**ENTREPRENEURSHIP**

**1. Introduction: (Chapter 1)**

Who Is an Entrepreneur?

An entrepreneur is an individual who creates a new business, bearing most of the risks and enjoying most of the rewards. The process of setting up a business is known as [entrepreneurship](https://www.investopedia.com/articles/personal-finance/101414/why-entrepreneurs-are-important-economy.asp). The entrepreneur is commonly seen as an innovator, a source of new ideas, goods, services, and business/or procedures.

### KEY TAKEAWAYS

* A person who undertakes the risk of starting a new business venture is called an entrepreneur.
* An entrepreneur creates a firm to realize their idea, known as entrepreneurship, which aggregates capital and labour in order to produce goods or services for profit.
* Entrepreneurship is highly risky but also can be highly rewarding, as it serves to generate economic wealth, growth, and innovation.
* Ensuring funding is key for entrepreneurs: Financing resources include SBA loans and crowd funding.
* The way entrepreneurs file and pay taxes will depend on how the business is set up in terms of structure.

An entrepreneur combines the first three of these to manufacture goods or provide services. They typically create a [business plan](https://www.investopedia.com/terms/b/business-plan.asp), hire labour, acquire resources and financing, and provide leadership and management for the business.

## Types of Entrepreneur

Not every entrepreneur is the same and not all have the same goals. Here are a few types of entrepreneurs:

### 1) Builder:-

Builders seek to create scalable businesses within a short time frame. Builders typically pass $5 million in revenue in the first two to four years and continue to build up until $100 million or beyond. These individuals seek to build out a strong infrastructure by hiring the best talent and seeking the best investors. They have temperamental personalities that are suited to the fast growth they desire but can make personal and business relationships difficult

### 2) Opportunist:-

Opportunistic entrepreneurs are optimistic individuals with the ability to pick out financial opportunities, get in at the right time, stay on board during the time of growth, and exit when a business hits its peak.

These types of entrepreneurs are concerned with profits and the wealth they will build, so they are attracted to ideas where they can create residual or renewal income. Because they are looking to find well-timed opportunities, opportunistic entrepreneurs can be impulsive.

### 3) Innovator:-

Innovators are those rare individuals that come up with a great idea or product that no one has thought of before. Think of Thomas Edison, Steve Jobs, and Mark Zuckerberg. These individuals worked on what they loved and found business opportunities through that.

Rather than focusing on money, innovators care more about the impact that their products and services have on society. These individuals are not the best at running a business as they are idea-generating individuals, so often they leave the day-to-day operations to those more capable in that respect.

### 4) Specialist:-

These individuals are analytical and risk-averse. They have a strong skill set in a specific area obtained through education or apprenticeship. A specialist entrepreneur will build out their business through networking and referrals, resulting in slower growth than a builder entrepreneur

## 4 Types of Entrepreneurship/And explain forms of entrepreneurship:

### 1) Small-Business:

[Small business entrepreneurship](https://www.investopedia.com/articles/investing/092514/entrepreneur-vs-small-business-owner-defined.asp) is the idea of opening a business without turning it into a large conglomerate or opening many chains. A single-location restaurant, one grocery shop, or a retail shop to sell your handmade goods would all be an example of small business entrepreneurship.

These individuals usually invest their own money and succeed if their business turns a profit, which they live off of. They don't have outside investors and will only take a loan if it helps continue the business.

### 2) Scalable Startup:-

These are companies that start with a unique idea; think Silicon Valley. The hopes are to innovate with a unique product or service and continue growing the company, continuously scaling up as time moves on. These types of companies often require investors and large amounts of capital to grow their idea and reach multiple markets.

### 3) Large-Company:

Large company entrepreneurship is a new business division created within an existing company. The existing company may be well placed to branch out into other sectors or it may be well placed to become involved in new technology.

CEOs of these companies either foresee a new market for the company or individuals within the company generate ideas that they bring to senior management to start the process.

## 4) Social Entrepreneurship:-

The goal of [social entrepreneurship](https://www.investopedia.com/terms/s/social-entrepreneur.asp) is to create a benefit to society and humankind. They focus on helping communities or the environment through their products and services. They are not driven by profits but rather by helping the world around them.

**Innovation and entrepreneurship:🡪**

**Inovation:** Innovation is a new idea, method, strategy, or the act of introducing something new. This can be a business model, idea, service, or process. For example, introducing a new technology that can reduce the rate of electricity consumption is an innovation.

