

MARKET-ENTRY DECISION MEMO

Brazil. Go, on a lean wedge.

A go / no-go assessment of entering the Brazilian industrial-pump market within eighteen months, on modest capital, for a company with no Brazil footprint today.

- Recommendation: GO — municipal water, staged entry

DECISION

Enter Brazil · Stage 1
export wedge
Authorize phase two on
proof

SEGMENT

Municipal water &
wastewater
Oil & gas held as
option value

CAPITAL AT RISK,
STAGE 1

Low seven figures
Bear-case loss capped ≈
US\$1.3M

HORIZON

18-month entry
window
3-year Stage-1
P&L

THE DECISION, BEFORE THE ANALYSIS

Enter Brazil through municipal water, on a capital-light export wedge. Authorize the heavy capital only on proof.

The demand curve, the procurement mechanics, and the incumbents' own positions point independently to the same door. Brazil wrote water-and-sewage universalization into federal law with a 2033 deadline and financial penalties, and converted its buyers from sleepy state utilities into private concession operators deploying tens of billions of reais on contractual capex clocks. Those buyers procure on specification, price, and reference — not through a state-owned qualification maze. A qualified newcomer can land a reference base inside the eighteen-month window.

Oil & gas is the larger, higher-margin pool of Brazilian pump demand. It fails *this* brief on two non-negotiables: a three-to-five-year qualification path and a local-content rule that effectively forces Brazilian manufacturing before the first competitive bid. It is held as **option value**, explicitly costed as a phase-two gate, not discarded.

The entry is **staged**. Stage 1 risks low seven figures to buy an option on a US\$300–450M/yr serviceable market. If it works, phase two is authorized on evidence. If it fails, the loss is capped near US\$1M even under correlated stress. That is what “lean and fast — prove the thesis before we commit big” means in financial form.

THE BOARD TRUTH, IN ONE LINE

Spend low seven figures to learn whether the lane is real, before betting the factory. The bear case is a cheap, survivable no.

THE SEGMENT CALL

Municipal water & wastewater. Legislated demand beats cyclical demand. The door is already open to US suppliers, and the client's water muscle transfers. **VERIFIED DEMAND**

THE ONE REAL RISK, NAMED

Municipal water is a **defended field**, not an empty one. Four global majors already manufacture in Brazil. The newcomer's lane is real but **narrow**: efficiency retrofit, non-revenue-water pumping, engineered duties where US spec-and-reference credibility travels.

1 The wedge

Export finished pumps through a local distributor/rep. No Brazilian factory required to start. Fastest to first revenue; near-zero fixed capital at risk.

ESTIMATED CAPEX US\$0.75–1.8M.

2 The gate

By month ~18–24: two-to-three reference wins, gross margin above a board floor, and a pipeline where local-content lead-time is the binding constraint. Only then does phase two unlock.

3 The staircase

JV / local assembly (US\$5–15M) strips the import tax and opens the O&G door. Greenfield and acquisition are later, larger, gated envelopes — not addends, not near-term.

HOW TO READ EVERY NUMBER IN THIS DOCUMENT

VERIFIED

read on the source's own page, cited

ESTIMATED

assumption stated, method shown

LEAD

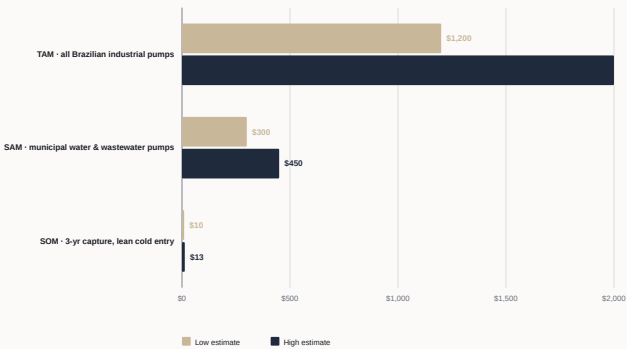
unverified; corroborating only, never load-bearing

§1 · MARKET SIZING

A US\$300–450M/yr serviceable market, sized from a demand pool whose size and legal backing are documented.

The single most-cited “Brazil industrial pumps” point estimate in the wild sits behind a bot wall and **could not be read on its owner page**. Rather than stamp a false precision, this sizing is built bottom-up from verified demand-side anchors and cross-checked against verified macro. An honest range with the method shown is the deliverable; a fabricated point estimate is not.

