

# MVP Implementation Blueprint · AgriSense AI

## From Strategy 2030 to working software — the next 180 days

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### Purpose of this document

Strategy 2030 said *what* to build and *why*. This document says **how** to build the MVP — concretely, in 180 days, on a pre-seed budget of ₹4.5 crore. Every recommendation here is action-ready: a sprint, a hire, a vendor pick, a milestone, a budget line.

The MVP target: **30,000 active farmers** across Telangana + Andhra Pradesh + Karnataka, with the top-4 RICE-scored features shipped and 2 State DaaS Letters of Intent signed — by **Day 180 (Nov 19, 2026)**.

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### 1 · The MVP definition · in one paragraph

A multilingual voice-first Android + IVR app that gives a smallholder farmer one daily Telugu / Hindi / Tamil voice action card pulled from 1km × 30min rain nowcast, AGMARKNET prices, 200+ govt schemes, and 65-disease crop classifier. With one button he files a PMFBY claim via drone + satellite evidence in 42 minutes. With one tap he requests OCEN credit and gets 3 bank offers in 60 seconds. Farmers join via FPO mass-camps (CAC ₹14). Insurers, lenders, and state governments pay AgriSense (farmer never pays).

That paragraph IS the MVP. Anything not in it does not ship before Day 180.

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### 2 · Day 0 → Day 180 sprint plan

12 fortnightly sprints. Each sprint is 2 weeks. Each sprint ships something a farmer can use OR a B2B partner can integrate against.

Sprint	Dates	Theme	Ships
0	Day -7 - 0	Pre-incorporation freeze	Cap table cleanup, founder leaves day job at term-sheet, IP assignment to entity

1	Day 1-14	Foundation	AWS Mumbai account · Postgres + ClickHouse · CI/CD · Sentry · React Native skeleton
2	Day 15-28	Identity layer	AgriStack OAuth · DigiLocker e-sign · Aadhaar OTP · Telugu landing screen
3	Day 29-42	Voice card v1	Daily action card · Bhashini TTS · 3-button menu fallback · IVR Twilio integration
4	Day 43-56	Rain nowcast	LightGBM ensemble on Bhuvan + Sentinel-2 + IMD AWS data · 1km × 30min output API
5	Day 57-70	Disease classifier	EfficientNet-V2 (S) trained on PlantVillage + ICAR 240k images · INT8 quantized for edge
6	Day 71-84	Mandi + ONDC	AGMARKNET feed · ARIMA price-band model · Beckn seller protocol live for paddy + cotton
7	Day 85-98	PMFBY claim flow	Drone partner integration (Garuda) · NDVI damage classifier · AIC API submission
8	Day 99-112	OCEN credit	Consent flow · alternative-data credit score · 3-lender quote API (HDFC + ICICI + Karur Vysya)
9	Day 113-126	Scheme matcher	200+ scheme rules-engine in JSON ·

			DigiLocker auto-fill · weekly subsidy radar
<b>10</b>	Day 127-140	WhatsApp agent	WhatsApp Business API · daily card pushed as Telugu voice note
<b>11</b>	Day 141-154	Drone marketplace	Convoy-mode aggregation · DGCA Digital Sky · driver-app for tarp logistics
<b>12</b>	Day 155-168	State DaaS portal	District Collector dashboard · welfare reporting layer for first 2 states
<b>13</b>	Day 169-180	Hardening + scale-test	Load test 30K concurrent · monitoring + alerts · readiness for Series A diligence

**Each sprint ends with:** a demo to 3 pilot farmers (in-person) + a partner check-in (insurer / lender / govt depending on sprint).

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### 3 • Tech stack decisions • build vs buy

Component	Decision	Reasoning
Mobile app	<b>Build</b> · React Native	Cross-platform; 11 MB; works on Android 8+
IVR / USSD / SMS	<b>Buy</b> · Twilio + Exotel + Mitra USSD	Don't reinvent telephony
ASR / TTS / NMT (15 languages)	<b>Buy</b> · Bhashini (Govt) free tier first	Production-grade and zero cost
Backend services	<b>Build</b> · Node + Python on K8s	Standard stack, easy to hire for
Database	<b>Buy</b> · AWS RDS Postgres + ClickHouse Cloud	No DBA needed
Object storage	<b>Buy</b> · Cloudflare R2 (10× cheaper than S3)	Critical for satellite imagery + photos
Event bus	<b>Buy</b> · Confluent Cloud Kafka	Managed; cheap up to 100k events/day

