petnest AI

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Product architecture — *five rails, one backbone.*

How Petnest AI turns one data layer into five durable revenue rails.

Clinical SaaS · Owner app · Enterprise Data API · Insurance B2B2C · E-commerce & Smart Agent

IN DEVELOPMENT · DESIGN PREVIEW

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Pet care doesn't need another platform. It needs a connected data layer.

THE GAP

Pet care

Every Chinese vertical has a super-app. Pet care — a ¥312.6B urban cat & dog market (2025) — is the last category without one. An estimated 1–3% of pets are insured. 24K+ clinics keep siloed records.

THE THESIS

Connected layer

Not a clinic chain, not a single app — a neutral data backbone that every actor plugs into. 5 revenue rails monetise the same data once, ethically.

THE EDGE

AI-native by design

Built from first principles for Chinese regulation, multilingual clinical AI, and consent-tokenised commerce. PIPL-native. Patents drafted.

1 layer → 5 revenue rails → ***one compounding data asset.***

Three layers stacked vertically. Five revenue rails crossing horizontally.

INTERFACES

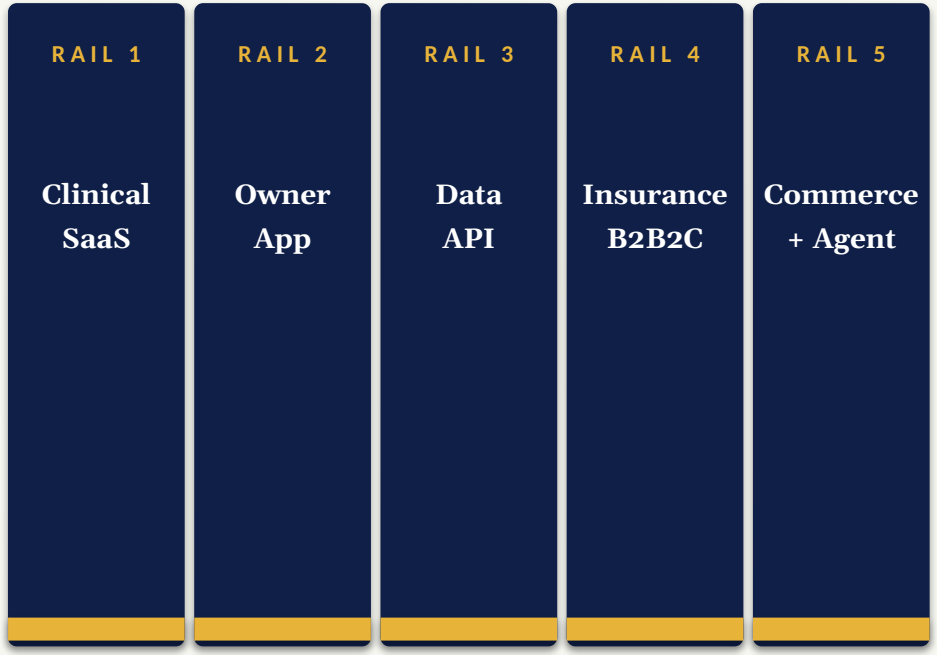
Vet web SaaS · Owner mobile app · Partner APIs · White-label SDKs

INTELLIGENCE

10 AI agents · clinical reasoning · predictive health · trust layer

DATA BACKBONE

Consent-tokenised EHR · ICD-11/SOAP · PetBERT NLP · OCR · audit log



Each rail is a separate revenue stream — and each rail makes the data layer more valuable for the next.

Rail 1 — Clinical SaaS. The vet's daily cockpit.

VET

Clinical Workspace

Web-based EHR · prescriptions · imaging · billing · staff workflows · multi-clinic admin. The vet's daily cockpit.

VET AI AGENT

AI Clinical Scribe

Voice → structured SOAP note in real time. Designed to save 30+ min per vet per day. Multilingual ZH/EN. Discharge summary auto-generated.

VET AI AGENT

Diagnostic Co-pilot

Differential diagnosis · dosing sensitivities · breed-aware case similarity surfaced from the Petnest network.

VET AI AGENT

Surgery Prep AI

Pre-op risk profile · anaesthesia protocol matching · post-op care plan templates · learning from outcome history.

VET

Treatment Cost Index

Real-time variance detection · benchmarks pricing across procedures and cities · protects vets from outlier flagging.

VET

Chronic Care Tracker

CKD · diabetes · arthritis · obesity — auto-follow-ups, longitudinal labs, owner reminders. Drives recurring revenue.

Rail 2 — Owner App. The trust interface.

OWNER

Pet Health Passport

Lifelong record portable across providers · imaging · vaccines · meds · allergies — owner-controlled, consent-tokenised.

OWNER AI AGENT

AI Owner Assistant

Symptom triage · breed-aware advice · vaccine & care reminders · plain-language explanations of vet diagnoses.

