

4.0

PROBLEM SOLVING METHODOLOGY

**BY : GROUP 3
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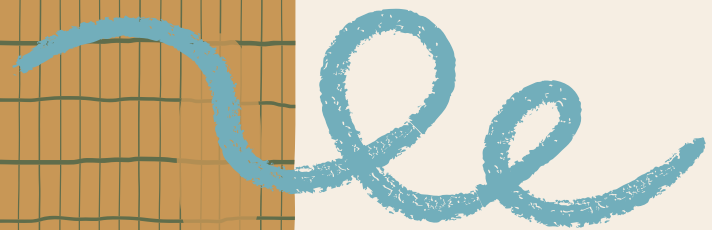
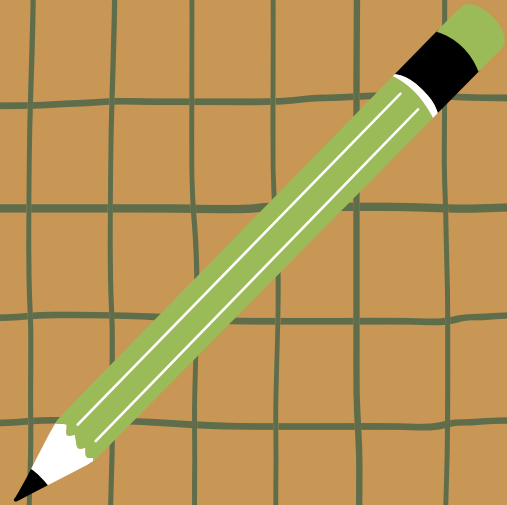
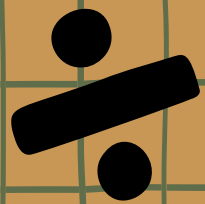


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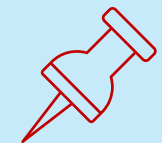
Problem Solving Methodology



Problem Solving Tools and Techniques



Location Facilities Capacity Planning

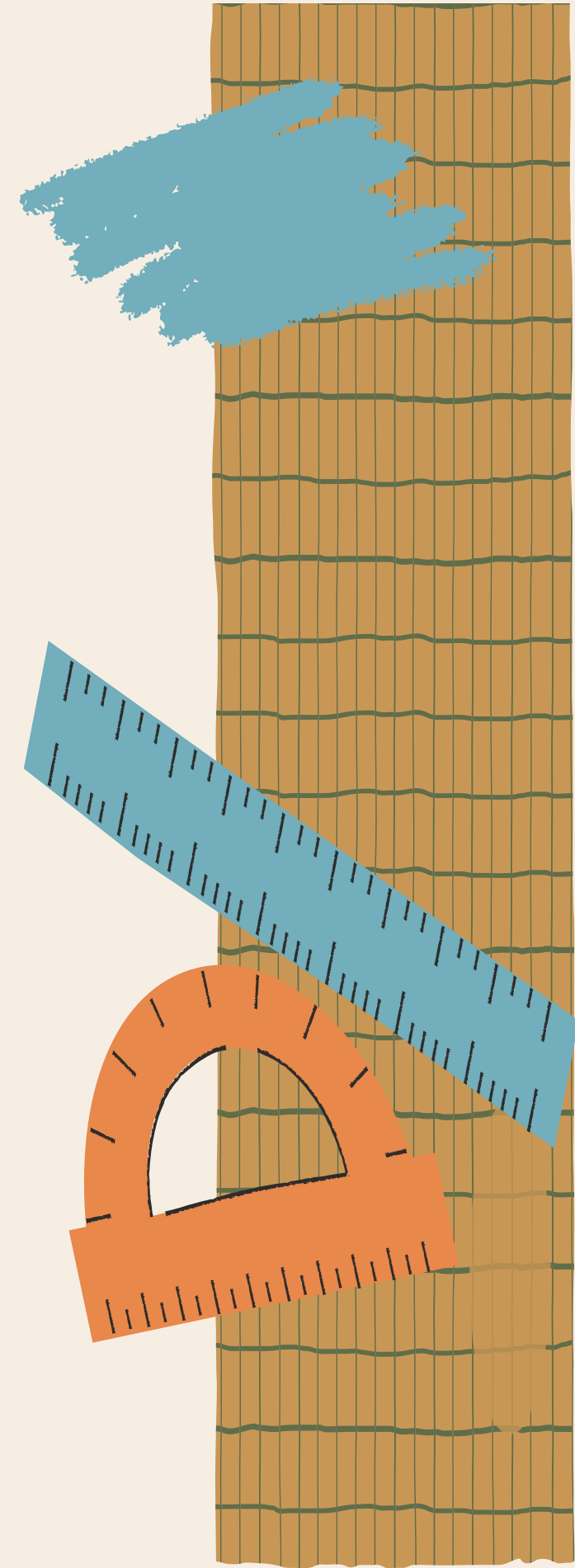


Layout Strategy

LEARNING OBJECTIVES :