The market, sized from the demand engine down



TAM brackets the walled secondary lead (~US\$1.5bn) without relying on it. SAM converges from two independent methods. SOM is the realistic three-year capture for a lean cold entrant — deliberately small against the total market. **ESTIMATED RANGES**

Source: the sizing method, §1. TAM anchor: ABIMAQ apparent consumption R\$410.9bn (verified). SAM: two-method triangulation on sanitation capex × pump-content share.

Sources on this page: ABIMAQ (abimaq.org.br); DLA Piper on Lei 14.026/2020; US Commercial Service (trade.gov); Trading Economics (USD/BRL). Secondary leads (Grand View, MarkNtel, Vyansa) carried as corroboration only, never load-bearing.

THE DEMAND CERTAINTY UNDERNEATH THE RANGE

US\$128bn

framework investment the sanitation law aims to attract

PPP / concession investment already contracted since 2020

2033

/yr additional still required to hit statutory targets

legislated universalization deadline, written into law

The pump content is a share of a demand pool whose size and legal backing are verified. That is what makes the range trustworthy.

WHAT THIS SIZING CANNOT SAY

The exact BRL value of the municipal-water pump sub-market is not published on any owner page we could reach. The SAM is a **reasoned range**, not a measured figure — and it is labeled as one. The verified anchors beneath it are what a board should weight.

§1 · THE SIZING LEDGER

The ledger a board can follow — every layer, its figure, its tag, its method.

LAYER	WHAT IT MEASURES	FIGURE	TAG	BASIS / METHOD
TAM	All Brazilian industrial pumps	~US\$1.2–2.0bn/yr	EST	ABIMAQ apparent consumption R\$410.9bn V × pump-share band (1.5–2.5%); brackets the walled Grand View lead LEAD
SAM	Municipal water & wastewater pumps	~US\$300–450M/yr	EST	Two-method triangulation: sanitation capex × pump-content share (3–6%), cross-checked vs. published sub-market reads. Both methods converge on ~US\$375M midpoint.
SOM	Three-year capture, lean cold entry	~US\$10–13M/yr by Y3	EST	Share ramp 0.5% → 1.5% → 3.0% on SAM midpoint. Conservative for a cold entrant with no local manufacturing. This is the revenue ramp the P&L stands on.

The two independent methods that converge on the SAM

METHOD A — TOP-DOWN FROM THE PROGRAMME Of the ~US\$8bn/yr sanitation capex still required, electromechanical equipment runs 8–15% of a water-infrastructure dollar and pumps specifically ~3–6%. That yields ~US\$240–480M/yr of programme-attributable pump demand; adding baseline replacement demand lands ~US\$300–500M/yr. ESTIMATED BAND	METHOD B — BOTTOM-UP FROM SUB-MARKET READS Published Brazil water-pump sub-market reads (US\$110–235M, narrower definitions) grossed up to include wastewater, lift stations, and engineered transport duties give a consistent ~US\$250–450M/yr. The convergence of an independent top-down and bottom-up read is what a board should weight. SECONDARY LEADS
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WHY THE CONVERGENCE MATTERS Neither method relies on the walled point estimate. When an independent top-down read (from the legislated investment programme) and an independent bottom-up read (from published sub-market figures) land on the same ~US\$375M midpoint, the <i>order of magnitude</i> is trustworthy even though the precise figure is not published anywhere we could read. That convergence — not either single number — is the basis for the serviceable-market range the P&L rests on.

Sources: ABIMAQ (abimaq.org.br); DLA Piper on Lei 14.026/2020; US Commercial Service (trade.gov); Trading Economics (USD/BRL). Secondary leads (Grand View, MarkNtel, Vyansa) carried as corroboration only, never load-bearing.

S2 · THE FIELD AS IT ACTUALLY STANDS

Four global majors already build pumps inside Brazil. The newcomer does not out-scale them. It wins in a narrow, specific lane.

Brazilian municipal-water pumps is defended by local manufacturing, entrenched utility relationships, and national service reach. A US newcomer that enters on standard, price-driven pumps loses to firms that pay no import stack. The opening is the intersection of three facts: the incumbents are strongest where the newcomer must *not* compete; the buyer-pulled demand is for *solutions*, not commodity pumps; and new-build concession projects have no incumbent brand yet specified.

KSB

THE ONE TO ROUTE AROUND

In Brazil since **1954**. Two plants (Várzea Paulista, Jundiaí), a foundry (Americana), seven sales & service branches, one of Latin America's largest pump test facilities.

[OWN-PAGE READ](#)

Lane: KSB defines the price/availability floor. The opening is differentiated engineered duties and efficiency retrofits, where performance decides the bid, not local-content convenience.

