**Project Design Phase**

**Problem – Solution Fit Template**

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| Date | 15 February 2025 |
| Team ID | LTVIP2025MID44706 |
| Project Name | Traffic volume Estimation |
| Maximum Marks | 2 Marks |

**Problem – Solution Fit Template:**

#### . ****Customer Identification****

* **Who is the customer?**  
  Describe the specific group or individual facing the problem. Be precise (e.g., "small business owners who manage inventory manually").
* **What are their characteristics?**  
  Include relevant details like demographics, behaviors, or pain points (e.g., "time-strapped, limited tech expertise, frustrated with errors").

Guidance: Use surveys, interviews, or existing data to define your customer clearly. Specificity is key.

#### 2. ****Problem Identification****

* **What is the customer’s problem?**  
  State the problem they’re experiencing (e.g., "manual inventory tracking leads to stockouts and overstocking").
* **Why is it a problem?**  
  Explain its impact (e.g., "wastes time, increases costs, and frustrates owners").

Guidance: Validate the problem with customer feedback, observation, or market research to confirm it’s real and significant.

#### 3. ****Solution Proposal****

* **What is the proposed solution?**  
  Describe your solution simply (e.g., "a mobile app for automated inventory tracking").
* **How does it solve the problem?**  
  Show how it addresses the issue (e.g., "scans stock levels in real-time, alerting owners to reorder or adjust stock").

**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 SEGMENTS (CS) Who are your customers? Why do you think so? - Commuters: Daily travelers seeking efficient routes. - Transportation Authorities: Public sector managing traffic. - Urban Planners: City officials designing infrastructure. - Why?: These groups benefit from traffic insights and predictions.

2. JOBS-TO-BE-DONE / PROBLEMS (JBP) What jobs could your customers want to get done? What problems could they have, or exploit different cases? - Jobs: Plan optimal routes, manage traffic flow, design efficient roads. - Problems: Unreliable traffic data, congestion, poor infrastructure planning.

3. TRIGGERS (TR) What triggers customers to act i.e. seeing their neighbor installing something, reading about a more efficient solution in the news. - Traffic delays during rush hour. - News about smart city initiatives. - Recommendations from navigation apps.

4. EMOTIONS BEFORE / AFTER (EM) How do customers feel before a job is done? How do they feel after using your solution? Identity your customer’s number 1 unmet need or communication strategy & design. - Before: Frustrated by delays, stressed by unpredictability. - After: Relieved with smoother travel, confident in planning. - Unmet Need: Real-time, accurate traffic updates.

5. PROBLEM ROOT CAUSE (PRC) What is the problem root cause? What is the back story behind the need to fix the issue? Has the customer tried a solution before? If so, how has this worked? - Root Cause: Lack of integrated traffic data systems. - Back Story: Growing urban congestion due to outdated management tools. - Previous Solutions: Basic apps (e.g., Google Maps) with limited accuracy.

6. CUSTOMER CONSTRAINTS (CC) What constraints prevent customers from taking action or trying your solution? e.g. competing power, budget, cost, awareness, communication. - Budget limitations for authorities. - Lack of awareness among commuters. - Resistance to change in planning processes.

7. BEHAVIOUR (BE) How does the customer behave to address the problem and get the job done? i.e. directly related to the root problem: calculate usage/behaviour, frequency of usage, preferred channels. - Commuters check apps frequently. - Authorities adjust signals manually. - Planners rely on annual reports. - Frequency: Daily for commuters, monthly for planners.

8. CHANNELS OF BEHAVIOUR (CH) What channels do customers take to execute online channels from? e.g. offline channels from offline channels & what can then be used for customer development. - Online: Navigation apps, web dashboards. - Offline: Traffic signs, public meetings. - Development: Feedback via app surveys, authority workshops.

9. AVAILABLE SOLUTIONS (AS) Which solutions are available to customers when they face the problem? Which solutions have a pain and is there an alternative to estimating? - Available: Google Maps, Waze (basic predictions). - Pain: Inaccurate during events. - Alternative: TrafficTelligence’s precise ML-based forecasts.

10. YOUR SOLUTION (YS) If you were solving an existing problem, write down your current solution. If it is new, sketch how much it meets, with clear black & white icons, the customer’s emotions and customer behaviour. - Solution: ML-driven traffic volume prediction with real-time updates. - Meets Needs: Reduces delays, improves planning, enhances user trust. - Sketch Idea: Dashboard with traffic heatmaps, route suggestions.

11. VALUE PROPOSITION (VP) What value does your solution bring to the customer? What is the value proposition and customer behaviour? - Value: Accurate traffic forecasts, reduced congestion, better planning. - Proposition: "Optimize your journey with precision traffic insights."