CNX Vinyl

A full-chain vinyl record plant for Asia-Pacific, in Chiang Mai, Thailand

Investment proposal, Plans A (~180M THB) and B (~215M THB), October 2026, draft. One plant, two ways to fund it.

~182M
THB, Plan A at the midpoint, labelled ~180M: six cost levers

~217M
THB, Plan B at the midpoint, labelled ~215M: everything in

0.58 to 0.90M
records a year at 60 % specials, the same three presses in both est.

Simona Meesaiyati, Project Lead · Alexander Grabowski, Technical Consultant · supported by buildfor.life · label name Poy Records



Plan A as the plant and business plan calculator draws it: schematic, on the Payap scenario layout and a placeholder plot. The site is not decided.

Source: business plans A and B, draft 0.3 (October 2026), cover and section 1; total-investment.md "Two plans". Render: fleet-calculator.html, Plan A preset. Both prices include the 10M to 20M THB ramp-up reserve and carry no contingency.

Asia-Pacific labels press on other continents. We know of no full-chain plant in the region.

WHERE REGIONAL CUSTOMERS PRESS TODAY

Europe, the US, Japan

Labels in Southeast Asia, Australia and much of East Asia ship masters there, wait in those queues and pay freight and time zones on top.

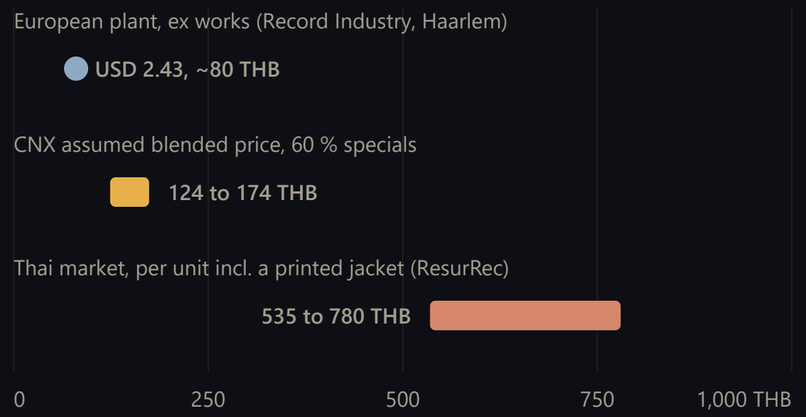
10 to 16 weeks

roughly, for a standard black LP at European and US plants today, after 6 to 9 months at the 2021 to 2022 peak.

One shop

The one Thai pressing shop we have seen presses only: it buys its stampers abroad, has no climate control, and cannot economically serve runs under 300 units.

PRICE PER RECORD: THE TWO MARKET DATA POINTS ON FILE



Scopes differ. Europe: black pressing with printed labels and a paper inner sleeve at 300 copies. CNX: the plan's assumed price, USD 3.76 to 5.27, covering pressing, labels, inner sleeve and assembly at 60 % specials. Thailand: the per-unit price from the August 2026 invoices (650 to 950 THB all-in at 300), a printed jacket included; several times the CNX assumption even after 100 to 150 THB for the jacket.

WHAT IS STILL OPEN

- **Market validation is open** (roadmap item 1): no buyer prices yet. The Thai data is one buyer, one plant, one afternoon.
- Making Vinyl Europe, Haarlem: strong supplier interest in full traceability. Supply-side evidence, not buyer validation.
- The plan keeps its assumed price until buyers have been asked.
- We compete on capability, not on price: in-house plating, climate control, metrology, traceability, short runs and represses from archived metal.

Source: business plan A, sections 1, 3.1 to 3.3 and 9.1; revenue-model.md "First market data point" and "Record Industry's calculator"; roadmap.md item 1. THB at 33 per USD.

The complete vinyl chain under one roof, bought in one capital round

1. **Mastering** — Console and chain; one to two engineers
2. **Lacquer cutting** — Sillitoe SDMS cutting system
3. **Galvanics** — Pheenix Alpha line; zero liquid discharge
4. **Stamper prep** — Sibert back-finish, punch, coin
5. **Pressing** — Newbilt Duplex system and Classic
6. **Finishing** — Trim, sleeve, shrink; optical QC
7. **Packaging** — Ploy Printing, Chiang Mai
8. **Fulfilment** — Bulk to labels, parcels to fans

3 presses

One Newbilt Duplex system (two semi-automatic HRP 12, EX 50 main and EX 35 colour extruder) and one Newbilt Classic, fully automatic