OWNER AI AGENT

Owner Translation Layer

Clinical Mandarin → plain English/French/etc. Same record, instantly understandable for international families.

OWNER AI AGENT

Pet Health Avatar

Engagement dashboard · trends in weight, activity, mood · early-warning signal cards · gamified preventive care.

OWNER AI AGENT

Smart Recommender

Diet · supplements · grooming · accessories — vet-validated picks based on the pet's real medical profile, not browsing history.

OWNER AI AGENT

Anomaly Detection

Longitudinal alerts: 'creatinine trending upward' or 'weight loss accelerating'. Banfield BARK-class on a Chinese cohort.

Rail 3 — Enterprise Data API. The B2B unlock.

PARTNER

Consent-bound Data API

Tokenised scope per request · PIPL-native · audit-logged · pharma, insurers and brands query the same backbone with distinct keys.

PARTNER AI AGENT

Pharmacovigilance NLP

PetBERT-class signal mining across clinical narratives · monthly AE reports for pharma · 8-week detection cycles.

PARTNER AI AGENT

RWE Study Platform

Consented observational cohorts · structured outcome capture · FDA GFI #266-aligned · MARA submission-ready data packs.

PARTNER

Population Health Maps

Anonymised disease incidence by city tier · breed × age × district stratification · quarterly refresh for brand strategy.

PARTNER

PMS Integrations

Native connectors to existing PMS (4+ systems) · auto-migration · legacy data structured into Petnest schema in days.

PARTNER

IoT Device Feeds

Wearables · activity trackers · lab analysers · imaging machines stream structured data directly into the EHR.

Rail 4 — Insurance B2B2C.

PARTNER

AI AGENT

Underwriting Engine

16-factor risk scoring on real longitudinal data · breed × age × care history × geo · multi-factor day one (Trupanion-class).

PARTNER

Embedded Enrolment

1-tap enrolment at vet counter · 60-second flow · pre-filled risk data · instant quote · in-app payment.

PARTNER

Vet-Counter Direct Pay

Real-time claims validation · insurer pays clinic directly · owner pays only the deductible.

PARTNER

AI AGENT

Claims Validation API

Auto-validation of treatment vs policy coverage · fraud detection · adjustor workload reduction.

PARTNER

Actuarial Tables

Commercially licensable Chinese pet actuarial tables · breed-level incidence · quarterly refresh for reinsurers.

PARTNER

Portfolio Analytics

Insurer-side dashboard · loss ratio by cohort · early warning on adverse selection · pricing intelligence.

Rail 5 — Commerce + Smart Agent. Trust-routed.

OWNER

Marketplace

Vet-validated brands · curated SKUs based on the pet's actual medical needs · commission + co-branded loyalty.

PARTNER

AI AGENT

Smart Agent

Conversational AI agent powers cross-sell · 'Time to switch to senior food?' · personalised by health trajectory.

OWNER

AI AGENT

Bundling Engine

Insurance + diet + preventive care + grooming, bundled at the right moment in the pet's life. Higher ARPU.

VET

Prescription Fulfillment

Vet writes prescription in Workspace → owner gets it delivered next day with auto-refills. Pharmacy partnership.

PARTNER

Brand Co-marketing

Brands access opt-in cohorts for new product launches · evidence-based marketing claims · CRM integration.

OWNER

Loyalty & Care Plans

Subscription-style annual care plans bundled with vet, food, insurance — predictable revenue, NRR-positive.

Ten AI agents — each built for one user, one job, one feedback loop.

VET

Clinical Scribe

Voice → SOAP note · 30 min/consult saved · multilingual

VET

Diagnostic Co-pilot

Differential diagnosis · case similarity · breed-aware

VET

Surgery Prep AI

Pre-op risk · anaesthesia protocol · post-op planning

OWNER

Owner Assistant

Triage · plain-language explanations · care reminders

OWNER

Translation Layer

Clinical CN/EN/FR · same record, instantly understandable

OWNER

Health Avatar

Engagement dashboard · trends · early-warning cards

OWNER

Smart Recommender

Diet · supplements · accessories · medically grounded

BOTH

Anomaly Detection

Longitudinal alerts · CKD/cardiac/metabolic risk

PARTNER

Smart Agent

Cross-sell · bundle recs · CRM integration

PARTNER

Pharmacovigilance NLP

AE signal mining · 8-week detection · monthly safety

Every agent runs on the same consent-tokenised data layer — and feeds back into the same outcome loop.

ICD-11 + SOAP + PetBERT — the schema that makes everything else possible.

WHO 2019

ICD-11 coding

Every diagnosis mapped to international standard — cross-clinic, cross-border, cross-decade comparable.

Global

SOAP structuring

Subjective / Objective / Assessment / Plan — the universal clinical note structure, applied to every consult.

SAVSNET

PetBERT NLP

Domain-tuned LLM converts free-text into structured fields, even from legacy paper records via OCR.

