

Codec Networks

Coding Threats. Decoding Solutions.

AGRICULTURE & AGRITECH

Secure the Farm Platform. Protect Every Harvest.

IoT and platform security, privacy, payment integration testing and cloud assessments for agriculture and agritech businesses

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What we will cover



The sector and its risks

Scale, players and the threats that matter most



What regulators now expect

Digital Agriculture Mission, RBI lending, WDRA, CERT-In and DPDP



How Codec Networks helps

Services, bundles and packages built for the sector



Proof in scenarios

Five new case studies and the controls that break the chain



Why Codec Networks and next steps

Our value add and how to start



Indian farming is going digital, and so is its attack surface

Public figures show the scale of what must be protected

10.31 crore

Farmer IDs created under
AgriStack (Aug 2026)

1.80 crore

Farmers registered on e-NAM
(Mar 2026)

₹2,817 crore

Digital Agriculture Mission outlay
(2024)

6 hours

To report cyber incidents to
CERT-In

What this means: Agribusinesses, input companies, farm IoT providers, marketplaces, warehousing and agri-credit platforms and FPOs must secure sensors, gateways and drones, test every marketplace, lender and AgriStack integration, verify every payment callback and payout, lock down field agent and cloud access, protect farmer, land and borrower data, prepare for ransomware in harvest season and report incidents to CERT-In within six hours.

Sources: Rajya Sabha reply (August 2026), PIB on e-NAM (April 2026) and the Digital Agriculture Mission (September 2024), CERT-In Directions (2022).

Who we serve across agriculture and agritech



Agribusiness

Plantations, processors, integrators



Seeds and inputs

Seed, fertiliser, crop protection



Farm IoT

Sensors, irrigation, farm analytics



Agri-drones

Spraying, survey, machinery telematics



Marketplaces

Crop trade, inputs, commodity platforms



Warehousing

Accredited warehouses, cold stores



Agri-credit

KCC, crop loans, warehouse finance



FPOs and co-ops

Member platforms, procurement, payments

The threats that cost agritech businesses the most

Six priorities from our 18-threat agriculture and agritech assessment



Farm IoT takeover

Sensors, gateways, controllers



Settlement fraud

Callbacks, payouts, DBT flows



Farmer data exposure

Land, crop, borrower records



Field agent and loan fraud

Phished logins, forged files



Harvest ransomware

Procurement, storage, plants



Cloud misconfiguration

Open buckets, weak identity

Attacks target every step from input purchase to payment

Where Cyber Risk Sits Across the Farm-to-Market Lifecycle

Every step from input purchase to payment carries its own attack surface



A farm business is only as secure as its weakest platform: one exposed sensor hub, payment callback or field agent login can stop trade or leak farmer data.

Source: Codec Networks analysis

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What regulators now expect

Digital Agriculture Mission, RBI lending, WDRA, CERT-In and DPDP

The rules shaping agriculture and agritech security

Requirement	Frequency / deadline	Source
Digital agriculture DPI	AgriStack, Farmer IDs, crop survey	Digital Agriculture Mission, Sep 2024
Farmer payments	DBT to verified bank accounts	PM-KISAN scheme guidelines
Digital agri-credit	Lender, partner and app duties	RBI digital lending rules; KCC
Warehouse receipts	Accredited warehouses, e-NWRs	WDRA Act 2007; WDRA rules
Seeds and inputs	Registration, labels, records	Seeds Act 1966; Insecticides Act 1968
Agricultural drones	Registration, permissions, pilots	Drone Rules 2021; Digital Sky
Cyber incident reporting	To CERT-In within 6 hours; 180-day logs	CERT-In Directions, 2022
Independent audits	Risk-based audits, including OT and ICS	CERT-In guidelines, Jul 2025
Farmer and borrower data	Safeguards and breach intimation	DPDP Act 2023; Rules 2025