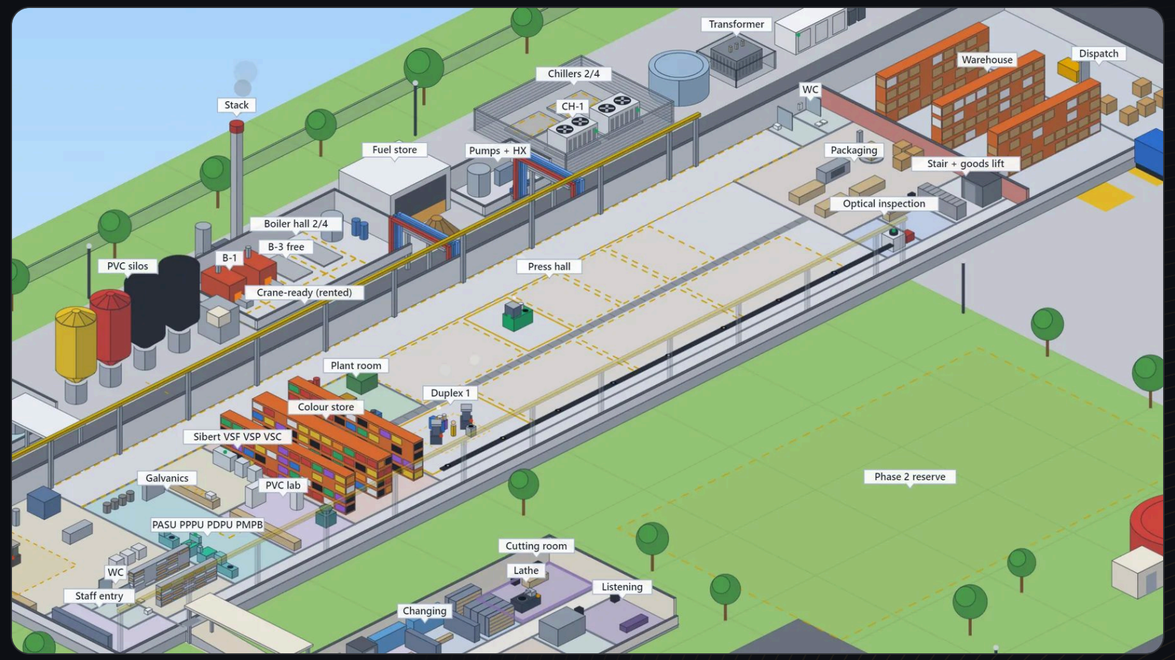
0.58 to 0.90M

records a year on two shifts at 60 % specials, central 0.74M est.; 0.71 to 0.97M at a standard-heavy mix

60 %+

special pressings: splatter, marble, colour effects. They run only on the Duplex, which sets the pace

- **Metal archive:** the father and the mother of every side are kept, so a repress starts from our own metal: 2 to 3 weeks from an archived mother (planning figure).
- **Growth from revenue, not in either price:** a second Duplex system lifts output to ~1.0 to 1.5M records a year; its floor, utility positions and pipe tees are reserved.



Press hall, Plan A preset: Duplex system 1 and the Classic; dashed bays are reserved for growth. Schematic (fleet-calculator.html).

Source: business plan A, sections 1, 4.0 to 4.4 and 4.7; total-investment.md "Launch plant"; scale.md; production-timeline.md; equipment/pressing-line.md.

HOW A RECORD IS MADE HERE

Nine stages, three artist approval gates, every record traceable

1 Audio intake
Checksums, format, technical QA

Gate 1 master plan

2 Vinyl mastering
Engineer QA of the vinyl master

Gate 2 master

3 Lathe cutting
Groove microscope, test cut, dead-wax scribe

4 Silvering, electro-forming
Bath logs, XRF thickness per part

5 Stamper prep
Concentricity, dimensions, visual

6 Pressing
Telemetry per cycle, 100 % optical, sampled audio

Gate 3 test pressing

7 Finishing
Trim quality, sleeving

8 Packaging
Matrix code scanned against the jacket barcode

9 Fulfilment
Carrier tracking per shipment

Traceability

A record's key is stamper + press + cycle timestamp + side. Logs are append-only; a complaint resolves to one stamper, press, shift and material lot.

One system of record

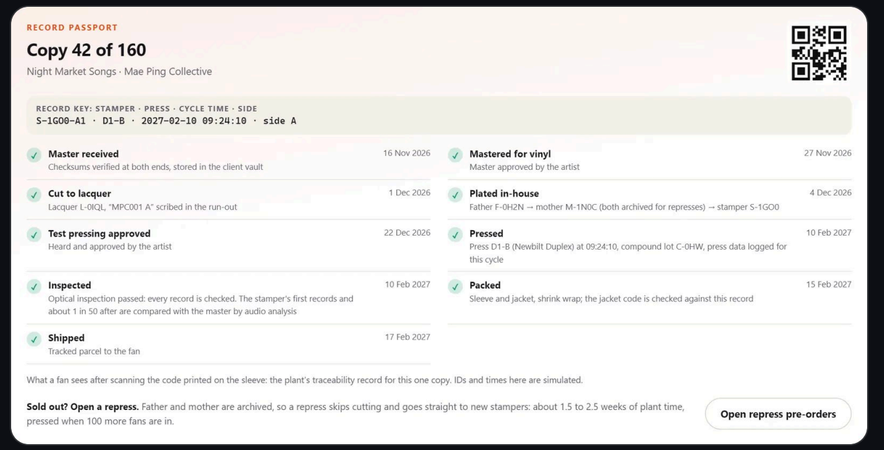
ERPNext holds orders, gates, job cards, stock, inspections and metal-part genealogy; machine data sits beside it, keyed to the same names.

Layered quality control

Inline optical inspection of every record, press telemetry every cycle, sampled audio comparison against the master; a lab gate for every PVC lot.

Metal and climate

XRF thickness per stamper serial from launch; the whole plant at 20 to 26 °C and 35 to 60 % RH, filtered for the burning season.



Record passport demo: what a fan sees from the code on the sleeve (IDs simulated, make-a-record.html).

100 %
of records through inline optical inspection

3 gates
artist approvals recorded before work continues

~10 sets
of stampers per archived mother; 5 to 10 mothers per father (rules of thumb)

Source: process-flow.md; traceability.md; quality-automation.md; digital-factory.md; business plan A, sections 4 and 5.1 to 5.3.

Online ordering with itemised quotes, and fan-funded pressing



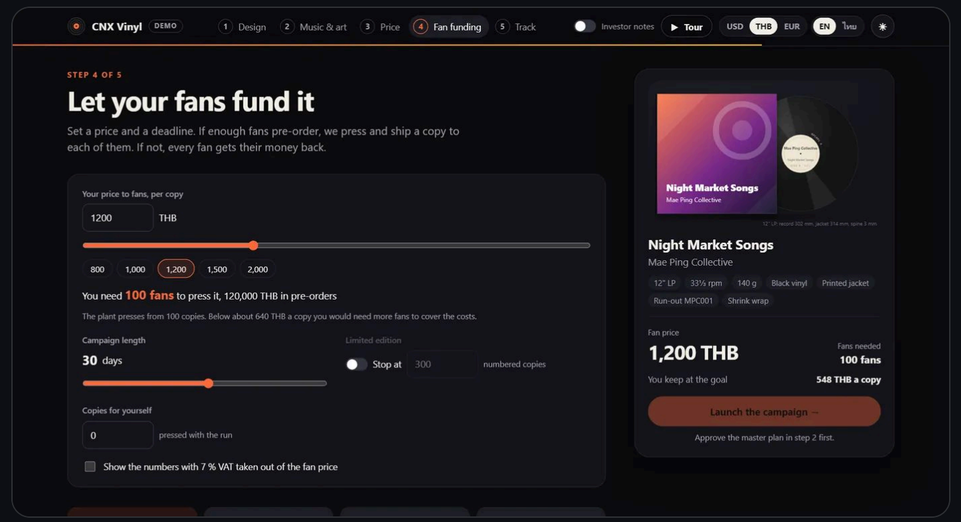
Step-by-step order page, step 4 with the "Splatter 12"" preset: the picture follows every option. Demo; prices and dates indicative, not an offer (order.html).

