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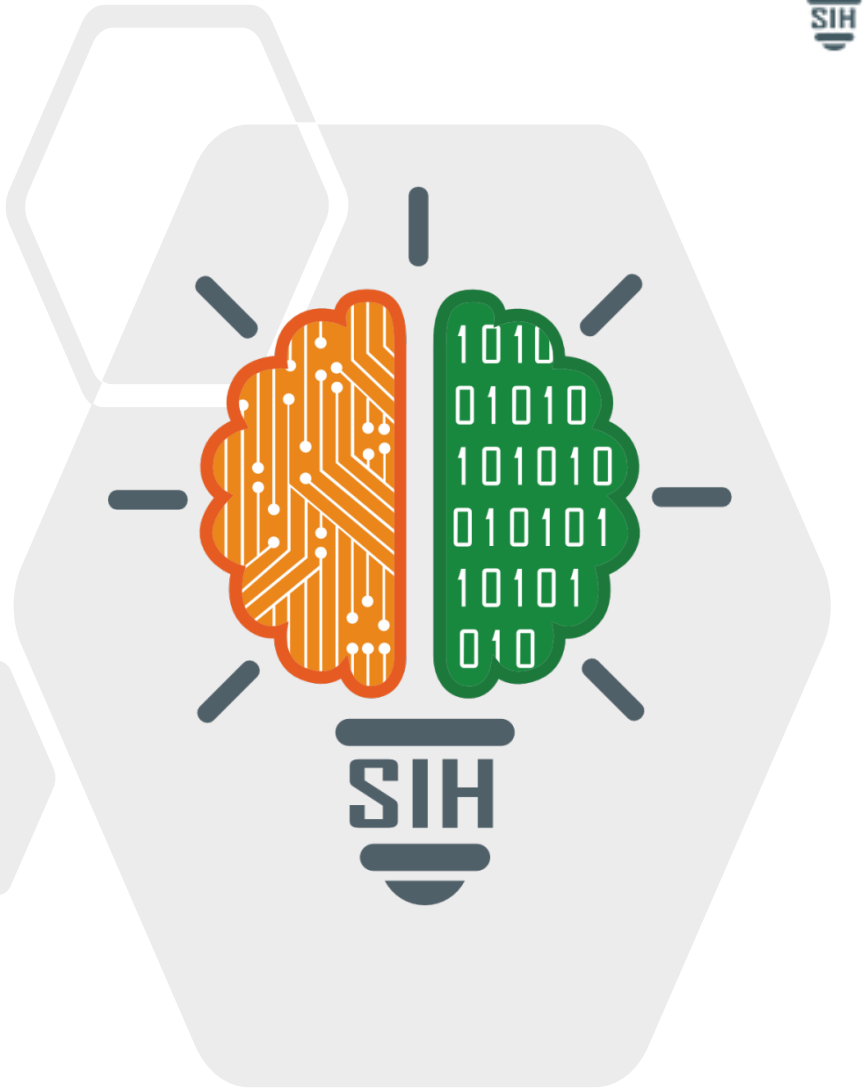
- **Problem Statement ID – SIH25006**

- **Problem Statement Title- Development of a Digital Farm Management Portal for implementing Biosecurity ileasures in Pig and Poultry Farms**

- **Theme- Agriculture, FoodTech & Rural Development**
- **PS Category- Software**

- **Team Name- Mission Samadhan**



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IDEA TITLE

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One Portal, Every Farmer: Personalized Training + Help Centers + Emergency Care

Proposed Solution:

- Personalized Content: Training videos & guides tailored to farmer's land.
- Inclusive Access: Mobile app for smartphone users, Help Centers for others.
- Smart Advisory: Data-based pesticide & chemical recommendations with safety.
- Emergency Alerts: Instant notifications + inspection support during outbreaks.
- Awareness Programs: Regular training & team-driven updates for farmers.

Innovation and Uniqueness:

- Customized training modules & best practices based on livestock type.
- Interactive videos, quizzes, and rewards in local language.
- Connect farmers, veterinarians, researchers, extension workers, and policymakers on a single digital network.

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TECHNICAL APPROACH

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Methodology and Implementation:

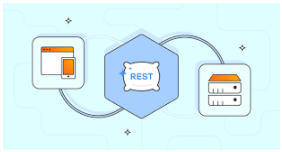
- System Design – plan app, dashboard, and alert modules.
- Prototype Development – build core features: farmer data, advisory, emergency help.
- Intelligent Features – add AI for risk prediction and maps for outbreak tracking.
- Testing & Validation – pilot test with real users, refine system.
- Deployment & Improvement – launch on cloud with offline/SMS support, improve with feedback.

Tech Stack

Flutter/React

Node.js

Python



Rest APIs

PostgreSQL

HTML, CSS, JS

API:

- Authentication API
- Language & Voice Support API
- Geolocation API

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FEASIBILITY AND VIABILITY

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Leverages What Exists

Uses farmers' basic smartphones & local help centers, avoiding costly new infrastructure.

