

# Project Design Phase

## Problem – Solution Fit Template

Date	24 June 2025
Team ID	LTVIP2025TMID35493
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 behaviour.
- 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:

Problem-Solution fit canvas 2.0		Purpose / Vision: To revolutionize urban mobility by providing intelligent, real-time traffic solutions that reduce congestion, optimize travel time, and empower commuters and city residents with reliable, data-driven decision-making.	
Define CS, fit into	<b>1. CUSTOMER SEGMENT(S)</b> <ul style="list-style-type: none"> <li>Daily commuters (private and public transport users)</li> <li>Delivery and logistics companies</li> <li>Ride-sharing drivers (e.g., Ola, Uber)</li> <li>City traffic management authorities</li> <li>Emergency response units (ambulance, fire brigade)</li> </ul>	<b>4. CUSTOMER</b> <ul style="list-style-type: none"> <li>Limited real-time traffic data</li> <li>Low smartphone penetration in some user groups</li> <li>Unreliable internet connectivity in remote or crowded areas</li> <li>Budget constraints in public infrastructure upgrades</li> <li>Dependency on static or outdated maps</li> <li>Lack of awareness or digital literacy among certain user segments</li> </ul>	<b>5. AVAILABLE SOLUTIONS</b> <ul style="list-style-type: none"> <li>Google Maps / Waze: Pros: Real-time navigation, congestion alerts. Cons: May lack hyper-local insights, user-dependent reporting.</li> <li>CCTV Monitoring &amp; Manual Traffic Control: Pros: Familiar and currently in use. Cons: Reactive, not predictive; labor-intensive.</li> <li>Fixed-time Traffic Signals: Pros: Simple to implement. Cons: Not responsive to real-time congestion.</li> </ul>
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> Which job-to-be-done (or problem) do you address for your customer? <ul style="list-style-type: none"> <li>Minimize travel time and delays during commutes</li> <li>Avoid highly congested routes, especially during peak hours</li> <li>Provide accurate, real-time traffic predictions</li> <li>Support emergency services with fastest, least-congested routes</li> <li>Help traffic authorities monitor and optimize signal timings and traffic flow</li> </ul>	<b>3. PROBLEM ROOT CAUSE</b> What is the root reason that the problem exists? What is the back story behind this problem? (A customer's pain point is because of the change in relationship) <ul style="list-style-type: none"> <li>Urbanization leading to increased vehicle density</li> <li>Lack of intelligent traffic management infrastructure</li> <li>Limited integration of AI/ML in traditional traffic systems</li> <li>Static or outdated traffic routing methods still in use</li> <li>Inconsistent or missing real-time data collection across regions</li> </ul>	<b>7. BEHAVIOUR</b> What does your customer do to address the problem and get the job done? <ul style="list-style-type: none"> <li>Use navigation apps like Google Maps or Waze</li> <li>Manually check traffic updates on news or radio</li> <li>Start earlier or take longer alternate routes to avoid traffic</li> <li>Follow common traffic habits based on experience, not data</li> <li>Traffic authorities use CCTV, manual patrols, or fixed-schedule signals</li> </ul>
<b>3. TRIGGER(S)</b> What triggers customers to act? Frequent traffic jams, rising fuel costs, and wasted time push users to seek better solutions. News, social media, peer usage, and government initiatives trigger interest in smart traffic systems.	<b>10. YOUR SOLUTION</b> <b>TrafficTelligence Solution:</b> <ul style="list-style-type: none"> <li>AI-powered traffic prediction and congestion avoidance system</li> <li>Uses real-time data (vehicle count, speed, time, road type, etc.)</li> <li>Offers alternative route suggestions for users</li> <li>Helps traffic authorities optimize signal timings and flow</li> <li>Dashboard for analytics and reports for urban planners and emergency services</li> </ul>	<b>8. CHANNEL(S) of BEHAVIOUR</b> <b>8.1. ONLINE</b> What kind of online do customers take and how? Extract online channels from 47 <ul style="list-style-type: none"> <li>Use apps like Google Maps/Waze for route planning</li> <li>Follow real-time traffic updates on Twitter, news sites, or traffic apps</li> <li>Join communities (WhatsApp/Telegram groups)</li> <li>Watch live data videos about traffic trends on YouTube</li> <li>Read blog posts and reviews on smart mobility</li> </ul> <b>8.2. OFFLINE</b> What kind of offline do customers take and how? <ul style="list-style-type: none"> <li>Go to traffic police stations</li> <li>Attend workshops or seminars for route suggestions</li> </ul>	
<b>4. EMOTION(S) BEFORE / AFTER</b> How do customers feel when they face a problem or a job and afterwards? Before using TrafficTelligence, users feel stressed, anxious, and frustrated by unpredictable traffic and delays. After using it, they feel confident, relaxed, and empowered with better travel decisions and smoother commutes.			<b>6. CHANNEL(S) of BEHAVIOUR</b> How do customers feel when they face a problem or a job and afterwards? Before using TrafficTelligence, users feel stressed, anxious, and frustrated by unpredictable traffic and delays. After using it, they feel confident, relaxed, and empowered with better travel decisions and smoother commutes.

#### References:

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