Grundfos

OWNS THE EFFICIENCY STORY

Operates Bombas Grundfos do Brasil (São Bernardo do Campo); took over a Brazilian pump factory. Global positioning is energy-saving pumps. [SEARCH INDEX](#)

Lane: the incumbent whose strength most overlaps the entry lane. Do not compete head-on on efficiency. Win on application niches and service/responsiveness gaps.

Xylem

INSTALL BASE & RENTAL

Flygt (submersible) and Godwin (dewatering) brands; expanding dewatering rental in Brazil. Flygt is ubiquitous in Brazilian wastewater lift stations. [SEARCH INDEX](#)

Lane: displacing an installed base is slow. Target new-build concession projects and greenfield lift stations where no brand is yet specified.

Sulzer

LARGE ENGINEERED DUTY

Built five giant pumps *in Brazil* that supply ~2M people in São Paulo (São Lourenço/Sabesp, a BRL 2.21bn / US\$680M PPP), tested on the country's largest in-house test bed. [OWN-PAGE READ](#)

Lane: do not fight Sulzer for giant custom transport pumps. Play in the standardized-to-mid-engineered band beneath its flagship projects.

Flowserve

Rio de Janeiro plant with a 6 MW test stand; process/O&G-weighted. More relevant if the client ever moves toward the O&G option. [SEARCH INDEX](#)

Weir (Warman)

Mining-slurry specialist, mining-region foundry strategy. Out of scope for the municipal wedge; a marker for a later mining-dewatering adjacency. [SEARCH INDEX](#)

Domestic tier

Local brands (incl. EB Bombas for this pump class) set the price floor and the buy-local reflex. Never compete on unit price; compete on total cost of ownership. [OPEN ITEM](#)

THE LANE, IN ONE SENTENCE FOR THE BOARD

Enter as a differentiated engineered / efficiency pump supplier into new-build concession projects and energy-retrofit duties — the solutions Brazilian utilities are actively pulling from US suppliers VERIFIED, TRADE.GOV — *and compete on lifecycle value and reference credibility, never on commodity unit price against locally-manufactured incumbents.*

This lane is real but narrow, and its narrowness is the single biggest risk to the water thesis. It is carried, named, to the risk register (§6).

Sources: KSB, Sulzer own pages (own-page reads); Grundfos, Xylem, Flowserve, Weir from search-index extracts (not owner-verified this pass); trade.gov on US-supplier demand pull.

S3 · REGULATORY & LOCALIZATION REALITIES

Water is the regulatorily cleaner wedge. Oil & gas is a wall of three reinforcing barriers.

Marco Legal do Saneamento — the demand engine

Lei 14.026/2020 amended the sanitation framework and wrote universalization into the law itself: **99% water and 90% sewage coverage by 31 December 2033**, with extension only to 2040 where studies prove 2033 unfeasible.

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- **Private capital forced in structurally.** No-bid “contratos de programa” are banned; new delegation requires a concession contract preceded by competitive public bidding. **V**
- **Capacity proof required.** Every contract is conditioned on proof the operator can deliver universalization by 2033 — what pushed weak utilities toward privatization. **V**
- **ANA sets national reference norms** on efficiency, tariffs, and water-loss reduction; federal-fund access is conditioned on adopting them — a tailwind for documented-efficient product. **V**

WHO THE BUYERS ARE — AND HOW THEY BUY

Aggressive private concession operators on 35-year capex clocks: **Aegea** (CEDAE, Corsan), **Iguá** (Sergipe, R\$4.5bn bid), **BRK Ambiental**, partly-privatized **Sabesp**. Abcon Sindcon counted 23 projects to auction in 2025 at ~R\$72.4bn estimated investment. They procure on specification, price, delivery, and reference — not a state qualification regime.

VERIFIED OPERATORS & DEAL FACTS

Oil & gas — why it stays option value

Three compounding barriers make O&G a multi-year game, not an eighteen-month path to revenue:

- 1 **ANP local content.** Floors raised to **30%** for exploration and well-drilling in 2023+ rounds. Spend without an accredited local-content certificate is declared integrally foreign. A cold entrant counts as 0%. **V**
- 2 **Petrobras qualification.** Formal registration through Petronect — economic, legal, technical, and safety criteria — then pre-qualification before restricted bids. A **3–5 year path** for a cold entrant. **V REGIME** **EST TIMELINE**
- 3 **Repetro-Sped.** The customs-relief regime (to 2040) benefits the *operator's habilitated supply chain*, not an unregistered first-time foreign vendor. **V**

THE REINFORCING LOGIC

Each barrier loops back to the others: Repetro relief requires being inside the qualified chain, which requires Petrobras qualification and local content, which requires Brazilian manufacturing. A footprint problem, not a sales problem — exactly why it is a **phase-two gate**, not a phase-one door.

