



LOGISTICS OPERATIONS & COSTING SYSTEM

One system for operations, cost, and *margin per job.*

Design, price, and schedule for an integrated freight forwarding platform — from quotation intake to job closing, with defensible costing and AI-assisted vendor invoice reading.

INVESTMENT	DURATION	TEAM	WARRANTY
IDR 585,000,000	22 weeks	6 people	90 days

What this document contains

This document answers the seven questions in your request for quotation in order, followed by the commercial assumptions we need so the price holds up.

01	Our understanding of your requirement	02	Scope & module architecture
03	Total price & breakdown	04	Duration & work schedule
05	Tech stack & hosting cost	06	How we use AI & protect quality
07	Team & project governance	08	Warranty & maintenance
09	Comparable business systems	10	Source code & data ownership
11	Commercial terms & assumptions	12	Next steps

TOTAL PRICE IDR 585 juta Full scope, excluding VAT	DURATION 22 weeks Four test gates, go-live in W22	TEAM 6 people One tech lead, start to finish
HOSTING IDR 4,1–5,6 jt/bln AWS Jakarta, billed to your account	WARRANTY 90 days Then maintenance from IDR 4.5m/month	OWNERSHIP 100% yours Source code, data, cloud account

You are not buying an application. You are buying control over margin.

Reading your scope list, the problem being solved is not "digitalisation" — it is cost leakage that stays invisible until a job is already closed. Three symptoms usually drive a project like this:

01

Actual cost arrives late

Vendor invoices land 3–6 weeks after the job ends. The variance surfaces only when the margin can no longer be fixed.

02

Departure and billing readiness live in people's heads

Document, container, and seal status is spread across WhatsApp and spreadsheets. Only one or two people actually know.

03

Rebillable cost disappears

Costs that should reach the customer are never flagged as rebillable — or are flagged without evidence strong enough to defend.

So we build it in one sequence, not one feature list

We structure this as a single chain that cannot be cut: **job** → **planned cost** → **actual cost** → **variance** → **approval** → **rebill** → **job closing**. Each module is only worth what the previous one puts into it. That is why we refuse to build the dashboard first: a dashboard over undisciplined data only accelerates the same mistakes.

One thing we value in your brief: you already have process flows and business rules per role. That cuts discovery from the usual 6–8 weeks to 2 weeks, and we have priced 9% below our normal rate because the assumption risk is far lower. We do not have to guess your process.

Four pillars, one database

Everything in your scope is inside the total price. We map it into four pillars plus the foundation layer beneath them. Nothing is promised "later".

Foundation — the layer that decides whether the system can be trusted

F1

Identity, roles, and access rights

- Email/password login, optional 2FA, per-device sessions
- Layered RBAC: role × module × action (view/edit/approve/void)
- Data scoping per branch/business unit and per job owner
- Authority delegation during leave, with audit trail

F2

Master data & rates

- Customers, vendors, agents, ports, depots, vessels, fleet
- Versioned rate cards: per vendor, lane, container type, validity period
- Cost types with behaviour: rebillable, margin-bearing, taxable, currency
- Rate change approval + prior-price history

F3

Job numbering, status flow, business rules

- Patterned numbering (e.g. JKT/0F/26/00184) per service type
- Explicit state machine: legal transitions, guards, and void handling
- Mandatory validation before status advances (docs, cost, approval)
- Multi-level approval engine with value thresholds

F4

Files, notifications, change history

- Object storage with versioning, file-type limits, malware scanning
- In-app + email notifications; document and vessel deadline reminders
- Immutable audit trail: who, when, before/after values
- Excel export & initial data import (templates + row validation)

Pillar 1 — Operations

01

Quotation & order intake

- Quotation built from rate cards, with visible and lockable margin
- Quotation versioning, customer send-out, win/loss with reason codes
- Quotation → order → job conversion with no re-keying

02

Job management

- One job spanning multiple containers, legs, and vendors
- Activity timeline per leg with named owners
- Internal notes vs customer-visible notes