An itemised offer for every customer

Every line priced from one price list, per title and per copy, with audio and artwork checked at upload. ERPNext is the system of record: the order, the three gates and the invoice live there. Public early with indicative prices and an interest list, so every configuration is market data.

Fan-funded campaigns

Fans pre-order into a ring-fenced account and are refunded automatically if the goal is missed (the recommended model). Minimum run 100 copies, a planning figure. Campaigns open only after the first releases ship.

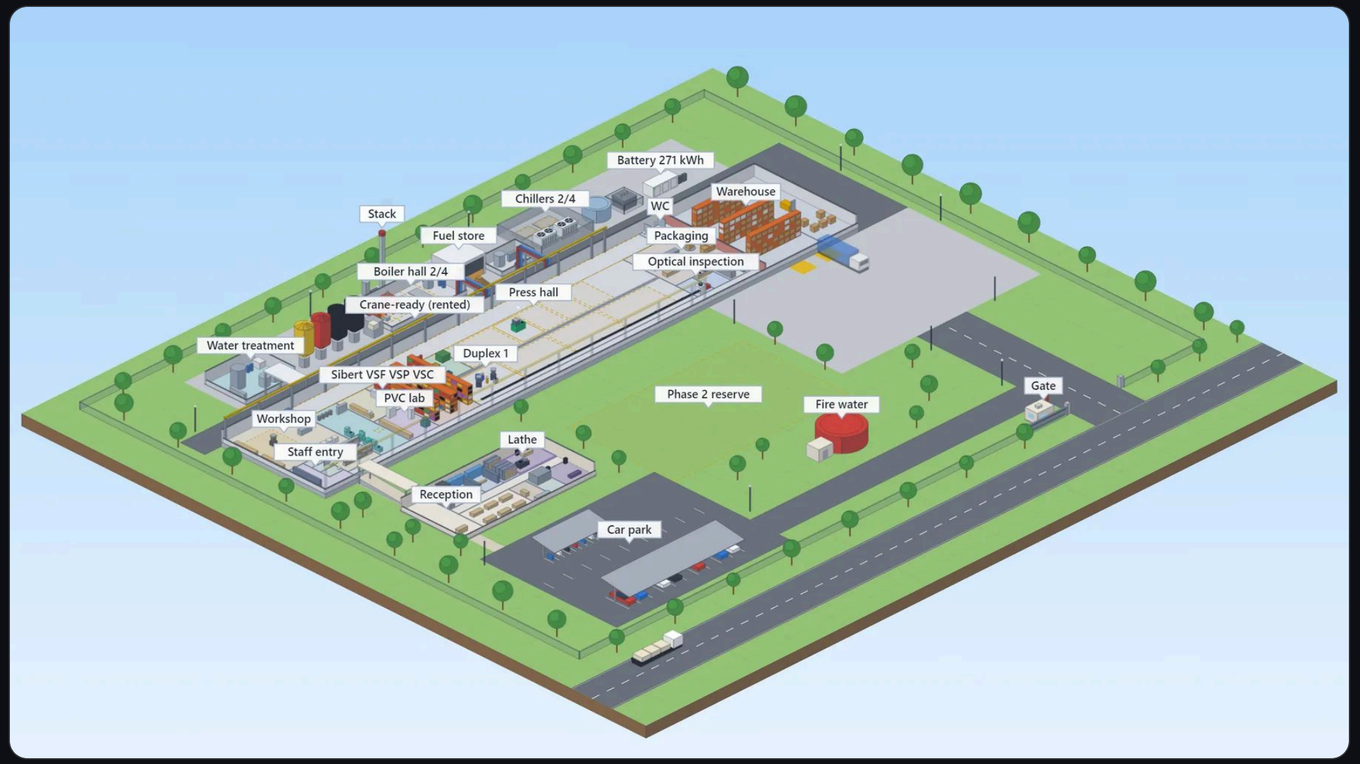


Investor demo, fan-funding step (make-a-record.html). The platform's name is not decided.

Source: artist-platform.md; business plan A, sections 4.8 and 5.1; digital-factory.md "ERPNext: the plant's ERP". Public side ~USD 40k to 90k *est.*, inside the software block.

SITE AND BUILDING

A ~1,500 m² plant on leased land, utilities built for four modules



Ground floor with the roofs cut away, Plan A preset: galvanics, stamper prep, PVC lab, press hall, inspection, packaging and warehouse; the office with the cutting room. Schematic of the calculator's Payap scenario layout on a placeholder plot.

SITE Long lease, working candidate in Lamphun (Mueang Chi), Chiang Mai options under review; Northern Region Industrial Estate as fallback. Nothing signed.

LAND ~4 rai minimum, 6 to 8 rai with expansion. Leasing keeps ~12M to 32M THB of land purchase out of the round; rent ~0.3M to 1.0M THB a year est.

BUILDING Steel portal frame, 60 × 25 m (1,500 m²), crane-ready; 30 kN/m² slab raised 1.2 m for dock-height loading; insulated, airtight envelope.

UTILITY YARD ~379 m²: boiler hall and chiller compound for four modules each. Launch: two 500 kg/h biomass boilers, two 250 kW chillers.

