

Project Design Phase

Problem – Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2025TMID36498
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine 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

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.**

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	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	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 <small>8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7</small>
Identify strong TR & EM	Identify strong TR & EM	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>		<small>8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small>

Project Name

TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning

Problem Statement (Customer Pain Point)

Urban traffic congestion is a growing problem due to unpredictable factors like weather, events, and insufficient data-driven systems. Transportation authorities, city planners, and commuters often struggle with reactive decisions and inefficient travel, which leads to longer commute times, environmental impact, and planning challenges.

Proposed Solution (What Your Project Does)

TrafficTelligence leverages machine learning to analyze historical traffic data, weather conditions, and real-time events to provide accurate traffic volume estimations and predictions. It supports:

- **Dynamic traffic control** through adaptive signal timing and congestion reduction.
- **Urban development planning** using predictive insights for road and infrastructure design.
- **Commuter navigation** by delivering route suggestions and alternative travel times based on predicted congestion.

Why This Solution Works (Fit Justification)

TrafficTelligence is grounded in real user needs:

- **Transportation authorities** gain actionable insights for proactive traffic flow adjustments.
- **Urban planners** make informed infrastructure decisions aligned with future growth.
- **Commuters** benefit from smarter travel planning through integration with navigation platforms.

The solution addresses critical pain points using familiar platforms and data sources, increasing its likelihood of adoption and effectiveness.

References:

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