



B U S I N E S S P L A N · I N D I A

Smart-Home Solutions

Home automation designed, installed and handed over - keys included

ELECTRONICS

AISEVAK.IN · BY ABL DIGITAL TECHNOLOGIES

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This document is confidential and prepared for planning purposes. All financial figures are illustrative model assumptions for an Indian MSME context and must be validated against live quotes, local rates and professional advice before any investment or borrowing decision.

1. Executive Summary

This plan sets out a **Smart-Home Solutions Business** in India — a home-automation systems integrator that designs, supplies, installs, configures and maintains lighting control, climate, security cameras, smart locks, sensors, intercom, audio and energy monitoring across apartments, villas and builder projects, with an annual maintenance contract behind every installation.

The electronics vertical's conventions are set in the consumer-electronics-store anchor and cross-referenced rather than re-derived: **the maker's own warranty is stated before anything is sold on top of it; attach rate is never reported without the rate at which the attached service is actually delivered; and ROCE belongs beside net margin. The components plan's rule carries directly — a control that depends on the buyer valuing honesty does not survive, so every control here has a second commercial justification. What is specific to this business is that the customer is installing surveillance in his own home, and somebody has to hold the keys while it is being built.**

□ **THE INSTALLER HOLDS THE KEYS TO THE CUSTOMER'S BEDROOM. A completed smart home contains cameras, microphones, door locks, presence sensors and full network access — and the installing technician routinely retains the admin credentials, the cloud account or an "installer backdoor for support" long after he has driven away. Which means a stranger who visited once can see inside the bedroom of a house he will never enter again, and the customer has no way to discover it, because there is nothing to see: the system works perfectly. This is not a hypothetical failure mode; it is the industry's default configuration, kept because it makes support convenient. So this plan makes credential handover a completion gate: the owner's admin account is created FIRST and the installer's access is subordinate to it, all installer accounts are revoked at handover with the revocation EVIDENCED to the customer on screen, and remote support thereafter requires per-session consent that expires — taking evidenced revocation from nothing to 100% of installations. The general rule: WHERE A SERVICE REQUIRES TEMPORARY ACCESS TO SOMETHING INTIMATE, THE REMOVAL OF THAT ACCESS MUST BE AN EVIDENCED EVENT, NOT AN ASSUMED ONE.**

□ **THE SECOND FINDING IS THE CLOUD DEPENDENCY THE CUSTOMER IS NEVER TOLD ABOUT. A ₹4 lakh installation can be reduced to ornaments by decisions taken in another country: a vendor discontinues a service, a subscription lapses, an app is withdrawn, a broadband line drops — and the lock, the camera and the lighting scene stop working. The customer believed he was buying fittings; he was buying a service he does not control, on terms nobody showed him. This plan discloses per device whether it functions without internet and without the vendor's server, prefers local-control-capable systems where a choice exists, and STATES THE TEN-YEAR SUBSCRIPTION LIABILITY IN RUPEES BESIDE THE INSTALLATION PRICE — because the quoted price is not the price, and a ₹3.6 lakh system with ₹1.9 lakh of subscriptions behind it is a different purchase from the one the customer thinks he is making.**

□ **And the third is a safety obligation the trade treats as a configuration preference: THE LOCK MUST OPEN WHEN THE HOUSE IS ON FIRE. Smart-lock behaviour on power failure, network failure and battery exhaustion, mechanical override, and egress from the inside are stated in writing and DEMONSTRATED at handover with the power off — and 34 requested configurations were refused in Year 3 because they could trap somebody. A customer is entitled to specify his own convenience; he is not entitled to specify a door his guest cannot open.**

This plan models an operator requiring **₹3.80 crore** (₹1.40 crore investor + ₹1.10 crore working-capital facility + ₹1.00 crore promoter + ₹30 lakh term loan), moving from **₹9.20 crore revenue and a ₹52 lakh loss** to **₹31.00 crore**

revenue and ₹2.48 crore profit by Year 3 — an 8.0% net margin, 41.2% return on capital, and revenue per technician-day of ₹16,200. (Smart-home solutions — figures illustrative.)

2. Business Description, Vision & Legal Structure

Concept: A home-automation integrator that proves it has given the keys back.

Vision: To be the integrator a customer can replace without being punished for it.

Mission: Create the owner's account before ours; revoke our access at handover and show him it is gone; ask before every remote session; say which devices die without the internet; price ten years of subscription beside the installation; demonstrate the lock with the power off; tell the people who are recorded; and hand over the configuration file.

Legal structure

- **Private Limited** — recommended and, given what this business holds, close to mandatory. Builder and developer contracts, brand dealerships, professional indemnity cover, and any institutional capital all require it.
- **Proprietorship or partnership** — the trade's usual form and the reason accountability evaporates: **a customer whose camera feed appears somewhere it should not has no one to pursue and no record of who held access.**
- **Employed technicians and commissioning engineers**, background-verified, with named individual credentials — **because a shared installer login is an audit trail that cannot name anybody, which is precisely its attraction.**

Regulatory anchor: a business that takes custody of a household's most private surfaces and must be structured around that fact. **The first exposure is data protection: the Digital Personal Data Protection Act 2023 applies squarely to camera footage, audio, occupancy patterns and access logs from inside a home, and this operator is a data fiduciary for as long as it holds access — with the aggravating feature, familiar from the refurbished-electronics plan, that the domestic staff, guests and children captured on those cameras are not this operator's customers, never consented, and will never be told unless somebody chooses to tell them. The second is unauthorised access: retaining a credential after the engagement ends and using it engages the Information Technology Act's provisions on unauthorised access and on violation of privacy, and "we kept it for support" is not a defence a court has to accept. The third is safety and representation: a smart lock is a building egress component, fire-safety norms and the National Building Code reach it, and consumer-protection provisions reach every claim made about what the system will still do in five years.** Then: BIS and mandatory registration on the electronic products supplied; electrical contractor licensing for the wiring work; e-waste and EPR; GST with correct works-contract treatment; and EPF/ESI and POSH across a workforce that enters homes.

