

# ENGINEERING ENTREPRENEURSHIP AND IPR

## Module 2

- **2.1 Problem and solution canvas preparation**
- **2.2 Customer profiling**
- **2.3 Competitor analysis**

# Module 2 Syllabus

- **Problem and solution canvas preparation**
  - Orientation and canvas introduction
  - Customer needs assessment
  - Market segmentation
  - Value proposition
  - Competitive analysis
  - Market entry strategy
  - Market validation
  - Regulatory and legal considerations

# Module 2 Syllabus Cond...

- **Customer profiling**
  - Review of market research
  - Customer segmentation
  - Customer profiling
  - Persona development
  - Validation and feedback
  - Prioritisation and selection
  - Communication and messaging

# Module 2 Syllabus Cond...

- **Competitor analysis**
  - Identify competitors
  - Competitor profiling
  - SWOT analysis
  - Market positioning
  - Customer feedback and reviews
  - Pricing analysis
  - Differentiation strategy
  - Benchmarking and improvement

# 2.1.1 Orientation and Canvas Introduction

## What is the Problem and Solution Canvas?

- A structured visual tool used to identify customer problems, evaluate potential solutions, and design strategies for product development and market entry.
- It provides clarity and focus for entrepreneurs to understand the feasibility of their ideas.

## Why Use It?

- Encourages a problem-first approach rather than jumping to solutions.
- Bridges the gap between customer pain points and innovative solutions.

## Components:

- **Problem Statement:** Clear definition of the issue faced by customers.
- **Proposed Solution:** A concise outline of how the problem can be addressed.
- **Target Audience:** The specific group of people affected by the problem.
- **Value Proposition:** The unique benefit your solution offers.

## 2.1.2 Customer Needs Assessment

Purpose: Understanding what customers truly need ensures that the solution aligns with their expectations.

Techniques:

- Surveys:
  - Online or offline questionnaires to collect quantitative data.
  - Questions focus on customer preferences, habits, and frustrations.
- Interviews:
  - One-on-one conversations for qualitative insights.
  - Encourage open-ended responses to explore customer perspectives.
- Observation:
  - Watching customers interact with similar products or services.
  - Identifying gaps or inefficiencies in their experiences.

Outcome: A prioritized list of needs categorized as “must-have,” “nice-to-have,” and “unnecessary.”

- **Example 1: Mobile Payment Solutions** – A fintech company in Delhi discovers that small retailers need a low-cost, easy-to-use mobile payment solution.
- **Action:** Conduct surveys and interviews with small business owners to understand their payment processing challenges.
- **Example 2: Organic Farming Products** - An agritech startup in Punjab learns that farmers are looking for affordable, effective organic products to increase crop yields.
- **Action:** Engage with farmers to identify their needs for organic fertilizers and pest control.

## **2.1.3 Market Segmentation**

**Definition:** Dividing the overall market into smaller, defined segments based on shared characteristics.

### **Segmentation Methods:**

- **Demographic:** Age, gender, income, occupation.
- **Geographic:** Location, climate, and cultural influences.
- **Behavioral:** Usage patterns, brand loyalty, and decision-making processes.
- **Psychographic:** Lifestyle, values, and interests.

### **Importance:**

- Ensures tailored marketing efforts.
- Helps in allocating resources efficiently.



- **Example 1: Health and Wellness Products** – A wellness brand in Chennai targets young professionals and middle-aged women with different product lines.
- **Action:** Segment the market based on demographics, such as age and income.
- **Example 2: Online Education Platforms** - An edtech company in Hyderabad segments its market into school students, college students, and working professionals.
- **Action:** Segment the market based on educational needs and preferences.

## 2.1.4 Value Proposition

### What is a Value Proposition?

- A clear statement describing the unique value your product or service provides to customers.
- Answers the question: “Why should a customer choose your product over others?”

### Key Elements:

- **Customer Needs:** Problems or desires that your product aims to address.
- **Benefits Offered:** Tangible and intangible outcomes for the customer.
- **Unique Differentiators:** Features that set your solution apart from competitors.

### Example:

“Our product helps small businesses save 30% on operational costs by automating repetitive tasks.”

- **Example 1: Electric Vehicles (EVs)** - An EV manufacturer in Pune emphasizes the long-term savings and eco-friendliness of their scooters.
- **Action:** Highlight the environmental benefits and cost savings of electric vehicles.
- **Example 2: Telemedicine Services** - A telemedicine startup in Kolkata promotes its service to access quality healthcare from home, especially in rural areas.
- **Action:** Focus on the convenience and accessibility of remote healthcare.

