A visual tool used to logically organize possible causes for a specific effect or problem by graphically displaying them in increasing detail.

Helps to identify possible root causes and ensures common understanding of the causes.

Causes are arranged according to their level of importance or detail, resulting in a depiction of relationships and hierarchy of events.
Why Use a C&E Diagram?

- To study the potential causes of an observed effect.
- To help identify areas where there may be problems, and compare the relative importance of different causes.
- To help a project team systematically think of many possibilities, rather than focusing on a few typical areas.
- To understand relationships between potential causes.
C&E Diagram Steps

- Write the effect or problem on the right side of the diagram.
- Identify the major cause categories and write them in the boxes to the left. You may summarize causes under categories such as:
  - Places, Procedures, People, Policies
  - Methods, Machines, Materials, People, Environment
- Continue to ask, “Why is that happening?” until you no longer get useful information.
- Analyze the diagram.
  - Review each of the identified root causes in each major cause category. Circle the most likely root causes on the diagram.
- For items identified as the most likely root causes, the team should reach consensus on prioritizing those items, with the first item being the most probable.
C&E Diagram Tips

• Be sure everyone agrees on the effect or problem statement before beginning.
• Be succinct.
• Pursue each line of causality back to its root cause. Some may take more steps than others.
• Root causes that occur more than once should be addressed.
In a small group, create a Cause & Effect Diagram.

- Select an effect identified in the analysis of one of the groups’ project data.
- Decide which major cause categories will be used.
- Brainstorm potential root causes for each major cause category.
- Identify most probable root causes for the effect.