3. Promoter & Ownership

Led by a promoter with systems integration, AV, electrical contracting or building-automation background. Three competences decide outcomes. *Design restraint*, because the easiest way to lose money in this trade is to sell an elaborate system that nobody in the household can operate, and the second easiest is to sell one that cannot be serviced. *Commissioning rigour*, since revenue is recognised on handover but reputation is decided six months later when a scene stops firing and nobody remembers how it was built. And *the willingness to refuse a configuration* — a customer who wants his front door to have no mechanical key, or a camera pointed where it should not point, and who is paying. Ownership, equity & investor terms are editable inputs; **credential revocation and safety sign-off are gated by the commissioning function and the promoter, never by the project manager whose completion date they can delay.**

4. Market Analysis — India

Indian smart-home demand has moved from novelty to specification, and is now limited less by price than by the customer's justified suspicion that the system will be abandoned.

Demand drivers

- **Premium residential construction**, where automation is increasingly specified at design stage rather than retrofitted.
- **Builder and developer differentiation** — base automation packages offered across a whole project, which is volume work with predictable margins.
- **Security anxiety**, the honest first reason most Indian households buy: cameras, video door phones and locks precede lighting scenes almost universally.
- **Elderly-parent monitoring by adult children abroad**, a large, growing and ethically delicate segment.
- **Energy cost and solar integration**, which gives automation a measurable payback rather than a lifestyle argument.

Market sizing (illustrative framing)

Layer	Definition	Indicative scale
TAM	Households and projects in the served metro region	Very large; mostly single-device purchases, not systems
SAM	Homes and projects buying an integrated, commissioned and maintained system	Bounded by TRUST and by SERVICEABILITY, not price
SOM (Yr 1–3)	Installations completed across retail and builder channels	₹9.2cr → ₹31.0cr; AMC attach 38% → 61%

Customer segments and what each actually buys

Segment	Buys on	Yr 3 revenue share
Retail villa & apartment owners	Security first, convenience second; design and hand-holding	41%
Builders & developers	Cost per unit, delivery schedule, and someone who will still exist at handover	29%
Interior designers & architects (referral)	Aesthetics, coordination, not embarrassing them	13%
Small commercial & serviced apartments	Access control, energy monitoring, remote management	10%
AMC & service base	Response time and continuity — the annuity that makes the business a business	7%

The elderly-monitoring segment deserves naming rather than quiet servicing, because it is the one place where this operator's customer and the person being watched are different people. An adult child abroad buys cameras and sensors for a parent's home, and the parent — who did not choose the system, may not fully understand it, and is often reluctant to object — is under continuous observation in her own house. This plan treats the resident as a person entitled to be informed regardless of who paid: the system is explained to her, camera locations are agreed with her, no camera is placed in a bedroom or bathroom, and she is shown how to

see what is being recorded. The deals lost by insisting on this are counted and reported, and they are real.

Constraints

- **Skilled commissioning engineers are scarce** and are the binding constraint on growth, not demand or capital.
- **Project cash flow** — builder receivables are slow and retention is standard, while equipment is bought against delivery.
- **Technology churn**, which strands both inventory and the installed base.
- **Trade reputation** — abandoned installations and vanished integrators have taught buyers to discount every promise of future support.

5. Competition & Position

Competitor type	Strength	Weakness this plan exploits
Brand-authorised premium integrators	Product depth, design capability, showroom	Expensive, ecosystem lock-in, weak on post-handover access hygiene
Electrical contractors adding automation	Already on site, cheapest, trusted by the builder	No commissioning discipline, no documentation, no service capability
Online / DIY device sellers	Price, immediacy, no installation cost	No integration, no safety review, customer becomes his own integrator
Security-only CCTV installers	Volume, low cost, fast	Installer credentials retained as standard practice
This plan	Evidenced credential revocation, cloud dependency disclosed, ten-year subscription cost priced, configuration handed over	Higher quoted price; loses customers who want the cheap camera and no questions

The positioning claim is deliberately unusual, because it is a promise to be easy to leave: the customer receives the complete configuration, the device inventory, the network diagram and the credentials, so **ANOTHER** integrator can take the system over without rebuilding it. The trade's instinct is the exact opposite — make the system incomprehensible to anyone else and the AMC renews itself — and that instinct is why AMC renewal rates across the industry mean nothing, since a renewal extracted from a hostage is not a satisfied customer. An AMC renewed by a customer who could leave tomorrow is the only renewal statistic worth quoting, and it is the one this plan reports.

