

INTERRELATIONSHIP DIAGRAM

What it is:

An interrelationship diagram is an analysis tool that allows a team to identify the cause-and-effect relationships among critical issues. The analysis helps a team distinguish between issues that serve as drivers and those that are outcomes.

When to use it:

Use an interrelationship diagram when a team is struggling to understand the relationships among several issues associated with a process. The tool can also be useful in identifying root causes, even when objective data is unavailable.

How to use it:

Develop the problem statement. Make sure the issue is presented as a complete sentence and is clear to all team members. Write this statement at the top of a white board or flip chart.

Develop issues related to the problem. These issues may be the result of a previous activity such as an affinity diagram or a brainstorming session, or the team may need to develop them now.

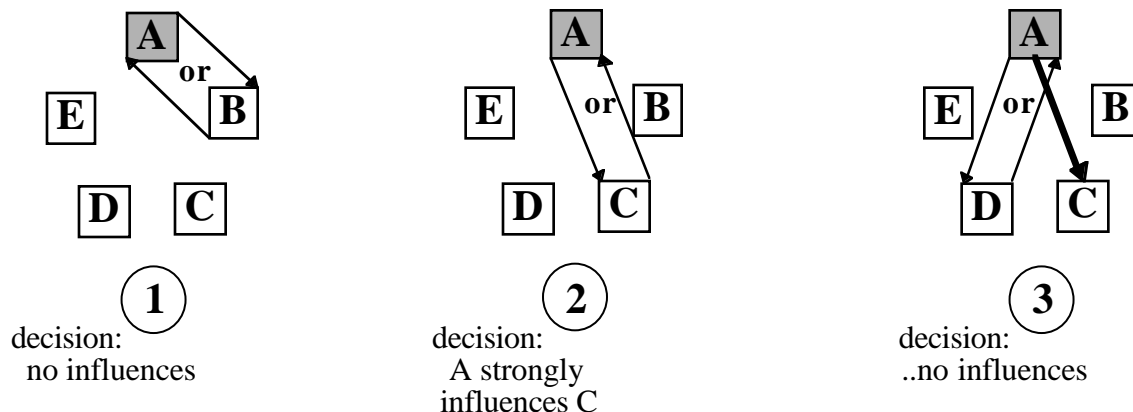
Arrange the issues in a circle. Write the issues on the white board or flip chart. If the issues have already been recorded on sticky notes, arrange them in a circular pattern.

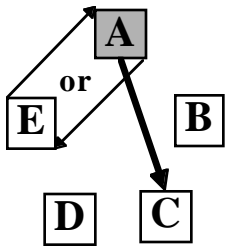
Identify cause-and-effect relationships. Using any of the issues as a starting point, work through the relationships in sequence. For each pair of issues, determine if there is

- no cause/effect relationship,
- a weak cause/effect relationship, or
- a strong cause/effect relationship.

If the team determines there is a cause/effect relationship, determine which issue is the cause and which is the result.

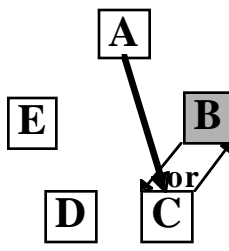
Draw arrows to indicate directions of influence. For each relationship pair, draw an arrow from the issue that is the cause to the issue that is influenced. For strong relationships, use a solid line. For weaker relationship, draw a dashed line. Although some relationships may seem evenly balanced, always determine which is the stronger influence and draw the arrow in that direction. *Never draw two-headed arrows.*





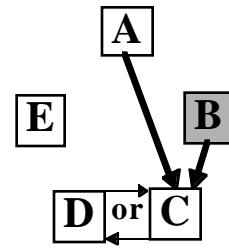
4

decision:
no influences



5

decision:
B strongly
influences C



6

decision:
D strongly
influences C

Tally influence arrows. For each issue, clearly record the number of arrows going in and going out.

Identify drivers and outcomes. A high number of outgoing arrows indicates that an issue is a driver or possible root cause. The team generally evaluates these issues first to gain the most far-reaching results. A high number of incoming arrows indicates that an issue is an outcome. These issues may serve as important measures of success

Interrelationship Diagram Example