By the end of the lesson, you'll be able to:

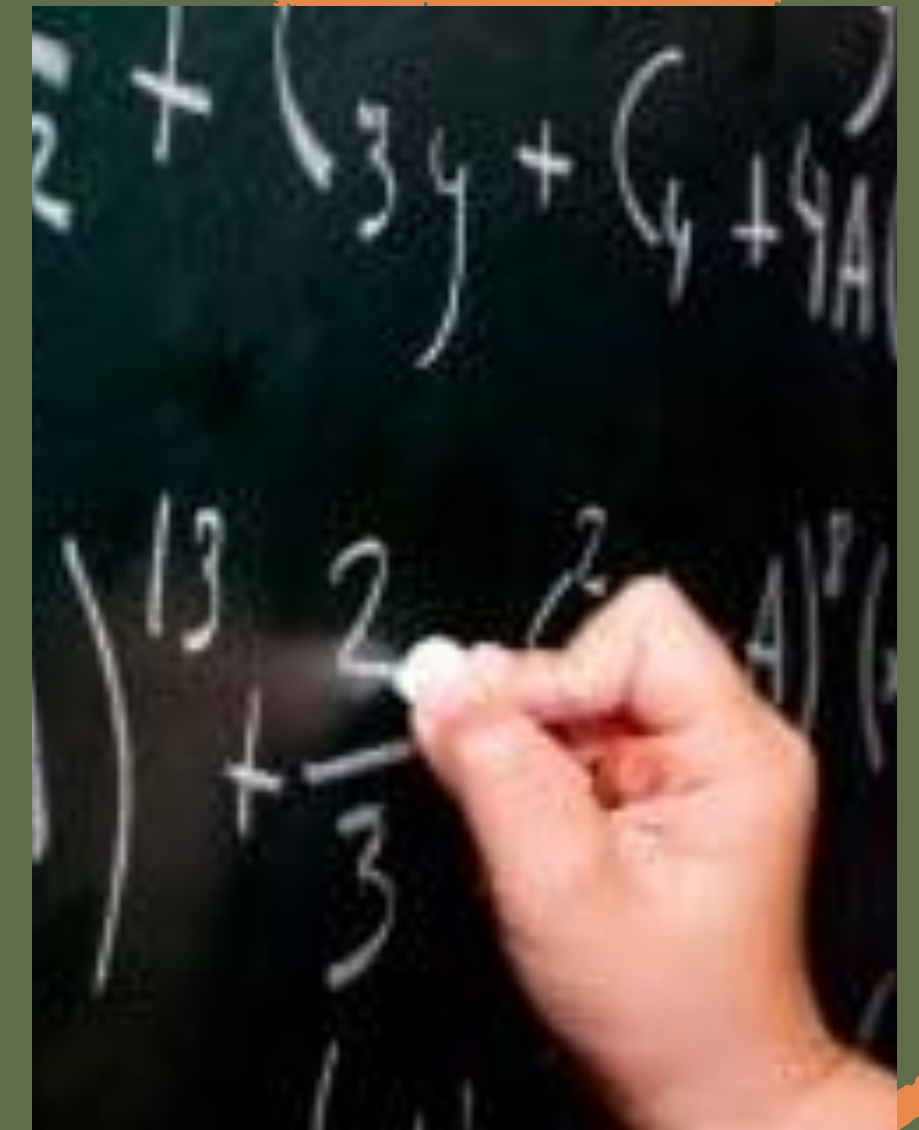
- **Learn the different methods of problem solving.**
- **Discover various tools and techniques in solving a problem.**
- **Acquire knowledge on location facilities capacity planning.**
- **Find out relevant layout strategy.**



PROBLEM SOLVING METHODOLOGY

Problem solving is the act of :

- Defining a problem.
- Determining the cause of the problem.
- Identifying, prioritizing and selecting alternatives for a solution.
- Implementing a solution.



Problem Solving Tools and Techniques



Problem solving tools are strategies that can help determine the cause of a problem and identify the best solutions available.



