

Theme:

Problem solving and decision making

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Introduction

In life or in business, problem solving and decision making are very important in order to deal with various situations. They are essential management tools, but can also be described as personal skills.

Problem solving is a complex analytical process which encompasses various actions with the aim of finding a solution to a situation. It goes through a few phases and results in changing certain conditions or the environment in a desired way.

Decision making, on the other hand is an action contained within the process of problem solving. It may be exercised many times before finding the solution. It can be described as making a choice from different available options. Choosing the right solution depends on the conclusions reached in the process of problem solving and also on the personal judgement of the decision maker. Important thing about decision making is that it chooses a way forward under the circumstances of the moment, which are bound to change with the change of the external factors.

Problem solving and decision making are two different concepts and need to be developed separately. Being a good problem solver does not necessarily mean that one is a good decision maker and vice versa.

Describe a problem, its nature, scope and impact

We can define 'problem' as something that produces a negative effect or it's hard to deal with and needs to be changed or we can also look at the problem as a question or a matter put up for consideration or examination.

Successful problem solving goes through a few stages: (Figure 1)

- **It begins with identifying the problem, recognizing that it exists in a first place.** This is a process of its own. It starts with evaluating the current situation. This evaluation aims to discover the underlying causes for the problem. At this stage a lot of information needs to be gathered from all participants in the situation. These are documents, interviews, rules and regulations. This will identify what expectation hasn't been met.

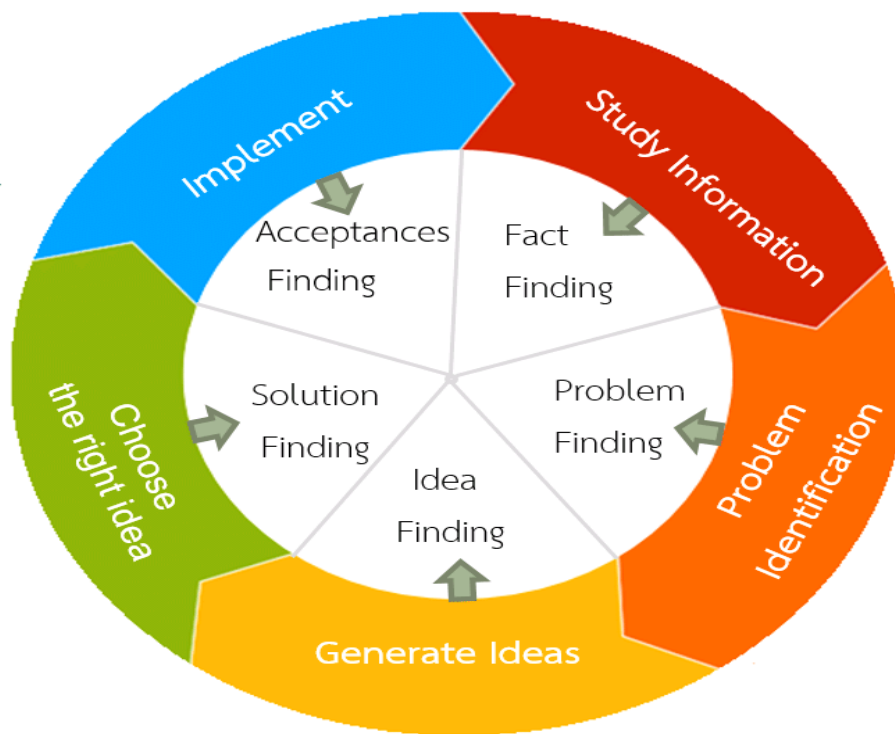


Figure 1: Problem solving steps.

Any attempt to solve a problem without data will result in failure. Using concrete data also helps objectivity, which is important as the solution should not be based on personal opinions and prejudices.

The essence of the problem and its scope need to be outlined accurately. That involves pinpointing all the different circumstances that had led to the problem. Each process or area needs to be scrutinized closely in order to find the specific place where the problem lies. Various techniques are used to arrive at the definition, such as Affinity diagrams, Fishbone diagrams and Pareto analysis. Their aim is to discover the root cause of the problem.

