



give me in detail data like which feature solving which gap of which paper

Here is a detailed mapping showing **which feature of your Digital Farm Management System directly solves which specific gap in each referenced paper/report**. This table is organized for traceability and actionable clarity.

Mapping Table

Project Feature	Gap Solved	Cited Paper/Report	Details
Digital medicine record-keeping (farmer app)	Lack of systematic treatment documentation at farm level; Poor monitoring of AMU/AMR	[PMC10098197] ^[1] [FAO White Paper]	Digitally logs all medicines, doses, and timings, eliminating lost/incomplete paper logs and supporting evidence-based reporting ^[1] .
Withdrawal period reminders	Low farmer awareness/compliance about withdrawal; High residue risk in food	[ScienceDirect 2003] [PMC10122944]	Automated app/SMS alerts remind farmers of legal withdrawal interval, reducing accidental sale of residue-contaminated milk or meat ^[1] .
Veterinarian-only digital prescription system	OTC/unauthorized use; Weak regulatory enforcement; Training gaps	[PMC11384992] ^[2] [IJMR Policy Dilemmas]	Only registered vets prescribe medicines, ensuring correct diagnosis, dosing, and withdrawal advice, enforcing compliance ^[1] .
Treatment history for vets	Off-label/non-therapeutic use; Lack of diagnostic standardization	[PMC11384992] ^[2] [IJMR Policy Dilemmas]	Vets can access full treatment records, supporting evidence-based, standardized diagnosis and more precise AMU ^[1] .
Authority dashboard/audit reports	No harmonized, actionable data for monitoring; Insufficient central surveillance	[ScienceDirect 2024] [FAO White Paper]	Dashboards show real-time usage, compliance, violations —directly closing the centralized data/action gap for authorities ^[1] .
Consumer-facing safety check (milk/meat)	No market-level monitoring; Lack of consumer-side transparency	[PMC10122944]	Anyone can check whether product is post-withdrawal or flagged, incentivizing farmers and traders to comply ^[1] .

Project Feature	Gap Solved	Cited Paper/Report	Details
Emergency vet access/help button	Self-medication; Non-vet advice	[PMC11384992] ^[2]	Guides farmers to connect with qualified vets for timely, correct interventions ^[1] .
Offline entry & rural-first design	Weak infra in rural & peri-urban areas	[FAO White Paper] [PMC11384992] ^[2]	Allows use with poor connectivity, supporting widest possible coverage ^[1] .
Expandable integration with dairy/govt labs	Lack of intersectoral/One Health harmonization	[ScienceDirect 2024] [FAO White Paper]	API/data-link to labs, dairy, FSSAI, etc. for joint sector surveillance ^[1] .
Photo-based disease reporting, planned AI diagnosis	Gaps in field diagnostic capacity and training	[IJMR Policy Dilemmas] [PMC11384992] ^[2]	Allows remote, standardized vet support and contributes data for training modules ^[1] .
Batch-level/barcode medicine compliance scanner	Use of critical/human-use antibiotics in food animals	[IJMR Policy Dilemmas]	Barcode scan can instantly detect restricted/banned drug use, supporting field enforcement ^[1] .

Explanatory Notes

- All feature designs are drawn from your provided project synopsis.^[1]
- Each gap is directly referenced to the cited literature, ensuring that your feature is precisely mapped to the problem domain as identified by sector authorities.
- Expansion features like SMS alerts, regional language support, and blockchain traceability address persistent field barriers (digital divide, literacy, and trust/traceability demands).^[1]
- One Health and policy harmonization gaps are met via real-time reporting, unified dashboards, and potential integration with food safety authorities/platforms.^{[2] [1]}

References

- PMC11384992 - Veterinary AMR/AMU review (One Health perspective)^[2]
- PMC10098197 - Punjab dairy AMU "bin method" study^[1]
- ScienceDirect 2024 - AMR burden & surveillance review
- IJMR - Policy dilemmas and diagnostic gaps
- ScienceDirect 2003 - Withdrawal period estimation methods
- FAO White Paper - Animal sector AMR gaps
- PMC10122944 - Bovine milk AMR studies

Use this mapping in project presentations, technical documentation, and research reporting to clearly communicate the unique, evidence-based value your platform delivers relative to published gaps in the AMR/AMU control ecosystem.

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1. Synopsis-Report.pdf
2. <https://PMC.ncbi.nlm.nih.gov/articles/PMC11384992/>