AI training	<b>Buy</b> · AWS SageMaker for training, KServe self-hosted for serving	Training is bursty (rent); serving is steady (own)
Rain model	<b>Build on top of buy</b> · GraphCast weights + custom LightGBM head	Foundation model from Google DeepMind
Disease classifier	<b>Build</b> · EfficientNet-V2 trained on partner datasets	Differentiator; needs Telugu-region disease labels
Telugu LLM	<b>Build on top of open source</b> · Llama-3-8B + LoRA fine-tune	Open source + our data = moat
OCEN flow	<b>Buy</b> · Sahamati / OCEN API	Standard; no reason to build
ONDC seller protocol	<b>Buy</b> · Beckn Protocol Server reference impl	Open source; minor customization
Drone fleet	<b>Buy</b> · Garuda Aerospace partnership	Asset-light; pay per acre
Soil moisture sensors	<b>Buy</b> · ESP32-based off-shelf	₹350 cost · 80% margin
Payment rails	<b>Buy</b> · UPI via Razorpay / PhonePe Business	Standard
Crop insurance integration	<b>Buy</b> · AIC API direct	Govt-mandated
Satellite imagery	<b>Buy</b> · Bhuvan (free) + Sentinel-2 (free) + Planet Labs (paid for high-res)	Mix tiers
Monitoring	<b>Buy</b> · Sentry + Grafana Cloud + AWS CloudWatch	Standard SaaS

**Net result:** ~70% buy / 30% build by component. We build only what's a competitive differentiator (Telugu LLM, disease classifier, rain head, integrations layer).

## 4 · Team hire plan · first 60 days post-funding

Hire order matters. Cost columns are total cost-to-company per year in ₹ lakh.

#	Role	Hire by	Why	TCT-C (₹ L/yr)
1	<b>CTO</b> (co-founder equity)	Day 7	De-risk biggest execution gap; conversations already warm	1% equity + ₹30 L cash

2	<b>Head of Govt BD</b>	Day 14	District DaaS contracts need someone with state secretariat relationships	₹28 L
3	<b>Sr Backend Engineer × 2</b>	Day 21	Identity layer + API gateway · K8s · Postgres	₹22 L each
4	<b>Sr ML Engineer</b>	Day 30	Bhashini fine-tuning + EfficientNet training	₹26 L
5	<b>Mobile Engineer (Android-first)</b>	Day 30	React Native + offline-first + IVR/USSD bridge	₹20 L
6	<b>Telugu Voice + Content Lead</b>	Day 45	LoRA training data curation, Telangana dialect QA	₹14 L
7	<b>FPO Operations Manager · TS</b>	Day 45	Field deployment in 25 FPOs across Warangal + Karimnagar	₹15 L
8	<b>FPO Operations Manager · AP</b>	Day 60	Mirror in AP — Krishna + Guntur districts	₹15 L
9	<b>DevOps / SRE</b>	Day 60	K8s, CI/CD, observability — full-time after sprint 6	₹22 L
10	<b>Finance + Compliance (contractor first)</b>	Day 60	Incorporation, NACH/DPDP, runway tracking	₹8 L contractor

**Total Year-1 payroll:** ₹2.22 crore (~50% of pre-seed). Leaves ₹2.28 cr for FPO ops, govt BD travel, infra, marketing, drone trials, and reserve.

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## 5 • Budget • ₹4.5 cr pre-seed broken down

Bucket	Amount	What it pays for
<b>Engineering</b> (35%)	₹1.575 cr	10 engineering hires (above) for 14 months
<b>FPO Operations</b> (30%)	₹1.35 cr	5 state regional managers, FPO mass-camps, demo phones, fuel, per-diems
<b>Government BD</b> (20%)	₹0.90 cr	Head of Govt BD + 2 regional BD execs + state secretariat travel + RFP responses
<b>Compliance + Legal</b> (10%)	₹0.45 cr	Incorporation, DPDP audit, trademark, contracts, insurance
<b>Reserve</b> (5%)	₹0.225 cr	Emergency buffer (one month of full burn)
<b>TOTAL</b>	<b>₹4.5 cr</b>	<b>18 months runway</b>

**Monthly burn rate target:** ₹25 lakh/month. **Runway:** 18 months. **Trigger for Series A close:** Month 14, with ₹50 L reserve still intact.

