

## Project Design Phase

### Problem – Solution Fit Template

Date	27 June 2025
Team ID	LTVIP2025TMID45694
Project Name	Transfer Learning-Based on Classification of Poultry Diseases for Enhanced Health Management
Maximum Marks	2 Marks

#### Problem – Solution Fit Template:

The Problem–Solution Fit simply means that we have identified a real and recurring problem faced by our target users—poultry farmers—and have designed a solution that effectively addresses this need through accessible technology. This fit helps innovators align their solutions with actual user behaviors and pain points.

#### Purpose:

- Solve complex problems in a way that aligns with the current realities and limitations of poultry farmers, especially in rural areas.
- Accelerate success and solution adoption by leveraging existing behaviours such as mobile usage, image sharing, and need for low-cost tools.
- Sharpen communication by using key triggers like “prevent disease early,” “save your flock,” and “predict instantly.”
- Build trust and increase user engagement by addressing high-cost, urgent issues (e.g., disease outbreaks) that directly affect livelihoods.
- Understand the day-to-day practices of poultry farmers and improve them through technology-based interventions.

#### Template:

Problem-Solution fit canvas 2.0		Purpose / Vision	
Define CS, fit into	<b>1. CUSTOMER SEGMENT(S)</b> <span style="float: right;">CS</span> <ul style="list-style-type: none"> <li>Poultry farm owners and veterinarians</li> <li>Animal husbandry officers</li> <li>Agri-tech and livestock health startups</li> <li>Rural farmers with poultry setups</li> </ul>	<b>6. CUSTOMER</b> <span style="float: right;">CC</span> <ul style="list-style-type: none"> <li>Poor internet in rural areas</li> <li>Limited access to trained vets or diagnostic labs</li> <li>Low awareness about AI-powered tools</li> <li>Budget limitations</li> </ul>	<b>5. AVAILABLE SOLUTIONS</b> <span style="float: right;">AS</span> <ul style="list-style-type: none"> <li>Manual examination by vets (limited availability)</li> <li>Trial-and-error medication</li> <li>General-purpose mobile veterinary apps (not image-based or disease-specific)</li> </ul>
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <span style="float: right;">J&amp;P</span> <p>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</p> <ul style="list-style-type: none"> <li>Detect poultry diseases early and accurately</li> <li>Reduce financial losses due to outbreaks</li> <li>Avoid misdiagnosis by untrained eyes</li> <li>Improve farm productivity and poultry health</li> </ul>	<b>9. PROBLEM ROOT CAUSE</b> <span style="float: right;">RC</span> <p>What is the real reason that this problem exists? What is the back story behind the need to do this job? I.e. customers have to do it because of the change in regulations.</p> <ul style="list-style-type: none"> <li>Lack of accessible, low-cost diagnostic tools</li> <li>Poor veterinary infrastructure in rural/agri areas</li> <li>Manual inspections are slow and error-prone</li> </ul>	<b>7. BEHAVIOUR</b> <span style="float: right;">BE</span> <p>I.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend freetime on volunteering work (i.e. Greenpeace)</p> <ul style="list-style-type: none"> <li>Call a local vet (if available)</li> <li>Ask other farmers for advice</li> <li>Try random medicine/feed changes</li> <li>Search symptoms on YouTube or WhatsApp groups</li> </ul>
Identify strong TR & EM	<b>3. TRIGGERS</b> <span style="float: right;">TR</span> <ul style="list-style-type: none"> <li>Sudden rise in bird mortality or visible symptoms</li> <li>Lack of access to immediate veterinary care</li> <li>Pressure to meet market demands without delays</li> </ul>	<b>10. YOUR SOLUTION</b> <span style="float: right;">SL</span> <p>If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer <b>behavior</b>.</p> <ul style="list-style-type: none"> <li>A web app where users upload images of sick birds</li> <li>AI model (ResNet50-based) classifies disease from the image</li> <li>Provides likely disease name + suggested actions</li> <li>Lightweight and can be used in low-resource settings</li> <li>Can be integrated with <b>agri</b> advisory platforms</li> </ul>	<b>8. CHANNELS of BEHAVIOUR</b> <span style="float: right;">CH</span> <p>What kind of actions do customers take online? Extract online channels from #7</p> <p><b>8.1 ONLINE</b></p> <p>Online: YouTube searches, agricultural WhatsApp groups, digital farming platforms</p> <p><b>8.2 OFFLINE</b></p> <p>What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</p> <p>Offline: Word-of-mouth, visiting nearby poultry farms, local vet clinics</p>
	<b>4. EMOTIONS: BEFORE / AFTER</b> <span style="float: right;">EM</span> <p>Before: Worried, helpless, confused After: Confident, in control, hopeful</p>		