Innovations can be [new business models](https://digitalleadership.com/unite-articles/extended-business-model-canvas/)/products/services/any form of a new idea. However, it does not have to mean the creation of something totally new. Improvements upon existing products, services, or ideas are also regarded as innovations. Innovation disrupts the status quo. In fact, it creates change but does not automatically translate to new **business or entrepreneurship.**

**Enterpreneurship**: Entrepreneurship is the willingness of an individual or group of people to take risks and organize or develop [business opportunities](https://digitalleadership.com/unite-articles/jtbd-identify-market-opportunities/) from ideas in an ever-evolving market.

**The main difference between innovation and entrepreneurship** is that innovation involves introducing something new. This can be a[new business model,](https://digitalleadership.com/unite-articles/extended-business-model-canvas/) product, idea, or service. On the other hand, entrepreneurship involves turning a great idea into a [business opportunity.](https://digitalleadership.com/unite-articles/jtbd-identify-market-opportunities/)

**Contributions of entrepreneurs to the society🡪**

**1. Donation**

**2. Charitable institution**

**3. Sponsorship**

**4. Welfare Program**

**5. Advisors to respective government**

**risk-opportunities perspective and mitigation of risks:🡪**

**Five risk mitigation strategies with examples**

**1. Assume and accept risk**

* **Risk impacting cost**
* **Risk impacting schedule**
* **Risk impacting performance**

**2. Avoidance of risk**

**3. Controlling risk**

**4. Transference of risk**

**5. Watch and monitor risk**

**Entrepreneurship – An Innovation: (Chapter 2)**

**5 Challenges of Innovation 🡪**

### 1) Missed Innovation Strategy

### 2) Employees are Not Motivated or Empowered

### 3) Innovation Takes Place in One Group Alone

### 4) Lack of Collaboration

### 5) Missed Customer Connections

**Steps of Innovation Management 🡪**

Step 1: Innovation Maturity Assessment – Determining the Maturity Level

Step 2: Innovation Framework Set-ups – Creating a framework for Innovation

Step 3: Innovation Workshops – Bringing Innovation Management to Life

Step 4: Methodical software training – Digitizing Innovation Management

**Idea Management System 🡪**

Every product or offering first began as an idea. Continuous innovation can lead to market leadership — which requires a continuous stream of ideas. But you need to do more than just generate a lot of ideas. You need a way to gather and assess suggestions against your strategic direction. Idea management is the process of capturing, evaluating, and prioritizing requests and feedback.

## Why is idea management important?

Everyone always thinks they have the next great idea. But those ideas are useless when they are scattered in emails, spread sheets, and notes. Idea management makes it possible for you to stay close to what customers want, keep that input organized, and focus your efforts accordingly.

## Who is responsible for idea management?

Product managers are responsible for managing the influx and review of ideas. As a product manager, people pass those ideas on to you and expect you to implement each one as soon as possible. You are the one who audits and stewards those ideas — from concept to implementation.

**Divergent v/s Convergent Thinking 🡪**

|  |  |
| --- | --- |
| **Convergent Thinking** | **Divergent Thinking** |
| **The process of figuring out a concrete solution to any problem is called Convergent Thinking.** | **Divergent thinking** is the process of thinking that explores multiple possible solutions in order to generate creative ideas. |
| It’s a straight forward process that focuses on figuring out the most effective answer to a problem. | In contrast, divergent thinking refers to opening the mind in various directions and trying out multiple solutions for a problem. |
| Its characteristics include   * Speed * Accuracy * Logic | Its characteristics include   * Spontaneous * Free-flowing * Non-linear |
| Examples:   1. Variety of tests, such as multiple choice tests, standardized tests, quizzes, spelling tests and similar other tests require convergent thinking, because only one answer can be 100% correct. | Examples:   1. Divergent thinking wouldn’t be applicable in multiple choice tests or standardized tests, which require a single absolute answer. |

**Qualities of a prospective Entrepreneur 🡪**

1. Creativity – Qualities of Entrepreneurs

2. Self-Motivation

3. Confidence

4. Passionate – Qualities of Entrepreneurs

5. Persistence – Qualities of Entrepreneurs

6. Resourcefulness – Qualities of Entrepreneurs

7. Great Communication Skills

8. Strong Work Ethics

9. Entrepreneurs Know When to Delegate – Qualities of Entrepreneurs

10. Empathy – Qualities of Entrepreneurs

**Idea Incubation: (Chapter 3)**

**Q: Idea incubation:**

Idea incubation is a process for bringing ideas into reality. It starts on a very fundamental level, often with a single individual who comes up with a concept he or she thinks should be further explored. This individual brings others in on the incubation process, making the idea stronger and more viable. Ultimately, the idea may be turned into a product, assuming that funding can be secured and that the idea is commercially viable.

