

## Project Design Phase

### Problem – Solution Fit Template

Date	8 JUNE 2025
Team ID	LTVIP2025TMID33800
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:

Problem-Solution fit canvas 2.0

Purpose / Vision

<div style="background-color: #f9f9f9; padding: 5px; border: 1px solid #ccc;"> <b>1. CUSTOMER SEGMENT(S)</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">CS</span> <ul style="list-style-type: none"> <li>Urban traffic control authorities</li> <li>City infrastructure planners</li> <li>Daily commuters</li> <li>Navigation app developers</li> <li>Smart city administrators</li> </ul> </div>	<div style="background-color: #f9f9f9; padding: 5px; border: 1px solid #ccc;"> <b>6. CUSTOMER CONSTRAINTS</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">CC</span> <ul style="list-style-type: none"> <li>Limited technical knowledge</li> <li>Budget or hardware limitations for IoT systems</li> <li>Lack of centralized data</li> </ul> </div>	<div style="background-color: #f9f9f9; padding: 5px; border: 1px solid #ccc;"> <b>5. AVAILABLE SOLUTIONS</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">AS</span> <ul style="list-style-type: none"> <li>Google Maps live traffic (reactive, not predictive)</li> <li>Manual traffic monitoring and signal adjustment</li> <li>City sensor data systems (often fragmented)</li> <li>Waze community-based reporting</li> </ul> </div>
<div style="background-color: #fff9c4; padding: 5px; border: 1px solid #ccc;"> <b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">J&amp;P</span> <ul style="list-style-type: none"> <li>Predict and manage traffic congestion before it occurs</li> <li>Improve commute efficiency using accurate traffic forecasts</li> <li>Optimize infrastructure planning based on data</li> <li>Enhance real-time route recommendations in navigation apps</li> </ul> </div>	<div style="background-color: #fff9c4; padding: 5px; border: 1px solid #ccc;"> <b>9. PROBLEM ROOT CAUSE</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">RC</span> <p>The core issue lies in the lack of predictive intelligence in existing traffic management systems. Planners and commuters depend on outdated or live-only data, which leads to late reactions and inefficient routing.</p> </div>	<div style="background-color: #fff9c4; padding: 5px; border: 1px solid #ccc;"> <b>7. BEHAVIOUR</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">BE</span> <p>Direct:</p> <ul style="list-style-type: none"> <li>Use traffic dashboards</li> <li>Adjust signals manually</li> <li>Monitor CCTV or sensors</li> </ul> <p>Indirect:</p> <ul style="list-style-type: none"> <li>Rely on historical assumptions</li> <li>Use public complaints to respond</li> <li>Wait for congestion to build before acting</li> </ul> </div>
<div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc;"> <b>3. TRIGGERS</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">TR</span> <ul style="list-style-type: none"> <li>Sudden traffic congestion with no prior alerts</li> <li>Weather changes or events causing unexpected jams</li> </ul> </div>	<div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc;"> <b>10. YOUR SOLUTION</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">SL</span> <p>TrafficTelligence is a machine learning-based solution that predicts traffic volume by analyzing time, weather, and event data. It helps commuters, planners, and traffic managers to make proactive decisions. The system is fast, lightweight, and easily integrable with web or mobile applications.</p> </div>	<div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc;"> <b>8. CHANNELS of BEHAVIOUR</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">CH</span> <p>Online</p> <ul style="list-style-type: none"> <li>Navigation app usage</li> <li>City dashboards</li> </ul> <p>8.2 OFFLINE</p> <ul style="list-style-type: none"> <li>Signal post adjustments</li> <li>Real-time field traffic reports</li> <li>Manual planning via meetings or paper</li> </ul> </div>
<div style="background-color: #e8f5e9; padding: 5px; border: 1px solid #ccc;"> <b>4. EMOTIONS: BEFORE / AFTER</b> <span style="float: right; background-color: #f44336; color: white; padding: 2px 5px;">EM</span> <p>How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure &gt; confident, in control - use it in your communication strategy &amp; design.</p> </div>		

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Fit

## References:

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