ROOF ~520 kWp PV on the factory roof est.; the office roof and the canopies built PV-ready.

GROWTH Duplex bays and utility positions reserved; a 45 × 38 m (1,710 m²) second building fits the Mueang Chi plot.

Source: business plan A, sections 6.1 and 6.2; site-candidates.md; scale.md; render: fleet-calculator.html, Plan A preset. The 60 × 25 m hall is the Mueang Chi design; the layout is fixed once a plot passes zoning and lease-ability.

Biomass steam, factory-roof solar and zero liquid discharge, in Northern Thailand

STEAM FROM BIOMASS

Biomass fuel
~0.67M THB/yr

Electric steam
~4.9M THB/yr

Two 500 kg/h modules on wood chips: **~0.67M THB** of fuel a year against **~4.9M THB** for electric steam, saving ~4.2M THB est. Grid demand ~264 kW instead of ~980 kW.

Heat recovered first: flue-gas economiser, condensate return, a heat pump lifting the presses' ~60 °C cooling return into feedwater.

SOLAR ON THE FACTORY ROOF

~520 kWp

Share of the plant's electricity

~61 % ~633 of ~1,036 MWh

~730 to 780 MWh a year, ~87 % used on site: ~633 MWh, ~61 % of the plant's ~1,036 MWh est. Zero export on PEA's grid.

Plan A: through a solar PPA, ~1.9M THB a year power price est. **Plan B:** owned, with the 271 kWh battery.

WATER AND MATERIAL

Zero

process water discharged

Closed cooling loop. Galvanics rinse water goes through a zero-discharge evaporator with metal recovery, in its own treatment building.

80 % virgin, 20 % regrind: edge trim and rejects are ground in-house and go back to the extruder.

NORTHERN THAILAND

~15 to 25

jobs across shifts at volume est.

Skilled roles in galvanics, cutting, QC and IT; Payap University programmes as a training pipeline (under discussion).

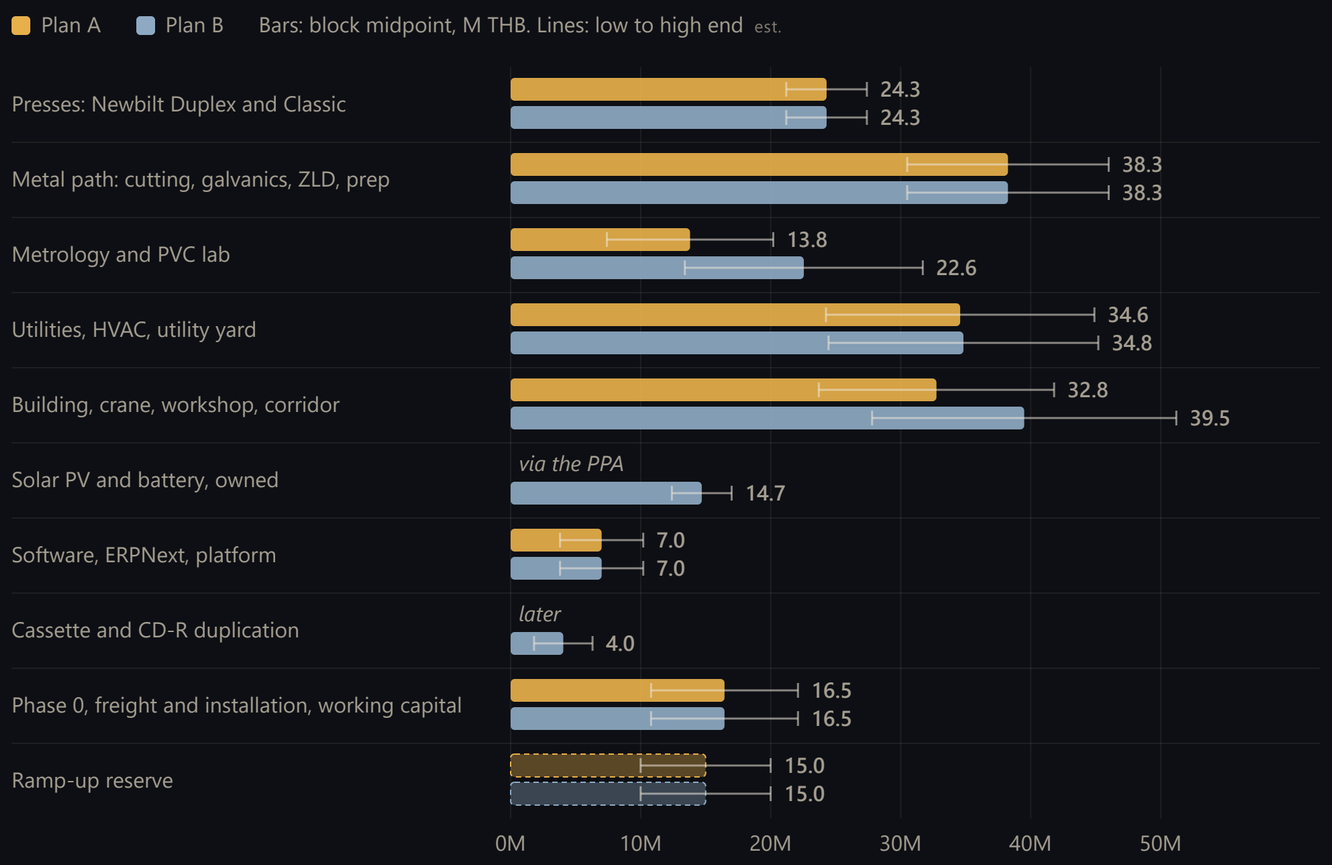
Chiang Mai, Lamphun and Lampang: the Northern Economic Corridor, promoted by BOI as a creative-economy base. Packaging from Chiang Mai.

> Biomass brings fuel contracts, a monsoon stock, ash handling, a 14 m stack with a dust collector and a certified boiler attendant; the stack is a visible point source in Chiang Mai's burning season, so dust control is drawn from the start.