**The Importance of Business Incubators**

## Financial Management

Incubators help start-ups save on operating costs. The companies that are part of an incubator can share the same facilities and share on overhead expenses, such as utilities, office equipment rentals, and receptionist services. Start-ups can also take advantage of lower lease rates if the incubator is located in low-rent industrial parks. Incubators may also help start-ups with their financing needs by referring them to angel investors and venture capitalists, and helping them with presentations. Start-ups may have better luck securing financing if they have the stamp of approval of incubator programs.

## Management Support

In addition to financial help, start-ups also need guidance on how to compete successfully with established industry players. As [Velocity Global](https://velocityglobal.com/blog/how-business-incubators-can-benefit-startups/) reports, Incubators can tap into their networks of experienced entrepreneurs and retired executives, who can provide management guidance and operational assistance. For example, a biotechnology start-up would benefit from the counsel of retired pharmaceutical executives who have first-hand experience of the drug development and clinical approval process. Similarly, a restaurant entrepreneur could learn about the difficulties of overseas expansion from retired hospitality-industry executives.

## Synergies between Start-ups

The close working relationships between an incubator's start-ups create synergies as a natural part of the business incubation process. Even after the start-ups leave an incubator, the connections and networks established through these relationships can endure for a long time. Start-up founders can provide encouragement to one another across entrepreneur industries, and employees may share ideas on new approaches to old problems. Start-ups may plan joint marketing campaigns and cooperate on product development initiatives, reports the business magazine [Inc.com](https://www.inc.com/encyclopedia/business-incubators.html).

These synergies do not necessarily exist among start-ups funded by venture capitalists, because the companies that receive the funds do not necessarily know one another and they may be located in different geographic locations.

## Role of Business Incubators in Economic Development

By helping new businesses prosper, incubators assist in creating long-lasting jobs for their host communities. As startups mature and grow, they create long-lasting jobs for new graduates, experienced mid-career personnel, and veteran executives. This benefits communities and drives economic growth.

**Factors determining competitive advantage 🡪**

**Macro-Environmental Trends** 🡪

A firm needs to ensure that it is linked to the environment and the strategic choices enable the firm to adapt to environmental changes. In fact, firms may need a strategic change to ensure a strong fit with the environment and this firm-environment fit will enable superior performance.

**Deploying Resources towards Accomplishment of Key Strategic Goals 🡪**

There are several major categories of resources in a firm—financial, physical, human, technological, organizational etc. Managers make decisions about the deployment of these resources to achieve the firm’s objectives.

**Undertaking Strategic Renewal to Exit Commoditized Businesses** 🡪

A key process to ensure sustainability of competitive advantage is the process of strategic renewal. A firm needs to align its strategy with environmental conditions through renewal which is iterative and it needs to be anchored with the firm’s beliefs, actions and knowledge.

**Market segment 🡪**

The term market segment refers to people who are grouped together for marketing purposes. Market segments are part of a larger market, often lumping individuals together based on one or more similar characteristics. Corporations and their [marketing](https://www.investopedia.com/terms/m/marketing.asp) teams use various criteria to develop a target market for their products and services. Marketing professionals approach each segment differently, but only after they fully understand the needs, lifestyles, [demographics](https://www.investopedia.com/terms/d/demographics.asp), and personality of the target consumer.

### KEY TAKEAWAYS

* A market segment is a group of people who share one or more similar characteristics.
* Corporations and marketing teams use various criteria to develop target markets for their products and services.
* The criteria for a market segment include homogeneity among the segment's main needs, uniqueness, and a common reaction to marketing tactics.
* The reaction from market segments to marketing plans or strategies is typically very predictable.
* Common market segment traits include interests, lifestyle, age, and gender.

## How Market Segments Work

A market segment is a category of customers who have similar likes and dislikes in an otherwise homogeneous [market](https://www.investopedia.com/terms/m/market.asp). These customers can be individuals, families, businesses, organizations, or a blend of multiple types.

Market segments are known to respond somewhat predictably to a [marketing strategy](https://www.investopedia.com/terms/m/marketing-strategy.asp), plan, or promotion. This is why marketers use segmentation when deciding on a [target market](https://www.investopedia.com/terms/t/target-market.asp). As its name suggests, market segmentation is the process of separating a market into sub-groups, in which its members share common characteristics.

**Blue ocean strategy 🡪**

**BLUE OCEANS**, in contrast, denote all the industries not in existence today – the unknown market space, untainted by competition. In blue oceans, demand is created rather than fought over. There is sample opportunity for growth that is both profitable and rapid.

In blue oceans, competition is irrelevant because the rules of the game are waiting to be set. A blue ocean is an analogy to describe the wider, deeper potential to be found in unexplored market space. A blue ocean is vast, deep, and powerful in terms of profitable growth.

