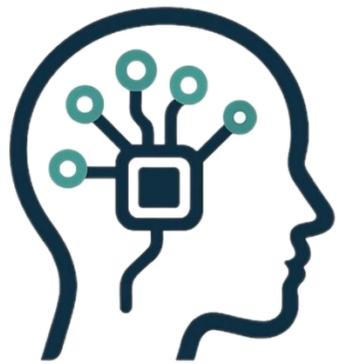# AI Based Precision Farming

Making advanced agriculture accessible to every farmer.

By Pragyanik AI Pvt. Ltd.

PRAGYANIK AI

Pvt. Ltd.

The Problem

India's agriculture sector still relies heavily on manual labor and outdated practices, leading to inefficient use of water, fertilizers, and manpower. Small farmers face challenges adopting modern tools due to high costs and lack of accessible technology. These are measure problems faced by Indian farmers.

☑ **Farming in India is still manual & old-tech dependent → leads to low efficiency.**

☑ **Farm leveling, seeding, weeding, spraying lack precision, mostly manual.**

☑ **No automation & real-time data, farmers rely on guesswork.**

☑ **Results in 40% lower yields + wastage of water, fertilizer, fuel.**

80% Indian farmers don't have access to modern, precise, affordable tools.

Our Vision

To build India's first affordable AI-powered precision farming ecosystem that reduces cost, increases yield, and enables real automation for small and marginal farmers.

Our Flagship Product

✓ AI-Enabled Multi-Functional Farm Robot

A compact, autonomous robot capable of mechanical weeding, targeted spraying, plant health inspection, and precision seeding. Powered by vision and sensor-based AI models trained on Indian crops and conditions.

Performs:
- Mechanical weeding
- Precision seeding
- Targeted spraying
- Plant & field health inspection

Powered by:
- Vision-based AI models
- Multiple sensors
- Modular attachments
- Designed for Indian soil, crops & climatic variations

One robot replaces 3–4 labourers at a fraction of daily cost.

PRAGYANIK AI
Pvt. Ltd.

Supportive Products

✅ GNSS Land Leveler

- Precise Leveling: 1.14 cm accuracy for uniform fields.
- Saves Water: Up to 40% less irrigation needed.
- Retrofit with old implements.

✅ Pragyanik Jalsoochak

- Water Alert: Beep + LED when water reaches the end of the field bed.
- Soil Data: Real-time NPK and pH readings.
- Mobile Updates: Irrigation alerts and soil info on the app.

✅ GNSS Auto Steering Kits for tractors

- 2–3 cm precision navigation
- Retrofits on any tractor
- Saves fuel, fertilizer & labour
- 5× cheaper vs international brands

✅ Integrated AI/IoT platform for farmers

All devices are networked via a farmer's mobile app. AI analytics plan tasks based on field data, weather, and field conditions. This end-to-end system transforms traditional farming into smart, data-driven agriculture.

GNSS Land Leveler

GNSS Auto Steering

https://youtu.be/oRM_GnQ61yA?si=uiB0c1tILlj5S3up

https://youtu.be/zP2RXqlHT1w?si=1uTY9BKqSYT9f2nY

Pragyanik Jalsoochak

Market Opportunity

With India's $400 billion agriculture sector and rapidly growing demand for affordable farm automation, Pragyanik AI has a massive untapped market opportunity among small and marginal farmers.

✅ **India's Agriculture Industry Size: 34 Lakh Crore.**

✅ **Smart Agriculture Market in India projected to reach 25K Cr. by 2027**

✅ **Precision Agri Market growing at 6% CAGR**

✅ **Precision farming penetration <5%**

✅ **80% farmers are small/marginal —> least served, largest market**

Business Model

Pragyanik AI follows a hybrid revenue model combining hardware sales and recurring software subscriptions. We offer both ownership and rental options to make smart farming accessible and sustainable for small and marginal farmers across India.