Defining the problem is a very important step as it will provide the basis for generating solutions. It is not always easy to do that and many problems stay undetected. Sometimes the problem is confused with its effects. Another step in the wrong direction is when a one problem is considered when actually we are faced with a number of different problems, which need to be dealt with separately.

- **Finding possible solutions.** Complex problem solving is usually done by a team of

people. This way of working has many advantages:

- Solution is found more quickly
- Everybody has an input, which increases collaboration
- They all use the same problem-solving techniques, that avoids confusion
- The result of the decision-making is justifiable

The participants in the group have to manifest certain abilities: to manage their time; to work out strategies; to think outside the box and to work under pressure.



Figure 2: Develop alternative solutions

Finding solutions is based on the collected data and the definition of the problem.

Different techniques are used to generate suitable solutions, such as Brainstorming. This technique allows everyone to have their input. They write down their ideas even the most outlandish ones. Brainstorming encourages creativity and ideas that seem unsuitable, may, later on, be incorporated into solutions. Initially, the ideas are not evaluated, the aim is to generate as many options as possible. (Figure 2)

The problem is looked at from all possible directions and all ideas are considered. Then the ones that relate to the root cause are picked. On this basis, alternative long and short-term solutions are devised.

Evaluate options to make decision

- **Evaluate the generated solutions.** In order to evaluate solutions, it's necessary first to create basis for comparison. Thus, first the idea for ideal solution is produced. This idea is described in detail, with all its characteristics. This is necessary because it is used as a benchmark for all other options. At this stage some alternatives are discarded as unrelated to the outcome. Critical thinking and analysis must be used.

Solutions are evaluated on the basis of effectiveness and the way they relate to the root cause of the problem. We

Satisficing – solution is chosen in the basis of a minimum set of criteria. This strategy is normally used when decision is required quickly.

Maximising – is giving preference to a particular evaluating requirement. This is applied when the criterion is more significant than the rest and also when a quick solution is required.

Minimising – choosing solutions with minimal risk or disadvantage.

Each of the chosen alternatives is traced to the outcome it will produce. A number of factors need to be considered:

1. Is it possible to implement the solution?
2. How quickly can it be implemented?
3. Are the costs involved acceptable?
4. Is the solution dynamic, can it adapt to changing environment?
5. What are the risks of implementing the solution?
6. Can it benefit the organisation as a whole?

It is important to develop a number of parallel solutions. Each variant will have pros and cons. At this stage it is a good practice to offer the final selection to a third party to look at from another perspective.

- **Decision making** - is taking the decision, which one solution will be chosen. Taking all the above things into account, one course of action is decided upon. The team also needs to agree on the details around the implementation of the solution:
 - Who will implement the solution?
 - How exactly it will be implemented, step by step.
 - Date and time when the implementation will begin.

Once a solution is chosen, the people who will take the action have to agree to it and accept it. Sometimes an authorisation from higher management is required.

At this stage the group has to look at the risks connected with the decision and to predict and evaluate all possible consequences.

If all steps in the problem-solving process, up to now, have been executed correctly, the decision making will not take long. It needs to be objective and pragmatic.