Source: business plan A, sections 1, 5.4, 8.4 and 12.1; biomass.md; sustainability.md "PV size with biomass steam"; boi.md "Regional angle"; scale.md. Fuel at ~850k records, planning price 1.35 to 2 THB/kg delivered.

INVESTMENT

Plan A ~182M THB, Plan B ~217M THB: the same plant, six levers apart



PLAN A

~182M THB

167.1M plus the 10M to 20M ramp-up reserve; ~132M to 233M low to high. Labelled ~180M: ~2M above it at the midpoint.

PLAN B

~217M THB

201.6M plus the same reserve; ~156M to 277M low to high. Labelled ~215M.

PLAN A'S SIX LEVERS, SAVING AT THE MIDPOINT

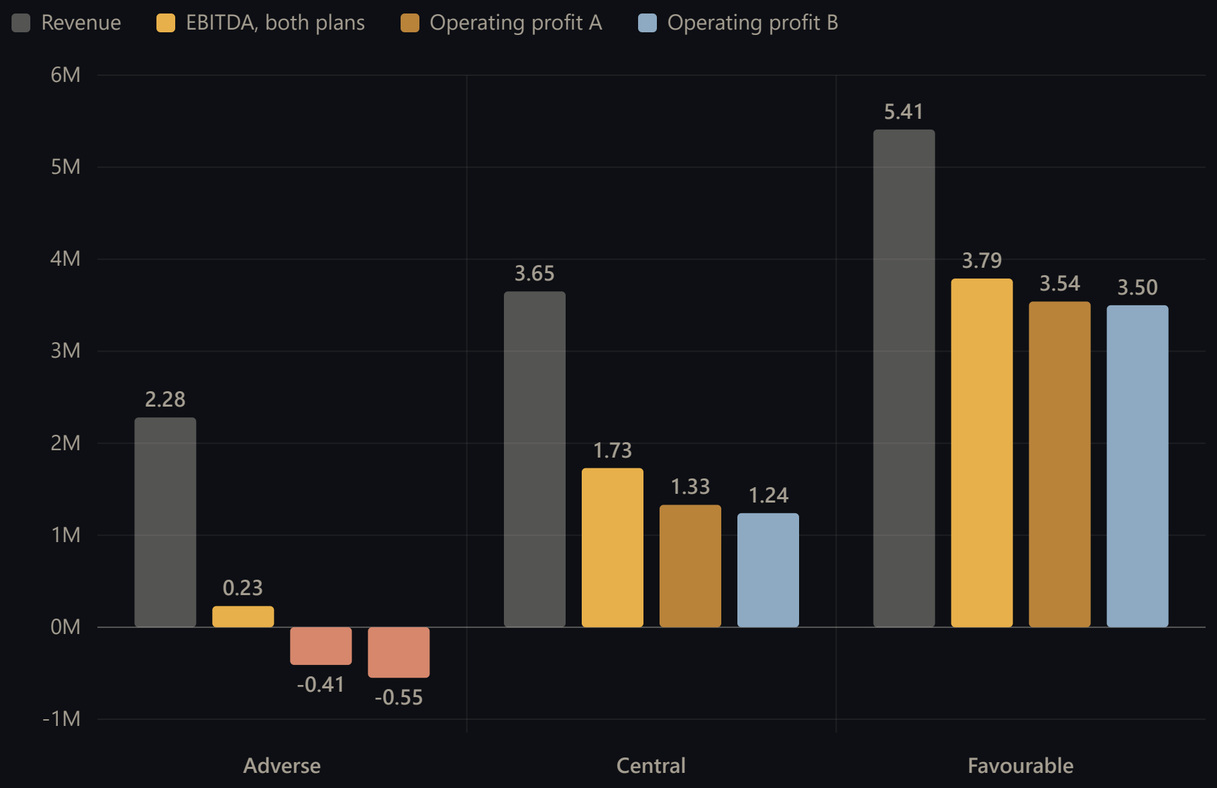
LEVER	M THB
1 · Solar and battery through a solar PPA	~14.7
2 · Metrology launch tier; confocal, profiler from revenue	~8.8
3 · Visitor corridor built later	~3.6
4 · Cassette and CD-R duplication later	~4.0
5 · Crane rented for the installations	~3.2
6 · Compressor through the Chinese route	~0.25
Plan B buys all six at launch	**~34.5**

No contingency in either price (at 15 %: ~25M THB on A, ~30M on B). Not in the price: the central hydraulic plant, archive shelving, CD replication, financing costs, currency moves, duty and import VAT (BOI assumed).

Source: business plans A and B, sections 8.1 and 8.2; total-investment.md "Launch plant" and "Two plans". Block groups and their midpoints are arithmetic on the block ranges. A Chinese biomass boiler quote ~2M THB below the Thai package would bring Plan A to 180M.