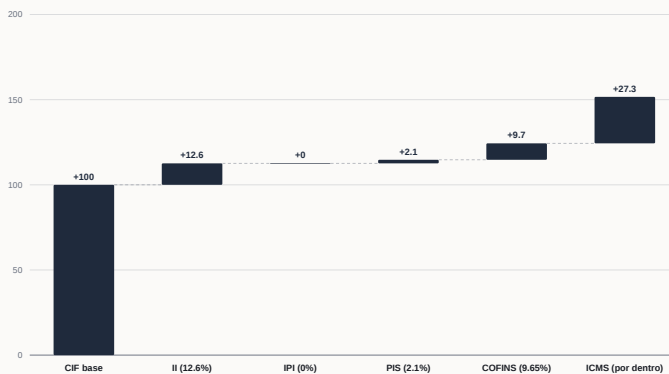
THE BRIDGE TO THE ECONOMICS

Water is the door; the tax stack is the price of walking through it as an importer. The next page works the landed-cost number the whole P&L stands on — ~50–55% of CIF — and the ladder that eventually strips it.

S3 · THE NUMBER THE P&L STANDS ON

A finished-pump import clears customs at ~152 on a CIF base of 100 — the ~50–55% stack the margin architecture lives with.

The landed-cost stack: ~52% of CIF in import taxes



Worked at an São Paulo-basis port (18% ICMS). Component rates are verified on official sources; the all-in multiplier is arithmetic on those rates and swings by state (RJ 20% higher, PR 12% lower). **VERIFIED COMPONENTS** **EST ALL-IN**

Source: the landed-cost stack, S3. NCM 8413.70.90. Res. Gecex 272/2021; Lei 10.865/2004; LC 87/1996; RICMS/SP.

TWO MECHANICS THE MODEL MUST NOT MISS

ICMS is “por dentro.” Its base includes the ICMS itself, so a nominal 18% rate lands ~27 points of load on the pre-ICMS base — not 18.

V

IPI is 0% for this pump class — genuine relief. The model does not assume a generic 5–15% IPI. **V**

TWO LEVERS THAT CAN REDUCE IT

Ex-Tarifário can cut import duty to 0% for capital goods with no national similar — but national manufacturers exist for this NCM, so relief is unreliable for standard types.

V MECHANISM

ICMS recoverability. For ICMS-taxpayer buyers, ICMS on import is a recoverable credit — a working-capital item, not always a dead cost. Modeled per buyer type. **EST LEVER**

INMETRO — THE MODERATE DOCUMENTATION BARRIER

Centrifugal pumps sit inside INMETRO's compulsory scope at the lighter tier: a **Supplier's Declaration of Conformity** plus ENCE energy-efficiency labeling, not full third-party certification. A weeks-to-months exercise (scope analysis, performance curve, efficiency-class evidence), verified at customs clearance via the DUIMP. Whether specific large industrial units fall inside the efficiency-labeling scope depends on power, flow, and rotation — confirmed per product line before first shipment.

VERIFIED · GOV.BR/INMETRO

THE ONE-LINE TAX TRUTH FOR THE BOARD

Selling *into* Brazil pays ~50–55% of CIF in import taxes and can never be “local content.” Manufacturing *in* Brazil moves the tax base to domestic value-add, earns national-product status, and is the only path to the oil & gas segment's local-content requirement. That single sentence is why the entry is staged — the ladder on the next page prices each rung.

S3 · THE LOCALIZATION LADDER

Selling into Brazil pays ~50–55% of CIF and can never be local content. Manufacturing in Brazil moves the tax base to domestic value-add.

The ladder is a real, stageable spend. Export-only is fastest and carries the highest tax drag. Local assembly is the phase-two gate: it strips the finished-unit import tax, earns national-product status, and — for the first time — opens the oil & gas local-content door. JV and greenfield are the outer options, costed so the board sees the staircase, not recommended as the entry.

