**Project Design Phase**
**Problem – Solution Fit Template**

| Date | 15 June 2025 |
|---|---|
| Team ID | LTVIP2025TMID43861 |
| Project Name | Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management. |
| Maximum Marks | 2 Marks |

**Problem – Solution Fit Template:**

Deeply understand the needs, motivations, and barriers of poultry farmers in both rural and commercial settings.

By mapping their behaviors, constraints, root problems, and emotional triggers, we can design a solution that truly serves them.

This framework helps us align our team around the real-world challenges farmers face — enabling the creation of an AI-powered mobile tool that diagnoses poultry diseases through images and recommends timely treatments.

It ensures our solution is grounded in empathy, practicality, and local context.

**Purpose:**

❏ Address poultry health challenges in a way that fits the realities of rural and small-scale farmers.

❏ Accelerate adoption of your AI-powered solution by aligning with existing behaviors, such as using mobile phones and local communication channels.

❏ Strengthen outreach with clear messaging that highlights fast diagnosis, reduced bird mortality, and cost-effective treatment.

❏ Build trust by solving urgent and frequent issues like unidentified poultry deaths and treatment delays.

❏ Understand farmers' current practices and constraints to create a meaningful, impactful solution they can rely on.

**Template:**



**Problem-Solution fit** canvas 2.0 — Purpose / Vision

**1. CUSTOMER SEGMENT(S) — CS**
- Small-scale and rural poultry farmers
- Veterinary field workers
- Commercial poultry operators
- Agricultural extension officers

*Define CS, fit into*

**6. CUSTOMER — CC**
- Lack of veterinary access in rural areas
- Poor internet connectivity
- Low digital literacy
- Limited budgets for diagnosis tools

**5. AVAILABLE SOLUTIONS — AS**
- Physical vet visits (often delayed or unavailable)
- Guesswork or home remedies
- Manual checking using books or online searches
- None provide fast, image-based, offline-capable solutions

*Explore AS,*

**2. JOBS-TO-BE-DONE / PROBLEMS — J&P**
- Identify poultry diseases early and accurately
- Reduce bird mortality and financial loss
- Minimize reliance on costly or distant veterinary services
- Get immediate guidance for treatment

*Focus on J&P, tap into BE, understand*

**9. PROBLEM ROOT CAUSE — RC**
- Lack of access to expert guidance at the point of need
- No fast or accurate disease identification tools
- Lack of awareness or training on poultry health management

**7. BEHAVIOUR — BE**
- Farmers isolate sick birds based on guesswork
- Often consult neighbors or unverified sources
- Delay decisions due to uncertainty
- Try basic or local remedies without understanding disease

*Focus on J&P, tap into BE, understand*

**3. TRIGGERS — TR**
- Bird showing unusual symptoms (drooping, diarrhea, etc.)
- Previous bird losses due to unknown disease
- News or neighbor reports of disease outbreaks nearby
- Need to quickly isolate or treat affected poultry

*Identify strong TR & EM*

**4. EMOTIONS: BEFORE / AFTER — EM**
**Before:** Helpless, anxious, frustrated due to lack of diagnosis and treatment access
**After:** Relieved, empowered, confident with a fast and accurate disease detection tool

**10. YOUR SOLUTION — SL**
- A mobile-based AI solution using transfer learning to detect poultry diseases from images
- Works offline after initial setup
- Suggests probable disease and treatment plan instantly
- Empowers farmers to take action quickly and reduce losses

**8. CHANNELS of BEHAVIOUR — CH**
8.1 ONLINE
- YouTube poultry tutorials, WhatsApp farming groups
- Basic Android phone usage for photos and web search

8.2 OFFLINE
- Physical isolation of birds
- Visiting agri shops or nearby vets if possible
- Word-of-mouth from other farmers

*Extract online & offline CH of BE*

**References:**

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