OPERATING PICTURE, MATURE YEAR

The central case works; the adverse case loses money



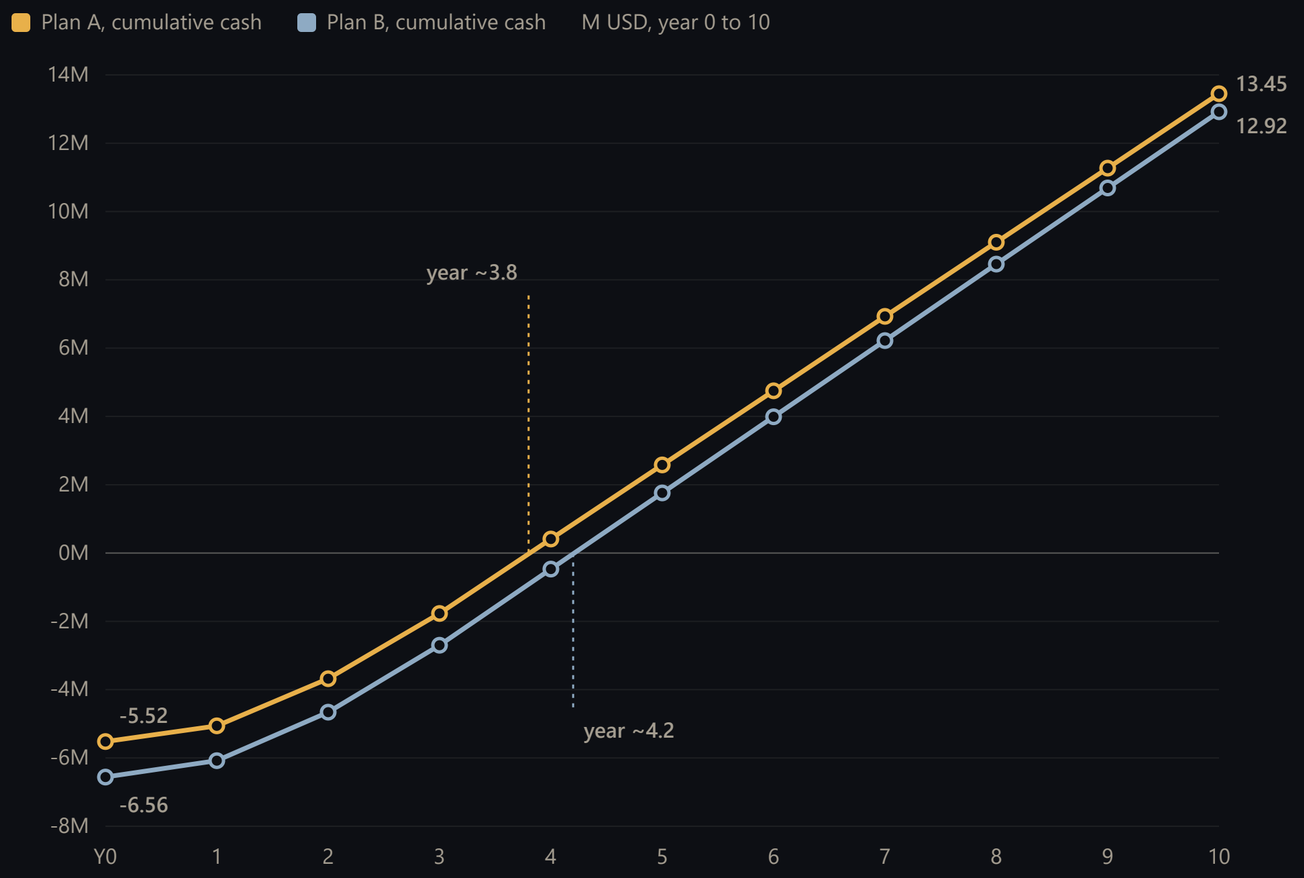
USD A YEAR	ADVERSE	CENTRAL	FAVOURABLE
Records	0.58M	0.74M	0.90M
Price per record	3.76	4.49	5.27
Direct cost per record	2.70	2.00	1.35
Revenue	2.28M	3.65M	5.41M
Revenue, THB	~75M	~120M	~179M
EBITDA	0.23M	1.73M	3.79M
Operating profit A	-0.41M	1.33M	3.54M
Operating profit B	-0.55M	1.24M	3.50M
Payback A, plan price	~31 yr	~3.2 yr	~1.1 yr
Payback B, plan price	~37 yr	~3.8 yr	~1.2 yr

Read the adverse column as the honest one. A central EBITDA margin of ~47 % is far above the 15 to 25 % pressing plants earn: the direct cost leaves out indirect labour, freight, scrap above the reject allowance, sales commissions and the extra cost of specials.

Source: revenue-model.md "Operating pictures of Plan A and Plan B (October 2026)"; business plans A and B, section 9.4. Estimates, mature year at 60 % specials; payback is EBITDA on the plan price including the reserve. Break-even on operating profit ~0.2M records (A), ~0.24M (B); the adverse case needs ~1.0M (A) or ~1.1M (B) records to cover depreciation.

CASH AND RETURNS

Ten years of cash: back to zero in year ~3.8 (Plan A) and ~4.2 (Plan B)



CALCULATOR PRESETS	PLAN A	PLAN B
Cash payback	year ~3.8	year ~4.2
IRR, ten years	~26 %	~22 %
NPV at 10 %	~5.4M USD	~4.7M USD
Year 0: investment and reserve	5.52M USD	6.56M USD
Mature-year EBITDA	2.17M USD	2.23M USD
Simple payback: plan price before the reserve / mature EBITDA	2.3 yr	2.7 yr

Basis: 850k records at 60 % specials at the team's planning rate (3 records a minute per Duplex system), the calculator's own cost build-up with biomass fuel, the cutting engineer and, in Plan A, the PPA power price. Ramp 35, 70 and 90 % in years 1 to 3. Pre-tax, pre-financing, no BOI tax holiday, no terminal value: a sketch, not a forecast.

In the revenue model's adverse case, EBITDA pays the plan price back in ~31 years (A) and ~37 years (B). A year-by-year cash model for the ramp is a phase 0 output.

Source: business plans A and B, section 9.4 and figure 12; fleet-calculator.html, presets planA and planB, cash view (values read from the page, October 2026); revenue-model.md. Estimates.