RUNG	DESCRIPTION	REGULATORY & TAX PROFILE	TIME EST	CAPITAL EST
A STAGE 1	Export-only + local distributor / rep	Full import stack (~50–55% of CIF); counts as foreign content; cannot meet O&G local content. Prioritize lines where Ex-Tarifário relief is accessible.	3–9 months to first sales	Lowest — no fixed asset; commercial + certification cost only
B STAGE 2	Local assembly / CKD-SKD	Tax on <i>components</i> , not the finished unit. If Brazilian content >60%, escapes the 4% interstate ICMS cap and earns national-product status.	12–24 months	Moderate — leased plant, assembly line, inventory, working capital
C STAGE 2	JV / partner with a Brazilian manufacturer	Inherits the partner's national-product status, ICMS position, and — the fastest route — O&G local-content certification and a Petrobras qualification pathway.	12–24 months	Moderate–high — equity / earn-in, integration; lower greenfield risk
D STAGE 3	Greenfield manufacturing	Full national manufacturer: no finished-unit import tax, maximum procurement preference, O&G eligibility — and full Custo Brasil labor/tax/operating exposure.	24–48 months	Highest

Rung time and capital ranges are estimated market practice, flagged for pressure-testing against a Brazilian tax/customs advisor before phase-two commitment. Source: the localization ladder, §4.

The “Custo Brasil” case for localizing — even in water

- An imported pump carries a structural cost penalty that a locally-made equivalent (KSB Brasil, EB Bombas) does not. **V**
- Local assembly pushing Brazilian content **above 60%** escapes the 4% interstate-ICMS cap, unlocks normal 7–12% rates, and earns national-product status. **V**
- National-product status confers **procurement preference** in many tenders — directly relevant to concessionaire bidding, decisive for O&G. **V**

THE STAGED REGULATORY RECOMMENDATION

Phase 1 (0–18 mo): Rung A. Prove the reference base and margin on commercial merit. The ~50–55% stack is the honest price constraint.

Phase 2 gate (on proof): Rung B or C. Assembly strips the import tax and opens O&G; a JV additionally shortcuts Petrobras qualification.

Rung D: high-conviction, later-stage. Costed as the outer option, not the entry.

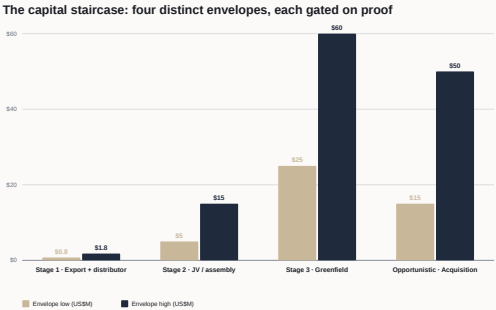
§4 • ENTRY MODELS COMPARED

A capital staircase. Each step is authorized only by the proof the prior step produced.

A staged recommendation for a lean cold entrant, **not four equal options**. The export wedge is the only model that fits both the eighteen-month clock and the lean posture. The envelopes beyond it are four *distinct* gate figures — not addends, and none modeled as near-term revenue.

A READING DISCIPLINE FOR THE BOARD

The four capital envelopes are not summed into a phantom total. Stage 2, Stage 3, and acquisition are authorized **only** on the proof of the stage before them — distinct envelopes on a staircase, each with its own gate.



Each envelope is a range, and each is gated. Stage 1 risks low seven figures; the heavy capital is committed only after the thesis is proven.

ESTIMATED ENVELOPES

Source: the entry-model economics, §4. Order-of-magnitude bands, to be refined with real Brazilian factory / deal comps.

The four models, honestly compared

MODEL	CAPEX TO START	TIME TO FIRST REVENUE	LOCAL CONTENT / LEAD-TIME	THE TRADE A CFO READS
Export + distributor ✓ STAGE 1	~US\$0.5–1.5M	Within 18 months	Weakest — full import stack; no local-content credit	The cheapest way to learn if you can win. Risk capped at low seven figures. You find out whether the lane is real before betting the factory.
JV / partner STAGE 2	~US\$5–15M	24–36 months	Strong — local content, cut lead time, partner channel	Buys the local-content problem away and the channel with it — but only worth it once Stage 1 proves demand. Partner selection is the whole ballgame.
Greenfield STAGE 3	~US\$25–60M+	36–60 months	Strongest — full local content, best lead time, own the asset	Only rational once volume is proven and sustained. Premature greenfield is how cold entries die. Not an 18-month move.
Acquisition OPPORTUNISTIC	~US\$15–50M+	Fastest to scale	Inherits the target's install base, channel, local content	The accelerant, not the wedge. If a well-priced domestic target surfaces it can leapfrog Stages 1–2 — but you don't build a thesis around a deal that may not exist.