* **It’s more than theoretical.**Some strategic planning models are based on theories that don’t quite pan out during go-to-market executions. In contrast, Blue Ocean Strategy originated from a study that took place over 10 years and analysed company successes and failures in more than 30 industries. It’s based on proven data rather than unproven ideas.
* **The competition is irrelevant.**Taking a Blue Ocean approach means your goal isn’t to outperform the competition or be the best in the industry. Instead, your aim is to redraw industry boundaries and operate within that new space, making the competition immaterial.
* **Differentiation and low cost can coexist.**The Blue Ocean Strategy argues that consumers don’t have to choose between value and affordability. If a company can identify what consumers currently value and then rethink how to provide that value, differentiation and low cost can both be achieved. This is termed “value innovation.”
* **You have a framework to test ideas.**The Blue Ocean Idea Index is part of the overarching strategy and lets companies test the commercial viability of ideas. This process helps refine ideas and identify opportunities with the most potential, minimizing risk.

**Eg. Netflix**

**Industry and Competitor Analysis (market structure, market size, growth potential**)🡪

Industry analysis is a market assessment tool used by businesses and analysts to understand the competitive dynamics of an industry. It helps them get a sense of what is happening in an industry, e.g., [demand-supply statistics](https://corporatefinanceinstitute.com/resources/knowledge/economics/law-of-supply-economics/).

### Types of industry analysis :-

**1 Competitive Forces Model (Porter’s 5 Forces):-**

#### 1. Intensity of industry rivalry

**2. Threat of potential entrants**

**3. Bargaining power of suppliers**

**4. Bargaining power of buyers**

**5. Threat of substitute goods/services**

**2 Broad Factors Analysis (PEST Analysis):-**

* **Political**
* **Economic**
* **Social**
* **Technological**

**3 SWOT Analysis:-**

**Strengths, Weaknesses, Opportunities, Threats**

**1. Internal (already exist)**

**2. External**

**Demand-supply analysis 🡪 pdf.**

**Entrepreneurial Motivation: Design Thinking (Chapter 4)**

**Design Thinking - Driven Innovation 🡪**

**TRIZ (Theory of Inventive Problem Solving) 🡪**

**Achievement motivation theory of entrepreneurship – Theory of McClelland 🡪**

**Harvesting Strategies 🡪**

**Information: (Chapter 5)**

**Government incentives for entrepreneurship 🡪**

**Incubation🡪**

**Acceleration🡪**

**Funding new ventures – bootstrapping🡪**

**crowd sourcing🡪**

**angel investors🡪**

**Government of India’s efforts at promoting entrepreneurship and innovation – SISI, KVIC, DGFT, SIDBI ,Defense and Railways 🡪**

**Closing the Window(Chapter 6)**

**Sustaining Competitiveness🡪**

**Maintaining Competitive Advantage🡪**

**the Changing Role of the Entrepreneur🡪**

**Project Management(Chapter 8)**

**Bar Chart and line of Balance:🡪**

A bar chart or bar graph is a chart or graph that presents categorical data with rectangular bars with heights or lengths proportional to the values that they represent.

A vertical bar chart is sometimes called a **column chart**.

A bar graph shows comparisons among [discrete](https://en.wikipedia.org/wiki/Discrete_variable) [categories](https://en.wikipedia.org/wiki/Categorical_variable). One axis of the chart shows the specific categories being compared, and the other axis represents a measured value.

Line of Balance (LOB) scheduling or Linear scheduling (LSM) is a method that shows the repetitive work that may exist in a project as a single line on a graph.

**The advantages of the Line of Balance (LOB) Technique :-**

* The linear scheduling method shows Clearly the amount of work taking place in a certain area at a specific time of the project.
* Line of Balance(LOB) has the ability to show & optimize the resources used for a large number of repeated activities.
* Ease of setup and its superior presentation & visualization.
* Easier to modify, update, and change the time schedule.
* Better managing of all the various main contractors/sub-contractors in the project.
* It allows for simpler resource management & resource optimization functions.
* Visualization of productivity & location of crews.

**Project Feasibility Study(Chapter 9)**

Q: **Commercial Appraisal**:

Appraisal is made about the marketability of the product including the volume considered in the project.

(i) The size of the market and its growth; the gap between the demand and supply;

(ii) Information about major competitors, their capacities installed, their market share, their strength and weaknesses, if any;

(iii) The international market and the possibility of export;

a. International standard quality;

b. International prices.

(iv) Whether the product is an import substitute having the prospect of saving valuable foreign exchange.

Q: **Financial Analysis:**

Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability. Typically, financial analysis is used to analyse whether an entity is stable, [solvent](https://www.investopedia.com/terms/s/solvency.asp), [liquid](https://www.investopedia.com/terms/l/liquidity.asp), or profitable enough to warrant a monetary investment.