The cost of the honest position is stated in rupees rather than implied. Disclosing the ten-year subscription liability beside the installation price loses an estimated ₹1.42 crore of Year-3 enquiries at the quotation stage — the number is large because a competitor's quote genuinely looks cheaper when the recurring cost is left off it. Refusing unsafe lock configurations and bedroom-camera placements costs a further ₹38 lakh of accepted-then-declined work. The offsetting return is an AMC base that renews without coercion, a referral engine among architects who cannot afford an embarrassment, and builder relationships that survive the first handover — which together carry Year-3 gross margin four points above the trade norm.

6. The Installer Holds the Keys

Every smart-home installation passes through a period in which one stranger has complete access to a family's home, and the trade has no convention for ending it.

Access held during installation	What it permits	Industry default at handover
Cloud/app admin account	Live camera and microphone, lock control, history	Installer remains admin; owner is a sub-user
NVR / hub local administrator	Full footage archive, export, deletion	Shared password, never changed
Home network and router	Everything on the network, not only automation	Installer-set password retained
Vendor "installer support" backdoor	Remote entry without the owner's knowledge	Left enabled; frequently undisclosed

This plan's control is a gate in the completion process, not a clause in the contract, because a clause is what the trade already has and it changes nothing. THE OWNER'S ADMIN ACCOUNT IS CREATED FIRST, before any device is enrolled, so the installer's access exists as a subordinate permission the owner grants rather than a primacy the owner is later given a share of — an ordering difference that decides who can revoke whom. At handover every installer account, shared password and vendor support backdoor is revoked, and the revocation is DEMONSTRATED ON THE CUSTOMER'S OWN SCREEN and recorded in the handover pack: 0% to 100% of installations. Thereafter remote support requires per-session consent that expires — the customer approves a specific session, sees that it is active, and it closes itself — reaching 100% of support sessions, with the session log available to him at any time. Router and network credentials are handed over and changed in front of him.

The generalisable rule, and the one this plan contributes to the library: WHERE A SERVICE REQUIRES TEMPORARY ACCESS TO SOMETHING INTIMATE, THE REMOVAL OF THAT ACCESS MUST BE AN EVIDENCED EVENT, NOT AN ASSUMED ONE. Retained access is invisible by construction — nothing breaks, no bill arrives, no notification fires, and the customer's only signal that his installer can still watch his living room is the absence of any proof that he cannot. An assurance that access was removed is worth precisely nothing, since it costs the same to give whether it is true or false; only the demonstration costs anything, which is why it is the demonstration that is required. And this control passes the components plan's durability test — it has a second, self-interested justification: an operator who provably holds no access after handover cannot be blamed for a breach he did not cause, and in a trade where one publicised incident ends a business, that defence is worth more than the support convenience it costs.

Why the industry default persists, and what it takes to change it

- **It is genuinely convenient.** A retained admin account lets an engineer fix a fault in four minutes instead of scheduling a visit, and every party to that transaction is better off in the moment — which is why the practice is defended sincerely rather than furtively.
- **Nobody is harmed visibly.** The overwhelming majority of retained credentials are never misused, so the trade's lived experience confirms that the risk is theoretical, right up until the one occasion when it is not.
- **The customer cannot audit it.** He has no way to enumerate who holds access to his own system, and would not know what he was looking at if he could.

- **The vendor's design encourages it** — installer portals, support backdoors and dealer-managed accounts are built into the platforms because they reduce the manufacturer's support load.
- **So the correction must be structural rather than cultural** — an account-creation order, a gate on completion, and a demonstration the customer watches. A policy asking technicians to remember is a policy that will hold for about a quarter.

It is worth being clear that this is not an accusation against technicians, who are mostly conscientious people doing a difficult job in other people's houses. It is an observation about a system in which the convenient thing, the profitable thing and the invisible thing are the same thing — and in which the person bearing the risk is the only party with no way to see it. Wherever those conditions hold, the outcome does not depend on the character of the individuals involved, which is exactly why this library keeps insisting that a control be structural.

7. The Cloud Dependency, the Lock, and the People Who Never Agreed

Three further exposures sit inside a completed installation, and all three are invisible on the day the customer signs.

□ **THE CLOUD DEPENDENCY THE CUSTOMER IS NOT TOLD ABOUT.** Much of what a smart home does is performed on somebody else's server, and a decision taken in another country — a discontinued service, a withdrawn app, a subscription tier that ceases to exist, an acquisition — can turn a ₹4 lakh installation into fittings. A dropped broadband line does it temporarily every month. The customer believed he was buying equipment; he bought a service, on terms he was never shown and cannot influence. So every quotation states **PER DEVICE** whether it works without internet and whether it works without the vendor's server, systems capable of local control are preferred where a real choice exists, and the **TEN-YEAR SUBSCRIPTION LIABILITY IS STATED IN RUPEES BESIDE THE INSTALLATION PRICE** — ₹1.9 lakh behind a ₹3.6 lakh system is not a footnote, it is half the purchase. This is the library's second-number rule: find the figure that constrains the flattering one, and publish both.

□ **THE LOCK MUST OPEN WHEN THE HOUSE IS ON FIRE.** A smart lock is a building egress component before it is a convenience, and its behaviour on power failure, network failure, battery exhaustion and fire alarm is a safety specification rather than a feature preference. Every installation states that behaviour in writing, retains a mechanical override, and **DEMONSTRATES** egress at handover with the power switched off — because a customer who has watched the door open in the dark understands something no clause conveys. 34 requested configurations were refused in Year 3: keyless-only front doors, locks without internal manual egress, and battery-dependent designs with no fail-safe. A customer may specify his own convenience; he may not specify a door his elderly mother or his guest cannot open, and the refusal is not negotiable at any price — which is the same principle as the refurbished-electronics floor, that disclosure does not discharge the obligation to refuse.

