

■ AgriPulse PH

Smart Agricultural Distribution Platform

Connecting Farmers · Buyers · Logistics · Government for a Transparent, Efficient, and Fair Food Supply Chain

PROPOSED BY

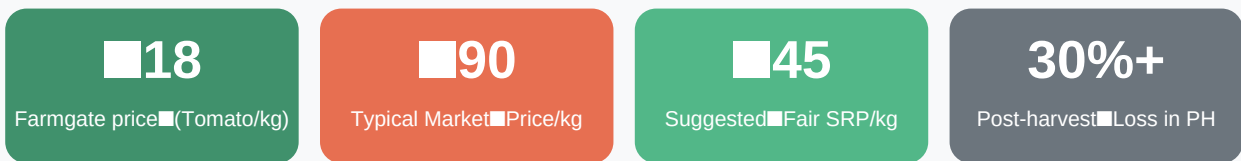
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Concept Design & System Architecture | 2026

01 | Executive Summary

The Philippines faces a persistent paradox in its agricultural sector: farmers discard tons of fresh produce while urban consumers pay inflated prices for the same goods. This is not a supply problem — it is an **information, coordination, and logistics problem**.

AgriPulse PH is a smart agricultural distribution platform that bridges this gap by providing real-time demand visibility, logistics matching, SRP (Suggested Retail Price) transparency, and supply-chain intelligence — all in one integrated system.



"Your real product is not just a marketplace — it is Supply Chain Intelligence for Agriculture."

Core Problems We Solve

■ Farmers throwing away produce

No buyer connections, no logistics, no demand visibility — forcing panic selling at rock-bottom prices.

■ Cities paying inflated prices

Disconnected supply chains, hoarding middlemen, and poor forecasting create artificial shortages.

■ No central agricultural data

Nobody knows where surplus exists, where shortages are forming, or what actual farmgate prices are.

02 | System Vision & Architecture

AgriPulse PH is envisioned as a **Grab/Lalamove + Marketplace + Supply Chain Dashboard** purpose-built for Philippine agriculture — a unified platform connecting every stakeholder in the food supply chain.

Platform Stakeholders

Stakeholder	Role	Key Benefit
■ Farmers	List produce, set prices, receive orders	Fair prices, less waste, direct buyer access
■ Buyers/LGUs	Browse supply, bulk order, reserve stock	Stable supply, transparent pricing
■ Logistics	Match trucks, optimize routes, track delivery	More volume, route efficiency
■■ Government	Monitor SRP, detect shortages, disaster response	Data-driven policy, inflation control
■ Consumers	Check SRP, compare prices, report overpricing	Transparency and trust

Technical Stack

Layer	Technology	Purpose
Frontend	Next.js (Mobile-first)	Farmer, buyer & consumer portals
Backend	Laravel API + Queue System	Business logic, order processing
Database	PostgreSQL	Relational data, analytics
Realtime	WebSockets	Live pricing, stock alerts
Maps	Google Maps / Mapbox	Route optimization, heatmaps
Hosting	Cloudflare Workers + R2	Images, files, CDN delivery

03 | MVP — Phase 1 Features

Phase 1 focuses on three pillars: **Marketplace** · **Logistics** · **Pricing Transparency**. No AI yet — just solid infrastructure that delivers immediate value.

■ Farmer Portal

- ✓ Register as a verified farmer with farm location
- ✓ Upload products: name, quantity, harvest date, price
- ✓ Photo uploads for quality assurance
- ✓ Real-time inventory management
- ✓ Example: Tomato · 2 tons · Available today · ₱18/kg

■ Buyer Portal

- ✓ Browse available produce by city or region
- ✓ Bulk ordering with stock reservation
- ✓ Negotiation & in-app chat with farmers
- ✓ Buyers: resellers, markets, groceries, restaurants, LGUs, co-ops

■ Logistics Module

- ✓ Smart truck matching based on route and load
- ✓ Route optimization to reduce fuel costs
- ✓ Real-time delivery status tracking
- ✓ Cold storage support for perishables
- ✓ Integration: Lalamove, transport cooperatives, local trucking

■ SRP Monitoring Dashboard

- ✓ Show SRP by city in real time
- ✓ Compare: farmgate price vs distributor vs market price
- ✓ Automated overpricing detection and alerts
- ✓ Public transparency dashboard for consumers

Sample SRP Comparison Data

Product	Farmgate Price	Market Price	Suggested SRP	Status
Tomato	₱18/kg	₱90/kg	₱45/kg	■ Overpriced
Ampalaya	₱22/kg	₱75/kg	₱40/kg	■ Overpriced
Kamatis	₱15/kg	₱48/kg	₱32/kg	✓ Near SRP
Sitaw	₱20/kg	₱60/kg	₱38/kg	■ Overpriced

04 | Killer Feature: Supply-Demand Heatmap

The **Supply vs Demand Heatmap** is AgriPulse PH's most powerful differentiator. It visualizes exactly where surplus and shortages exist across the country — enabling instant, data-driven redistribution decisions.

