Project Design Phase
Problem – Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2025TMID52074
Project Name	visualization tool for electric vehicle charge and range analysis
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

visualization tool for electric vehicle charge and range analysis

Define CS, fit into

1. CUSTOMER SEGMENT(S) — CS

EV Policy Makers – Government and municipal planners shaping electric mobility strategie

Automotive Analysts – Researchers studying model performance, pricing trends, and adoption rates

EV Consumers – Potential buyers seeking model comparisons and charger availability

Developers & Students – Building solutions or exploring EV data for academic and tech innovation

6. CUSTOMER — CC

▢ Inconsistent data formats (range in km vs miles, different powertrain naming)
- Scattered data across Indian and global sources, hard to compare
- Difficulty understanding charger coverage or finding affordable EVs
- Poor visual tools or dashboards for non-technical stakeholders

5. AVAILABLE SOLUTIONS — AS

Explore AS,

Which solutions are available to the customers when they face the problem

▢ Static policy PDFs or non-interactive reports
- OEM marketing brochures (with brand bias)
- Individual EV comparison websites (without regional charger insights)
- Google Maps for manual charger location checking (not power-rated)

Focus on J&P, tap into BE, understand

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

▢ **EV Consumers**: Find a model that fits budget, range needs, and nearby charging
- **Policy Makers**: See region-wise charging density, highlight underserved zones
- **Analysts**: Compare efficiency (Wh/km), cost-to-range ratio, charger types
- **Developers**: Build dashboards that narrate EV stories across India & globally

9. PROBLEM ROOT CAUSE — RC

▢ No centralized, cleaned dataset combining specs and infrastructure
- Lack of unit normalization across sources (e.g., "Type 2" vs "CHAdeMO")
- Very few open-access dashboards tailored to Indian EV market with global benchmarks
- Deployment tools not integrated with web-based analytics

7. BEHAVIOUR — BE

Focus on J&P, tap into BE, understand

What does your customer do to address the problem and get the job done?
▢ Relies on spreadsheets, articles, or multiple websites to compare models
- Hesitates due to "range anxiety" and unknown charging station status
- Developers and analysts waste time preprocessing before visualizing
- Policy teams struggle to translate stats into relatable user journeys

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Identify strong TR & EM

3. TRIGGERS — TR

▢ Public push for sustainable mobility and EV subsidies
- Student and academic interest in EV analytics
- Pressure to decentralize charging infrastructure in Tier-2 & 3 cities
- EV brand launches and competitive pricing shifts

4. EMOTIONS: BEFORE / AFTER — EM

Before:

Uncertain, confused by scattered or biased data, overwhelmed by decisions

After:

Confident, empowered, informed through an intuitive visual journe

10. YOUR SOLUTION — SL

▢ Interactive Tableau dashboards: Range vs price, charger maps, brand comparisons
- **Integrated dataset pipeline using Python and SQL**
- **Story-based navigation for public, academic, and technical users**
- **Web app via Flask + Render: Accessible anywhere, anytime**
- **Filterable dashboards by brand, charger type, body style, region, and cost**

8. CHANNELS of BEHAVIOUR — CH

Extract online & offline CH of BE

8.1 ONLINE

Using Tableau Public / Tableau Online dashboards

- Reviewing competitor or retail performance via e-commerce sites and analytics |

8.2 OFFLINE

Industry expos, trade shows
- Internal meetings for sales/performance reviews
- Manufacturer and distributor interviews |

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