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## 6 • Day-0 / Day-30 / Day-90 / Day-180 checklists

### Day 0 (term-sheet → first cheque)

- Incorporate Pvt Ltd — Akshaya Divine AgriSense AI Private Limited
- Cap table: 65% founder, 20% pre-seed investors, 10% ESOP pool, 5% advisor pool
- Transfer all IP (code, data, brand, content) from founder personal to entity
- Founder transitions from Quadrant Technologies (paperwork + handover)
- Open AWS Mumbai account, Cloudflare account, Bhashini API access request submitted
- Trademark filings for “Akshaya Divine AgriSense AI” + logo

### Day 30

- CTO + 2 backend engineers + 1 ML engineer + Govt BD lead all joined
- Sprint 1 + Sprint 2 complete: AgriStack identity flow + Telugu landing screen live
- First conversation with 3 state Agriculture Departments (TS, AP, KA)
- 12-month engineering roadmap signed off by full team
- First 10 pilot farmers given app + voice-card running daily

## Day 90

- Sprints 1-6 complete: identity + voice card + rain nowcast + disease classifier + mandi + ONDC LIVE
- 5,000 active farmers across 12 FPOs in TS
- 1 State DaaS Letter of Intent signed (target: TS)
- First Insurer Evidence API contract signed (target: AIC + 1 private insurer)
- First lender pilot (HDFC or ICICI): 50 farmers receive OCEN-routed loans
- Series A advisory firm engaged

## Day 180

- Sprints 7-13 complete: PMFBY + OCEN + Scheme matcher + WhatsApp + Drone + DaaS portal LIVE
  - 30,000 active farmers across TS + AP + KA
  - 2 State DaaS LoIs (TS + AP)
  - 47+ FPOs signed (per pilot baseline)
  - First ₹50 lakh of B2B revenue (insurer + lender + DaaS combined)
  - Series A diligence pack ready · target: ₹25-40 cr at ₹100-150 cr post
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## 7 • The five founding promises — wired into engineering rituals

These are not slogans. They are sprint-level checks.

1. **Free for the farmer forever.** Sprint review checklist includes: “Did we add any paywall on the Basic tier this sprint?” If yes, rollback.
  2. **Real Telangana Telugu.** Telugu Voice + Content Lead reviews every customer-facing string. Textbook Hindi-style Telugu rejected at PR review.
  3. **Never sell farmer data.** DPDP audit at end of each quarter. Any aggregated data product requires founder + CTO + legal sign-off.
  4. **Open-stack orchestrator, not replacer.** Engineering decision rule: if a public-stack rail exists (ONDC, AgriStack, OCEN, Bhashini, AIC), we use it. Building a competing rail requires explicit founder approval.
  5. **Voice-first, low-literacy.** Every new UI screen requires a corresponding voice flow. Ship-blocking gate at sprint review.
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## 8 • Risk register · top 10 risks with mitigation

#	Risk	Likelihood	Impact	Mitigation
1	CTO doesn't sign	Med	High	3 candidates in pipeline; advisor backups

				identified
2	Govt BD cycles slower than VC milestones	High	Med	Pre-warm 4 state Agri Depts before Day 1; ship MVP that has stand-alone value
3	Bhashini API quota changes / pricing shifts	Low	High	Open-source TTS fallback (Coqui-TTS) pre-built
4	Disease classifier accuracy plateau	Med	Med	Partner with ICRISAT + ICAR for more training data; agronomist fallback on Pro tier
5	Drone partner unreliability	Med	High	Triangulate 3 partners (Garuda, ideaForge, Marut Drones)
6	Funding winter delays Series A	Med	High	Burn rate $\leq$ ₹25L/mo gives 18-month runway; first revenue by month 4
7	DeHaat or AgroStar copies model	Low (this year)	High	Lock state DaaS contracts in 6+ states by month 12
8	Founder burnout	Med	Critical	CTO + co-founder reduces single point of failure; advisory board established Day 30
9	Data breach (DPDP non-compliance)	Low	Critical	Sentry + AWS WAF from Day 1; quarterly

10	Pilot retention drops at scale	Med	High	external audit; cyber insurance month 1 Cohort weekly tracking from Day 30; intervention playbook documented
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## 9 • Vendor / partner shortlist • the rolodex to call Day 1

**Cloud + Infra** - AWS Mumbai (primary), Azure Hyderabad (DR) - Cloudflare R2 (object storage + CDN) - Confluent Cloud (Kafka)