□ **AND THE PEOPLE IN THE FRAME WHO WERE NEVER ASKED.** Domestic staff, drivers, guests, tenants and neighbours appear on these cameras continuously; none of them is this operator's customer, none consented, and none will ever be told unless somebody decides to tell them. It is the refurbished-electronics pattern exactly — the harm lands on somebody outside the transaction, so the entire incentive structure ignores it. This plan requires a printed notice at entry points, camera fields of view surveyed and adjusted so they do not cover a neighbour's window or door, no camera or microphone in bedrooms, bathrooms or staff quarters as an absolute rule, and a written explanation of recording and retention given to the household at handover for the staff who work there. Third-party notice reaches 100% of installations, and the survey is repeated whenever a

8. Operations Plan (design, supply, install, commission, hand over, maintain)

Design and quotation

- **Site survey before quotation** — network capability, electrical provision, wall construction and, critically, who lives there and how they will actually use it.
- **Design restraint as policy** — scenes and automations a resident can explain to a visitor; anything requiring a manual is a design failure that returns as a service call.
- **Quotation states per device: local control capability, internet dependency, vendor-server dependency, and subscription cost**, with the ten-year recurring total shown beside the installation price.
- **Safety review at design stage** — egress, lock fail-behaviour, camera fields of view, and any configuration that will be refused, identified before money changes hands rather than after.

Supply and installation

- **Equipment sourced through authorised channels with warranty registered in the customer's name**, not the integrator's — the anchor's rule that the maker's own cover is stated before anything is sold on top of it.
- **Named individual technician credentials**, never a shared installer login, so the access log can identify a person.
- **Background verification and police verification for every technician entering homes**, refreshed, and a photograph sent to the customer before each visit.
- **Cabling and electrical work to licensed-contractor standard**, with structured cabling preferred over wireless wherever the building permits, because a wireless system is a dependency the customer did not choose.

Commissioning and handover — the gate

- **Owner admin account created first; installer access subordinate to it throughout.**
- **Every installer account, shared credential and vendor backdoor revoked, demonstrated on the customer's screen, and recorded.**
- **Egress and fail-behaviour demonstrated with power off**, witnessed and signed.
- **Configuration pack handed over** — device inventory with model, serial and warranty dates; network diagram; automation logic in plain language; credentials; and subscription renewal dates with costs.
- **Household training including the residents who did not buy the system**, and the third-party recording notice explained.

Service and AMC

- **Remote support only on per-session consent that expires**, with the session log visible to the customer.
- **AMC priced for visits actually delivered**, and the delivery rate reported beside the attach rate per the anchor's rule.
- **Preventive visits scheduled and evidenced** — battery replacement, firmware review, camera field-of-view re-survey, lock mechanism check.
- **Subscription renewal reminders issued in advance** with the cost restated, since a lapsed subscription is a system failure the customer will otherwise experience as a fault.

The operational hinge is that handover is a gate rather than a milestone, and the pressure against it is entirely internal. A project manager with a completion date, a customer eager to move in and a technician wanting to leave will all accept "we'll revoke it next week", and next week never has an owner. So the project

cannot be marked complete, invoiced or released for revenue recognition until the revocation, the egress demonstration and the configuration handover are recorded — which converts three disciplines that decay into three conditions on getting paid.

What the customer receives at handover

- **Device inventory** — every item with model, serial number, purchase date, warranty expiry and the maker's own warranty terms stated separately from anything sold on top of it.
- **Network and system diagram** — what talks to what, over which protocol, and which parts depend on the internet.
- **Automation logic in plain language** — every scene and rule written so a person who did not build it can understand and change it.
- **Credentials** — owner admin accounts, router, hub and NVR, with the revocation record for every installer account.
- **Subscription schedule** — what renews, when, at what cost, and what stops working if it lapses.
- **Safety record** — lock fail-behaviour, override locations, and the signed egress demonstration.

This pack takes about ninety minutes to assemble per installation and is the single most-resisted item in the operating model, because it is work that produces no visible benefit on the day and hands a competitor everything he would need to take the account. That is precisely the argument for it: a document set whose only cost is making the customer free to leave is the one piece of evidence that the relationship is not being held together by his inability to.

9. Privacy, Safety & Operating Compliance (India)

- **Company & tax** — Private Limited, PAN/TAN, GST with correct works-contract treatment, shops & establishments, professional indemnity and public liability cover.
- **Data protection** — DPDP Act 2023 obligations over footage, audio, occupancy and access logs; this operator is a data fiduciary while it holds access, and the retained-credential question is the whole of that exposure.
- **Unauthorised access** — Information Technology Act provisions on unauthorised access and violation of privacy reach a retained installer credential that is used; **"we kept it for support" is not a defence.**
- **Third parties** — domestic staff, guests and neighbours captured without consent; entry notices, field-of-view surveys and absolute exclusion zones are the response.
- **Safety & building** — egress requirements and fire-safety norms reach smart locks; National Building Code considerations; electrical contractor licensing for the wiring work.
- **Products & environment** — BIS and mandatory registration on electronics supplied, Legal Metrology on stated specifications, consumer-protection provisions on longevity and support claims, e-waste and EPR, EPF/ESI and POSH across a workforce entering homes.

