A3 Cookbook

The key to efficiency lies in the ability to self-investigate. Operational Excellence (OPEX) includes a variety of tools for investigating problems of different types and in different areas. Most of the tools focus on analyzing, investigating, and optimizing work processes. Nevertheless, some problems are not related to a specific process but require a broader examination. For example, dealing with a waste issue on a production line involves several work processes and requires a broad examination of the factors causing waste. Similarly, addressing employee motivation issues in a company department requires a broad view of various factors, not necessarily focusing on a specific process.

A3 is an OPEX tool designed for investigating such issues. In developing the GEMBA A3 model, we aimed to simplify things as much as possible while also delving deep into the problem to reach root causes. Like any investigative tool, it is possible to conduct a superficial analysis or dive deep into the issues. From our experience, the deeper the dive and the broader the examination of various factors, the higher the quality of the results we will achieve. One of our main goals in OPEX is reducing the chances of a problem recurring, and eliminating the root cause of the problem guarantees better performance.

Steps in Performing the A3

1. **Title** - The name of the problem.
2. **Defining the Need** - What is painful about the problem.
3. **Current State** - The extent of the problem.
4. **Goals** - Where we want to take this.
5. **Analysis** - 5 Whys.
6. **Solutions**
7. **To-Do List**

Each step will have a dedicated screen in the application, and the user will be mentored in its use. Here are the highlights for user mentoring.

Title

The title should clearly define the nature of the problem you want to address. It should be simple and clear and set the boundaries of the problem.

For example:
- "Motivation problem" would be too general.
- "Motivation problem in the customer service center" better defines the boundaries of the problem.
- "Employee attrition within the first three months of employment in the customer service center" even better defines the real problem.

As we progress through the next stages of the A3, the title may change, evolve, and become more precise.

Defining the Need

After framing the problem with the title, we want to ensure our problem is meaningful enough and justifies forming an energy and time-consuming improvement team. For that, we need to examine the problem through the eyes of the organization. In other words, to check whether “our problem” is an “organizational pain point.”

The organizational pain point is the topic around which the A3 improvement team will operate. It is important to define this topic clearly for all team members and management. The organizational pain point will be defined by the team and then approved by management. If we do not involve management from the outset, we may end up working on a topic that management does not need or want, which could lead to a lack of support when we reach the solution and implementation stages.

To involve management, we must choose a topic while looking through the CEO's eyes. It is important to remember that the torch and even their direct manager have only a local perspective, and we want to teach them to adopt a different viewpoint.

Differences Between Local and Organizational Perspectives:
Local Perspective:
When you ask the manager of department X about the problems in their department, their perspective is local and narrow. The problems at their level are related to daily operational difficulties. For example, lack of floor space, employee skills and availability, issues with the department's suppliers, and so on.

Organizational Perspective:
When you ask the company's CEO about the problems in department X, the perspective is broad and related to organizational metrics external to the department. For example, product availability, production costs, product quality in the department, etc.

To choose the topic for treatment, it is very important that the torch examines the topic through the CEO's or senior manager's perspective.

Current State

Once we have defined the problem with the title and the organizational need, the next step is to understand the size of the problem. To do this, we need to describe a broad and comprehensive "current state" as much as possible. This is done by collecting data related to various aspects and facets of the problem. It is important that the data collected reflects the situation in the field (at GEMBA) and only relies on estimates when absolutely necessary.

For example, if the problem is that there are numerous customer complaints about the 330cc Coca-Cola cans production line, we would want to collect data such as the number of complaints, types of complaints, whether the complaints are related to a specific product, a specific raw material, a specific shift, a specific machine on the line, a specific type of quality issue, and so on. All this data should be sourced from the field (the GEMBA) and not from reports or estimates.

Goals

Combining the definition of the organizational need with a comprehensive description of the "current state" will allow us to focus the goals of the A3 team on the precise requirement. Continuing the example of defining the current state in the Coca-Cola cans production line, if we defined in the "organizational need" stage that the organizational pain metric is "number of customer complaints about empty or partially filled cans" and collected data on the number of complaints received over the last three years, and additionally gathered sufficient data on the types of faults that led to such complaints in those years, we can easily define a goal to reduce the number of complaints by 50% within three months and then by an additional 20% each subsequent year for three years. If we have enough data in a broader view, we can also define how many of these complaints should be of each type of fault or from each shift or from each raw material supplier, and so on.