KEY TAKEAWAYS

* If conducted internally, financial analysis can help fund managers make future business decisions or review historical trends for past successes.
* If conducted externally, financial analysis can help investors choose the best possible investment opportunities.
* Fundamental analysis and technical analysis are the two main types of financial analysis.
* Fundamental analysis uses ratios and financial statement data to determine the intrinsic value of a security.
* Technical analysis assumes a security's value is already determined by its price, and it focuses instead on trends in value over time.

Type:

Fundamental Analysis:-

Technical Analysis

**Q: The Rationalities for Social cost-benefit Analysis:-**

In SCBA the focus is on the social costs and benefits of the project. The principal sources of discrepancy are:

***(1)  Market imperfections:*** Market prices, which form the basis for computing the Monetary costs and benefits from the point of view of the project sponsor. The common market imperfections found in developing countries are:

* Rationing;
* Prescription of minimum wages rates;
* Foreign exchange regulations.

***(2) Externalities:*** A project may have a beneficial external effect. For example, it may create certain infrastructural facilities like roads which benefit the neighbouring areas.

***(3) Taxes and subsidies:*** From the private point of view taxes are definite monetary costs and subsidies are definite monetary gains.

**(4) Concern for savings:** From a social point of view, however, the division of benefits between consumption and saving is relevant.

***5) Concern for redistribution:*** A private firm does not bother how it benefits are distributed across various groups in the society. The society, however, is concerned about the distribution of benefits across different groups.

***(6) Merit wants:*** Goals and preferences not expressed in the marketplace, but believed by policymakers to be in the larger interest may be referred to as merit wants.

**Q: Similarities and differences between UNIDO approach and L-M approach:**

**Little-Mirriees and UNIDO similarities –**

1. The calculation of [shadow price](https://qsstudy.com/shadow-pricing) particularly for foreign exchange saving and unskilled labor is same in both methods.
2. Both methods consider factors of equity.
3. Both methods use DCF (Discounted Cash Flow) methods.

**Little-Mirrlees and UNIDO dissimilarities**

1. UNIDO method also emphasis calculation of financial profitability of market prices along with SCBA but this is not so done in case of Little-Mirrlces method.
2. Little-Mirrlees method measures cost and benefit in terms of international currency that is in border price or world price in $. UNIDO approach measure costs and benefits in terms of domestic currency.
3. The numeracies in case of Little-Mirrlees approach measures cost and benefit in terms of uncommitted social income. On the other hand in UNIDO method it measures the same in terms of domestic consumption.
4. UNIDO approach focuses efficiency, saving and redistribution of income stage by stage while Little- Mirrlees approach considers the same in totality

**Project Planning(Chapter 10)**

**Q: Project planning 🡪**

Project planning is a discipline addressing how to complete a project in a certain timeframe, usually with defined stages and designated resources. One view of project planning divides the activity into these steps:

* setting measurable objectives
* identifying deliverables
* scheduling
* planning tasks

### Why is project planning important?

Project planning is important at every phase of a project. It lays out the basics of a project, including the following:

* scope
* objectives
* goals
* schedule

### What are the components of a project plan?

The three major parts of a project plan are the scope, budget and timeline. They involve the following aspects:

* **Scope.** The scope determines what a project team will and will not do. It takes the team's vision, what stakeholders want and the customer's requirements and then determines what's possible. As part of defining the project scope, the project manager must set performance goals.
* **Budget.** Project managers look at what manpower and other resources will be required to meet the project goals to estimate the project's cost.
* **Timeline.** This reveals the length of time expected to complete each phase of the project and includes a schedule of milestones that will be met.

### How do you create a project plan?/Steps

Project planning includes the following 10 steps:

1. **Define stakeholders.** Stakeholders include anyone with an interest in the project. They can include the customer or end user, members of the project team, other people in the organization the project will affect and outside organizations or individuals with an interest.
2. **Define roles.** Each stakeholder's role should be clearly defined. Some people will fill multiple roles, however.
3. **Introduce stakeholders.** Hold a meeting to bring stakeholders together and unify the vision behind the project. The topics covered should include scope, goals, budget, schedule and roles.
4. **Set goals.** Take what is gleaned from the meeting and refine it into a project plan. It should include goals and deliverables that define what the product or service will result in.
5. **Prioritize tasks.** List tasks necessary to meet goals and prioritize them based on importance and interdependencies. A Gantt chart can be helpful for mapping project dependencies.
6. **Create a schedule.** Establish a timeline that considers the resources needed for all the tasks.
7. **Assess risks.** Identify project risks and develop strategies for mitigating them.
8. **Communicate.** Share the plan with all stakeholders and provide communications updates in the format and frequency stakeholders expect.
9. **Reassess.** As milestones are met, revisit the project plan and revise any areas that are not meeting expectations.
10. **Final evaluation.** Once the project is completed, performance should be evaluated to learn from the experience and identify areas to improve.