Problem Solving Tools and Techniques

Examples :

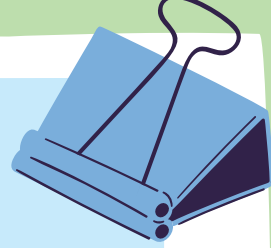
1. Brainstorming

Brainstorming is a popular group problem-solving technique. It is typically referred to as a technique for:

- ❖ **Group thinking sessions (where all ideas are collected).**



Problem Solving Tools and Techniques



1. Brainstorming

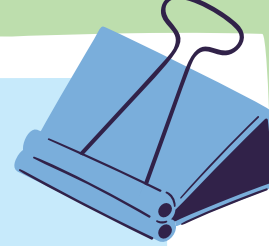
❖ Stimulating creative thinking.

❖ Spontaneous participation.

❖ Group problem-solving (around a specific question or challenge).



Problem Solving Tools and Techniques



1. Brainstorming



- ❖ **Generating new ideas or creative solutions (drawing on lateral thinking/thinking outside the box).**
- ❖ **Ensuring all ideas are captured and nothing is criticized or critiqued until the later analysis stage.**

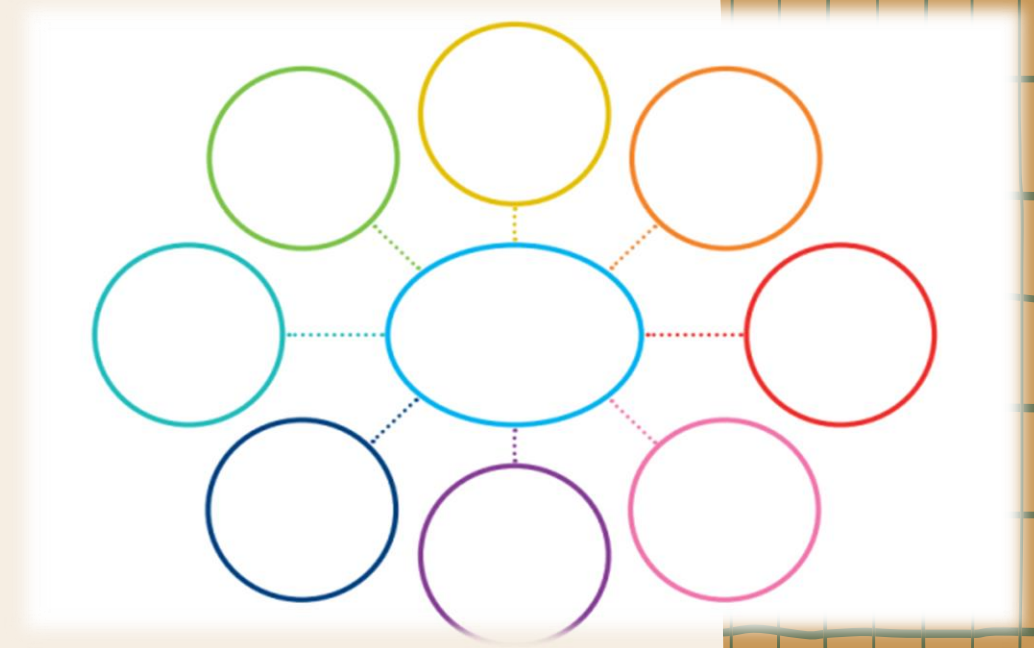


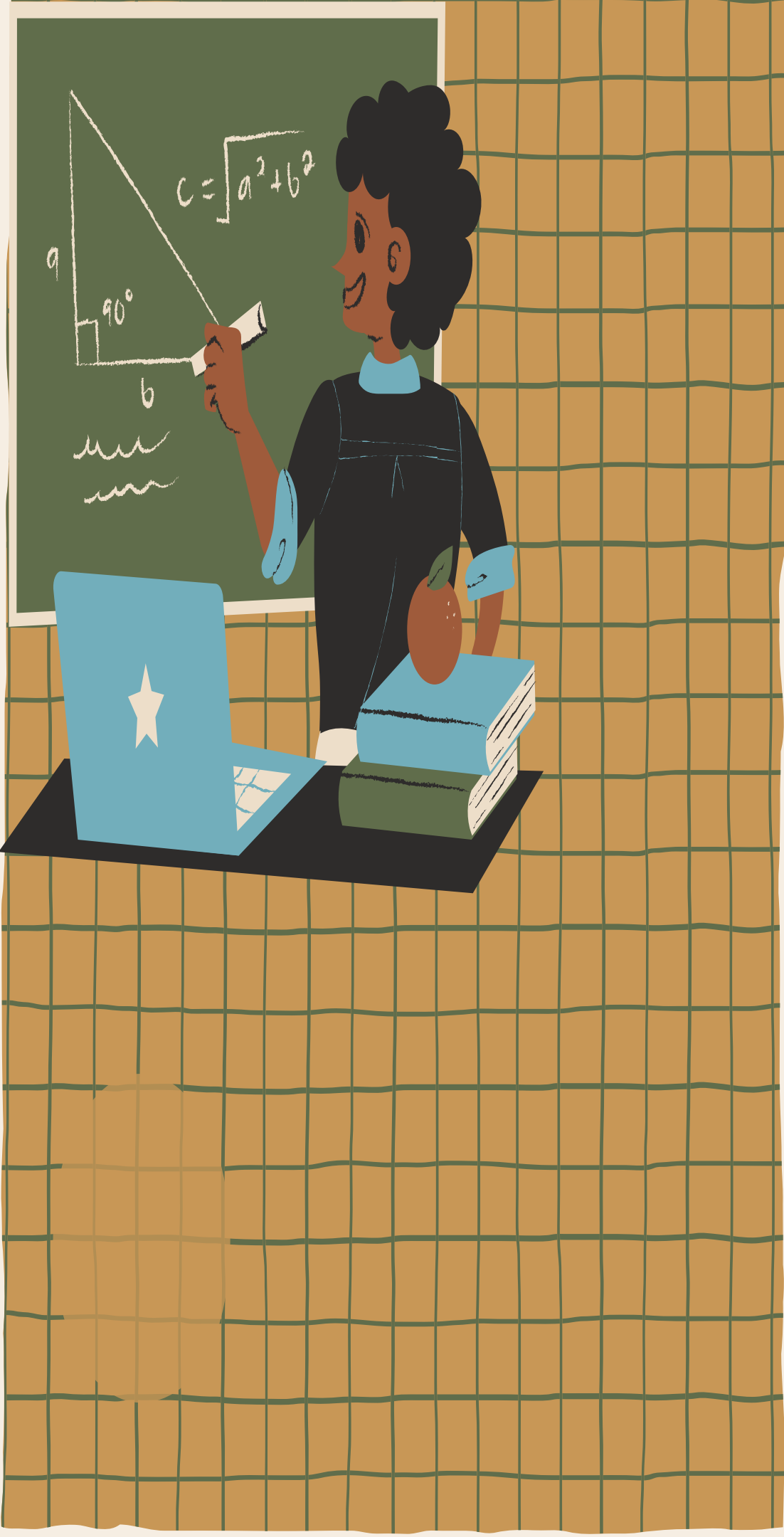
Problem Solving Tools and Techniques

Examples :

2. Mind Mapping

A diagram that visually organizes information and involves writing down a central theme/concept and thinking of new and related ideas which radiate out from the center.





Problem Solving Tools and Techniques

Examples :

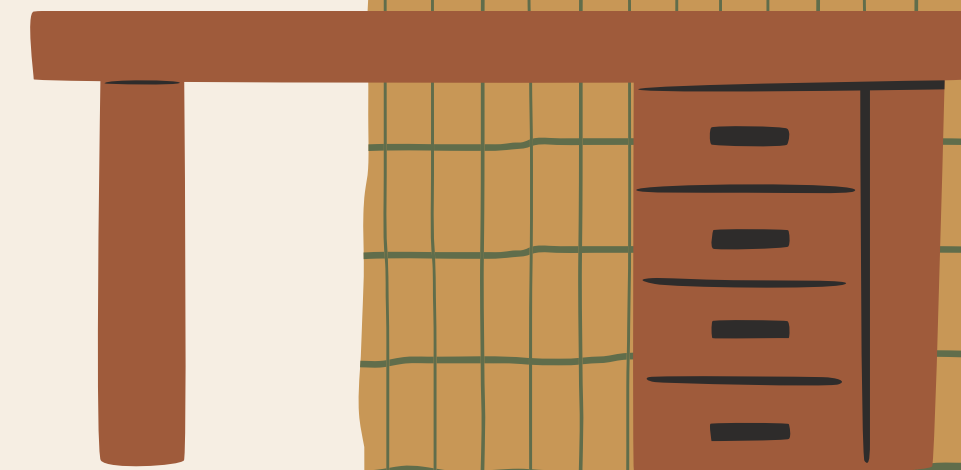
3. SWOT ANALYSIS

A strategic planning tool that is used to generate information on which rigorous, logical, defensible decision can be based. As the diagram highlights, SWOT stands for Strengths, Weaknesses, Opportunities and Threats.