BOI PROMOTION AND FINANCING

Duty-free machinery under BOI, debt-to-equity no higher than 3:1

CATEGORY	Basic plastic consumer-goods manufacturing (Category 6), incentive Group B: no tax holiday on the core activity. Sub-code to confirm with a BOI-registered consultant.	TO CONFIRM
PRIVILEGES	Machinery import duty exemption, with import VAT; 100 % foreign ownership; visas and work permits through the One Stop Service; raw-material duty relief for export production.	GROUP B CORE
UPGRADES	Smart and Sustainable Industry (15/2565, refreshed July 2025): typically 3 years of CIT exemption, capped around 50 % of the upgrade spend; R&D merit at 1 % of revenue adds 1 to 3 years.	TO STRUCTURE
SOLAR	No longer promoted since 1 July 2025 (Announcement 3/2568). Only battery storage may still qualify, capped at 12M THB per MW.	SOLAR DROPPED
CONDITIONS	Debt-to-equity no higher than 3:1 for the life of the privileges; minimum 1M THB excluding land and working capital; modern machinery; progress and annual reports; machinery imported within ~30 months, full operation by ~36 months.	BINDING
PROCESS	e-Investment filing and analyst meeting; ~40 working days to a decision under 200M THB, 60 to 90 above; 4 to 6 months in practice. No machinery order before the certificate.	PHASE 0

FUNDING NEED, RESERVE IN, NO CONTINGENCY

~182M THB

Plan A, ~5.52M USD. Equity at 3:1: at least a quarter, ~46M THB

~217M THB

Plan B, ~6.56M USD. Equity at 3:1: at least a quarter, ~54M THB

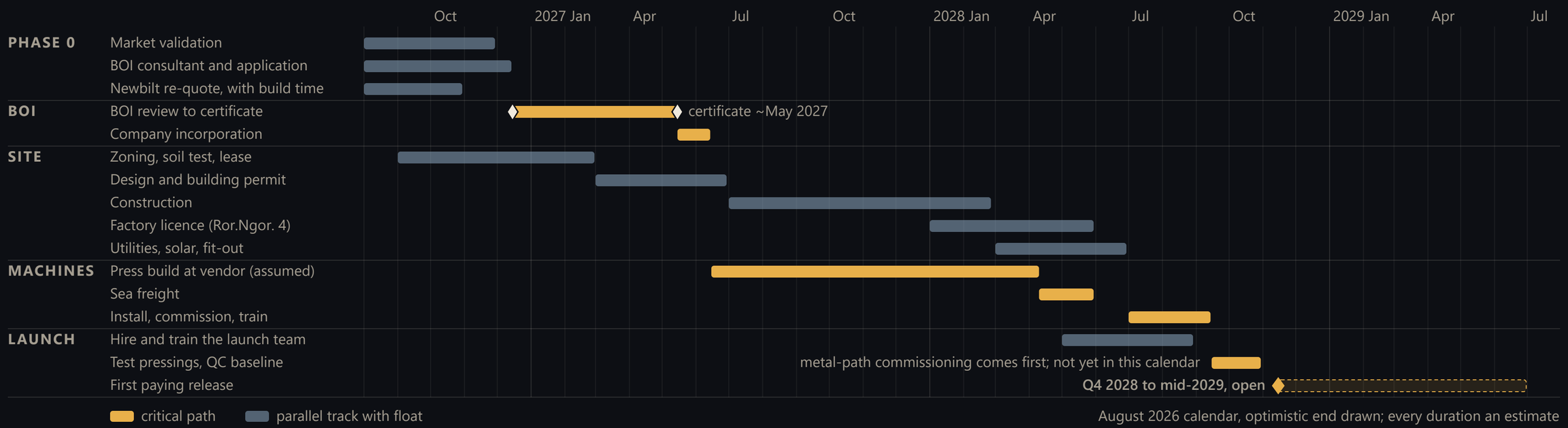
COLLATERAL	The machinery and equipment. The building only if the lease grants its ownership and the right to mortgage it, a lease condition. No land collateral: the site is a long lease of raw land.
EQUITY	The lead investor; Ploy Printing as intended strategic co-investor (terms not yet discussed); the founders.
USE OF FUNDS	Plan A at the midpoint: equipment (presses, metal path, metrology, lab) ~76M THB, utilities ~35M, building and site ~33M, software, freight, working capital and phase 0 ~23M (block midpoints est.), plus the reserve; released in tranches (slide 15).
WITHOUT BOI	~5 % duty on ~2.3M USD of imported machinery (~0.11M USD) and ~0.17M USD of import VAT up front est.

> Financing structure to be agreed. No loan terms, interest rate or debt-service figures are on file.

Source: boi.md; business plan A, sections 6.1, 7.1, 8.4 and 12.2; business plan B, section 1 ("The ask"); total-investment.md "Launch plant". Equity floors and use-of-funds groups are arithmetic on the plan's figures, before financing costs.

SCHEDULE

First paying release: Q4 2028 to mid-2029, and still open



COMMISSIONING SEQUENCE

1. Cutting room and galvanics, with the Sibert line: the presses need their stampers.
2. Newbilt Duplex system, with boilers B-1 and B-2 and chillers CH-1 and CH-2.
3. Newbilt Classic, once the metal path and the press process are stable.

LONG-LEAD ORDERS, AFTER THE CERTIFICATE

Pheenix galvanics line, Sillitoe lathe, Sibert line, Newbilt Duplex system and Classic, two biomass boiler modules, the first two chiller modules. Press build 9 to 12 months, assumed; the other build times are not quoted.

WHAT MOVES THE DATE

The BOI filing date and the vendor build times: a 15 to 18 month press build moves launch to mid-2029. Ordering with a deposit before the certificate, if BOI allows it, could bring launch 6 to 9 months earlier.

Source: project-timeline.md, calendar anchored August 2026 (nothing in phase 0 has started, so it shifts day for day; not yet redrawn for the launch plant); business plan A, sections 10 and 11.1; roadmap.md phases 0 to 4.

