On Problem Identification and Resolution

One of the primary tasks of any leader, at any level and in any function, is **problem solving**. I remember a production supervisor once telling me (back when I was an Operations Manager) that he would be able to meet shift targets if there were no absenteeism, no material shortages, and no machine breakdowns. It occurred to me that, in such a case, I wouldn't need a supervisor; the operators alone would be enough to meet production.

Doing so effectively—and above all, maintaining **composure and a cool head**—is a skill you can develop to increase your value to the organization. While there are many approaches, such as the **DMAIC** (Define, Measure, Analyze, Improve, and Control) methodology from Six Sigma, the following points are specific recommendations to strengthen your actions and avoid common errors that only delay reaching a resolution.

1. Problem Understanding

A detailed understanding of the problem is one of the first steps where the most mistakes are made.

- **Avoid jumping to conclusions:** People often rush to identify a root cause without investing time to reflect on what they are trying to solve.
- **Define the deviation:** You must be able to clearly state the observed deviation, including which elements are not being met or expected. Remember, this is the definition of a problem.
- **Use tools:** Tools like the **IS/IS NOT** list are highly effective for collecting information and correctly scoping the problem. It may seem a simple tool, however using it with discipline is a powerful tool to describe an issue.

2. Scoping the Problem with Data

When I worked at Delnosa (part of Delco Electronics), we were given a small 15-centimeter ruler with a legend that said: **"In God we trust, everyone else bring data"**.

- **Quantify the issue:** Focus on describing the problem through numbers, trends, frequencies, and the onset of the deviation.
- **Prioritize collection:** If you don't have data, you must work on collecting it before moving to the next step.
- **Time investment:** Your effectiveness in solving the problem will be directly proportional to the time you invest in these early steps. I cannot overemphasize this point. A good problem definition is a key enabler for the resolution.

3. Root Cause Confirmation

Once you have performed your root cause analysis, you must validate it.

- **Watch for interactions:** The root cause might be an interaction between two or more factors; focusing on only one may cause the problem to persist under certain circumstances.
- **The "On/Off" test:** If you cannot "turn the problem on and off" by manipulating a single root cause, you are likely to have a correlation you haven't discovered yet.
- **Design experiments:** Use statistical tools to discriminate factors and discover correlations during your analysis. Once again, this brings you back to the data collection phase of the initial steps.

4. Team Collaboration

The core principle of the **Toyota Production System** and the **Shingo Model** is respect for people.

- **Involve them early:** Pay attention to their concerns and give them the opportunity to participate in solving problems in their own areas.
- **Active listening:** Ask for their input and listen carefully to their comments and suggestions.
- **Recognition:** Keep them informed of progress and include them in the recognition once the problem is resolved. This increases your authority and fosters an environment of trust.

Problem solving is a skill you can develop and improve with every new challenge you face in your work and daily life. I hope these points help you improve your efficiency in this critical task.