03

Booking & vessel schedule

- Booking per carrier, booking number, document and cargo cut-offs
- Vessel schedules (ETD/ETA, vessel/voyage) with tracked revisions
- Automatic T-3 / T-1 alerts against every cut-off

04

Trucking & depot

- Container and seal numbers per unit, including re-seals
- Fleet and driver assignment, pickup and return scheduling
- Depot charges (lift on/off, storage, cleaning, repair) posted straight to job costing

05

Documents & customs

- Document checklist per job type (BL, invoice, packing list, customs declaration, COO, etc.)
- Completeness computed, not estimated — percentage plus the missing documents
- Per-document deadlines with escalation as the limit approaches

06

"Ready to Depart / Ready to Bill" board

- Two boards, one source of truth, updated automatically from rules
- Ready to depart = documents complete + booking confirmed + container/seal recorded
- Ready to bill = actual cost locked + variance approved + vendor evidence attached

A design note on that board: the status must never be typed in by hand. If "ready to bill" can be ticked by anyone, within three months the board will be full of meaningless ticks. Every column is computed from data already on the job — so the board cannot lie, and managers see the real queue.

Pillar 2 — Costing

C1

Planned cost vs actual cost

- Line-level estimate at quotation, locked when the order is confirmed
- Actuals arrive from vendor invoices, depot charges, and approved manual entries
- Variance per line, per vendor, per job — in value and percentage

C2

AI-assisted vendor invoice reading

- Structured extraction: vendor, invoice number, date, currency, cost lines
- Every line carries a confidence score; below threshold it queues for human verification
- No automatic posting to the ledger without approval

C3

Variance & approval

- Variance thresholds per role: above X% requires manager approval
- Variance reason chosen from a controlled list plus free text
- Approval queue with full context, not just a number

C4

Rebillable cost & invoice readiness

- Rebillable flag per line, with markup or fixed sell price
- Ready-to-bill summary per customer, exportable into your billing process
- Warning for un-rebilled cost when a job is about to close

C5

Job closing

- Closing checks: documents, dangling cost, rebills, approvals
- Closed jobs are read-only; corrections via a tracked adjustment entry
- Final job margin locked as the baseline for comparison

C6

Cash advance **OPTIONAL**

- Request, approval, recorded disbursement, and settlement against receipts
- Outstanding advances automatically offset job settlement
- Priced separately: see section 03

Pillar 3 — Management

M1

Dashboard

Active jobs by status, at-risk jobs, document readiness, approval queue, running margin vs locked margin.

M2

Vendor cost & margin trends

Price movement per vendor and lane over time; which vendors are compressing your margin, and since when.

M3

AI assistant for variance summaries

Explains what drove a variance in plain language, citing the underlying cost lines. Numbers come from SQL; the model only explains.

The principle we hold on AI features

The language model is never the source of a number. Every value, total, and variance is computed by a deterministic query against the database. The model receives that as fact and its only job is to write the explanation and point at the relevant lines. If the model errs, the sentence is wrong — the number is not. This is what separates a system usable for commercial decisions from an impressive demo.

DELIBERATELY OUT OF SCOPE

- ×

Payments and fund transfers
- ×

Tax invoices and official invoices
- ×

Native mobile apps (the web interface is fully responsive)
- ×

Accounting integration, customer portal, training — offered separately

03 — PRICE

One total price, no surprises halfway through

The figure below covers the entire scope in section 02 — foundation, operations, costing, and management — through handover, key-user training, and the 90-day warranty.

TOTAL PRICE — FULL SCOPE

IDR 585.000.000

approx. USD 36,100 at IDR 16,200/USD · excluding VAT

A fixed price for the scope in section 02. No hourly billing, no hidden charges, and no additional invoice if the work takes longer than we estimated.