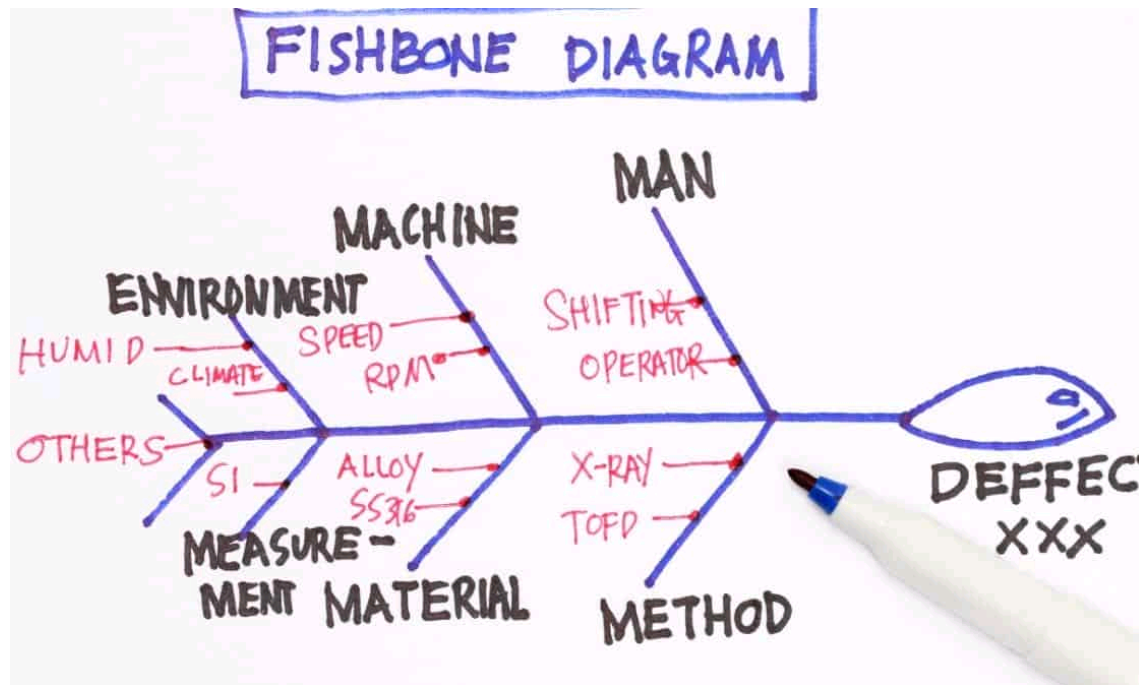
SWOT analysis

<u>Strengths</u>	<u>Weaknesses</u>
- Company assortment - Loyal customers - Good location of the stores - Good competition levels	- Issues with the customer service - High labor turnover - Need more improvement of the sustainability

-	- More expand over the market - Better promotions - More new items as per customer demands in stores.
Opportunities - Possible increasing the sales - Improving the customer service - Increasing the number of loyal customers -	Threats - Brexit implications - COVID19 restrictions and lockdowns - Increasing of the taxation - Decreasing of the people income which will lead to low customer basket.

Fishbone diagram

Fishbone diagram use often used for finding solutions and defining the problems and with the steps from the diagram the company or manager can find exact reasons for the problem and from there to find the exact proper solution.



Plan, monitor and review the implementation and organization of the decisions

- **Plan the implementation of the solution and monitor its progress.** – the actual implementation begins with the creation of a very detailed plan which describes the sequence of actions required. The plan must include:
 - ✓ Appointing a manager, responsible for the implementation of the solution.
 - ✓ Defining the teams or groups of people, who will be involved.
 - ✓ Date and time when the implementation will begin.
 - ✓ Outlining costs and other resources which will be used.
 - ✓ Key points that need to be addresses.
 - ✓ Actions which need to be taken before the implementation begins.
 - ✓ The sequence of actions that constitute the solution.
 - ✓ Course of action if the solution doesn't meet the expectations.

A good approach in many cases is to create a pilot test for your idea and execute it in real situation. During the test the team collects feedback from all involved parties. For that to happen efficiently, very clear and simple feedback channels must be created. After the feedback phase, all information gathered must be assessed. This will show if

the chosen solution really is the best option. If it is not quite what is expected, changes and adjustments must be made. When the solution of the problem begins to be implemented, monitoring at every stage is conducted in order to check if the real events are compliant with the plan and if the solution is producing the desired effect. This happens when the results produced by the implementation are checked against the characteristics of the ideal solution, which were outlined in the previous phases. Monitoring is conducted through the feedback channels.