Key dates on the regulatory timeline

Legal and Regulatory Timeline Shaping Agriculture and Agritech Security

Agricultural digital public infrastructure, cyber, data and incident milestones that reach agribusiness, input, farm tech, marketplace, storage and credit firms

● In force ● Upcoming (from Oct 2026)

Apr 2016	● e-NAM launched to link regulated mandis on one online trading platform
Feb 2019	● PM-KISAN launched: ₹6,000 a year paid into farmers' bank accounts by DBT
Feb 2020	● Central scheme to form 10,000 FPOs launched with an outlay of ₹6,865 crore
Aug 2020	● Misused official logins add ineligible PM-KISAN payees in Tamil Nadu districts
Sep 2021	● Ransomware hits US grain cooperatives NEW Cooperative and Crystal Valley at harvest
Apr 2022	● CERT-In Directions: 6-hour incident reporting and 180-day ICT logs kept in India
Apr 2022	● FBI warns ransomware on agricultural cooperatives may be timed to critical seasons
Aug 2023	● Digital Personal Data Protection Act 2023 enacted
Sep 2024	● Digital Agriculture Mission approved: ₹2,817 crore for AgriStack and crop surveys
Dec 2024	● ₹1,000 crore credit guarantee scheme launched for loans against e-NWRs
Jul 2025	● CERT-In Comprehensive Cyber Security Audit Policy Guidelines, including OT and ICS
Nov 2025	● DPDP Rules notified; draft Seeds Bill 2025 released for public comment
Aug 2026	● Over 10.31 crore Farmer IDs created under AgriStack; target 11 crore by March 2027
May 2027	● Most DPDP Rules obligations, incl. security safeguards and breach intimation, apply

Sources: MoA&FW, PIB, Parliament replies, WDRA, CERT-In, MeitY, FBI and widely reported events. Confirm against the official instruments.

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How Codec Networks helps

Farm IoT · Platforms & APIs · Payments · Privacy · Cloud · SOC

One partner from field sensor to payout



Farm IoT & Drones

Sensors, gateways, telematics



Platform & API Testing

Marketplaces, apps, integrations



Payment Integration

Callbacks, settlement, payouts



Farmer Data Privacy

Data maps, consent, DPDP



Cloud Assessments

Configuration, storage, identity



24/7 SOC & Response

Monitoring, CERT-In, forensics

Eleven bundles from the Codec Networks catalogue

Business-ready bundles instead of 180 separate services



Bundle numbers follow the Codec Networks Bundled Service Models. Scope, frequency and pricing are confirmed during scoping.

Three packages, sized to where you are

Foundation

Agritech start-ups and FPO platforms

- App and API security test (B2)
- Cloud configuration review (B3)
- Farmer data privacy check (B6)
- IR retainer (B8)

Assurance

Marketplaces and agri-credit platforms

- Payment integration test (B2)
- Field agent access review (B3)
- CERT-In empanelled audit (B4)
- 24x7 managed SOC (B7)

Continuous Resilience

Agribusiness and input groups

- IoT, OT and network VAPT (B1)
- Supplier and dealer assurance (B9)
- ISO 27001 and DPDP (B5, B6)
- SOC with plant OT (B7)

Every obligation mapped to a bundle

Requirement	How Codec Networks helps	Bundle
Approved, consent-based use of AgriStack data (DA Mission)	Integration and data flow review	B2, B6
Lender and partner duties for digital agri-loans (RBI)	Loan app and API assessment	B2, B5
Incidents to CERT-In in six hours; 180-day logs (CERT-In)	SOC, IR retainer, reporting support	B7, B8
Risk-based independent audits incl. OT (CERT-In guidelines 2025)	CERT-In empanelled audit	B4
Accurate electronic warehouse receipts (WDRA framework)	Warehouse system and access review	B1, B3
Safeguards and breach intimation for farmer data (DPDP Act)	DPDPA programme	B6
Supplier and dealer assurance where contracts require it	Third-party risk assessment	B9