✅ Revenue Streams:

A. Hardware Sales (60%)
Robots, GNSS Levelers, Auto-steering Kits
Buyers: FPOs, large farmers, government departments

B. Rental / Pay-Per-Use (30%)
₹800–₹2,000 per day
Fastest adoption for small farmers through FPO networks

C. Software & Services (10%)
App subscription (₹50–₹150/month)
AMC, training & support
Future soil analytics subscription

Investor takeaway: Recurring + Asset-light + Software margin layer.

✅ Go-To-Market Strategy:

- District-level field demonstrations
- Partnerships with FPOs
- Government tenders
- Dealers & tractor vendor network
- WhatsApp groups + YouTube demo-based marketing

✅ Why Farmers Buy:

- Saves fuel, labor, water & fertilizer
- Increases accuracy and yield
- Daily ROI (₹1000 spent → ₹3000–₹4000 saved)
- Reliable performance in Indian conditions

✅ Affordability Model :

- Rental Access – Small farmers don't buy, they just rent per day/acre.
- Shared Ownership – FPOs/cooperatives buy & share at low cost.
- Government Subsidies – Leveraging agri schemes to reduce farmer burden.

Competition

Global Competitors:

1. Trimble Agriculture (USA) – GPS/Laser-based leveling, costly, suited for large farms.
2. John Deere Precision Ag (USA) – Premium GNSS auto-steering & robots, very high cost.
3. Carbon robotics (USA) – farm robots for precision farming.

Local Competitors:

1. Niqo Robotics (India) – Focus on AI-based spraying robots, limited functions.
2. Xmachines (India) – Small robots for farms, not multipurpose.
3. Harvested Robotics (India) – Focus on AI-based wedding robots, Early-stage startup.

Our USP/ Competitve Edge (Pragyanik AI)

- AI-enabled Multifunctional Farm Robot with 4 modular attachments (ploughing, spraying, sowing, weeding).
- GNSS Land Leveler – affordable, small-farm friendly, 40% water saving.
- Affordable Auto-Steering Kits – retrofittable on any old tractor.
- Exclusive Retrofit Modules – no global/local competitor provides retrofit kits.
- Hybrid Business Model – purchase + rental + subscription.
- Localized AI App – multilingual, simple, real-time insights.
- Focused on Small & Marginal Farmers (80% in India) – ignored by global players.
- On-ground Support + AI Insights – training + service vans + WhatsApp helpline.

Progress So Far

Agriculture: Ensuring a Sustainable Future

Land Leveler, Auto-Steer & Jalsoochak

Prototype developed and tested.

Farm Robot

Under development.

AI & Software

Software development is under progress.

Patents

Land leveller's patent is filed; others are in progress.

Pre Revenue Traction

Although we are pre-revenue, we have strong
market validation:

✅ **GNSS Land Leveler – Field Trial (Chhatarpur, M.P.)**
- 30 acres successfully leveled across 10 farmers
- ±1.14 cm precision with 99% accuracy
- 30–35% fuel savings & 40% faster operation
- Farmers reported better water flow, uniform germination & easier sowing
- 50 hours continuous operation with zero failure

✅ **Jalsoochak –Irrigation Sensor Trial (Shivpuri, M.P.)**
- Tested on ~14 acres across 3 farmers
- 97–99% water-reach detection accuracy
- 20–25% water saving & 60% less supervision time
- Beep + LED + Mobile alerts accurate within 10–15 seconds
- Device passed mud, dust & splash durability tests

✅ **Farmer Validation & Demand**
- Strong positive feedback from both trial locations
- Farmers willing to reuse and pay for rental/ownership
- Multiple repeat demo requests from nearby villages
- Confirmed interest from FPOs for upcoming pilot deployments

Funding Requirement & Fund utilization

We are seeking ₹50 lakh to complete the development of our final farm robot prototype, upgrade all existing GNSS-based products to market-ready versions, and execute our first commercial launch through large-scale pilots.

