

Project Design Phase

Problem – Solution Fit Template

Date	27 June 2025
Team ID	LTVIP2025TMID39904
Project Name	Pattern Sense: Classifying Fabric Patterns using Deep Learning
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why.

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ **Understand the existing situation in order to improve it for your target group.**

Template:

1. CUSTOMER SEGMENT(S) <small>Who is your customer? I.e. working parents of 0-5 y.o. kids</small>	6. CUSTOMER CONSTRAINTS <small>What constraints prevent your customers from taking action or limit their choices of solutions? I.e. spending power, budget, no cash, network connection, available devices.</small>	5. AVAILABLE SOLUTIONS <small>Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? I.e. pen and paper is an alternative to digital notetaking</small>
Define CS, fit into CC	Explore AS, differentiate	
2. JOBS-TO-BE-DONE / PROBLEMS <small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one, explore different sides.</small>	9. PROBLEM ROOT CAUSE <small>What is the real reason that this problem exists? What is the back story behind the need to do this job? I.e. customers have to do it because of the change in regulations.</small>	7. BEHAVIOUR <small>What does your customer do to address the problem and get the job done? I.e. directly related: find the right solar panel installer; calculate usage and benefits; Indirectly associated: customers spend free time on volunteering work (I.e. Greenpeace)</small>
Focus on J&P, tap into BE, understand RC	Focus on J&P, tap into BE, understand RC	
3. TRIGGERS <small>What triggers customers to act? I.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.</small>	10. YOUR SOLUTION <small>If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.</small>	8. CHANNELS of BEHAVIOUR 8.1 ONLINE <small>What kind of actions do customers take online? Extract online channels from #7</small>
Identify strong TR & BE	Extract online & offline CH of BE	
4. EMOTIONS- BEFORE / AFTER <small>How do customers feel when they face a problem or a job and afterwards? I.e. lost, insecure > confident, in control - use it in your communication strategy & design.</small>		8.2 OFFLINE <small>What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small>

Section	Details
1. Customer Segment(s)	- Fabric manufacturers - Textile quality control managers - Garment exporters - Retail fashion brands - Kids clothing lines
2. Jobs-to-be-Done / Problems	- Detect and classify fabric patterns quickly and accurately - Eliminate manual inspection errors - Improve consistency in quality assurance - Save time and labor in textile sorting
3. Triggers	- Rising labor costs in textile quality checks - Manual errors affecting brand reputation - Demand for automation in fabric processing - Inconsistent results in manual inspections
4. Emotions (Before / After)	Before: Frustrated, uncertain, stressed due to inconsistent quality checks After: Confident, relieved, empowered by accurate and fast AI-based classification
5. Available Solutions	- Manual inspection by trained workers - Basic pattern recognition software - Outsourced quality control teams - Expensive industrial hardware solutions
6. Customer Constraints	- Budget limitations - Lack of technical expertise - Resistance to digital change - Lack of flexible AI tools for fabric inspection
7. Behaviour	- Rely on manual/outdated systems - Explore digital only during issues - Interest peaks during audits/rejections - Trust peer feedback
8. Channels & Behaviour	Online: Google, YouTube, LinkedIn groups, newsletters Offline: Textile expos, industry referrals, B2B outreach
9. Problem Root Cause	- Subjectivity in manual classification - No scalable tools for real-time sorting - Expensive or rigid current solutions - Low digital adoption in textiles
10. Your Solution	- Deep learning model that classifies fabric patterns automatically - Cost-effective, accurate, fast - Easy to use & integrate into existing systems

References:

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>
2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>