10. Organisation & Manpower Plan

Function	Yr 1	Yr 3	Notes
Promoter / MD	1	1	Design authority, safety refusals, builder relationships
Design & pre-sales	2	6	Site survey, system design, quotation with dependency disclosure
Installation technicians	8	24	Background-verified; named individual credentials
Commissioning engineers	2	6	Hold the handover gate; the binding constraint on growth

Service & AMC	3	11	Preventive visits, remote support under consent
Sales & channel	2	6	Retail, builder, architect referral
Finance, projects & admin	2	5	Receivables, retention, procurement
Total	20	59	Employed; no subcontracted access to customer homes

Two structural rules govern the organisation. Commissioning does not report to projects — the engineer who can hold a handover cannot report to the manager whose completion date the hold delays, which is the library's control-independence rule applied to the one gate that matters here. And installation is not subcontracted: a subcontracted technician holds the same access with none of the accountability, and an operator who cannot name the individual who was in the house on Tuesday has no answer when the question is eventually asked. The cost of employing rather than subcontracting is roughly ₹64 lakh a year at Year-3 scale, and it is stated here rather than absorbed silently.

11. Implementation Timeline & Milestones

Phase	Window	Milestones
Formation & capability	Month 0-3	Incorporation, GST, electrical licensing, brand dealerships, experience centre fit-out
Systems & protocol	Month 2-5	Handover gate built into the project system; consent-based remote support live; configuration pack template
First installations	Month 3-8	Retail villa and apartment projects; architect referral channel opened
Builder channel	Month 8-16	First developer package contract; per-unit costing and schedule delivery proven
Service annuity	Month 10-20	AMC base built; delivery rate reported beside attach rate from the first renewal cycle
Scale	Month 18-36	Second city or second experience centre; commercial and serviced-apartment segment

Training and competence

- **Credential-hygiene and handover-gate training for every technician and engineer**, re-verified annually, because this is the discipline that decays first.
- **Safety and egress training** — lock fail-behaviour, override mechanisms, and the refusals that are not negotiable.
- **Privacy conduct in occupied homes** — what a technician may look at, photograph, or discuss, and the fact that he is in somebody's bedroom.
- **Manufacturer product certification** maintained across the deployed platforms, since an integrator without current certification loses both support and warranty standing.

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions, not forecasts or guarantees. They exist to show the drivers of a smart-home integration P&L and how the disclosure and handover controls move them. Every input is editable. **The defining feature of this model is that project revenue pays the bills and the AMC base creates the value — an**

integrator with no annuity is re-earning its entire revenue every year from strangers.

12.1 Project cost & funding

Item	₹ lakh	Notes
Experience centre — fit-out & working display systems	78	Leased; the room where the sale is actually made
Tools, test & commissioning equipment	42	Network analysers, cabling tools, safety test kit
Vehicles & field kit	46	Installation and service fleet
Project, CRM & handover-record systems	34	The handover gate lives here; it cannot be added later
Demonstration & buffer inventory	72	Fast-moving devices; project stock is bought against order
Security deposits & pre-operative	32	Lease, dealerships, licensing, certification
Working capital & contingency	76	Builder receivables and retention money
Total project cost	380	₹140L investor + ₹110L WC facility + ₹100L promoter + ₹30L term loan

12.2 Operating metrics

Metric	Yr 1	Yr 2	Yr 3
Installer credentials revoked AND revocation evidenced to customer at handover / per-session consent for remote support	100% / 100%	100% / 100%	100% / 100%
Cloud & internet dependency disclosed per device / ten-year subscription liability stated beside price	100% / 100%	100% / 100%	100% / 100%
Egress demonstrated with power off at handover / configurations REFUSED on safety grounds	100% / 11	100% / 22	100% / 34
Third-party recording notice & field-of-view survey / full configuration pack handed to customer	100% / 100%	100% / 100%	100% / 100%
AMC attach rate / preventive visits actually delivered / renewal rate	38% / 71% / n/a	52% / 89% / 74%	61% / 97% / 86%
Installations completed / revenue per technician-day / service response within SLA	96 / ₹9,400 / 78%	208 / ₹13,100 / 91%	352 / ₹16,200 / 96%

Read rows three and five the way this library reads every gate. Refusals **RISING** from 11 to 34 as volume grows is the signal that the safety review is a real function rather than a page in the proposal — a business that refuses nothing in a trade where customers routinely ask for keyless front doors is not reviewing, it is agreeing. And the AMC row deliberately carries three numbers together, per the anchor's rule: 61% attach is worthless beside 71% delivery, which is what the trade actually runs and what makes AMC income a fee for a promise rather than a price for a service. The 86% renewal figure means something here only because the configuration pack was handed over — these customers can leave, and did not.

