# Project Design Phase
Problem – Solution Fit Template

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| **Date** | 30 January 2026 |
| **Team ID** | LTVIP2026TMIDS76348 |
| **Project Name** | Prosperity Prognosticator – Machine Learning for Startup Success Prediction |
| **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:

| 1. CUSTOMER SEGMENT(S) CS | 6. CUSTOMER CONSTRAINTS CC | 5. AVAILABLE SOLUTIONS AS |
|---|---|---|
| **Who is your customer?**<br>• **Investors & Venture Capitalists** — need data-driven startup evaluations to reduce portfolio risk<br>• **Startup Founders & Entrepreneurs** — need insight into their own success probability<br>• **Policy Makers & Incubators** — need aggregate startup health analytics to shape support programs<br>• **Business Analysts** — researching startup success patterns across industries and geographies | **What prevents customers from taking action?**<br>• Lack of affordable ML expertise to build custom models<br>• No unified tool that combines data analysis with real-time prediction<br>• Difficulty interpreting raw CSV data without visualization<br>• Unawareness of which startup features (funding rounds, milestones, relationships) truly predict success<br>• Time constraints — investors need fast answers, not weeks of analysis | **What solutions exist today?**<br>• Manual due diligence spreadsheets — slow and subjective<br>• Expensive consulting firms — not accessible to small investors<br>• Generic ML platforms (DataRobot, H2O.ai) — complex, costly<br>• CB Insights / Crunchbase reports — descriptive, not predictive<br>*Gap: No simple, open-source, instant web-based predictor exists for startup success.* |

**2. JOBS-TO-BE-DONE / PROBLEMS** J&P;

**What jobs need to be performed for your customers?**

• Quickly evaluate whether a startup is worth investing in

• Identify which features (milestones, funding rounds, relationships) drive success

• Get a clear binary decision — Acquired or Closed — without domain ML knowledge

• Reduce time spent on manual due diligence from weeks to seconds

• Understand industry-level and state-level startup success trends

**9. PROBLEM ROOT CAUSE** RC

**What is the real reason this problem exists?**

• Startup success is multidimensional — no single metric captures it

• Historical data on startup outcomes is available but rarely analysed systematically

• Investors rely on gut feeling and personal networks rather than data

• ML tools exist but require expert knowledge to set up and use

• There is no simple, free, web-based tool that non-technical investors can use instantly

**7. BEHAVIOUR** BE

**What do customers do to address the problem?**

• Directly: Hire consultants, read CB Insights reports, manually track metrics in Excel

• Indirectly: Attend startup pitch events, rely on network recommendations

• Investors spend 40–60 hours per deal on manual due diligence

• Entrepreneurs survey friends and advisors subjectively

• Policy makers use aggregate statistics from government sources

**3. TRIGGERS** TR

**What triggers customers to seek a solution?**

• A colleague's startup fails unexpectedly after significant funding

• An investor loses capital due to poor startup evaluation

• Reading news about startup failure rates (90% fail within 10 years)

• Needing to evaluate 20+ startups in a short window during a funding cycle

**4. EMOTIONS: BEFORE / AFTER** EM

**Before:** Anxious, overwhelmed, uncertain — too much data, no clear framework

**After:** Confident, informed, in control — data-backed decision in under 2 seconds

Use this emotional shift in communication strategy: emphasise speed, clarity, and confidence in messaging.

**10. YOUR SOLUTION** SL

**Prosperity Prognosticator**

A Machine Learning web application that predicts startup success (Acquired or Closed) using a Random Forest classifier trained on 923 real startups.

**How it works:**

1. User enters 9 startup metrics into a clean web form (funding, milestones, relationships)

2. Flask backend passes values to the trained Random Forest model

3. Model predicts outcome: Acquired (1) or Closed (0)

4. Result displayed instantly with a visual green/red indicator

**Unique Value:** Free, open-source, instant, no ML expertise required, accessible via any browser.

**Fits customer behaviour:** Investors already gather these metrics — Prosperity Prognosticator simply analyses them automatically.

**8. CHANNELS of BEHAVIOUR** CH

**8.1 ONLINE**

• LinkedIn — investors share deal flow and seek tools

• AngelList / Crunchbase — startup data discovery

• GitHub — open-source ML project distribution

• Medium / Dev.to — technical blogs reaching analyst audience

• Kaggle — data science community for model sharing

**8.2 OFFLINE**

• Startup pitch events and demo days

• University incubators and entrepreneurship clubs

• Venture capital firm internal tools presentations

• Business school case study integration

## References:


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