- **Multipurpose Farm Robot – Prototype Completion (35%)**
- **Market-Ready Upgradation of Existing Products (30%)**
- **Pilot Deployments & Market Launch (20%)**
- **Operations, Tools & Infrastructure (15%)**

15.0%

30%

35%

50 Lakh

20.0%
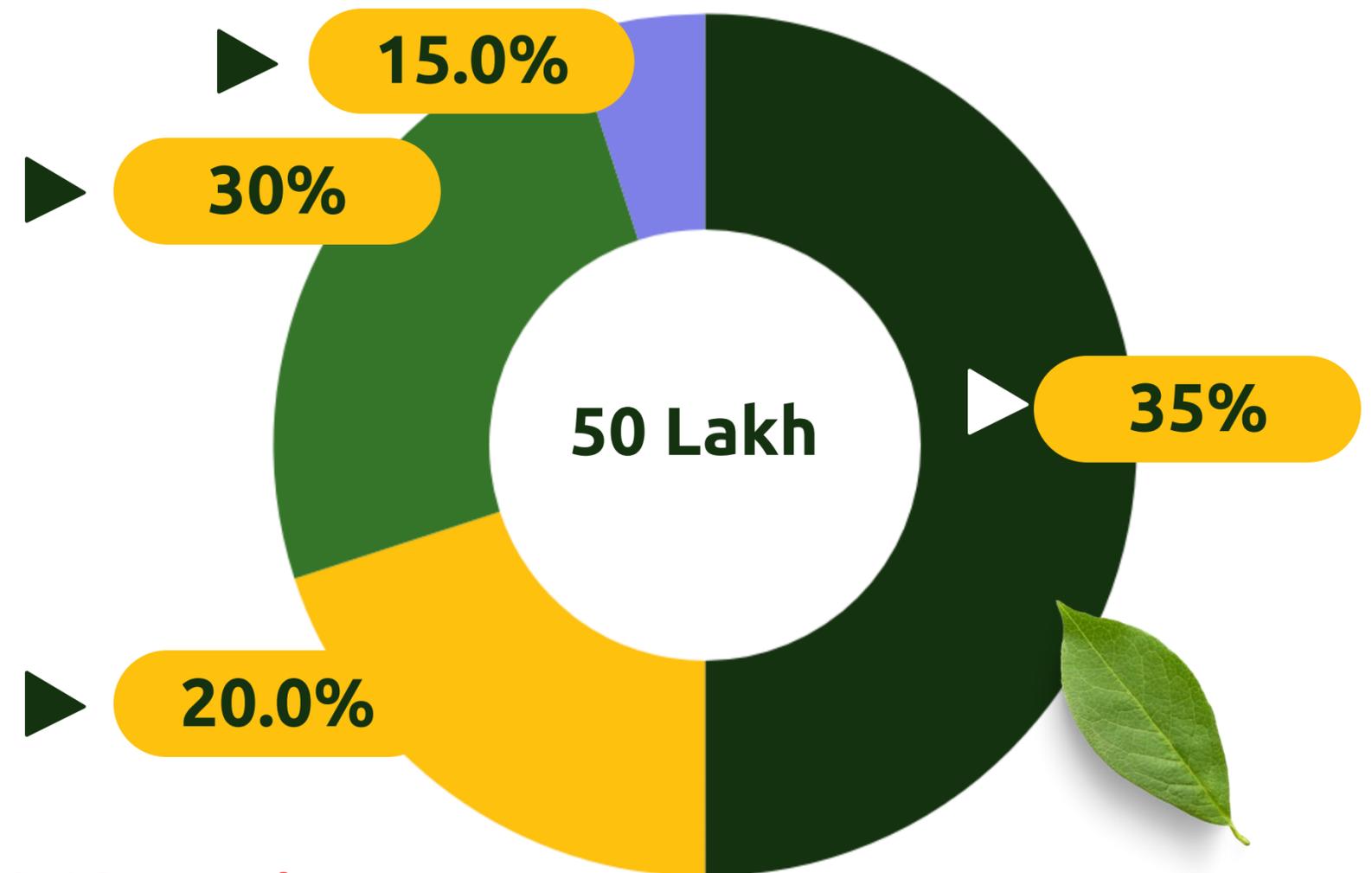
Funding will enable full-scale launch within 9-12 months.