**Public-stack integrations** - AgriStack (govt) · AgriStack onboarding portal - ONDC (govt + private adopters) · Beckn Protocol Server reference impl - OCEN (govt + Sahamati network) · Sahamati support - Bhashini (MeitY) · API tier 1 (free for first 100k MAU) - DigiLocker · OAuth integration

**Telephony + WhatsApp** - Twilio (primary IVR + SMS) - Exotel (regional language IVR) - Mitra (USSD) - 360Dialog or AiSensy (WhatsApp Business API)

**Banks + Insurers (warm intro priority)** - AIC India (PMFBY API) - ICICI Lombard (private insurer Evidence API) - Bajaj Allianz (private insurer) - HDFC Bank Agri (KCC + OCEN loans) - ICICI Bank Agri (KCC + OCEN loans) - Karur Vysya Bank (mid-tier; faster contracting)

**Drones** - Garuda Aerospace (DGCA-licensed; high reliability) - ideaForge (NDVI + thermal) - Marut Drones (low-cost backup)

**Carbon** - Verra (issuance standards) - Boomitra (Indian carbon-credit aggregator partner)

**FPOs (kickstart in TS+AP)** - Warangal Farmer Producer Federation - Karimnagar FPO Cluster - Krishna Delta FPO (AP) - Guntur Chilli FPO (AP)

## 10 • How this MVP maps back to Strategy 2030

Strategy 2030 section	MVP deliverable that proves it
§2 Product Enhancement · 8 themes	Sprints 3-13 deliver Top-4 by Day 168 (PMFBY filer, subsidy radar, WhatsApp, drone convoy)
§3 Competitive Analysis · 14/14 score	By Day 180 we have 11 of 14 capabilities

\$5 Roadmap Horizon 1 · 100K farmers	live in production; remaining 3 in beta We hit 30% of Horizon 1 by Day 180 (30K of 100K) — on-track
\$6 Revenue Model · 5 streams	3 of 5 revenue streams generating revenue by Day 180 (insurer + lender + DaaS)
\$10 Government Integration · 12 systems	8 integrations live by Day 180 (AgriStack, ONDC, OCEN, DigiLocker, AGMARKNET, Bhashini, AIC, state Agri portal)
\$11 Investor Readiness · 5 moats	Data + AI + distribution moats actively compounding · integration + community moats forming
\$15 Recommendations · “lock 2 DaaS contracts”	2 State LoIs by Day 180 — this is the single most-investor-relevant milestone

## 11 · The one number that decides everything

**₹25 lakh per month of burn × 14 months until Series A.**

If we exceed that burn rate, we either compromise the founding promises (start charging farmers, kill the free Basic tier) or run out of cash before Series A. Both are fatal.

Every hire, every vendor decision, every feature scope question reduces to: *“does this keep us at ≤ ₹25 lakh/month for the next 14 months?”*

If yes, ship it. If no, defer it.

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## 12 · The morals · what AgriSense AI will not compromise on

Listed last because they’re the most important.

1. **The farmer never pays for anything essential.** Forever.
2. **We tell the truth about AI confidence.** When a model is uncertain, the farmer sees that uncertainty — not a confident-sounding wrong answer.
3. **We never sell farmer data.** Not aggregated, not anonymised, not “research-only”. The data belongs to the farmer.
4. **We respect the farmer’s time and dignity.** No push notifications between 8 PM and 6 AM. No gamification gimmicks. No fake urgency.
5. **We credit the partners we stand on.** AgriStack, ONDC, OCEN, Bhashini, AIC — we acknowledge publicly, not just legally.
6. **We never overstate the pilot.** 8,742 means 8,742. Not “10,000+”. Not “approximately 10K”. Honest numbers in every pitch.

7. **We don't lobby against the farmer's interests.** No backroom deals with input cartels, no greasing the wheels on schemes that disadvantage smallholders.
8. **We refuse extractive business models.** No predatory financing partnerships, no usurious interest rates passed through our app, no dark patterns.
9. **We open-source what we can.** Anything that's not a competitive differentiator goes to the community — and we contribute upstream to AgriStack, ONDC, Bhashini.
10. **The founder eats last.** Founder salary is in the bottom quartile of the team until cash-flow positive. The team gets paid first.

These ten morals are non-negotiable. Any partner, employee, investor, or feature that requires breaking one of them is rejected — no matter the business upside.

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