All capex figures estimated (analyst build, method shown in §4). FX band verified (Trading Economics, own-page read).

THE STAGE-1 GATE — THE CFO'S GO / NO-GO FOR PHASE TWO

1. **Reference wins.** Two-to-three project wins in the target lane (efficiency retrofit / new-build concession duties).
2. **Margin above floor.** Gross margin after the full duty stack and FX clears a board-set floor.
3. **Binding constraint.** A pipeline large enough that local-content lead-time — not demand — is what caps further growth.

If those three clear, the local-content disadvantage becomes the thing worth spending US\$5–15M to solve. If they don't, the board has spent low seven figures to learn the lane isn't there — a cheap, honest no.

S5 · THE 3-YEAR SCENARIO P&L

The base case turns EBIT-positive in Year 2, on a peak capital-at-risk near US\$0.4M.

This model is **Stage 1 only** — the export + distributor phase. It is *not* a model of Stage 2 (JV/assembly), Stage 3 (greenfield), or acquisition. Those are the phase-two capital staircase, shown as gate figures, never as near-term scenarios. Modeling greenfield revenue here would violate the client's own staged mandate.

Base case — the planning case

FX 5.09 (at spot) · share ramp 0.5% / 1.5% / 3.0% · landed COGS 42.0% of sale price · 50% ICMS recoverable. Revenue = share × SAM (US\$375M) × FX factor.

US\$ 000S	YEAR 1	YEAR 2	YEAR 3
Revenue	1,875	5,625	11,250
Landed COGS (42.0% of rev)	(787)	(2,362)	(4,725)
ICMS credit recovered	+70	+210	+420
Gross profit	1,157	3,472	6,945
Gross margin %	61.7%	61.7%	61.7%
Total operating expense	(1,550)	(1,650)	(2,150)
EBIT	(393)	1,822	4,795
EBIT margin %	(21.0%)	32.4%	42.6%
Cumulative operating cash	(393)	1,430	6,225

All lines estimated on the margin architecture at right; the revenue primitives (share ramp, SAM, FX) trace to §1 and §4. Reconciles cell-for-cell with the workbook and the live simulator. **EST**

THE MARGIN ARCHITECTURE, STATED ONCE

A cold export entrant does *not* sell at CIF. It sells at a Brazil market price that must clear landed cost and stay competitive against locally-made incumbents.

- 1 Ex-works cost** — the Ohio plant's pump cost, delivered to CIF Brazil (~27.6% of sale price, base).
- 2 Landed cost** = CIF × 1.52 (the verified import stack) = 42.0% of sale price.
- 3 Sale price** must exceed landed cost. Gross margin 58.0%, lifted to **61.7%** reported after the 50% ICMS credit add-back.

FX IS MODELED AS A REVENUE LEVER

A weak BRL raises the Brazilian buyer's local-currency price, compressing achievable USD price and volume. That is the honest direction of the risk, and it is what the bear case shows.

The honest simplification: the model is revenue-percentage-driven, not SKU-level — the right resolution for a board go/no-go. Unit modeling belongs to the phase-two operating plan, after the gate.

Year 2

EBIT turns positive; cumulative operating cash turns positive in the same year

~US\$0.4M

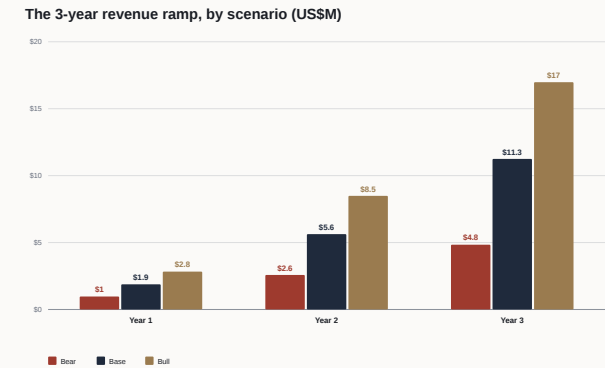
peak capital-at-risk from operating loss, on top of the Stage-1 setup envelope

US\$11.3M

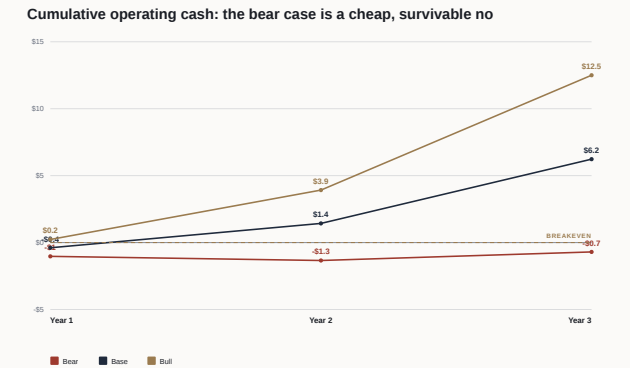
Year-3 revenue — the case for phase-two authorization on modest capital

\$5 • BASE, BULL, AND THE HONEST BEAR

The bear case does not kill the thesis with one number. It kills it with correlated stress — and the loss is still capped near US\$1.3M.