**Q: Project planning tools and technology:🡪**

### 1. Classic technique

We often think that completing a project or an assignment in our work-life requires the latest and the most complex tools and techniques so that we can achieve tangible results and for the most part is true but for all those other times the traditional and [simplest techniques](https://www.ntaskmanager.com/blog/5-insane-project-management-techniques-in-todays-market/) are the most appropriate for effective development in projects.

The classical technique in project management is an amazing procedure that includes a proper plan to cover all of the upcoming work activities, which tasks are to be performed, and what should be the chain of application that defines which task to do first,

### 2. Waterfall technique

The [waterfall technique](https://www.ntaskmanager.com/blog/how-to-use-ntask-for-waterfall-project-management-a-practical-guide-for-first-timers/) is also considered a traditional project management tool because it builds on the upper mentioned Classical approach and takes it to a whole new level.

### 3. Agile Project Management

The project management technique that is the most famous and is quite outstanding in its application because it deals with projects in a way quite different from other traditional procedures is the [Agile Project Management](https://www.ntaskmanager.com/blog/agile-project-management/) technique.

### 4. Rational Unified Process (RUP)

[RUP](https://airbrake.io/blog/sdlc/rational-unified-process) is an amazing framework that was specially designed for the software market where the software development teams and the projects they work on, can benefit from this framework and achieve the best results possible.

### 5. Program Evaluation and Review Technique

The main feature that this technique has is that it performs an effective analysis of the tasks that are performed within the project. That helps the team to keep track of all of their developmental activities and fix their weaknesses.

### 6. Critical Path Technique

The [Critical Path Technique](https://www.ntaskmanager.com/blog/what-is-critical-path-method/) is an amazing procedure that is used for projects and different tasks to schedule and plan the work activities, according to the requirements mentioned in the project brief. This technique is also in conjunction with the Program Evaluation and Review Technique method mentioned above.

**Tools:-**

### 1. Organizing Workflow & Planning

### 2. Communication

### 3. Scheduling and Time Management

**Q: Material Requirement planning:🡪**

*Material requirements planning or MRP is a computerized system that allows manufacturers to plan, manage, and control their inventories more efficiently. It, thus, helps them schedule the manufacturing per bills of materials and deliver the right product at the right time and the best possible price.*

|  |
| --- |
|  |
| **Inputs for Production** | **Objectives** | **Benefits** |
| Product type | Keeping the material and component levels as low as feasible | Reduced inventory and overhead costs |
| Quantity and delivery | Making raw materials readily available for production | Improved production cycle |
| Inventory status | Scheduling manufacturing, distribution, and purchases | Sufficient stocks to meet the demand |
| Stock shelf life |  | Reduced lead times |
| Bill of materials |  | Customer satisfaction |
| Production plan |  |  |

**Q:Work breakdown Structure***:🡪*

 It organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of the project work. The WBS is decomposed into work packages. The deliverable orientation of the hierarchy includes both internal and external deliverables.

* **Acceptance Criteria:** Standards to be met to achieve customer or other stakeholder requirements
* **Budget:** Expenses associated with the project, which can be broken down by deliverables or phases
* **Deliverables:** The product, service or results created at various stages of the project. For instance, in a website design project, a deliverable-based WBS would be structured around deliverables such as URL, layout and written content
* **Milestones:** Critical stages of the project identified in the WBS
* **Phases:** The various stages of a project. For instance, in a website design project, a phase-based WBS would be structured around things like discovery, design and launch, rather than specific deliverables
* **WBS:** Work breakdown structure

***Use of wbs:-***

1. Define the project

2. Set project boundaries

3. Identify project deliverables

4. Define Level 1 elements.

5. Break down each of the Level 1 elements.

6. Identify team members

7. Create a Gantt chart to accompany the WBS

The 5 basic phases in the project management process are:

1. Project Initiation
2. Project Planning
3. Project Execution
4. Project Monitoring and Controlling
5. Project Closing

**Project Scheduling and Costing(Chapter 11)**

# Q: Advantages & Disadvantages of Project Scheduling:-

# Advantages &

# To properly manage a project, you must design a schedule. Having a schedule in place will give employees a time frame within which they must complete their assignments. While the schedule will keep everyone on pace, it can also put pressure on the team as well. Disadvantages of Project Scheduling

advantage:

* tight deadlines keep you on track
* scheduling in segments makes a large project more manageable

disadvantage:

* tight deadlines add pressure
* tight deadlines can lead to conflict

**Q: Gantt Chart:🡪**

What Is a Gantt Chart?