12.3 Revenue build

Stream	Yr 1 (₹L)	Yr 2 (₹L)	Yr 3 (₹L)	Driver
Retail projects — villas & apartments	438	826	1,271	Higher margin, longer sales cycle
Builder & developer packages	246	542	899	Volume, thinner margin, slow receivables
Designer & architect referred	128	252	403	Lowest acquisition cost in the business
Commercial & serviced apartments	74	178	310	Access control and energy monitoring
AMC, service & upgrades	34	102	217	The annuity — 7% of revenue, far more of the value
Total revenue	920	1,840	3,100	Illustrative

12.4 P&L summary

Line	Yr 1 (₹L)	Yr 2 (₹L)	Yr 3 (₹L)
Revenue	920	1,840	3,100
Equipment & material cost	(561)	(1,104)	(1,829)
Gross profit	359	736	1,271
Field employee cost — technicians & engineers	(186)	(324)	(496)
Design, sales & admin employee cost	(94)	(148)	(228)
Handover gate, safety review & verification	(24)	(34)	(48)
Experience centre, rent & utilities	(46)	(54)	(68)
Vehicles, travel & logistics	(38)	(58)	(86)
Marketing, referral & channel	(32)	(52)	(78)
Warranty, rework & service provision	(28)	(38)	(44)
Insurance, professional & other admin	(26)	(36)	(52)
EBITDA	(115)	(8)	171
Depreciation & amortisation	(42)	(46)	(50)
Finance cost	(18)	(26)	(34)
Other income — dealership incentives <i>(disclosed)</i>	108	172	244
PBT	(67)	92	331
Tax	15	(24)	(83)
PAT	(52)	68	248
Net margin	(5.7%)	3.7%	8.0%
ROCE	(14.6%)	12.8%	41.2%

Two lines require the library's disclosure discipline rather than a footnote. Dealership incentive income at ₹2.44 crore in Year 3 is almost as large as PAT, exactly the pattern the consumer-durables plan warned of, so it is a separate line rather than netted into material cost — and the accompanying rule holds: an incentive that steers which brand is specified is disclosed to the customer, because a recommendation paid for by the manufacturer is advice the customer is entitled to price accordingly. The handover-gate line is the cost of the plan's central control, and at ₹48 lakh against ₹2.48 crore of PAT it is neither trivial nor prohibitive — it is what evidencing a revocation, surveying a field of view and demonstrating an egress on 352 installations actually costs, stated so an investor can decide whether it is worth it rather than being told it is free.

12.5 Break-even & sensitivity

Scenario	Yr 3 revenue	Yr 3 PAT	Comment
Base	₹31.0cr	₹2.48cr	As modelled
Gross margin down 300bps	₹31.0cr	₹1.78cr	Builder-mix pressure is the usual cause
AMC attach 61% → 42%	₹30.2cr	₹1.94cr	The annuity is where the enterprise value sits
Dealership incentive down 30%	₹31.0cr	₹1.93cr	Why it is disclosed separately
Technician productivity down 15%	₹28.4cr	₹1.62cr	Revenue per technician-day is the operating metric
Builder receivables 92 → 130 days	₹31.0cr	₹2.22cr	Finance cost; retention money compounds it

The AMC row is the one an investor should weigh most heavily, and not because of its effect on Year-3 profit, which is modest. A project business with no annuity must find 352 new customers every year forever; the same business with a renewing service base compounds, and the difference shows up in exit valuation rather than in this table. It is also the row most directly connected to the plan's integrity controls — the configuration handover that makes this operator easy to leave is the reason an 86% renewal rate can be quoted as evidence of satisfaction rather than of lock-in.

12.6 Working capital & cash cycle

Element	Yr 1	Yr 2	Yr 3	Note
Days receivable — retail projects	34	28	24	Milestone billing with advance against equipment
Days receivable — builder channel	118	104	92	Plus retention held beyond handover
Retention money outstanding (₹L)	18	44	71	Released at defect-liability expiry; pursued as a finance function
Days inventory — buffer & project stock	46	38	31	Project stock bought against order, not forecast
AMC billed in advance (₹L)	34	102	217	The only negative-working-capital stream in the model
Operating cash flow (₹L)	(142)	(31)	204	Growth in the builder channel consumes cash

The two receivable rows should be read as two different businesses sharing a workforce. Retail projects bill at milestones with an advance and settle in 24 days; builder packages settle in 92 with retention held for a further year, so every rupee of builder revenue consumes roughly four times the working capital of a retail rupee at a thinner margin. Builder work is still worth doing — it fills the calendar, trains technicians and seeds an AMC base in a single complex — but it is capped at 29% of revenue deliberately, and an operator who lets

that share drift upward because the orders are large will discover the constraint as a cash crisis in a profitable year.

13. Funding Requirement & Bankability

Source	₹ lakh	Terms (indicative)
Investor equity	140	Growth capital; board seat; AMC base and gate-compliance covenants
Working-capital facility	110	Against project receivables and retention; the builder channel needs it
Promoter contribution	100	Cash and assets
Term loan	30	Fit-out, vehicles and equipment; 5 years
Total	380	Illustrative structure

The bankability case rests on the annuity and on the absence of a catastrophic tail, and the second is easier to underestimate. A lender or investor in this trade is exposed less to slow growth than to one incident — a retained credential used, a camera feed circulating, a door that did not open — any of which ends the business regardless of its P&L. The handover gate, the evidenced revocation, the refusal log and the field-of-view survey are therefore not overhead but the reason this cash flow can be capitalised at all, and they are auditable monthly from the project system rather than asserted. This is the components plan's durability test satisfied again: the control protects the customer AND the enterprise value, so it does not depend on anyone's goodwill to survive a bad quarter.

- **Use of funds** — 20% working capital, 21% experience centre, 19% demonstration and buffer inventory, 12% vehicles and field kit, 11% tools and commissioning equipment, 9% systems, balance deposits and pre-operative.
- **Repayment** — term loan from Year 2 EBITDA; working-capital facility revolving against project receivables and a growing AMC book that bills in advance.
- **Investor exit** — strategic sale to a national integrator, security services group or building-systems company seeking an installed base and a service annuity, or a secondary once the AMC base is established.

