

## Project Design Phase

### Problem – Solution Fit Template

<b>Date</b>	27 JUNE 2025
<b>Team ID</b>	LTVIP2025TMID59882
<b>Project Name</b>	TrafficTelligence:Advanced Traffic Volume Estimation with Machine Learning
<b>Maximum Marks</b>	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			
Eligible Customer Segments	<b>1. CUSTOMER SEGMENT(S)</b> <span>CS</span> <ul style="list-style-type: none"><li>City traffic authorities</li><li>Urban planners</li><li>Smart city infrastructure teams</li><li>Daily urban commutr companies</li></ul>	<b>6. CUSTOMER LIMITATIONS</b> <small>EG. BUDGET:</small> <span>CL</span> <ul style="list-style-type: none"><li>Budget constraints for new infrastrucut</li><li>Limited access to real-time data sources for anc-liarden</li><li>Lack of skilled staff for advanced anaftics</li></ul>	<b>5. AVAILABLE SOLUTIONS</b> <small>PROS &amp;</small> <span>AS</span> <ul style="list-style-type: none"><li>Loop Defectors: Accurate but expensive, limited coverage</li><li>Manual Counts: Labor-inten-sive, not scalable</li><li>Static Models; Outdated not</li></ul>
	<b>2. PROBLEMS / PAINS</b> <small>ITS FREQUENCY</small> <span>PR</span> <ul style="list-style-type: none"><li>Inaccurate traffic volume estimates (daily)</li><li>Poor congestion management (frequent during peak hours)</li><li>Manual data collection</li></ul>	<b>7. PROBLEM ROOT / CAUSE</b> <span>RE</span> <ul style="list-style-type: none"><li>Reliance on outdatd methoo despite inefficiencies (nt:</li><li>Reactive decision-making instead of predictive (high intensity in critical scenarios)</li></ul>	<b>7. BEHAVIOR - ITS INTENSITY</b> <span>BE</span> <ul style="list-style-type: none"><li>Reliance on outdated methods despite inefficiencies</li><li>Static diecision-n-lmaking in crifical scenarios</li></ul>
Innovation Drivers / Triggers	<b>3. TRIGGERS TO ACT</b> <span>TR</span> <p>Before: Frustrated Stressed, stressed., helpess</p>	<b>10 YOUR SOLUTION</b> <span>SL</span> <p>A machine learning-based system that predicts traffic volume using real-time GPS, weather, and histo-rical data—providing accurate, scalable, and adaptive traffic insights</p>	<b>9. CHANNELS OF BEHAVIOR</b> <span>CH</span> <p>ONLINE Road sensors Field staff reports</p>
	<b>4. EMOTIONS</b> <small>BEFORE /AFTER</small> <span>AF</span> <p>Emotions before /Aft efficient</p>		<b>8. CHANNELS OF BEHAVIOR</b> <p>OFFLINE Road sensors, field staff-reports</p>

### References:

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