

Project Design Phase

Problem – Solution Fit Template

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| Date | 15 February 2025 |
| Team ID | LTVIP2025TMID34696 |
| Project Name | Enchanted Wings: Marvels Of Butterfly Species |
| 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

Purpose / Vision

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|-------------------------|--|----------------|---|-----------|--|-----------|-----------------------------------|
| Define CS, fit into CC | 1. CUSTOMER SEGMENT(S) Ecologists and biodiversity researchers Wildlife conservation organizations Environmental NGOs and policymakers Biology teachers and students | CS | 6. CUSTOMER CONSTRAINTS Limited technical knowledge in AI/ML Budget constraints for high-end systems Lack of access to large annotated butterfly datasets Inconsistent image quality from citizen submissions | CC | 5. AVAILABLE SOLUTIONS Manual classification by entomologists Field guides and printed butterfly atlases Mobile apps with limited species database Crowd-sourced identification on forums | AS | Explore AS, differentiate |
| | 2. JOBS-TO-BE-DONE / PROBLEMS Identify and classify butterfly species accurately from images Automate species detection to support biodiversity tracking Assist conservation efforts with species population data Educate the public and students about butterfly diversity | J&P | 9. PROBLEM ROOT CAUSE The core issue lies in the lack of automated, accurate, and scalable tools for butterfly species classification. Manual methods are time-consuming and inconsistent, making it difficult for researchers and educators to identify and monitor diverse species effectively. | RC | 7. BEHAVIOUR Direct: Upload butterfly images to platforms Use field guides for manual checks Participate in photo-based biodiversity contests Indirect: Rely on expert opinion through email/forums Post images on social media for crowd opinions | BE | |
| Identify strong TR & EM | 3. TRIGGERS Difficulty in manually identifying butterfly species Loss of biodiversity without real-time monitoring Limited awareness of species at risk Increase in citizen-contributed butterfly photos | TR | 10. YOUR SOLUTION Enchanted Wings is a transfer learning-based image classification system that identifies butterfly species from photos using deep learning (VGG16). It supports ecologists, educators, and citizen scientists by providing fast, reliable predictions. It's lightweight, easy to deploy, and works on both mobile and web platforms. It enhances ecological research and public education on butterfly diversity. | SL | 8. CHANNELS of BEHAVIOUR B.1 ONLINE Butterfly image upload portals Web dashboard or app Educational platforms B.2 OFFLINE School/college biodiversity projects Printed data reports for conservationists In-person biodiversity surveys | CH | Extract online & offline CH of BE |
| | 4. EMOTIONS: BEFORE / AFTER Before: Confused, unconfident, overwhelmed by manual classification After: Confident, empowered, aware, involved in conservation | EM | | | | | |

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References:

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