Region	Commodity	Status	System Action
Batangas	Tomato	■ Oversupply (+2 tons)	Redirect to Manila & Quezon City
Benguet	Sayote	■ Oversupply (+5 tons)	Route to Metro Manila markets
Manila	Tomato	■ Shortage (-3 tons)	Pull from Batangas — alert dispatched
Cebu	Ampalaya	■ Near Balance	Monitor — no action needed
Davao	Banana	■ Oversupply (+8 tons)	Connect to Visayas buyers

05 | Phase 2 — High-Value Features

■ Smart Demand Forecasting (AI)

Predict commodity shortages, seasonal demand spikes, and typhoon-related supply disruptions before they happen. AI models analyze historical data, weather patterns, and market trends.

■■ Fair Price Calculator

Show farmers the current average market price and a fair selling range — eliminating exploitation by middlemen. Example: 'Current fair tomato price: ■25–■32/kg.'

■■ Harvest Scheduling Engine

Prevent oversupply by coordinating planting and harvest schedules across farmer groups. This is a long-term game-changer for price stability.

■■ Near-Expiry Marketplace

Sell excess goods at discounted prices before spoilage — connecting surplus to food processors, charities, and restaurants. Reduces food waste significantly.

■■ Government Command Dashboard

National supply visibility, shortage alerts, disaster-response coordination, SRP monitoring, and inflation tracking. A potential B2G revenue stream with the DA and DTI.

06 | Advanced Features (Phase 3+)

■ AI Price Prediction

Forecast next-week commodity prices using ML models trained on historical farmgate data, weather, and demand signals. Predict onion shortages, rice supply issues, and more.

■ Smart Distribution Engine

Automatically recommend where goods should go, the best route, and optimal timing — reducing logistics costs by matching supply to demand algorithmically.

■ Warehouse & Cold Storage System

Track inventory aging, cold storage capacity, and spoilage risk across partner warehouses nationwide. Prevent losses before they happen.

■ Digital Farmer Identity

Build verifiable farm records, production history, and credit scoring for farmers. This unlocks access to loans, crop insurance, and agricultural financing.

■■ Blockchain Traceability (Optional)

Consumers scan a QR code to trace food from farm to fork — harvest date, farm location, transport history. Powerful for export-quality produce certification.

■ Consumer Transparency App

Public-facing app to check SRP, compare nearby market prices, report overpriced goods, and see product origins. Transparency builds long-term consumer trust.

Feature Priority Matrix

Feature	Priority	Impact	Phase
Live Pricing & SRP Dashboard	■ Must Have	■■■■■	1
Oversupply & Shortage Alerts	■ Must Have	■■■■■	1
Logistics Matching	■ Must Have	■■■■	1
Supply-Demand Heatmap	■ High Impact	■■■■■	1
Farmer Payout Wallet	■ High Impact	■■■■	2
QR Traceability	■ High Impact	■■■	2
Harvest Scheduling	■ High Impact	■■■■■	2
AI Demand Forecasting	■ Very Powerful	■■■■■	3
Government Command Dashboard	■ Very Powerful	■■■■	3

Blockchain Traceability	■ Optional	■■■	4
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07 | Monetization Strategy

Revenue Stream	Model	Target
Transaction Fee	1–5% per completed order	Farmers & Buyers
Logistics Commission	Commission per delivery match	Truckers & Logistics Partners
Premium Subscription	Monthly/annual analytics plans	Distributors, LGUs, Wholesalers
Government Dashboard	B2G SaaS licensing	DA, DTI, LGUs
Agri Ads & Promotions	Promoted listings for seeds/fertilizer	Agri-input companies
Data Insights API	Anonymized agricultural market data	Research & Financial Institutions

08 | Go-to-Market Roadmap

Start small. Prove value. Then scale. Do NOT launch nationwide first.

Month 1–2	Foundation & Pilot • Onboard 20 farmers in 1 province (e.g., Batangas tomatoes / Benguet vegetables) • 3–5 buyers (LGU, local market, cooperative) • 1 logistics partner • Farmer portal, product listing, basic ordering live
Month 2–3	Pricing & Logistics • Logistics tracking module • SRP monitoring dashboard • Oversupply and shortage alerts • Supply-demand heatmap v1
Month 3–4	Analytics & Growth • Full analytics dashboard • Notifications and alerts system • Expand to 2nd province • Buyer network expansion
Month 4–6	Intelligence Layer • AI demand forecasting • Smart distribution recommendations • Government dashboard beta • Farmer wallet and payout system

09 | Why AgriPulse PH Will Win

- No existing platform in PH unifies marketplace + logistics + SRP monitoring
- Government is actively seeking agricultural data infrastructure
- Farmers are desperately underserved by existing technology
- Food inflation is a top political and economic priority
- Data network effects: more users = better forecasts = more value
- B2G (government) contracts provide stable, recurring revenue
- Regional expansion playbook is proven (1 crop → 1 province → nationwide)

Possible Brand Names

AgriFlow	AniLink	FarmRoute	AniMarket	AgriConnect PH
BukidLink	HarvestGrid	AgriPulse PH ✖	FarmBridge	AniSupply

"AgriPulse PH is not just a marketplace — it is the operating system for Philippine agricultural supply chain intelligence."

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