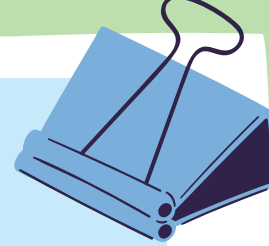
Problem Solving Tools and Techniques

Examples :

3. SWOT ANALYSIS



Problem Solving Tools and Techniques



4. The 5W's

The 5 W's is a questioning and problem-solving method that aims to view ideas and issues from different perspectives. It helps you to understand a problem better and find the root cause of it. 5W is an acronym for What, Where, When, Why, and Who.







Problem Solving Tools and Techniques

Examples :

4. The 5W's

THE 5 W'S CHART

Name: _____ Date: _____

<div>Who was involved?</div> <div></div>	Who 
<div>What happened?</div> <div></div>	? What
<div>When did it happen?</div> <div></div>	When 
<div>Where did it happen?</div> <div></div>	Where 
<div>Why did it happen?</div> <div></div>	Why 



Location Facilities Capacity Planning

Creating a plan, as a company, to decide how much of a product to produce and where to produce it.



Location Facilities Capacity Planning



Why location facilities relevant to a business?

A right location provides adequate access to customers, skilled labors and in transportation. A right location ensures success of the organization in current global competitive environment.





Location Facilities Capacity Planning

Why capacity planning is important to a business?

Having the wrong level of capacity causes negative effects. Too much capacity means that costs are higher than they should be since we are paying for more land, equipment and a larger building than we need. Not enough capacity negatively affects the level of service provided to our customers.



LAYOUT STRATEGY

An efficient layout strategy focuses on the best methods to integrate the flow of materials, people, and information within and between areas to accomplish the business mission.

$$\sqrt{\frac{3}{4}}$$





LAYOUT STRATEGY

Layout is one of the key decisions that determines the long-run efficiency of operations. Layout has strategic implications because it establishes an organization's competitive priorities in regard to capacity, processes, flexibility, and cost, as well as quality of work life, customer contact, and image.



