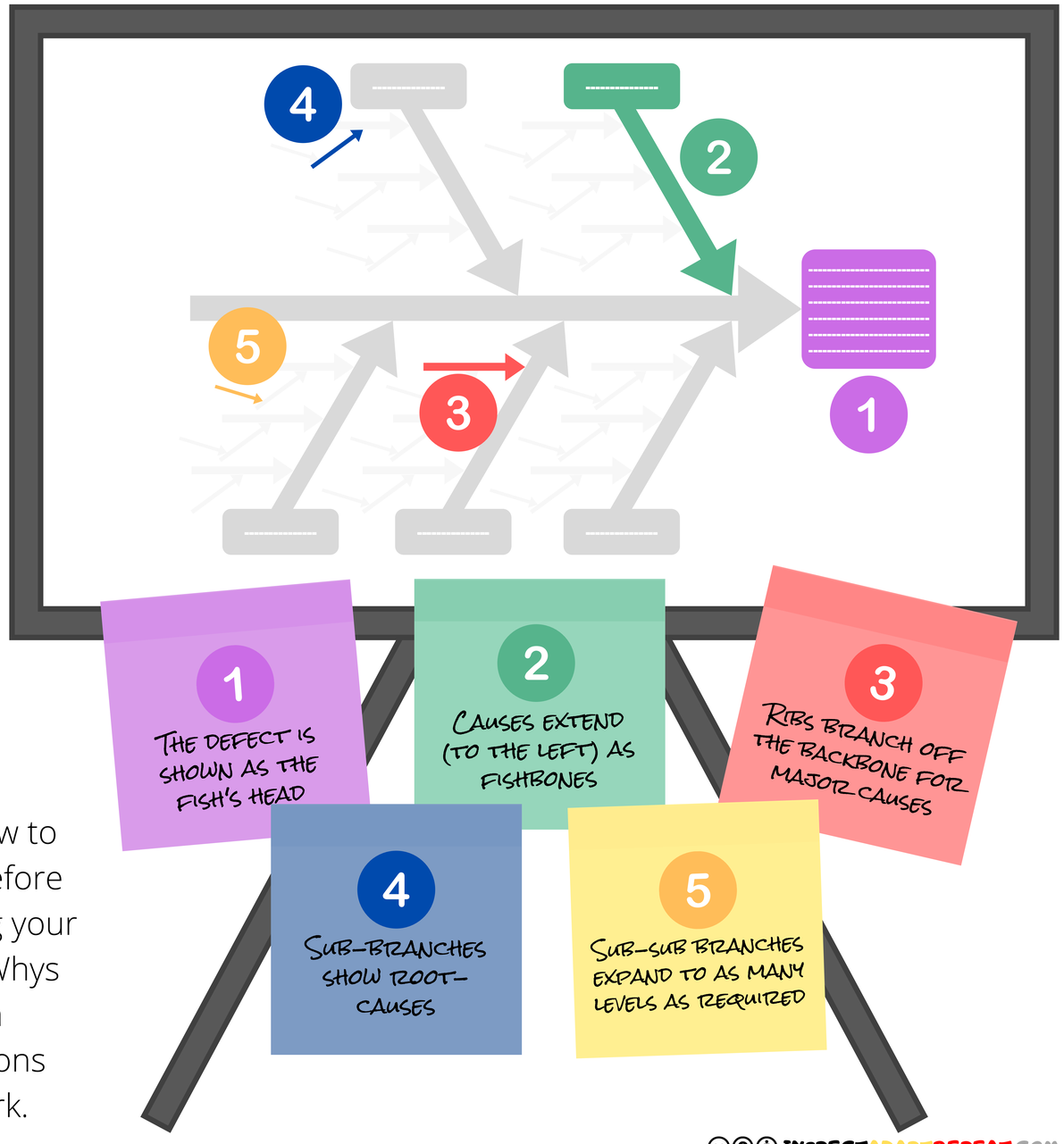
THE ISHIKAWA DIAGRAM

Ishikawa diagrams (also called fishbone diagrams, herringbone diagrams, cause-and-effect diagrams, or Fishikawa) are causal diagrams created by Kaoru Ishikawa that show the causes of a specific event. Common uses of the Ishikawa diagram are product design and quality defect prevention to identify potential factors causing an overall effect. Each cause or reason for imperfection is a source of variation. Causes are usually grouped into major categories to identify and classify these sources of variation.