RISKS AND MITIGATIONS

The risks we carry, and what retires each one

SEVERITY	RISK	MITIGATION AND STATUS
HIGH	Pricing power is unproven: market validation (roadmap item 1) is open, with no buyer prices yet	Validation gate with regional labels; the platform's calculator as an interest list; no large spending before it clears
HIGH	Utilisation and price: the adverse case loses money; the extra cost of specials is not yet in the direct cost	Treat the adverse column as the honest one; specials gain an upper bound until compound quotes; second Duplex waits for demand
HIGH	No contingency in the price: at 15 %, ~25M THB on A and ~30M on B	Quotes before commitment; release in tranches; how overruns are funded agreed up front
HIGH	Galvanics and cutting on the critical path, galvanics the hardest skill to hire. Sibert advised getting presses, boilers, operators and feedback loops right first	Advice carried as a risk: commission the metal path first and measure it; hire early, train at the vendors; Stamper Discs and SST as overflow contacts
HIGH	Prices not on file: the Newbilt Classic (placeholder band) and the Pheenix line (OMS reference + 20 %, no Pheenix quote)	Newbilt re-quote and Pheenix quote in phase 0; OMS's offer as the galvanics benchmark
HIGH	Vendor build times unknown: the press build carries ~40 % of the schedule	Build time and order-book position required in every re-quote
HIGH	Zoning unverified: the Payap point failed, Mueang Chi is unchecked	Verify on the land-use map and with counsel before the BOI filing; industrial estate as fallback
MEDIUM	Lease terms and building ownership: a weak lease makes the building hard to finance	Registered 30 to 50 year lease with renewal, building ownership and assignment rights; Thai counsel in phase 0
MEDIUM	Galvanics effluent and biomass emissions in the first factory licence	Zero-discharge design and treatment building from the start; dust collector and 14 m stack drawn; fuel contracts
MEDIUM	Currency: EUR on Newbilt and Pheenix, USD on Sibert and Sillitoe, costs in THB	Currency and validity in every quote; THB pricing regionally; hedging decided with the investor

Source: business plan A, sections 11.2 and 13 (severities as the plan states them); revenue-model.md "Honest caveats"; roadmap.md item 1; site-candidates.md.

A small founding team, specialist vendors and a local packaging partner

TEAM

Simona Meesaiyati

PROJECT LEAD

Management and the audio side.

Alexander Grabowski

TECHNICAL CONSULTANT

The technical side: equipment and vendors, utilities, the building model, the traceability and QC specification, the factory software.

buildfor.life

CONSULTING

Supports the project in a consulting capacity.

To hire at launch: a galvanics process engineer and a cutting engineer (critical path), a plant manager, two shifts of operators, QC, maintenance, sales. About 20 people at the start est.

PARTNERS

Ploy Printing

CHIANG MAI · PACKAGING

Jackets, sleeves and inserts; intends to co-invest alongside the lead investor, terms not yet discussed. Supply priced at arm's length, Ploy abstaining on its own contract.

Payap University

CHIANG MAI · UNDER DISCUSSION

Joint student programmes in mastering, lathe cutting, IT and business. Nothing agreed yet.

Advisers, phase 0

TO ENGAGE

A BOI-registered consultant; Thai counsel for the lease, the company and the shareholder agreement.

VENDORS

VENDOR	SUPPLIES	ON FILE
Newbilt Germany	Duplex system and Classic presses	2024 quote EUR 200,500 for the Single 2.1, expired; Classic not priced
Pheenix Alpha Sweden	Galvanics: PASU, PPPU, PDPU, PMPB	No quote; priced at OMS's reference + 20 %
Sibert UK	Stamper prep: VSF, VSP, VSC	USD 250k budget confirmed, October 2026
Sillitoe Australia	SDMS cutting system	List price USD 125k
Ploy Printing Chiang Mai	Print and packaging	Partner

Making Vinyl Europe, Haarlem, 30 September to 2 October 2026: strong interest in full traceability; Pheenix offered references and a factory visit, OMS sent galvanics reference prices, SST Frankfurt offered help. Supplier-side evidence.

Source: README "Team"; business plan A, sections 1, 12.1 and 12.2; equipment/pressing-line.md; equipment/galvanics.md; suppliers/vendor-landscape.md.

THE ASK AND NEXT STEPS

Approve phase 0 now; commit in tranches once the gates clear

NOW: PHASE 0

1.3M to 2.6M THB

~USD 40k to 80k over 3 to 6 months, part of the plan price

BOI consultant, Thai counsel for the lease and zoning, a soil boring test, and the quotes that settle most of the investment band. Then, on the gates clearing, a commitment in principle to one plan, released in tranches.

TRANCHES, SHARE OF THE INVESTMENT BEFORE THE RESERVE EST.

#	TRIGGER	COVERS	SHARE	A, M THB	B, M THB
0	Now	Phase 0 work	1 to 2 %	1.3 to 2.6	1.3 to 2.6
1	BOI certificate, lease, zoning, soil, pricing validated	Deposits on every long-lead order	20 to 30 %	~33 to 50	~40 to 60
2	Building permit; build dates in writing	Construction, utilities, balance payments	35 to 45 %	~58 to 75	~71 to 91
3	Building watertight; first machinery shipped	Fit-out, clean zones, ZLD, metrology, software	15 to 20 %	~25 to 33	~30 to 40
4	Metal path commissioned; first stampers	Working capital; the reserve from here on	8 to 12 %	~13 to 20	~16 to 24

THE QUOTES THAT FIRM THE NUMBERS

- [ ] Newbilt re-quote: Duplex with the EX 35, the Classic, build time
- [ ] Pheenix galvanics quote, against OMS's reference
- [ ] Sillitoe quote and build time; Sibert's itemised quotation
- [ ] Building RFQ to two or three Thai contractors, with the soil test
- [ ] Metrology quotes; solar PPA offers next to a purchase quote
- [ ] Biomass boilers from Getabec and Chinese makers; fuel offers

DECISIONS FOR THE INVESTOR

- Plan A or Plan B; the equity and debt mix within 3:1
- How quotes landing above the plan price are funded
- CD replication, yes or no, before the BOI filing; hedging of the EUR orders

Phase 0 unlocks

The BOI filing, the lease heads of terms and the zoning answer, and quotes in place of the estimated blocks: the next version of the plan.

The round unlocks

Every long-lead order and the build, commissioned in sequence: metal path, Duplex, Classic. First paying release Q4 2028 to mid-2029, open.

Revenue then funds

The second Duplex system (~15.4M THB at the midpoint est.), metrology, corridor, cassette and CD-R where Plan A defers them.

Source: business plans A and B, sections 8.3, 14.1 and 14.2; roadmap.md phases 0 to 2. Gates before any order: market validation, the BOI certificate, and land (zoning, lease terms, soil).