14. Risk Analysis & Mitigation

Risk	Impact	Mitigation
Retained installer access used to view a customer's home	Existential — criminal exposure under the IT Act, DPDP liability, and a reputation that does not recover in this trade at any price	Owner admin account created FIRST so installer access is subordinate; every installer account, shared credential and vendor backdoor revoked at handover and the revocation DEMONSTRATED on the customer's screen and recorded (100%); remote support only on per-session consent that expires, with the session log visible to him; named individual technician credentials so a log can identify a person; no subcontracted access to homes

A smart lock that does not open — fire, power failure, dead battery	Injury or death; a smart lock is a building egress component before it is a convenience	Fail-behaviour stated in writing, mechanical override retained, egress DEMONSTRATED at handover with the power off; 34 configurations refused in Year 3 including keyless-only front doors and battery-dependent designs with no fail-safe; the refusal is not negotiable at any price, because disclosure does not discharge the obligation to refuse
Third parties recorded without consent — domestic staff, guests, tenants, neighbours	DPDP exposure and a real harm to people outside the transaction who will never know it occurred	Printed notice at entry points; field-of-view survey so no camera covers a neighbour's window or door, repeated whenever a camera moves; absolute exclusion of bedrooms, bathrooms and staff quarters; written recording-and-retention explanation given to the household for the staff who work there (100%)
Vendor discontinues a cloud service and the installed base stops working	Customers hold this operator responsible for a decision taken by somebody else in another country — and are not entirely wrong, because he chose the platform	Per-device disclosure of internet and vendor-server dependency at quotation; local-control-capable systems preferred where a real choice exists; ten-year subscription liability stated in rupees beside the installation price; platform concentration limited; and renewal reminders issued in advance so a lapse is not experienced as a fault
Commissioning-engineer scarcity constrains growth	The binding constraint on scale, ahead of demand or capital	In-house training pipeline from technician to engineer; manufacturer certification maintained; design restraint that keeps systems serviceable by more than one person; documentation good enough that a second engineer can take over a project
Builder receivables, retention and project cash flow	Equipment bought against delivery while payment runs 92 days plus retention; growth consumes cash	Working-capital facility sized to the channel, milestone billing with advance against equipment, retention tracked and pursued as a finance function, builder-mix capped as a share of revenue, and growth throttled to facility headroom
Technology churn stranding the installed base	Systems sold three years ago becoming unsupportable; the trade's slow reputational poison	Platform selection weighted toward open protocols and local control; upgrade paths quoted rather than replacements; buffer inventory of deployed-generation devices; and honest advice to a customer that a platform is ageing, before he discovers it
Handover gate quietly bypassed under schedule pressure	Every control in this plan defeated at once, silently, by people acting in good faith to meet a date	The project cannot be marked complete, invoiced or recognised as revenue until revocation, egress demonstration and configuration handover are recorded — three disciplines converted into three conditions on getting paid; commissioning reports to the promoter and not to projects, so the person who can hold a handover does not report to the manager it delays

15. SWOT Analysis

Strengths • Credential revocation evidenced to the customer, not asserted • Cloud dependency and ten-year subscription cost disclosed at quotation • Egress demonstrated with power off; unsafe configurations refused • Configuration pack handed over — the customer can leave • AMC 61% attach with 97% of preventive visits actually delivered	Weaknesses • Higher quoted price than competitors who omit the recurring cost • Commissioning-engineer scarcity caps growth • Project cash flow with builder retention • Dependent on platform vendors' long-term decisions
Opportunities • Automation specified at design stage in premium construction • Builder packages at project scale • Architect and designer referral at near-zero acquisition cost • AMC annuity compounding into enterprise value • Energy monitoring and solar integration with measurable payback	Threats • One privacy or safety incident anywhere in the business • Vendor service discontinuation across an installed base • Price competition from electricians and DIY devices • Technology churn and protocol fragmentation

16. Recommended AiSevak Tools for This Business

- **Quotation & proposal generator** — with per-device dependency disclosure and the ten-year subscription total printed beside the installation price.
- **Project & handover-gate tracker** — completion blocked until revocation, egress demonstration and configuration handover are recorded.
- **AMC & service scheduler** — preventive visits, delivery rate against attach rate, renewal reminders.
- **Field service & technician despatch** — named credentials, visit records, revenue per technician-day.
- **Customer configuration & asset register** — device inventory, warranty dates, network diagram, subscription renewals.
- **Receivables & retention tracker** — milestone billing, builder retention, ageing.
- **Compliance calendar** — DPDP obligations, electrical licensing, BIS, EPR, EPF/ESI and insurance renewals.

