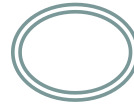


Unit II – Problem and Customer Identification



INNOVATION & ENTREPRENEURSHIP
R25 B.TECH ECE | JNTUH

Learning Outcomes



Identify gaps and real-world problems.

Analyze problems from an industry perspective.

Segment markets and customers.

Validate customer problem fit.

Map competition and industry trends.

Apply design-thinking and idea-generation techniques.

Gap vs. Problem



Gap: a difference between current and desired conditions.

Problem: a specific pain, need or obstacle experienced by users.

A useful opportunity often exists where a meaningful problem affects a reachable customer segment.

Avoid solving a problem that customers do not consider important.

Finding Real-World Problems



Observe inefficient processes and recurring complaints.

Study delays, high costs, errors and inconvenience.

Talk to users, employees and industry experts.

Look for underserved customer groups.

Use data, reviews and field observations as evidence.

Industry Perspective



Understand how the problem affects the entire value chain.

Identify current processes and stakeholders.

Estimate cost, frequency and severity of the problem.

Consider regulations, technology and industry constraints.

Ask why existing solutions are insufficient.

Customer Segmentation

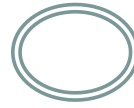
Divide a broad market into meaningful groups.

Demographic, geographic, behavioral and needs-based segmentation.

B2B segmentation may consider industry, company size and buying role.

Select a segment with a strong and identifiable problem.

Customer Personas



Describe a representative target user.

Include goals, behaviors, pain points and constraints.

Identify who uses, influences and pays for the solution.

Personas help teams make customer-centered decisions.

Customer Problem Fit



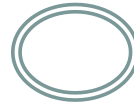
Confirm that the target customer experiences the stated problem.

Measure frequency, urgency and impact.

Check how customers currently solve it.

Strong fit exists when the problem is significant and existing alternatives are unsatisfactory.

Customer Validation



Prepare assumptions before interviewing.

Conduct customer interviews without leading the respondent.

Observe actual behavior where possible.

Record evidence and patterns.

Update the problem statement based on findings.

Iterating Problem–Customer Fit



Initial assumptions are hypotheses, not facts.

Compare interview evidence with the original problem.

Refine customer segment, problem definition or context.

Repeat interviews until the problem becomes clear and specific.

Competition Mapping



Direct competitors solve the same problem for the same customers.

Indirect competitors satisfy the same need differently.

Map competitor features, price, reach and customer experience.

Identify gaps where customers remain underserved.

Industry Trends



Technology trends can create or remove opportunities.

Customer behavior and demographic shifts affect demand.

Regulation can create constraints or new markets.

Track competitors, substitutes, costs and emerging technologies.

Initial Opportunity Assessment



Problem severity and customer willingness to change.

Market size and accessibility.

Competitive intensity.

Technical and operational feasibility.

Potential for differentiation and growth.

Porter's Five Forces



A framework for assessing industry attractiveness.

Competitive rivalry.

Threat of new entrants.

Bargaining power of suppliers.

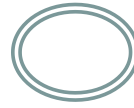
Bargaining power of buyers.

Threat of substitutes.

Brainstorming

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- Generate many ideas before evaluating them.
 - Define a clear problem statement.
 - Encourage quantity and defer judgment.
 - Build on others' ideas.
 - Cluster similar ideas and select promising concepts.

Brain Writing



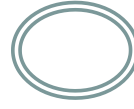
Participants write ideas individually.

Ideas are then shared for discussion or further development.

Useful when some participants are less comfortable speaking.

Reduces dominance by a few voices and increases idea diversity.

Round Robin



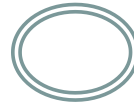
Team members contribute ideas in turns.

Each participant gets an equal opportunity to contribute.

Ideas can be developed collaboratively.

Useful for structured group ideation.

SCAMPER



Substitute – replace an element.

Combine – join features or functions.

Adapt – modify for another context.

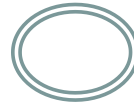
Modify – change size, form or attributes.

Put to another use – find a new application.

Eliminate – remove unnecessary elements.

Reverse/Rearrange – change sequence or arrangement.

Design Thinking Principles



Empathize with users.

Define a focused problem.

Ideate alternative solutions.

Prototype quickly.

Test with users and learn.

The process is iterative rather than strictly linear.

Unit II – Key Takeaways

Start with evidence of a real customer problem.

Segment customers and identify the most relevant target group.

Validate assumptions through interviews and observation.

Understand competition and industry forces.

Use structured ideation and design thinking to map solutions to problems.