# **2.1.5 Competitive Analysis**

## **What is Competitive Analysis?**

- A process to evaluate your competition to understand their strengths, weaknesses, and strategies.

## **Steps:**

### **1. Identify Competitors:**

- i. Direct competitors: Offer similar products.
- ii. Indirect competitors: Solve the same problem differently.

### **2. Analyze Competitor Strategies:**

- i. Pricing, marketing tactics, distribution channels.

### **3. Perform SWOT Analysis:**

- i. Evaluate Strengths, Weaknesses, Opportunities, and Threats for both your company and competitors.

## **Outcome:**

- Insights into gaps in the market.
- Strategies to position your product effectively.

- **Example 1: Food Delivery Services** - A new food delivery service in Mumbai studies Swiggy and Zomato to identify gaps in service and customer satisfaction.
- **Action:** Analyse the strengths and weaknesses of existing food delivery apps.
- **Example 2: Renewable Energy Solutions**
- - A solar panel company in Gujarat assesses other solar providers to understand pricing strategies and market positioning.
- **Action:** Evaluate competitors in the solar energy market.

## **2.1.6 Market Entry Strategy**

**Definition:** A planned approach for launching a product or service into the market.

### **Key Steps:**

- **Analyze Barriers to Entry:**

Existing competition, legal restrictions, and customer loyalty to current brands.

- **Choose Entry Mode:**

Direct sales, partnerships, franchising, or online platforms.

- **Develop a Launch Plan:**

Outline promotional activities, pricing models, and distribution methods.

### **Goal:**

- Minimize risks associated with market entry.
- Maximize initial impact and customer acquisition.

- **Example 1: Fashion Retail** – A fashion brand in Delhi launches an e-commerce site first, then opens flagship stores in major cities.
- **Action:** Plan a phased launch, starting with online sales before opening physical stores.
- **Example 2: Health Supplements** - A health supplement company in Kerala collaborates with local retailers to reach a wider audience.
- **Action:** Partner with local pharmacies and health stores to distribute
- products.

## **2.1.7 Market Validation**

**Purpose:** Ensuring your product or service meets a genuine demand in the market.

### **Validation Steps:**

- **Build a Prototype:**

Develop a basic version of the product for testing.

- **Collect Feedback:**

Engage early adopters to evaluate your prototype.

- **Adjust Based on Data:**

Refine the product based on user insights and market trends.

### **Benefits:**

- Reduces the risk of failure.
- Strengthens investor confidence.



- **Example 1: Mobile App Development** - A tech startup in Bangalore launches a beta version of their productivity app to gather user feedback and make improvements.
- **Action:** Release a beta version of the app to a select group of users.
- **Example 2: Eco-friendly Packaging** - A packaging company in Mumbai tests its biodegradable packaging with local restaurants to gather feedback on durability and customer satisfaction.
- **Action:** Conduct pilot tests with a few businesses to assess the effectiveness of the packaging.

## **2.1.8 Regulatory and Legal Considerations**

### **Regulatory Requirements:**

- Adhering to local, state, and national regulations applicable to the product or service.
- Examples: Environmental laws, safety standards.

### **Legal Considerations:**

- Intellectual Property Rights (IPR): Patents, copyrights, and trademarks.
- Compliance with labor laws, tax laws, and consumer protection acts.

### **Why It Matters:**

- Avoid penalties and legal disputes.
- Build credibility with stakeholders.

- **Example 1: Fintech Solutions** - A fintech startup in Chennai ensures its payment gateway complies with RBI guidelines and secures the required licenses.
- **Action:** Research and comply with financial regulations and obtain necessary licenses.
- **Example 2: Food and Beverage Industry** - A new beverage company in Goa ensures its products meet FSSAI standards and obtains the necessary certifications before launching.
- **Action:** Adhere to food safety standards and obtain FSSAI certification.

## Example : Affordable Healthcare Services in Urban Slums

- **Problem:** Access to affordable healthcare is a significant issue in urban slums in India.
- **Customer Needs Assessment:** Residents need affordable and accessible healthcare services.
- **Market Segmentation:** Focusing on low-income families in urban slums who lack access to quality healthcare.
- **Value Proposition:** Offering affordable healthcare services through mobile clinics and telemedicine.

- **Competitive Analysis:** Analysing existing healthcare providers and identifying the lack of affordable options in slums.
- **Market Entry Strategy:** Partnering with local NGOs and community leaders to build trust and awareness.
- **Market Validation:** Conducting health camps to understand the specific health needs and gather feedback.
- **Regulatory and Legal Considerations:** Ensuring compliance with healthcare regulations and obtaining necessary licenses.