Interrelationship Diagram

DESCRIPTION

An interrelationship diagram (also referred to as interrelationship digraph) is a tool used to conduct a cause-and-effect analysis to help identify relationships among complex situations. This tool allows for multiple inputs and outputs, which can help to identify multiple root causes.

STRENGTHS	WEAKNESSES
• Helps visualize relationships among complex and confusing problems. • Helps analyze and identify links among the different aspects of the problem. • The tool can be used by an individual or with a team.	• Might be time-consuming for simple situations. • The more complex the problem the more complex it is to construct the diagram.

APPLICATIONS

1. To further explore possible causes after completion of an affinity or fishbone diagram.
2. To analyze complex issues and identify root causes.
3. To better understand how different aspects of the problem are connected.

HELPFUL HINTS

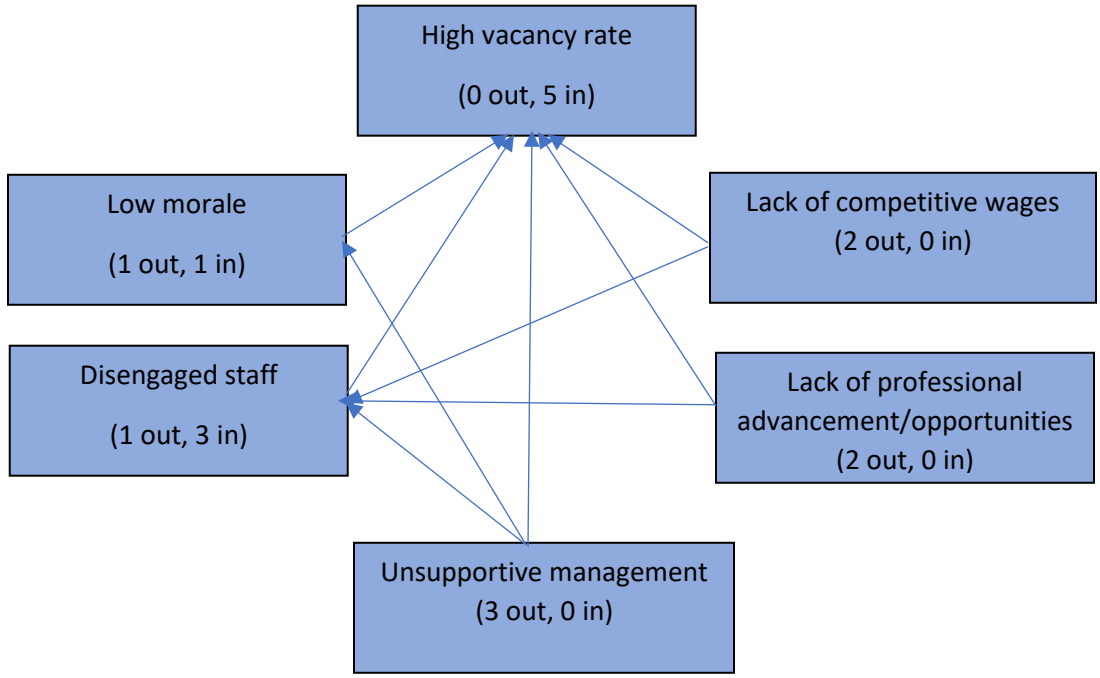
To construct the interrelationship diagram:

1. Identify the problem.
2. Conduct a brainstorming session and have each team member write ideas on a sticky note. In addition, the team can use the ideas generated from the affinity diagram or final branches from the fishbone diagram.
3. Go through the ideas and identify whether it is a cause or an effect (symptom) of the problem. Draw an arrow from the cause (arrow leading out) to the effect (arrow leading in). Continue drawing arrows from all causes to the effects.
4. Count the number of arrows going in and out for each issue. The ideas with the most arrows leading out are likely to be the root causes of the problem. The ideas with the most arrows leading in are probably the most likely effects.

Alternately, there are templates in Microsoft Word and Excel that can be used to help construct the Interrelationship Diagram. The brainstorming session can be performed using a virtual meeting platform (e.g., Zoom, Microsoft Teams, Webex).

EXAMPLES

Problem: Employee Retention



Conclusion: Unsupportive management is the most likely cause and high vacancy rate is the most likely effect of employee retention.