Five new case studies, five broken chains

Illustrative composite scenarios written for 2026—not client engagements

1

The Harvest Week Lockout

A phished login brings ransomware to a grain cooperative at harvest; MFA and segmentation stop it

B7 · B8 · B10

2

The Sensor Hub With a Default Password

Shared gateway passwords let attackers send false irrigation commands; unique credentials stop it

B1 · B3 · B11

3

The Mandi App That Paid Twice

Forged payment callbacks release seller payouts; signature checks and reconciliation prevent it

B2 · B1 · B7

4

The Field Agent Who Wasn't

A phished agent account files forged loans; MFA, device binding and data checks stop it

B3 · B2 · B8

5

The Farmer List That Went Public

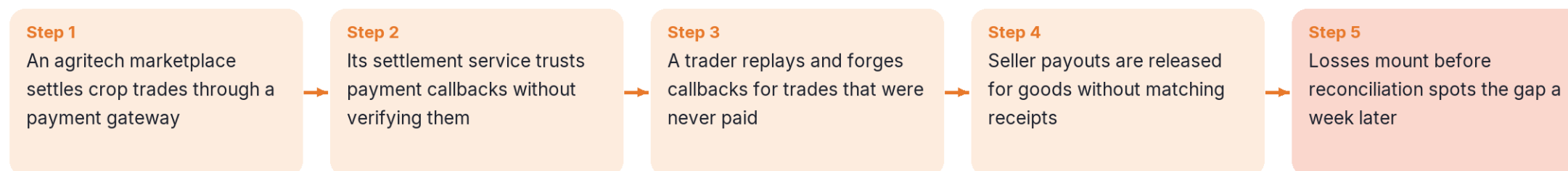
A vendor's open cloud bucket exposes farmer records; private storage and vendor clauses prevent it

B6 · B3 · B9

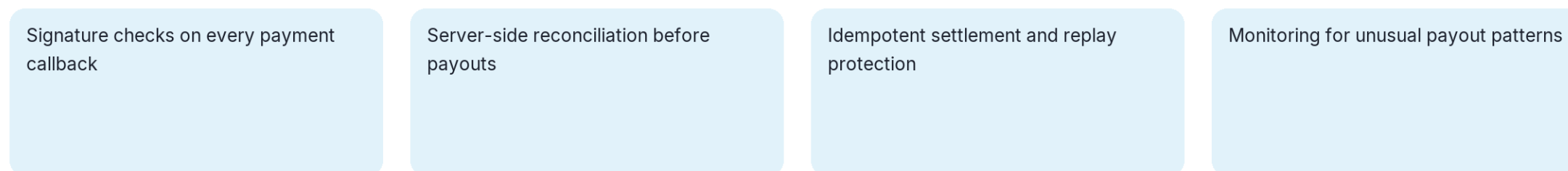
Example: stopping a forged payment callback

Case 3: The Mandi App That Paid Twice

ILLUSTRATIVE ATTACK PATH



WHERE CONTROLS BREAK THE CHAIN



Illustrative composite scenario prepared by Codec Networks. Not a client engagement.

Codec Networks

What we test: whether the marketplace verifies the signature and amount of every payment callback, whether replayed or duplicated messages are rejected, whether payouts wait for server-side reconciliation with the gateway, how refunds and reversals are handled, and how the firm would detect unusual payouts, investigate and report to CERT-In and its partners.