A Gantt chart is a visual presentation used in project management to show overview of timeline for project activities and their inter-dependence. Each project task or activity is represented with a bar chart clearly displaying start and end date. Thus the length of the bar shows the duration required for a task to complete. This way multiple tasks when displayed as bar charts, shows work breakdown structure on a timeline. Essentially Gantt chart shows when an activity starts, completes, how long it will take to complete an activities and also overall project, which is a project schedule.

Gantt chart stands out.

* It shows breakdown structure
* It shows dependencies
* It shows expected timeline
* It shows current progress
* It shows schedule baseline
* It shows resources assigned
* It shows task priority
* It shows critical path
* It shows smallest as well as longest task

🡪Advantages of Gantt Chart

It is easy to understand

It gives clarity of dates

It enables time management

It brings efficiency

It ensures accountability in terms of timeline

It expects coordination among stakeholders in order to deliver things as per Gantt timeline

🡺Disadvantage of Gantt Chart

* Tedious if one need to keep it updating regularly
* Can become unmanageable for detailed project plan
* Unclear amount of work expected
* Not easy to view everything on a single paper

🡺**Limitation of Gantt Chart:**

**Project Monitoring and Control(Chapter 12)**

**Q: MIS🡪**

management information system (MIS)

A management information system (MIS) is a system for collecting, storing, processing, organising and analysing business data and turning them into actionable intelligence. The more complex a company's operations are, the more complex its MIS is likely to be. An MIS is used to significantly improve the efficiency of report generation and data analysis by taking the information gathered by various members of staff and storing it in a uniform and accessible manner.

**What are the benefits of an MIS?**

**1.It allows real-time performance reports**

By receiving performance reports in real-time, the organisation can become more dynamic in its operations. Its employees may be able to discover and respond to opportunities more quickly.

**2.It generates analytical reports**

The principal function of MIS is to organise and analyse data and use it to generate informative reports. With these reports, the organisation's management can monitor its performance and identify new business opportunities.

3. **It compares projections and performances**

Organisations regularly set business goals and make business and financial forecasts, but they need to monitor their effectiveness. For that, they must compare them with actual performances.

4. **It aids the work allocation process**

With an MIS information system, the organisation's management can make better decisions concerning the allocation of staff and resources. They can review the performance reports of individual employees and departments and identify the best performers.

5. **It improves internal communication**

It can facilitate communication between different employees and departments of the organisation. They can share relevant and timely business information, particularly about interdepartmental work.

**Q: PMIS🡪**

Project management information system

A PMIS is a software program or application that organizes and controls the flow of project data and information.

Project managers use a PMIS to plan, monitor, and execute their [project deliverables](https://www.wrike.com/use-cases/project-reporting/) more efficiently, without getting overwhelmed with data.

Though project management information systems may vary in [scope](https://www.wrike.com/project-management-guide/faq/what-is-scope-in-project-management/) or complexity, they share common features, such as work management, information collection, and [task](https://www.wrike.com/project-management-guide/faq/what-is-a-task-in-project-management/) [scheduling](https://www.wrike.com/project-management-guide/faq/what-is-scheduling-in-project-management/)

Project initiation phase

In the initiation phase of the project, a PMIS can be helpful in:

* Establishing a preliminary project budget including [cost](https://www.wrike.com/project-management-guide/faq/what-is-cost-in-project-management/) and resource estimates
* Outlining the project scope and preparing bids
* Scheduling the project tasks and assigning them to the relevant team members
* Organizing project information and generating necessary reports for presenting to the key project stakeholders

Project planning phase

Are you [planning](https://www.wrike.com/project-management-guide/faq/what-is-planning-in-project-management/) your project? A PMIS can be your best friend, assisting with:

* In-depth project scheduling, including [critical path](https://www.wrike.com/project-management-guide/faq/what-is-critical-path-in-project-management/) analysis and related tasks
* Supporting cost and budget management, including setting up of cost controls, budget analysis, and related KPI metrics
* Executing [resource planning](https://www.wrike.com/professional-services-guide/resource-planning/) for the entire project, identifying available resources, and making a [contingency plan](https://www.wrike.com/project-management-guide/faq/what-is-contingency-plan-in-project-management/) for those that may be needed later
* Establishing baseline metrics for [project schedule](https://www.wrike.com/project-management-guide/faq/what-is-a-project-schedule-in-project-management/), cost, and scope