17. Key Assumptions & Notes

- **All financials are illustrative model assumptions, not forecasts, projections or guarantees.** Revenue, margins, attach rates, incentive income and headcount are editable inputs; actual outcomes depend on city, channel mix, platform selection and the availability of commissioning engineers. Figures are in Indian rupees.
- **The central integrity finding is that the installer holds the keys to the customer's bedroom.** A completed installation contains cameras, microphones, locks, presence sensors and full network access, and the trade's default is that the installing technician keeps the admin account, the shared password and the vendor's support backdoor after he leaves — so a stranger who visited once can watch a family indefinitely, and the customer cannot discover it, because

nothing breaks and there is nothing to see. **The response is an ordering change and a gate, not a clause: the OWNER'S admin account is created FIRST so the installer's access is a subordinate permission the owner can revoke, every installer account and backdoor is revoked at handover with the revocation DEMONSTRATED ON THE CUSTOMER'S SCREEN and recorded, and remote support thereafter requires per-session consent that expires. The generalisable rule this plan contributes: WHERE A SERVICE REQUIRES TEMPORARY ACCESS TO SOMETHING INTIMATE, THE REMOVAL OF THAT ACCESS MUST BE AN EVIDENCED EVENT, NOT AN ASSUMED ONE — because an assurance costs the same to give whether it is true or false, and only the demonstration costs anything.**

- **The customer was sold equipment and bought a service he does not control.** Much of what a smart home does happens on somebody else's server, and a discontinued product line, a withdrawn app or a lapsed subscription can reduce a ₹4 lakh installation to fittings — while a dropped broadband line does it temporarily every month. **So every quotation states PER DEVICE whether it works without internet and without the vendor's server, local-control-capable systems are preferred where a real choice exists, and the TEN-YEAR SUBSCRIPTION LIABILITY IS STATED IN RUPEES BESIDE THE INSTALLATION PRICE, because ₹1.9 lakh of recurring cost behind a ₹3.6 lakh system is not a footnote but half the purchase. This is the library's second-number rule: find the figure that constrains the flattering one and publish both — and note that a competitor's quotation genuinely looks cheaper precisely because it omits this, which is why disclosure costs an estimated ₹1.42 crore of Year-3 enquiries.**
- **A smart lock is a building egress component before it is a convenience.** Behaviour on power failure, network failure, battery exhaustion and fire alarm is stated in writing, a mechanical override is retained, and egress is DEMONSTRATED at handover with the power switched off, because a customer who has watched the door open in the dark understands something no clause conveys. **34 configurations were refused in Year 3 — keyless-only front doors, no internal manual egress, battery-dependent designs with no fail-safe — and the refusal is not negotiable at any price. A customer may specify his own convenience; he may not specify a door his guest cannot open. Disclosure does not discharge the obligation to refuse.**
- **The people in the frame were never asked.** Domestic staff, drivers, guests, tenants and neighbours are recorded continuously; none is this operator's customer, none consented, and none will be told unless somebody chooses to tell them — the same third-party pattern as the previous owner's data in the refurbished-electronics plan, where the harm lands outside the transaction and the incentive structure therefore ignores it. Entry notices, field-of-view surveys repeated whenever a camera moves, absolute exclusion of bedrooms, bathrooms and staff quarters, and a written recording-and-retention explanation given to the household. **The same principle governs the elderly-monitoring segment, where the customer and the person watched are different people: the resident is informed, camera placement is agreed with her, and she is shown what is recorded — regardless of who paid.**
- **This business promises to be easy to leave, which is the opposite of the trade's instinct.** The customer receives the full configuration, device inventory, network diagram, credentials and subscription schedule so another integrator can take over without rebuilding. **The usual practice — make the system incomprehensible to anyone else and the AMC renews itself — is why industry renewal rates mean nothing, since a renewal extracted from a hostage is not evidence of satisfaction. An 86% renewal rate is quotable here only because these customers could have left.**
- **The metrics that must rise are stated as such.** Refused configurations rise from 11 to 34 as volume grows, because a safety review that refuses nothing in a trade where keyless front doors are routinely requested is not reviewing. AMC attach is never reported without the rate at which preventive visits are actually delivered — 61% beside 97%, against a trade norm nearer 71% — per the vertical anchor's rule that an attach rate alone describes a fee for a promise rather than a price for a service.
- **The controls are built to survive a bad quarter, per the components plan's durability test.** Each has a second, self-interested justification: evidenced revocation is also the defence against blame for a breach this operator did not

cause; the safety refusal log is also what makes the cash flow capitalisable; the configuration handover is also what makes the renewal rate mean something to an investor. **A control that depends only on the customer valuing honesty does not survive the first month the numbers are short. And because handover is where all of them are defeated at once by people acting in good faith to meet a date, the project cannot be marked complete, invoiced or recognised as revenue until revocation, egress demonstration and configuration handover are recorded — three disciplines converted into three conditions on getting paid, with commissioning reporting to the promoter rather than to projects.**

- **Dealership incentive income of ₹2.44 crore in Year 3 is almost as large as PAT and is disclosed as a separate line** rather than netted into material cost, per the consumer-durables rule — and an incentive that steers which brand is specified is disclosed to the customer, because a recommendation paid for by the manufacturer is advice he is entitled to price accordingly. The cost of the plan's central control is stated rather than implied: ₹48 lakh a year for the handover gate, safety review and verification, and roughly ₹64 lakh a year for employing technicians rather than subcontracting access to customers' homes.
- **Compliance is continuous and unusually personal.** DPDP Act 2023 obligations over footage, audio, occupancy and access logs; Information Technology Act provisions on unauthorised access and violation of privacy, under which "we kept it for support" is not a defence; egress and fire-safety norms and National Building Code considerations reaching smart locks; electrical contractor licensing; BIS and mandatory registration on electronics supplied; consumer-protection provisions on longevity and support claims; e-waste and EPR; GST with works-contract treatment; and EPF/ESI and POSH across a workforce that enters homes. Professional advice should be taken on the specific city, platform mix and customer base.

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