Built-in

OCR + ingestion

Legacy paper notebooks, PDFs, and 4+ existing PMS systems → unified schema in days, not months.

API layer

Device telemetry

Wearables, lab analysers, imaging machines stream structured data directly into the EHR.

Compliance

Audit log

Every read and write recorded with timestamp, identity, scope — PIPL-grade traceability by default.

Without the schema, the AI agents are guessing. With it, every consult feeds every other product.

Compliance built into the data layer — not retrofitted later.

Tokenised consent

Every data flow scoped: who, what, why, for how long. Owners revoke anytime, per actor, per data type.

China data localisation

Designed so all data stays in mainland China (Tencent Cloud). Zero cross-border flow without explicit legal basis.

Multi-party access

Cryptographically distinct tokens per actor (owner, clinic, insurer, breeder). No global keys.

Revocable & traceable

Owner-side revocation propagates in seconds. Every read/write logged with identity + scope.

COMPLIANCE ROADMAP

PIPL framework
Phase I

Data Security Law
Phase II

Cybersecurity Law
Phase II

ISO 27001 cert.
Phase III

SOC 2 readiness
Phase III

The Nest Cycle — one flywheel, four reinforcing loops.

Reliable health data backbone

Every decision, service, and innovation built on centralized, enriched data.

Predictive owner experience

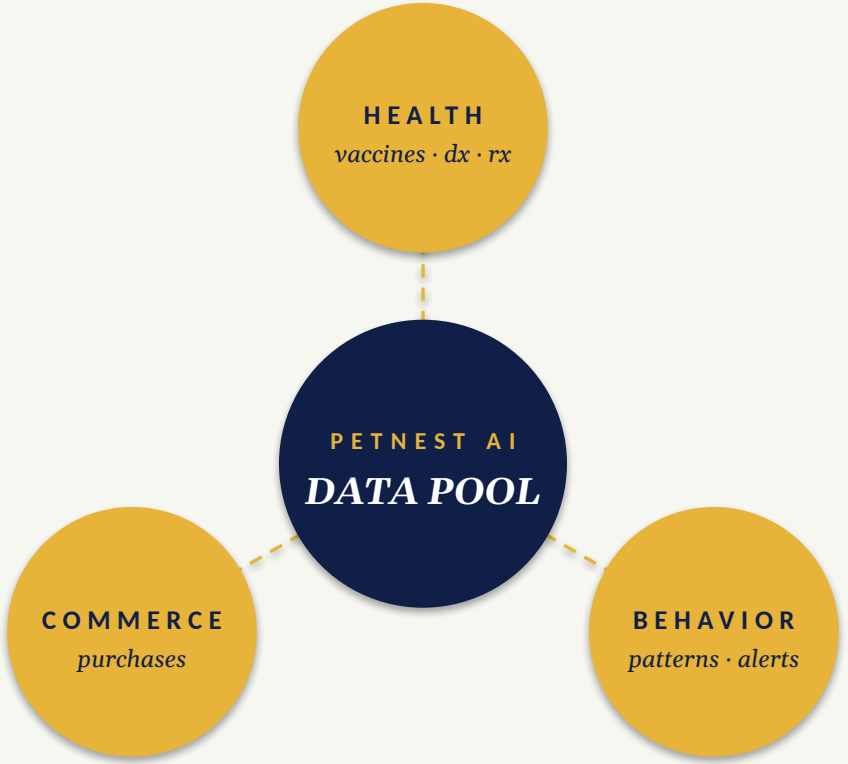
Instant access to history, AI advice, automated reminders, products & insurance.

Excellence layer for pros

SaaS tools for vets, supply chain integration, new revenue, ethical monetization.

Designed for export

Modular APIs, compliance by design, cultural & regulatory adaptability.



Each data type reinforces the others. Health makes behavioral smarter; behavioral boosts commerce relevance; commerce loops back into health outcomes.

From MVP to enterprise APIs — sequenced by data, not features.

PHASE I

Solving the broken record

- Clinical Workspace (web)
- AI Clinical Scribe
- Pet Health Passport (mobile)
- AI Owner Assistant
- Data API (consent-bound)
- PIPL-Native Compliance Layer

Y0–Y2

PHASE II

Intelligence + trust layer

- Diagnostic Co-pilot
- Surgery Prep AI
- Pet Health Avatar
- Smart Recommender
- Anomaly Detection
- Treatment Cost Index

Y2–Y4

PHASE III

Commercial flywheel

- Marketplace
- Insurance B2B2C (full)
- Vet-Counter Direct Pay
- Smart Agent
- Enterprise Data API (full)
- Pharmacovigilance NLP

Y4–Y6

Each phase ships only when the previous phase has produced the data the next one needs.

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The product *is the moat.*

Execution is the differentiator.

Five revenue rails. Roughly 30 products. Ten AI agents. One backbone.

Built for China — designed for export.

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