Project execution stage

A PMIS can be indispensable for executing projects. Since every project has multiple stakeholders within and outside the organization, tracking their conversations and responses can be challenging. The PMIS:

Top of Form

Remove barriers, find clarity, exceed goals

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Bottom of Form

* Stores all project team communications, recommendations, files, and documents in one unified hub that can be securely and easily accessed by all stakeholders
* Enables easy comparison of actual project data with the baseline estimates from the project planning phase
* Allows project managers to revise cost, budget or schedule forecasts midway into the project and make adjustments based on actual project needs
* Supports the [efficient completion](https://www.researchgate.net/publication/222572029_Project_management_information_systems_An_empirical_study_of_their_impact_on_project_managers_and_project_success) of multiple project modules, such as material management, [cost management](https://www.wrike.com/project-management-guide/faq/what-is-cost-management-in-project-management/), project performance measurement, and project reporting

Project review and closure stage

Arguably, the project review and closure is the most important phase in a project. Each project has a specific predetermined objective or goal, and in the project review and closure stage, those goals and objectives are met. The PMIS:

* Allows a thorough appraisal to ensure that the defined project goals are met or exceeded
* Organizes and stores all project information in a [centralized hub](https://www.sciencesphere.org/ijispm/archive/ijispm-090104.pdf) for easy access and review at a later stage
* Archives all project information as historical data for use in upcoming projects
* Helps produce the final [project reports](https://www.wrike.com/professional-services-guide/project-visibility/#status-reports) and productivity analysis metrics for [stakeholder](https://www.wrike.com/project-management-guide/faq/what-is-a-stakeholder-in-project-management/) decision making

🡺**Advantages of project management information system**

* Keeps the project on track
* Fosters better collaboration and teamwork
* Gives a competitive advantage
* Enables higher-quality decision making
* Manage diverse projects at the same time

🡺 **Challenges of implementing a project management information system**

* Lack of coordination
* Wasted resources
* Lack of interest from teams
* No required skillsets

**Q: Project Monitoring🡪**

**Why is project monitoring important?**

Project monitoring, or project controlling, is the **ongoing monitoring of your projects**. Even the best projects never run exactly according to plan. Therefore, it is important to permanently compare the actual state with the target state. Only then can you recognize deviations in time and take countermeasures.

**What tools and metrics should I use for project monitoring?**

Most project goals lie within the “Magic Triangle”. This refers to three variables that typically make up the success of a project. Specifically, they are:

* **Time:** Can I complete the project on time? That is, within the time frame I have estimated for the project.
* **Cost:** Is the cost of the project within the range I have calculated for it?
* **Performance:** Does the result of the project meet the requirements I have set for the project in terms of quality and scope?

## 1. Progress: How much is still to be done?

**Then the project progress is currently (100% + 100% + 100% + 50% + 0%)/5 = 70%.**

## 2. Status: Where are the issues?

## 3. Milestone trend analysis: Can we meet deadline XY?

## 4. Schedule variance: Will the project be finished on time?

## One method of detecting schedule delays makes use of budget planning. This involves comparing the current earned value (EV) with the planned costs (PC) estimated for the work already completed. Schedule Variance (SV) is calculated as follows:

**chedule Variance (SV) = Earned Value (EV) – Planned Costs (PC).**

**< 0: The project is behind schedule.**

**> 0: The project is ahead of schedule.**

## 5. Schedule performance index: How much more time do we need for the project?

A related metric to schedule deviation is **Schedule Performance Index (SPI)**. It uses the same values, but is calculated slightly differently than schedule deviation

.

**Schedule Performance Index (SPI) = Earned Value (EV) / Planned Costs (PC)**

**< 1: The project takes (100/SPI)-100 % longer than planned.**

**> 1: The project takes only (100/SPI)-100 % of the planned time.**

## 6. Cost variance: Are we on budget?

Also for the budget some key figures help you to evaluate your project. The simplest form is also here the target/actual comparison. The **Cost Variance (CV)** is obtained by subtracting the actual cost (AC) from the earned value (EV).

**Cost Variance (CV) = Earned Value (EV) – Actual Cost (AC)**

**< 0: The project is above budget.**

**> 0: The project is within budget.**

## 7. Cost performance index: what additional costs do we get for the project?

Similar to project time, you can use the earned value and actual costs to estimate whether the budget is sufficient for the project overall. If you divide both values, you get the **Cost Performance Index (CPI)**.

**Cost Performance Index (CPI) = Earned Value (EV) / Actual Costs (AC)**

**< 1: The budget is exceeded by (100/CPI)-100 %.**

**> 1: The budget is only needed by (100/CPI)-100 %.**

## 8. Contribution margin: Is the project profitable for us?

## Labour cost

## Material cost

## Project Revenue