The revenue ramp flexes on the share curve and FX. Base reaches US\$11.3M by Year 3; bull nears US\$17M; bear stalls at US\$4.8M. ESTIMATED



Cumulative operating cash. Base and bull cross breakeven; the bear stays underwater across all three years, bottoming near -US\$1.34M — then recovers toward -US\$0.70M. ESTIMATED

Scenario comparison — the board one-look

METRIC	BEAR	BASE	BULL
FX (USD/BRL) V BAND	6.35	5.09	4.90
Share ramp (Y1 / Y2 / Y3)	0.3 / 0.8 / 1.5%	0.5 / 1.5 / 3.0%	0.75 / 2.25 / 4.5%
Year-3 revenue (US\$M)	4.8	11.3	17.0
Gross margin %	48.3%	61.7%	64.7%
Breakeven (EBIT positive)	Year 3	Year 2	Year 1
Peak capital-at-risk (US\$M)	~1.3	~0.4	none (Y1+)
Cumulative cash, Y3 (US\$M)	(0.7)	+6.2	+12.5
Phase-2 gate cleared?	No — stop signal	Yes	Yes, early

All scenarios estimated on stated levers; FX band verified (Trading Economics). Full assumptions ledger in the model. Reconciles with the workbook and the live simulator.

WHAT ACTUALLY KILLS THE THESIS

Not any single number. The killer is the **combination**: a weak BRL near its all-time high compressing the achievable USD price ~14%, a slow share ramp against the defended incumbent field, zero ICMS recoverability, and committed setup cost that can't flex down fast enough. Correlated stress, not one lever.

WHY THE BEAR CASE IS THE ARGUMENT FOR STAGE 1

Even under correlated stress, peak capital-at-risk stays ~US\$1.3M. The lean posture means the bear case is a **cheap, survivable no**. The board's real question in the bear world — does -US\$1.03M by end of Year 1 trigger a stop before Year 2, or hold for the reference base — is the gate decision, and the model shows it plainly.

S6 · THE RISKS THAT WOULD KILL IT

Four risks carry the downside. The narrowest lane is the one to name loudest.

1 The defended field — the narrow lane Highest

Municipal water is **not an open field**. KSB (since 1954), Grundfos, Xylem, and Sulzer all manufacture or hold deep install base in Brazil. The newcomer’s lane — efficiency retrofit, non-revenue-water, engineered duties where US spec credibility travels — is real but **narrow**. This is the single biggest risk to the water thesis, and the bear share-ramp is where it shows up in the numbers. Named, not buried.

2 FX — BRL volatility High

USD/BRL was 5.09 at spot, with an all-time high of 6.75 in December 2024 and live election-year volatility (the October 2026 runoff). Brazil’s policy rate stood at 14.00%, inflation 4.44%. **VERIFIED** A weak BRL compresses the achievable USD price and can push breakeven from Year 2 to Year 3 — the dominant lever in the bear case.

3 Local-content rules Structural

In O&G, a cold entrant with no Brazilian manufacturing counts as **0% local content** against 30% floors. Even in water, national-product status confers procurement preference the importer cannot match. **VERIFIED** This is the structural reason the entry is staged: the wall is real, and it is the phase-two gate, not a phase-one blocker.

4 State-owned-buyer dynamics Segment-specific

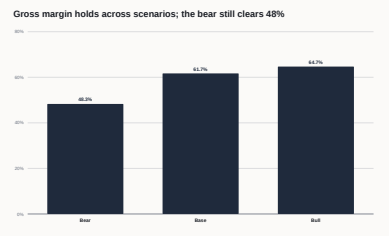
In O&G, Petrobras is the mandated operator of every pre-salt production block, and its qualification regime favors firms with existing local track record — a 3–5 year path. **V REGIME** **EST TIMELINE** The water wedge deliberately routes *around* this: private concession operators buy on commercial merit, not a state qualification maze.

