

## Project Design Phase

### Problem – Solution Fit Template

Date	24 June 2025
Team ID	LTVIP2025TMID50347
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau.
Maximum Marks	2 Marks

#### Problem – Solution Fit Template:

What is the customer struggling with?







Stakeholders in the real estate sector—such as analysts, marketing teams, and executives—face challenges in:

- Identifying which property features influence pricing trends
- Understanding how renovations affect buyer interest and price
- Making strategic decisions without data-backed insights
- Communicating property trends effectively to clients or investors

#### Purpose:

- Solving complex challenges in real estate analysis through actionable, data-driven insights.
- Accelerating adoption by aligning solutions (e.g., Tableau visualizations) with existing behaviors and decision-making patterns.
- Sharpening strategy and communication, ensuring that dashboards, insights, and stories speak directly to stakeholder needs.
- Building trust with users by solving frequent annoyances like unclear trends, pricing confusion, or unstructured data.
- Understanding the current workflows and gaps in analysis, so the final solution is a clear, effective improvement.

#### Template:

 <b>1. Problem Statement</b> <b>What is the customer struggling with?</b> Stakeholders in the real estate sector—such as analysts, marketing teams, and executives—face challenges in: <ul style="list-style-type: none"><li>• Identifying which property features influence pricing trends</li><li>• Understanding how renovations affect buyer interest and price</li><li>• Making strategic decisions without data-backed insights</li><li>• Communicating property trends effectively to clients or investors</li></ul>
 <b>2. Existing Behavior / Situation</b> <b>How are they currently addressing the problem?</b> <ul style="list-style-type: none"><li>• Based on spreadsheets and static reports with limited visual context</li><li>• Heavily reliant on manual analysis with potential data misinterpretation</li><li>• Missing comprehensive dashboards for interactive exploration</li><li>• Not leveraging full potential of historical or feature-specific data</li></ul>
 <b>3. Desired Outcome / Ideal Scenario</b> <b>What would a better world look like for them?</b> <ul style="list-style-type: none"><li>• Ability to visually explore and interpret housing trends easily</li><li>• Understand how each feature (renovation, age, rooms/floors) impacts sale price</li><li>• Make informed and fast decisions using an interactive Tableau dashboard</li><li>• Identify actionable trends and optimize pricing strategies</li></ul>
 <b>4. Our Solution</b> <b>How does your solution address the problem effectively?</b> An interactive Tableau dashboard that: <ul style="list-style-type: none"><li>• Provides overall data summaries with key KPIs (Scenario 1)</li><li>• Visualizes trends based on years since renovation (Scenario 2)</li><li>• Breaks down age distribution by renovation status (Scenario 3)</li><li>• Analyzes house features like bathrooms, bedrooms, and floors by age (Scenario 4)</li><li>• Offers drill-down capabilities and filters for customized insights</li><li>• Can be embedded in a web app using Flask for broader accessibility</li></ul>
 <b>5. Why It Works</b> <b>How does it align with customer behavior and needs?</b> <ul style="list-style-type: none"><li>• Real estate teams already work with data but lack intuitive tools — Tableau adds clarity</li><li>• Renovations and house features are top decision factors — directly visualized</li><li>• Users prefer visually rich, interactive reports over static spreadsheets</li><li>• Immediate insights help close decisions faster, leading to business growth</li></ul>
 <b>6. Marketing / Communication Strategy</b> <b>What messaging and touch-points help adoption?</b> <ul style="list-style-type: none"><li>• Messaging Angle: "Turn your housing data into decisions"</li><li>• Emotional Trigger: Solve the frustration of slow, unclear analysis</li><li>• Rational Trigger: Improve accuracy and speed of market evaluations</li><li>• Touch-points: Demo sessions, tutorials, integration in existing dashboards</li><li>• Performance-based dashboards shared with stakeholders</li></ul>

## References:

1. Customer development theories by Steve Blank.
2. Lean Startup methodology by Eric Ries.
3. Tableau documentation and real estate BI case studies.
4. Behavioral economics applied to tech adoption (Nir Eyal's Hooked Model).