Supported By

We are proudly incubated at AIC Pinnacle, AIC Bimtech, octaNE – Guwahati Biotech Park who are supporting us with mentorship, infrastructure, and pilot facilitation to scale our agri-tech innovation.

ATAL
INCUBATION
CENTRE - BIMTECH

SUPPORTED BY AIM, NITI AAYOG

AIC-PINNACLE
ENTREPRENEURSHIP FORUM
INNOVATION |INCUBATION |INVESTMENT
Supported by ATAL INNOVATION MISSION, NITI AAYOG

MPIDC
Madhya Pradesh Industrial
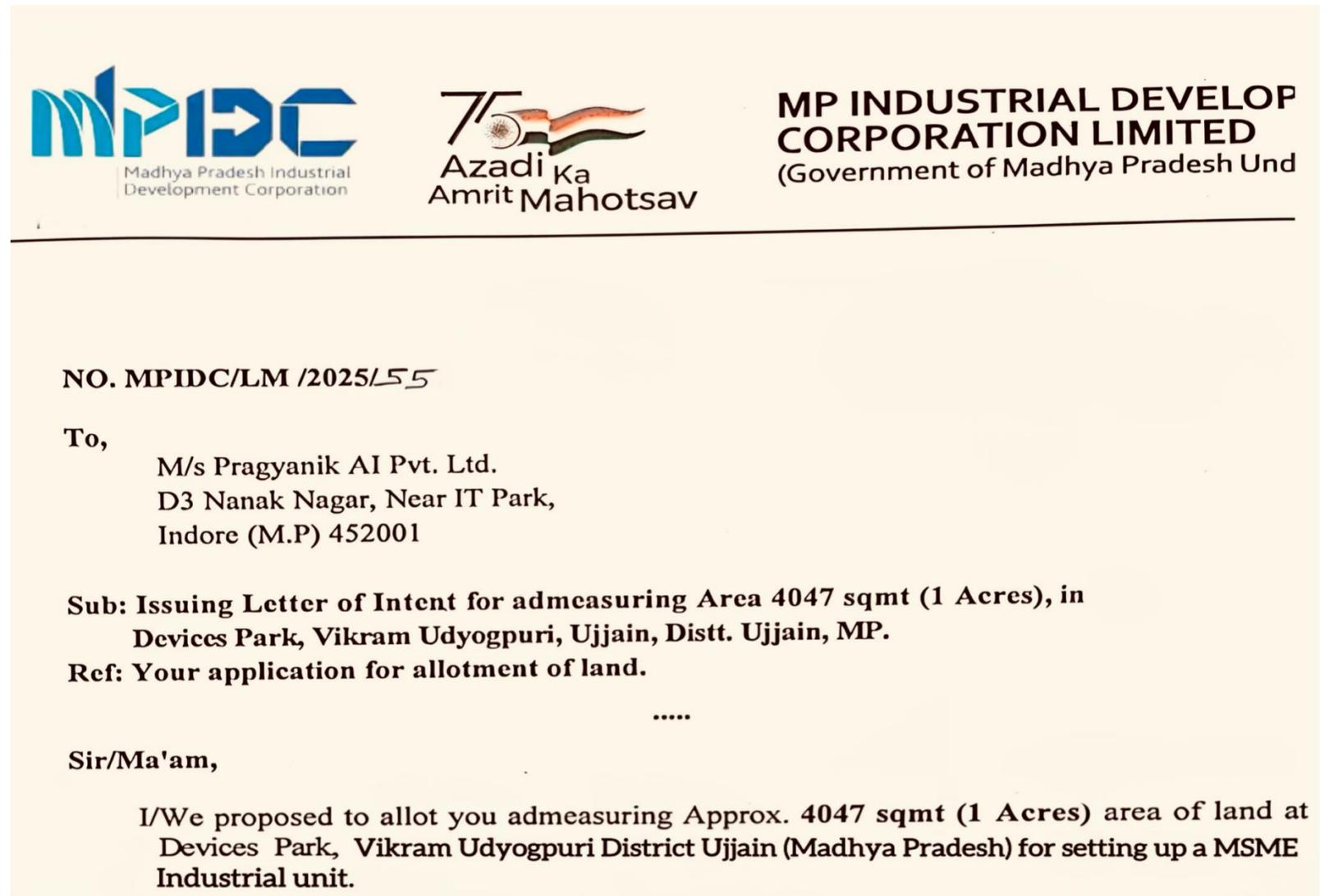Development Corporation

