

Project Design Phase

Problem – Solution Fit Template

Date	12 June 2025
Team ID	LTVIP2025TMID33015
Project Name	Traffic Telligence:Advanced Traffic Volume Estimation Using 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:

<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Define CS, fit into CC</div> <div> 1. CUSTOMER SEGMENT(S) <small>Who is your customer? I.e. working parents of 0-5 y.o. kids</small> </div> <div style="background-color: #f8d7da; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">CS</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Define CS, fit into CC</div> <div> 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> </div> <div style="background-color: #f8d7da; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">CC</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Define CS, fit into CC</div> <div> 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> </div> <div style="background-color: #f8d7da; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">AS</div> </div>
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Focus on „J&P“, tap into BE, understand RC</div> <div> 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> </div> <div style="background-color: #fff3cd; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">J&P</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Focus on „J&P“, tap into BE, understand RC</div> <div> 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> </div> <div style="background-color: #fff3cd; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">RC</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Focus on „J&P“, tap into BE, understand RC</div> <div> 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> </div> <div style="background-color: #fff3cd; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">BE</div> </div>
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Identify strong TR & EM</div> <div> 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> </div> <div style="background-color: #d4edda; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">TR</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Identify strong TR & EM</div> <div> 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> </div> <div style="background-color: #d4edda; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">SL</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: 0.8em;">Extract online & offline CH or BE</div> <div> 8. CHANNELS of BEHAVIOUR <small>8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7</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> </div> <div style="background-color: #d4edda; padding: 2px 5px; font-weight: bold; font-size: 0.7em;">CH</div> </div>

References:

- Spatio-Temporal Graph Neural Network for Urban Spaces: Interpolating Citywide Traffic Volume.
- Network-wide Multi-step Traffic Volume Prediction using Graph Convolutional Gated Recurrent Neural Network.