Why agriculture and agritech businesses choose Codec Networks



CERT-In empanelled

For information security auditing services; NISCI empanelled for application audits



Regulation-mapped

Mapped to the Digital Agriculture Mission, RBI lending rules, the WDRA framework, CERT-In Directions and audit guidelines, the Seeds and Insecticides Acts, the Drone Rules and DPDP



Full stack, one partner

VAPT, audits, SOC, forensics, privacy and Board advisory connected



Certified

ISO 9001:2015, ISO/IEC 27001:2022, ISO/IEC 20000-1:2018



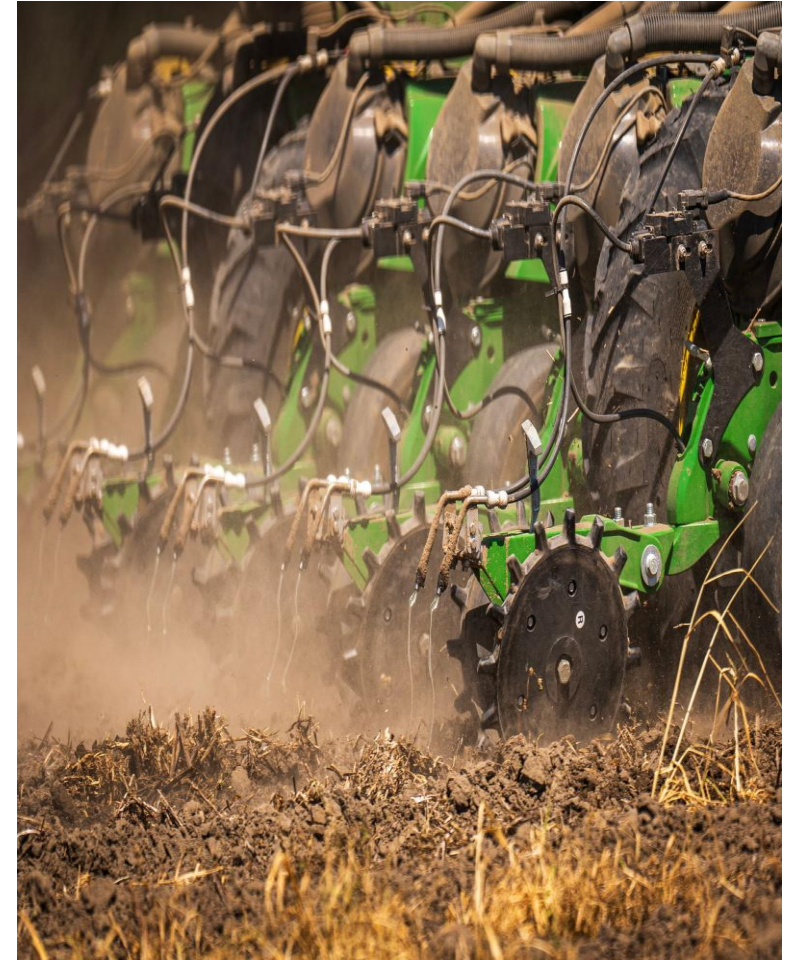
Tests the whole chain

Technical, process and monitoring tests together



Specialist experts

CEH, OSCP, CPENT, CISA, ISO 27001 LA/LI, CHFI; OWASP, MITRE ATT&CK, NIST



How we deliver, and what you receive

Codec Networks Delivery Methodology

Nine stages, from scoping to continuous improvement



Source: Codec Networks project and service delivery methodology

Codec Networks

- Executive summary for the Board or its committee
- Technical findings with evidence and CVSS ratings
- Compliance gap matrix mapped to your obligations
- Prioritised remediation roadmap and retest reports
- Audit evidence tracker for regulators and partners
- SOC dashboards with MTDD and MTTR metrics

Let's start with a scoping session

1 Scoping session

Farm sensors, gateways and drones, marketplaces and farmer apps, payment and settlement flows, AgriStack and lender integrations, warehouses and receipts, field agent access, cloud platforms, farmer data

2 Proposal

Regulation-mapped scope, methodology, timeline and deliverables

3 Kick-off

Testing, audit or SOC onboarding, with Board-ready reporting

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Regulatory references reflect public instruments as of October 2026; applicability depends on each entity's licence, category and activities.