Analyzing a Sudden Spike in Leaky Cap Defects

Scenario:

During the same operational week at the Onitsha plant, a sharp spike in **Leaky Cap** defects occurred across multiple production lines. The issue was concentrated on **Wednesday, July 2** and **Thursday, July 3, 2025**, and stood out against performance on other days.

The incident triggered an urgent quality alert. Early signs point to a possible **common-source issue** such as a faulty cap batch or supplier-related defect.

🧠 Your Task:

Conduct a root cause analysis to explain:

- Why did Leaky Cap defects spike on July 1 and 2?
- What common factors or materials could be responsible?

You'll compare defect performance:

- During the spike period (July 1–2)
- Against baseline days/weeks (1-2 months)

🎯 Goal:

Identify the **most likely root cause** (e.g. cap batch, supplier, cap torque, ambient condition), and propose **data-backed recommendations** to prevent it from happening again.

👥 Stakeholders:

- **Procurement Manager** → suspects a bad batch from a supplier
- **Quality Control Lead** → needs clarity on whether this was a system-wide issue
- **Line Managers** → want to isolate the problem quickly to resume normal production

Guiding Questions

- What was normal before July 2?
- What changed on or just before the spike period?
 - Are specific batches, machines, or shifts involved?
- Was the issue isolated or plant-wide?
 -What's your most likely root cause - and how confident are you?
- What corrective actions do you recommend?