Project Design Phase Problem – Solution Fit Template

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Team ID	LTVIP2025TMID60871
Project Name	Transfer learning based classification of poultry
	diseases for enhanced health management
Maximum Marks	

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Problem-Solution Fit: Health Management System		
1. Problem		
Poultry farmers face frequent challenges in detecting diseases early, leading to:		
High mortality and reduced productivity due to delayed diagnosis.		
Lack of access to veterinary professionals in remote areas.		
Inadequate disease tracking and reporting system	ns.	
Language and literacy barriers in using existing di	gital solutions.	
Losses in income due to undiagnosed or misdiagn	osed health issues.	

2. Existing Situation (Customer's World Without the Solution)

Farmers rely on physical symptoms and guesswork, often leading to wrong treatment.

Veterinary consultations are costly or unavailable in rural locations.

Manual recordkeeping is error-prone and inefficient.
Weather and environment-related outbreaks aren't forecasted or tracked.
There's no centralized health history of poultry flocks.
3. Behavior Patterns Observed
Farmers use smartphones but prefer vernacular language and voice-based input.
Increasing awareness and willingness to adopt mobile health tools.
Government schemes push digital adoption, especially in agriculture and livestock.
Farmers seek low-cost, intuitive, and rapid solutions.
4. Solution Overview
An Al-powered Poultry Health Management System that includes:
Image-based disease detection using transfer learning models.
Mobile app interface with local language support and voice commands.
Chatbot assistance for basic disease queries and treatment steps.

Weather-based outbreak alerts and personalized health dashboards.
Secure cloud storage of health records and veterinary reports.
5. Solution Benefits
Early diagnosis minimizes disease spread and reduces mortality.
Reduced costs due to less dependency on in-person vets for basic symptoms.
Empowers farmers through automated, real-time diagnosis and guidance.
Data-driven tracking of disease trends and outbreak predictions.
Improves income stability and decision-making for farmers.
6. Problem-Solution Fit Summary
✓ The problem is significant, recurring, and costly to the customer.
The solution fits current user behavior (mobile-first, voice preference, low literacy).
The benefits are clear, immediate, and measurable.
Trust is built through automation, accessibility, and language support.

References
Field interviews with poultry farmers (real or hypothetical)
WHO and FAO reports on animal health
IBM Watson AI use cases in agriculture
Agricultural ministry guidelines on livestock health
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