एसटीपीआई
STPI

Recognition

We are officially recognized under the Startup India program and certified by DPIIT as an innovative Agri-tech startup.

Startup India

CERTIFICATE NO:
DIPP210890

#startupindia

Government of India
Ministry of Commerce & Industry
Department for Promotion of Industry and Internal Trade

CERTIFICATE OF RECOGNITION

This is to certify that **PRAGYANIK AI PRIVATE LIMITED** incorporated as a **Private Limited Company** on **20-03-2025**, is recognized as a startup by the Department for Promotion of Industry and Internal Trade. The startup is working in 'AI' Industry and 'Machine Learning' sector as self-certified by them.

This certificate shall only be valid for the Entity up to **Ten** years from the date of its incorporation only if its turnover for any of the financial years has not extended ₹ **100 Cr.**

03-07-2025

DATE OF ISSUE

19-03-2035

VALID UPTO

Scan to Verify

Allotted Industrial land

MPIDC
Madhya Pradesh Industrial Development Corporation

Azadi Ka Amrit Mahotsav

MP INDUSTRIAL DEVELOP CORPORATION LIMITED
(Government of Madhya Pradesh Und

NO. MPIDC/LM /2025/55

To,

M/s Pragyanik AI Pvt. Ltd.
D3 Nanak Nagar, Near IT Park,
Indore (M.P) 452001

Sub: Issuing Letter of Intent for admeasuring Area 4047 sqmt (1 Acres), in Devices Park, Vikram Udyogpuri, Ujjain, Distt. Ujjain, MP.
Ref: Your application for allotment of land.

.....

Sir/Ma'am,

I/We proposed to allot you admeasuring Approx. **4047 sqmt (1 Acres)** area of land at Devices Park, Vikram Udyogpuri District Ujjain (Madhya Pradesh) for setting up a MSME Industrial unit.

Our Team

Mukesh Rai
Co-Founder & COO

- B.Tech (Electronics & Communication)
- MBA (Operations & Business Management)
- 4+ years experience in operations.
- Successfully ran and scaled Room-Dekho for 4 years, handling operations, customer pipeline building, and business expansion

Manoj Patel
Co-Founder & CTO

- B.Tech (Electronics & Communication)
- 5+ years experience in industrial machinery & electronic components development
- Experience at JSI Delhi, Arotack Services, and TRC Engineering (HCL Pvt. Ltd.)
- Successfully ran and scaled Room-Dekho
- Expert in electronics, hardware development, and robotics integration

Rishabh Ojha
Agri Engineer

- B.Sc. Agriculture graduate
- 3+ years hands-on experience in agriculture field operations
- Works on AI, automation & practical farm-level implementation

Thank You

Together, Let's Build the Future of Farming.

Making advanced agriculture accessible to every Indian farmer.

Email: info@pragyanikAI.com
Mob: +91 9039361327, 8120251664
Web: http://www.pragyanikAI.com