INSTRUCTIONS

1. Choose the problem you're trying to solve, and place it in **the box** 1 at the right of the worksheet
2. Label your **fishbones** 2 - good default options are "People", "Process", "Equipment", "Environment", and "Management"
3. Brainstorm causes for the problem and place them as **ribs** 3 under the appropriate fishbone; change fishbone labels as necessary
    a. Optional: if you identify causes of causes, add them as **sub-branches** 4
        i. Optional: if you identify causes of causes of causes, add them as **sub-sub-branches** 5
4. Dot-vote to decide the most important / most likely root cause(s)
5. Re-state the problem, integrating the identified root cause(s)



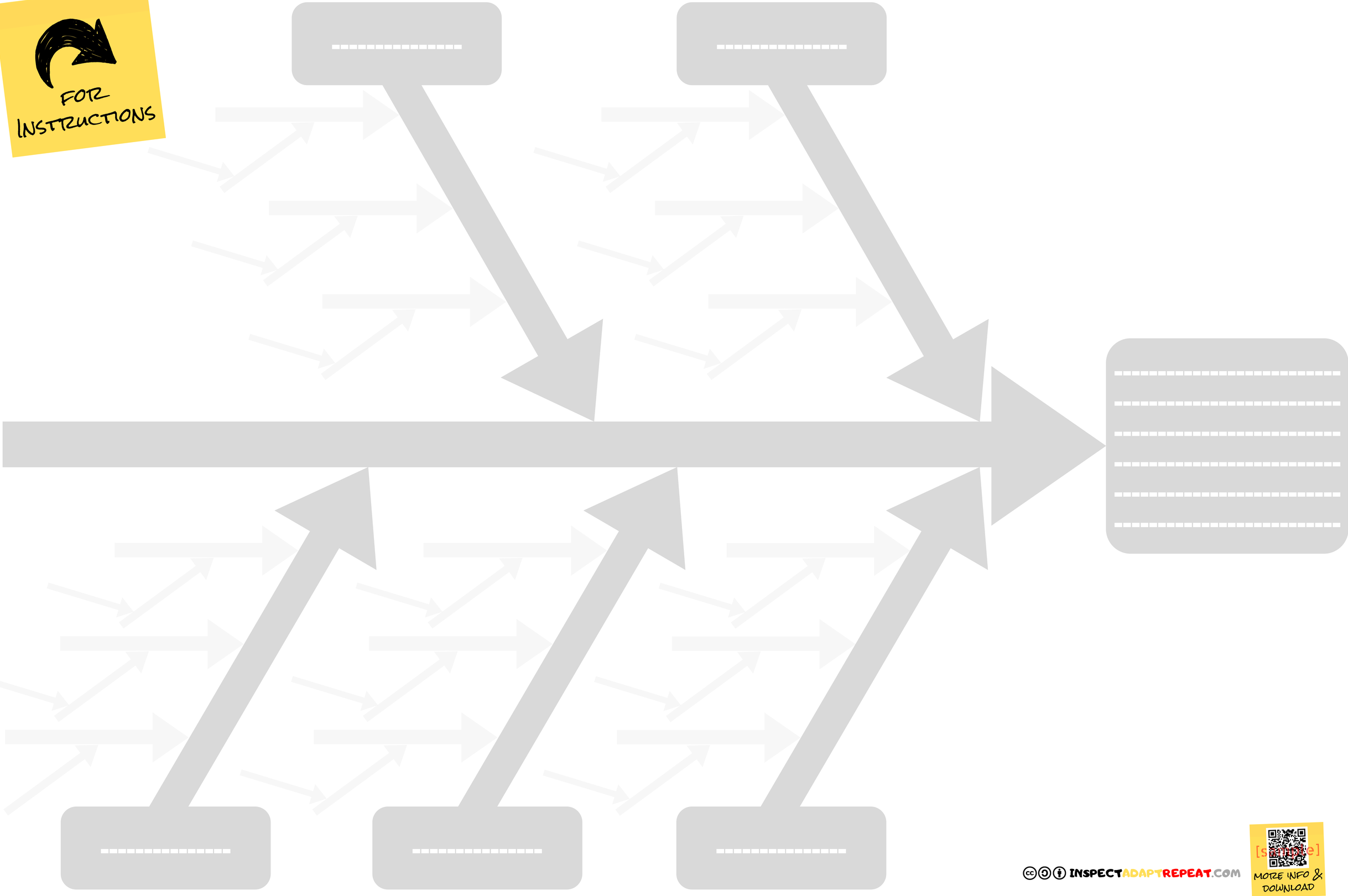
NEXT STEPS

Five Whys

The primary goal of the five whys technique is to determine the root cause of a defect or problem by repeating the question "Why?". Each answer forms the basis of the next question. The "five" in the name derives from an anecdotal observation on the number of iterations needed to resolve the problem.

The logical next step is to figure out how to solve your newly identified problem. Before you do that, however, consider probing your new problem statement with the Five Whys (or similar) method - see breakout for a description. Then propose some solutions (experiments), prioritise, and get to work.

FOR INSTRUCTIONS



[sample]
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