Once the goals are defined, we will turn to the organization's management and ask them to approve the goals in a goals discussion. This discussion involves the improvement team members and the managers who defined the organizational need, and in it, it will be decided together whether the goals presented by the team are worthy in the eyes of management. Management may adjust the metrics and goals according to their managerial perspective. Once the goals are defined, they will not change and will form the basis for the analysis and solutions that follow.

Analysis

The analysis stage is the most complex to implement. It requires experience in root cause analysis techniques or the 5 Whys technique. Using the analysis technique, we will develop a "tree" of causes and reasons that will allow us to trace the root causes of each intermediate problem leading to the main problem defined in the title.

We start by recording the title as the tree's title. For example: "Numerous customer complaints about partially filled cans." From there, we will come up with the main branches of the tree. For example: problems related to human resources, problems related to suppliers, problems related to machines. We then start investigating each branch and ask the question "why." For example, in the "human resources" branch, we ask what human resources-related problems exist and elaborate each one on a separate note in the branch. Problems such as "lack of employee skills in operating the filling machine"; "inattention to the machine's alert."

We continue to develop each note with additional "why" questions. For example, "inattention to the machine's alert" -> why? -> on one note, "because during the machine's operation, the operator is in an area far from the alert zone"; on another note, "because the machine's alert is weak"; on a third note, "some operators are unfamiliar with the alerts and therefore do not respond to them" -> why? -> and so on, until we reach the root cause. The root cause will be something that reflects a simple possible solution. For example: "during the machine's operation, the operator is in an area far from the alert zone" is a question we can still investigate further to understand why. In contrast, "the machine's alert is weak" enables us to understand that creating a clearer and more tangible alert will likely solve the problem permanently.

After reaching the root causes of each branch (this investigation process can take a lot of time and effort), we prioritize the root causes to address. Collecting sufficient quality data in the "current state" phase will help understand where lays the potential and which root causes of which branches should be prioritized. Sometimes additional data collection will be needed at this stage to better understand which solution channels should be prioritized.

Solutions

As mentioned, root causes reflect fairly clear possible solutions. Once we have prioritized the root causes we want to address first, we will formulate with the team the desired solution for each root cause. When formulating solutions, we need to ensure the following principles:

1. **Quick Implementation:** The solution should be implementable quickly. The lifespan of an improvement team is limited. It is crucial to take advantage of the short time when the team receives the organization's and management's attention to implement solutions. Experience shows that what does not happen quickly usually does not happen at all.
2. **No Negative Impact on Other Activities:** The solution should not negatively impact other activities and areas of the organization. We do not intend to solve something significant in one place at the expense of something else in another place.
3. **Meeting All Goals:** The overall solutions should ensure that we meet the set goals. It is essential to continuously monitor progress and ensure that all goals are being met, not just focusing on one particularly prominent goal.
4. **Justified Resource Investment:** If resource investment (money, manpower, infrastructure, etc.) is required, it should be justified in terms of the goals. For example, the investment will cost 'a,' pay back within 'b' time, and contribute to 'c' improvement in 'd' metric.
5. **Enforced Implementation:** The key to successful implementation lies in the ability to physically enforce its use. We call such enforcements "triangles" after the triangular traffic islands at the entrance to a roundabout. Without these triangular traffic islands, drivers would "cut" the roundabout.

Finalizing the solutions step, we will try to estimate, as a team, the potential progress they will lead to, in terms of the goals we have set. Reaching an estimation that the goals aren’t met will require further discussions about improving the solutions accordingly to the desired goals.

To-Do List

Estimating we are reaching the desired goals with our new solutions, we will break down those solutions into tasks. For each task, we define an accountable person from among the A3 team and a target completion date. It is important that the tasks are clear, practical, and can be implemented quickly. Experience with improvement teams shows that what is not implemented quickly may be relegated to a very low priority later and often removed from the task list. The lifespan of an improvement team is limited, and when tasks are postponed to distant dates, they usually tend to fizzle out and disappear.

During the implementation period of the to-do list, the team will hold status meetings to monitor and follow up on the completion of each task by the target date.