

Summary Document
Module 1: Problem Solving Skills
Session 5: Analysing the Solutions

In this session, you learnt how to analyse possible solutions to problems.

Segment 1: Step 3- Analysing Possible Solutions

In this segment, you learnt that analysing possible solutions to a problem entails specific activities, which consist of the following steps:

- Brainstorming potential solutions
- Prioritising the options
- Considering key implications

You then learnt about the methods that are commonly used for ideating solutions:

- **Design thinking:** It is a phased non-linear approach for brainstorming and ideation of a solution.
- **De Bono's Six Thinking Hats:** It is an approach to creatively arrive at a solution, wherein a group of people analyse in unison towards a particular aspect of the solution like planning, ideation, judgement and benefits.
- **Storyboard and prototyping:** Storyboarding is the process of creating visual representation of a solution. Prototyping is the process of creating a physical model of your idea and then improving and changing it in response to feedback.
- **6-3-5 Technique:** This technique includes six individuals writing down three ideas in five minutes.

Next, you learnt about the technique called **SCAMPER**, which is used to improve the existing products and services. SCAMPER stands for Substitute, Combine, Adjust, Modify, Put to other use, Eliminate and Rearrange, as explained below:

- **Substitute:** This entails finding an alternative to your existing products and services that can result in a better outcome.
- **Combine:** This involves combining various different ideas and concepts to check whether that works better.
- **Adjust:** This refers to making improvements in a product or service to obtain better results.
- **Modify:** This refers to modifying and making changes to an existing product or service to bring out the innovative capabilities of an organisation.
- **Put to other use:** This refers to putting the current product or service to another use.
- **Eliminate:** The aim of this step is to eliminate a product, service or concept that is less valuable than the others.

- **Rearrange:** This step entails developing and bringing in the most recent concept from a pre-existing one to solve the problem.

You then understood, with the help of an example, how McDonalds uses the SCAMPER technique to effectively build its products and services.

Segment 2: Prioritising Options

In this segment, you learnt how to narrow down and prioritise the most effective solution to a problem.

The two most common ways of prioritising solutions are as follows:

1. **Funnel:** It is a process of narrowing down solutions that are identified using hard constraints to determine whether a solution or an option is likely to be accepted or rejected.
2. **2x2 prioritisation matrix:** This technique uses soft factors to prioritise solutions and involves four quadrants and two axes. The importance of the solution lies on the X-axis and on the Y-axis lies the ease of its implementation. The option that falls in the upper right quadrant is high on both importance and ease and is to be prioritised.

You then learnt that the hard constraints mentioned in the funnel method are constraints that are non-negotiable. These constraints include the following:

1. **Qualitative:** These filters include:
 - Alignment of the solution with the business objectives,
 - Sustainability of the solution, and
 - Effect of the solution on the people, system and processes.
2. **Quantitative:** These filter include:
 - Profitability of the solution and
 - Minimum population.

Next, you learnt about some factors that can help in determining the importance of a solution. They are as follows:

- Value of opportunity
- Profit margin
- Growth rate
- Impact time

You also understood some factors that can help in determining the ease of implementation of a solution; they are as follows:

- Cost of implementation

- Effort in implementation
- The risk associated with the implementation
- The time required to implement it

Segment 3: Considering Implications

In this segment, you learnt how to evaluate the implications of problem solving in a business context.

Some implications of problem solving are as follows:

- **Organisation structure:** Sometimes, the organisational structure needs to undergo change in order to tackle the implication of problem solving. There might also be a need to create a new department in order to cater to the change.
- **Leadership:** There might be a need to hire industry leaders or move individuals internally from one department to another. There might also arise the need to upskill the existing personnel.
- **Partnerships:** Skills that cannot be found in-house might need to be outsourced.
- **Talent:** It is crucial to hire and retain top talent in an organisation in order to tackle the implications of problem solving.
- **Culture:** An organisation's culture depends on several factors such as the location, employees and customers, and it may have to adapt to the new changes.

You then learnt about the implications of problem solving on the IT stack, which is also referred to as systems. These implications are as follows:

- **Application landscape:** This includes system software that helps to run and serve the business.
- **Infrastructure:** This is the framework that is necessary to run business applications.
- **Middleware:** This can be considered as a glue that holds the applications and infrastructure together and allows the application to function properly.
- **Data analytics:** This process includes analysing data to gain insights and follow up on trends that can help in making an informed decision.
- **Cybersecurity:** These are the procedures and technology used to safeguard the company's as well as the customer's data.

Finally, you learnt about the the implications of problem solving on processes:

- **Unorthodox working style:** The company will need to adapt to a faster and more efficient style of working such as the one observed in start-ups.
- **Increased accountability:** There might be a need to create a new team with added responsibilities and objectives.

- **Proper governance:** Proper governance will be needed in the organisation to make sure that all the SOPs (standard operating procedures) are followed and all the activities and decisions are properly reviewed.
- **Tracking data metrics:** These are required to ensure that all the objectives are met and to measure the impact of business decisions on profitability.
- **Interfacing the ecosystem:** In this, you might realise the need to work with new partners and improve the communication process.

Additionally, with the help of the e-commerce business example, you learnt how to evaluate the implications of a specific problem solution on people, systems and processes.

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