

Project Design Phase

Problem – Solution Fit

Date	15 June 2025
Team ID	LTVIP2025TMID41277
Project Name	Smart sorting
Maximum Marks	2 Marks

Problem – Solution Fit:

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

Purpose:

- ☐ 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.**

Problem-Solution fit canvas 2.0

Purpose / Vision

<div style="background-color: #f8d7da; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">Define CS, fit into CC</div> <div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">Focus on J&P, tap into BE, understand RC</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">Identify strong TR & EM</div>	<div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">Focus on J&P, tap into BE, understand RC</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">Extract online & offline CH of BE</div>	<div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">Focus on J&P, tap into BE, understand RC</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">Extract online & offline CH of BE</div>
<div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">1. CUSTOMER SEGMENT(S) CS</div> <div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em;">2. JOBS-TO-BE-DONE / PROBLEMS J&P</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">3. TRIGGERS TR</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">4. EMOTIONS: BEFORE / AFTER EM</div>	<div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">6. CUSTOMER CONSTRAINTS CC</div> <div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em;">9. PROBLEM ROOT CAUSE RC</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">10. YOUR SOLUTION SL</div>	<div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em; margin-bottom: 5px;">5. AVAILABLE SOLUTIONS AS</div> <div style="background-color: #fff3cd; padding: 5px; font-size: 0.8em;">7. BEHAVIOUR BE</div> <div style="background-color: #d4edda; padding: 5px; font-size: 0.8em;">8. CHANNELS of BEHAVIOUR CH</div>
Small-scale fruit & vegetable industry owners Sorting workers Local vendors and packaging units	Limited budget for automation Low technical expertise among staff No access to large infrastructure or cloud systems	Manual sorting by visual inspection Hiring skilled labor for quality checks Buying expensive industrial-grade sorters (not affordable)
Errors while manually sorting produce Reliance on worker experience and availability Inconsistent quality control Frequent customer complaints about spoiled items	Inadequate and unreliable manual classification of produce Lack of affordable, scalable, and easy-to-use sorting tools Dependence on human vision for complex judgment calls	High frustration when spoilage is missed Reactive behavior to customer complaints Inconsistent sorting standards among workers
Increasing rate of returns and dissatisfaction from customers. Growing competition offering better quality control. Pressure to reduce wastage and improve brand image	SmartSorting: A lightweight, offline-ready, AI-based fruit and vegetable sorting tool Uses transfer learning (VGG16) to classify fresh vs. rotten produce with high accuracy Designed for low-resource environments using Flask + local deployment	Watching YouTube tutorials on AI/ML solutions. Browsing for affordable AI tools for agriculture. Searching forums or blogs for cost-effective tech B2B OFFLINE Talking to other vendors at markets Attending agriculture expos or machinery demonstrations

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