INCLUDED

334 person-days of work100%

Role-based acceptance testing✓

Initial data import✓

3 training sessions✓

90-day warranty✓

Code & documentation handover✓

PILLAR	CORE CONTENT	PERSON - DAYS	IDR
Foundation	Access, master data, status flow, files, audit, import/export	92	161.000.000
Operations	Quotation, job, booking, trucking & depot, documents, readiness boards	86	150.500.000
Costing	Planned vs actual, AI invoice reading, variance, rebill, closing	82	143.500.000
Management	Dashboard, vendor & margin trends, variance assistant, standard reports	38	66.500.000

PILLAR	CORE CONTENT	PERSON - DAYS	IDR
Delivery & quality assurance	Project management, business analysis, QA, DevOps, documentation, UAT	36	63.500.000
Total, full scope		334	585.000.000

Blended rate of IDR 1,750,000 per person-day. Module-level breakdown available as a separate annex on request.

Optional items — priced separately

We deliberately kept these out of the total. Each has a different value for each company, and you should decide on real data once the core system has run for three months.

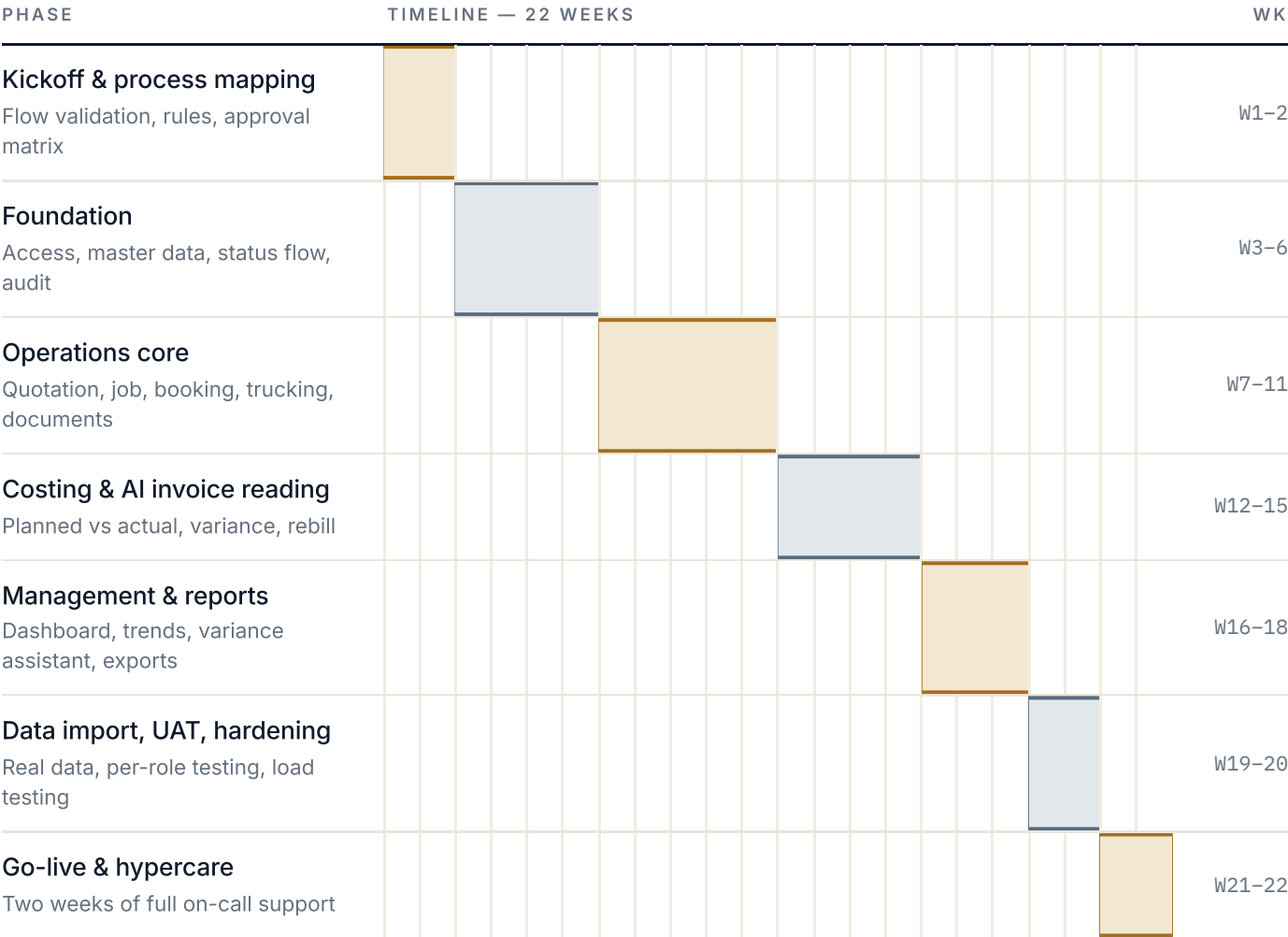
ITEM	CONTENT	IDR
Accounting software integration	Two-week feasibility study, then two-way CSV export/import as the baseline; a direct connector to Accurate Online or SAP B1 as a further option	96.000.000
Customer portal	Customer login, job tracking, document download, billing status, shipment history	119.000.000
Training & documentation	Written SOP per role, video library, 3 additional sessions, and train-the-trainer	35.000.000
Cash advance module	Request, approval, disbursement, receipt-based settlement, and offset to job	28.000.000