- **Evaluating the effectiveness of the solution.** This is the last stage of the problem-solving process. It is devised to show if the problem is really dealt with or people need to take a step back and do further adjustments. (Figure 3)

Building good feedback channels will assure that the team will be able to successfully compare the real results with the expectations.

Once achieved, the effective solution will stay in place and will only be changed to reflect the changing environment. It will be incorporated within the organisation's practices and used in the future.

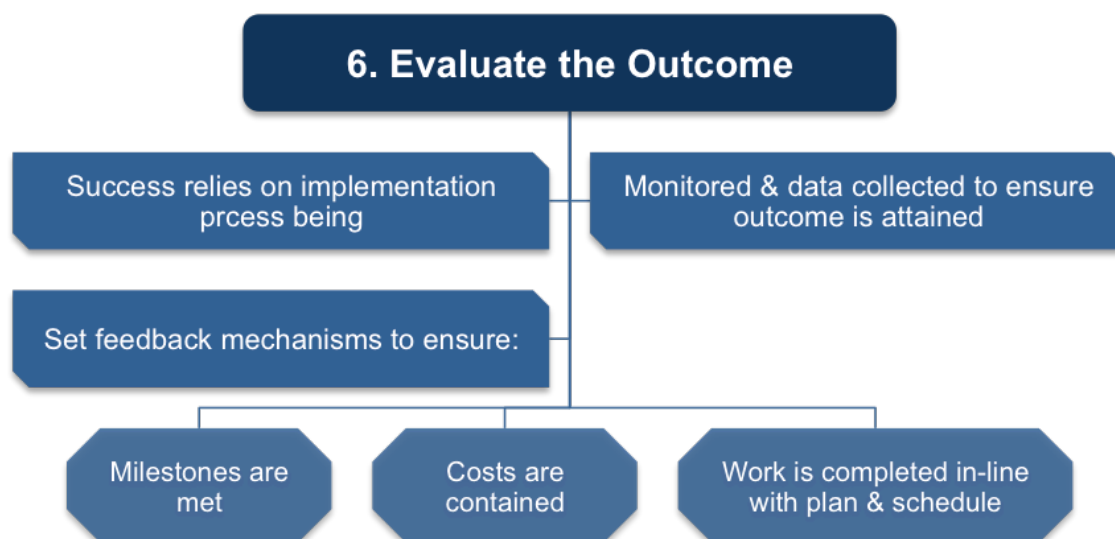


Figure 3: Evaluate the outcome of problem solving.

To be successful this last phase relies on:

- ✓ The effective gathering of information.
- ✓ Well established feedback mechanisms.
- ✓ Strong two-way communication link between the manager and the working groups.
- ✓ Being critical about the process and the actions conducted.

Reports, studies and figures will show how good the solution is. This stage also requires

logic, pragmatism and objective analysis of the data. The conclusions must not be based purely on personal opinion.

Conclusion

Problem solving is an undistinguishable part of life. We do it all the time without even realising it, it is part of the process of evolution. It drives new ideas and inventions.

Successful problem solving requires the people involved with the problem to develop particular skills. These are: the ability to listen; analyzing and critical thinking; creative thinking; the ability to communicate ideas and decision-making skills.

Problem solving is a very important skill which allows people and organisations to control their surrounding environment. It doesn't only introduce positive changes in a situation but it also anticipates what may happen in future and applies an already tested action.

Problem solving is a result of human interaction and cooperation. The people constantly adapt to the newly improved situation and that leads to generally improved performance.

There are different methods of problem solving:

Trial and error – it involves repeated attempts to solve a problem and introducing changes every time around.

Difference reduction – this method breaks the whole process into small steps and the task is to find the best way towards solution.

Means-ends analysis – the real situation is compared with the expected one and the most important difference is outlined. Then a sub-goal is created in order to remove the difference.

Whatever method is used, problem solving and decision making are extremely important survival skills for individuals as well as organisations and need to be developed with care.

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