Reduced Expenditure

Preventing outbreaks is cheaper than dealing with large-scale disease spread.

Challenge: Limited Smartphone Access
Overcome: Help centers for offline farmers.

Challenge: Slow Emergency Response
Overcome: Real-time alerts & quick inspection requests

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Flowchart Representation

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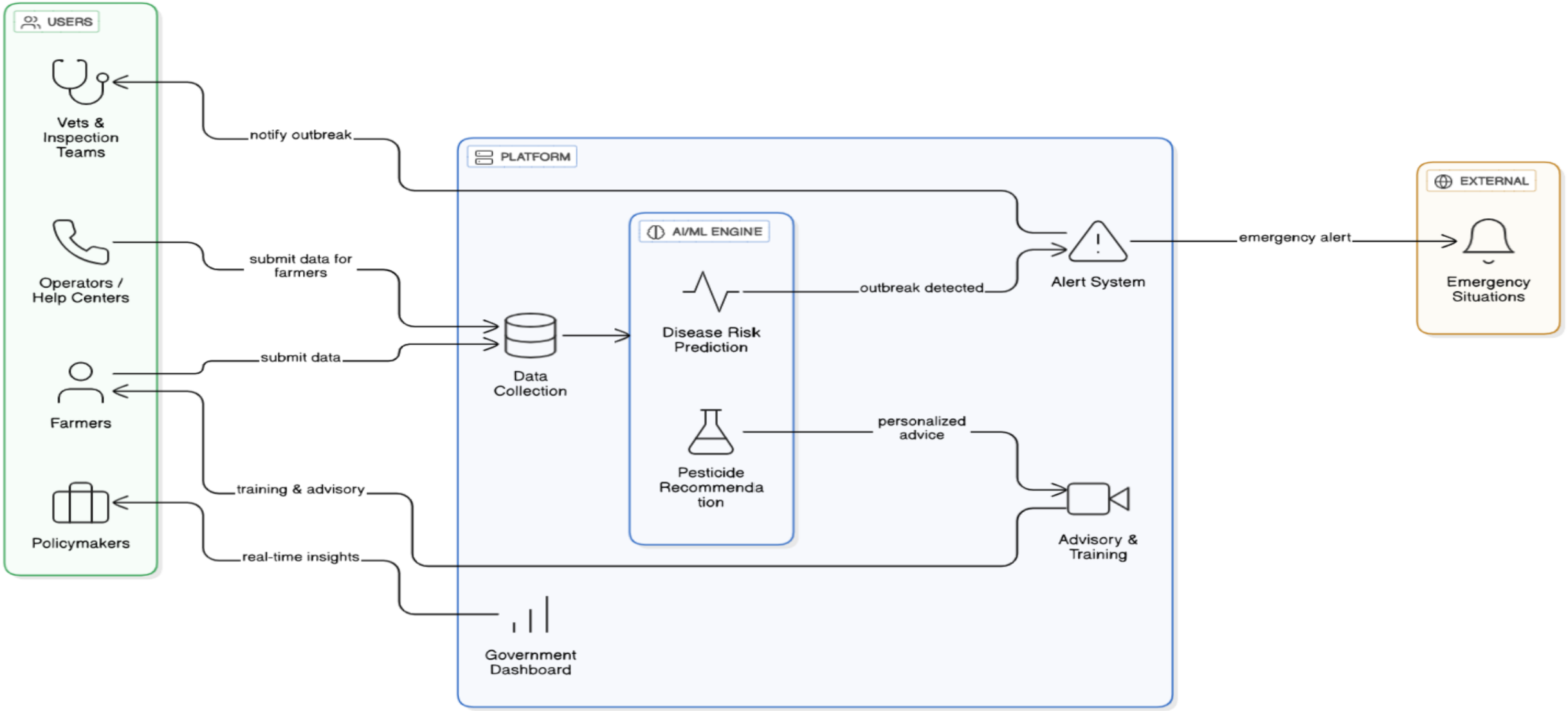

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IMPACT AND BENEFITS

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Impacts:

- Public Health Safety – Prevents zoonotic diseases (animal-to-human) → safeguards society.
- Knowledge Sharing Community – Farmers can learn from each other's case studies & solutions.

Benefits

- Farmer Creditworthiness – Verified digital farm data can help farmers get loans/insurance easily.
- Boosts rural economy by creating demand for digital services & training centers.
- Healthy poultry and pig farms mean that meat, eggs, and related products reaching the consumer are safe and free from major disease risks.

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RESEARCH AND REFERENCES

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Research:

Based on Digital Agriculture Mission (2021–25), FAO/ICAR biosecurity studies, and AI/ML applications for farm disease prediction. Models like Digital Green and e-Choupal prove localized training and ICT adoption.

References:

Digital Agriculture Mission 2021–25FAO (2019) – ICTs for AgricultureICAR (2020) – Biosecurity in AgricultureSpringer (2022) – AI/ML in FarmingDigital Green Programs