Open items to close before phase-two commitment

Domestic-tier names. The two-to-three domestic brands that actually appear in concession bids — a targeted local-source pass. **OPEN**

Advisor sign-off. Localization rung timelines/capital and per-line INMETRO scope, blessed by a Brazilian tax/customs advisor. **OPEN**

Per-line duty confirmation. Sibling NCM sub-codes and Ex-Tarifário eligibility confirmed per product line by a despachante. **OPEN**



THE MARGIN CUSHION BENEATH THE RISK

Even in the bear world, gross margin clears **48%** before operating cost. The thesis does not fail on unit economics — it fails, if it fails, on *volume* under correlated stress. That distinction is what makes the loss capped and survivable, and it is why the honest answer to the bear case is a stop, not a bankruptcy. **ESTIMATED**

THE DECISION, RESTATED FOR THE ROOM

Go. Enter through municipal water on a capital-light export wedge. Authorize the heavy capital only on proof.

The board greenlights with its eyes open. The demand is legislated, not cyclical. The buyers procure on merit, not through a state maze. The lane is narrow, and it is named. The downside is a weak BRL and a defended field — and the lean posture caps that downside near US\$1.3M even when every stress lands at once.

Stage 1 risks low seven figures to buy an option on a US\$300–450M/yr market. Phase two is authorized on evidence: two-to-three reference wins, margin above floor, a pipeline where local content is the binding constraint. If the evidence does not come, the loss is capped and the answer is a clean stop.

THE THREE-LINE RESOLUTION FOR THE MINUTES

- 1 **Approve** Stage-1 entry: export + local distributor into municipal water, capital envelope US\$0.75–1.8M. EST
- 2 **Hold** oil & gas as option value; do not commit manufacturing capital before the Stage-1 gate.
- 3 **Review** at month 18–24 against the three gate criteria; authorize phase two only on proof.

US\$11.3M

base-case Year-3 revenue, on modest capital

~US\$1.3M

bear-case loss cap — the price of the option

“Spend low seven figures to learn whether the lane is real, before betting the factory. The bear case is a cheap, survivable no. That is what lean and fast means in P&L form.”

PROVENANCE & METHOD

Every figure traces to a source read on its own page, or to a stated method.

VERIFIED read on the owner's own page

ESTIMATED assumption + method shown

LEAD unverified, corroborating only

Verified anchors (read on owner pages)

- Universalization 99% water / 90% sewage by 2033; US\$128bn framework — planalto.gov.br (law text) & DLA Piper.
- US\$68bn contracted, US\$8bn/yr still needed; US-supplier demand pull — trade.gov (US Commercial Service).
- USD/BRL 5.09 spot, ATH 6.75, policy rate 14.00%, inflation 4.44% — Trading Economics.
- Import component rates (II 12.6%, IPI 0%, PIS 2.1%, COFINS 9.65%, ICMS por dentro) — Res. Gecex, TIPI, Lei 10.865, LC 87/96, RICMS/SP.
- ANP local content, Petrobras qualification, Repetro-Sped — gov.br/anp, Petronect, gov.br/receitafederal.
- Incumbent positions for KSB and Sulzer — company own pages.
- Machinery apparent consumption R\$410.9bn — ABIMAQ.

Estimated, with method shown

- SAM range (US\$300–450M/yr) — two-method triangulation on verified sanitation capex and pump-content share bands.
- SOM ramp (0.5% → 1.5% → 3.0%) — conservative cold-entrant share curve on the SAM midpoint.
- Landed multiplier ×1.52 — arithmetic on the verified component rates (SP worked example).
- Margin architecture, ICMS-recoverability split, operating-expense schedule — analyst build, arithmetic shown.
- Localization rung timelines / capital and entry-model envelopes — order-of-magnitude bands, flagged for advisor sign-off.

WHAT THIS DOSSIER DOES NOT CLAIM

No valuation, no invented duty rate, no precise market point estimate treated as measured. Where a number could not be read on an owner page — the walled industrial-pump TAM point estimate — it is carried only as a corroborating lead, and the honest range with its method is the deliverable in its place.

THE RECONCILIATION SEAM

The canonical figure set — revenue ramp (Y1 US\$1.9M / Y2 US\$5.6M / Y3 US\$11.3M base), FX band 5.09 / 4.90 / 6.35, landed multiplier ×1.52, breakeven Year 2 base — is identical across this dossier, the live scenario simulator, and the workbook. One figure, one truth.

Confidential — prepared for the Board of Directors. Distribution restricted. September 2026.