FOUR TYPES OF LAYOUT STRATEGY




Process Layouts



Product Layouts

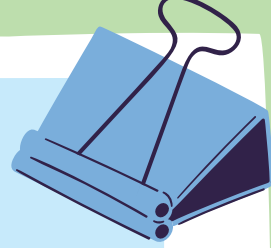


Hybrid Layouts



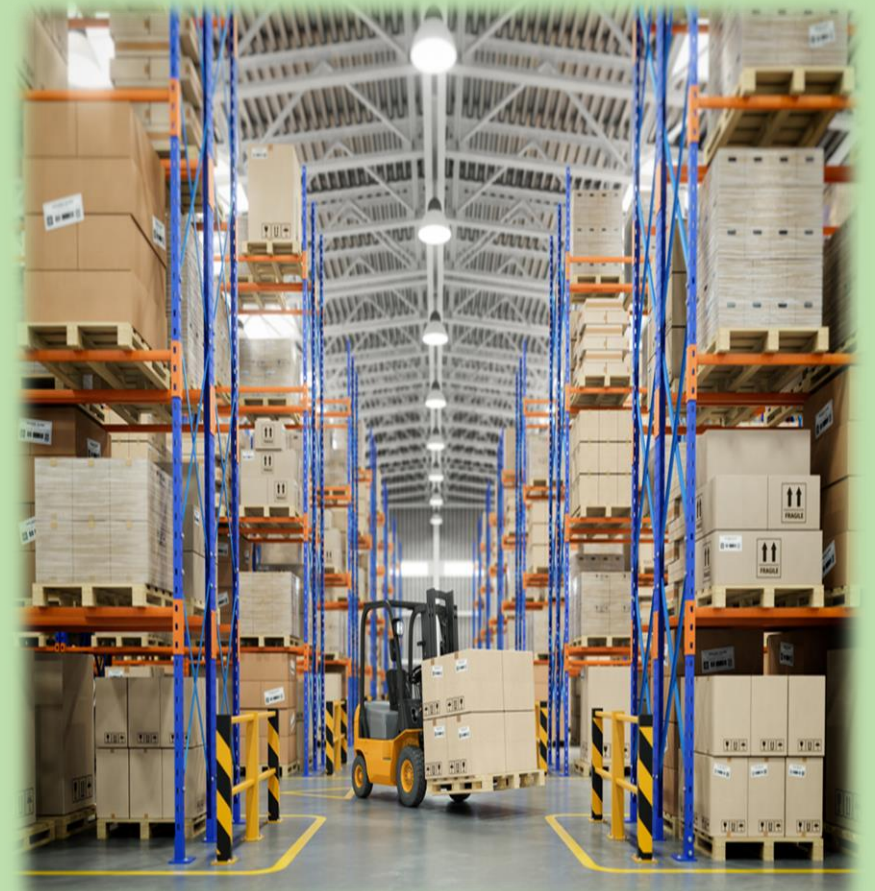
**Fixed-Position
Layouts**

FOUR TYPES OF LAYOUT STRATEGY



1. Process Layout

The process layout arranges workflow around the production process. All workers performing similar tasks are grouped together. Products pass from one workstation to another (but not necessarily to every workstation).



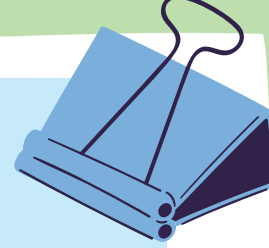
FOUR TYPES OF LAYOUT STRATEGY

2. Product Layout

A product layout, also known as “line layout”, arranges production resources around the product or service produced by that resource. That is, the resources are arranged and dedicated to a particular product or service.

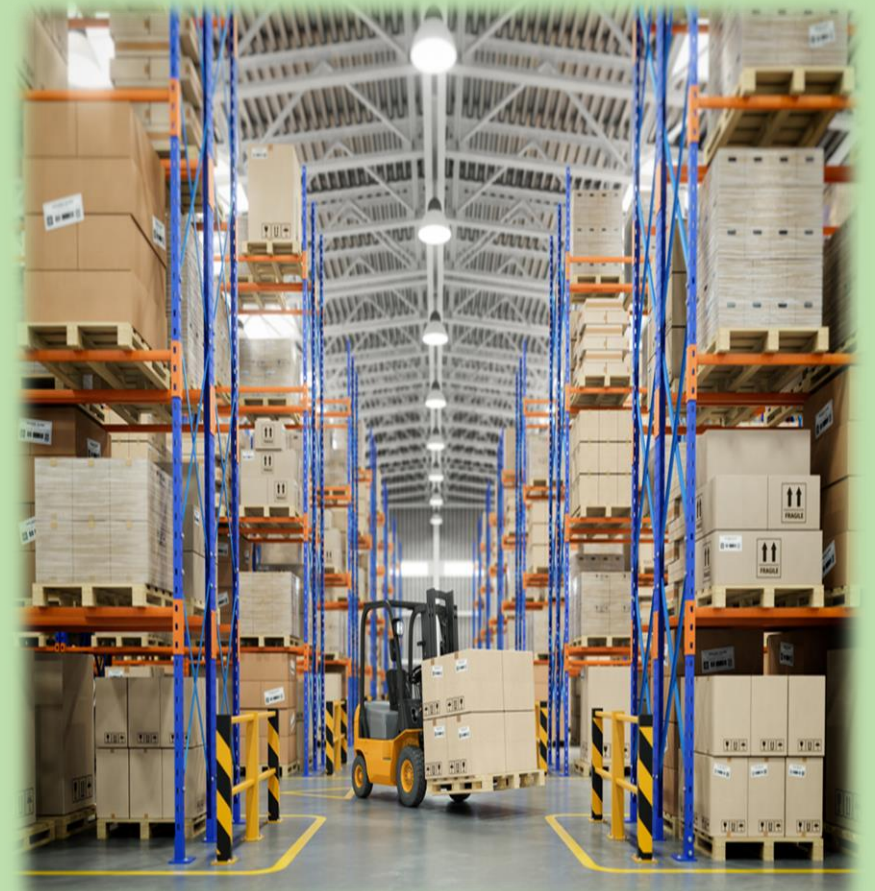


FOUR TYPES OF LAYOUT STRATEGY



3. Hybrid Layout

Hybrid layouts place together resources which service a subset of the total range of products or services. The grouping of products/services is known as a “family”.



FOUR TYPES OF LAYOUT STRATEGY

4. Fixed-Position Layout

The Fixed-Position layout is used when the product or service cannot be moved, and the production process must happen at the delivery location.



THANK YOU!

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