Kepner-Tregoe Problem Analysis (Is / Is Not)

Kepner-Tregoe Problem Analysis is a structured method for finding the true cause of a problem when the cause is not obvious. It was developed by Charles Kepner and Benjamin Tregoe and presented in their book The Rational Manager, published in 1965. Its central idea is to describe the problem by what it is and what it is not, and then ask what is different about the first group. The cause must explain both sides, which protects us from jumping to a favourite explanation. Four steps make it practical: state the deviation, specify what is and is not, find distinctions and changes, and test the cause.

1. State the Deviation

The first step is to state the deviation in one clear sentence that names an object and what is wrong with it, such as glass jars arrive with cracks. A vague statement like deliveries are a mess hides the facts and leads to guesses. We also confirm that the deviation is real by comparing what should happen with what actually happens. A precise statement tells us exactly what to investigate.

Example: A cook says the soup is bad. Asking for the object and exactly what is wrong, the cook restates it: the soup is too salty.

At work: Nader hears that deliveries are a mess. Asking for the object and exactly what is wrong, he restates it: glass jars arrive with cracks. Now the team knows what to investigate.

2. Specify Is and Is Not

The second step is to specify the problem along four dimensions: what, where, when and how much. For each dimension we write what the problem is, and what it could be but is not. These is not facts are comparisons, such as the same product in another place, which show where the problem stops. Writing the specification takes time, but it narrows the search more than any brainstorm.

Example: A cook notices that only the soup from the large pot is too salty. Asking what the problem is and is not, the cook notes: large pot, yes; small pot, no; the same recipe in both.

At work: Nader writes the specification. The cracked jars are the large ones, shipped from the north warehouse, since last month, about one box in ten. The same large jars from the south warehouse and the small jars from the north warehouse are not affected.

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3. Find Distinctions and Changes

The third step is to look for distinctions, which are things that are true of the is side but not of the is not side. For each distinction we ask what changed, because problems often appear after a change in people, equipment, materials or methods. Each distinction and change suggests a possible cause. We list these possibilities without defending any of them.

Example: The cook finds one distinction: only the large pot was seasoned by a new helper. Asking what is distinct and what changed, the cook sees that the helper started that week.

At work: Nader compares the north warehouse with the south warehouse. Asking what is distinct and what changed, he finds that the north warehouse started using boxes from a new supplier last month. The large jars are also the heaviest items.

4. Test the Cause

The fourth step is to test each possible cause against the whole specification. A cause is only likely if it explains every is and every is not. We keep the cause that explains the most, and then verify it with a check or a small experiment before acting. Only then do we fix it, so that we solve the real problem and not a guess.

Example: The cook suspects that the new helper salted the large pot twice. Testing whether this explains every is and is not, the cook asks the helper, who confirms it, and the small pot, seasoned by another person, is fine.

At work: Nader tests the weak-box idea. It explains why the north warehouse is affected, why the south warehouse is not and why only the heavy jars break. He verifies it with a strength test of boxes from both suppliers, and the new boxes fail first.

Conclusion

In summary, Kepner-Tregoe Problem Analysis finds the true cause by comparing what a problem is with what it is not. It starts with a precise statement of the deviation. The is and is not specification then shows where the problem stops, and distinctions and changes suggest possible causes. A cause is accepted only when it explains every fact and passes a verification. This discipline helps us fix the real cause instead of guessing.

Sources

- Kepner, C. H. and Tregoe, B. B. (1965). The Rational Manager: A Systematic Approach to Problem Solving and Decision Making. McGraw-Hill.
- Kepner, C. H. and Tregoe, B. B. (1981). The New Rational Manager. Princeton Research Press.
- Kepner-Tregoe, Inc. (company site) – https://www.kepner-tregoe.com/
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