Why we cut price rather than inflate promises. Our normal rate for scope this size is IDR 640 million. Because you supply the process flows and business rules per role — work that normally consumes 30–40 analyst days — we can compress the process-discovery phase and price roughly 9% lower. What we did not cut: testing, code review, and documentation.

04 — SCHEDULE

22 weeks to production, with four test gates

We do not work toward one large release at the end. Each pillar is delivered, tested, and accepted before the next begins — so failure surfaces in week 6, not week 20.



GATE	WHAT WE HAND OVER	HOW YOU TEST IT
G1 • W6	Foundation accepted	Staging environment, per-role logins, populated master data, working job status flow
G2 • W11	Operations accepted	One complete job from quotation to documents, run end-to-end by your own team
G3 • W15	Costing accepted	20 real vendor invoices read; line accuracy measured and reported openly
G4 • W20	Go-live ready	Data imported, all UAT scripts passed, load report, zero open defects of severity 1-2

On what "ready" means. A gate passes only when the test scripts you approved in week 1 run without developer intervention. We write those scripts with you at the start, not after the build — because a test written after you can see the result is not a test.

A stack that is easy to inherit, not one that is trending

Our criterion is simple: in three years, any developer in Jakarta should be able to open this codebase and continue it. That means technology with deep local talent, mature documentation, and no single-vendor lock-in.

BACKEND	FRONTEND	AI & DOCUMENTS	INFRASTRUCTURE
PHP 8.3 + Laravel 11	Vue 3 + TypeScript	OCR: AWS Textract / Google Document AI	AWS Jakarta (ap-southeast-3)
PostgreSQL 16	Inertia.js (tanpa API ganda)	Ekstraksi: LLM via lapisan abstraksi	Docker, Terraform
Redis (cache, queue, lock)	Tailwind CSS	Antrean verifikasi manusia	GitHub Actions (CI/CD)
Horizon untuk worker	Antarmuka ID/EN sejak awal	Setiap output tersimpan + versi model	S3 + CloudFront
REST + webhook	Responsif sampai tablet	Bisa ganti provider tanpa tulis ulang	Backup PITR 35 hari

The vendor invoice reading pipeline

This is the part most often sold as "AI" and most often disappointing. So we designed it as a staged process with explicit human stopping points.

#	STAGE	SYSTEM BEHAVIOUR
1	Upload & classification	File arrives, document type identified, duplicates checked by invoice number + vendor
2	OCR & extraction	Text and tables captured, then mapped to structured cost lines with a per-line confidence score
3	Matching	Matched to job, container, and cost type using reference numbers and context
4	Human verification	Lines below threshold enter a queue; the verifier sees the original image beside the extracted value
5	Posting	Only after approval. Stored: original file, extraction result, model version, and who approved

The target we will commit to contractually: **≥ 80% of cost lines accepted without correction** on your vendor invoices after tuning on 200 real invoices. We do not promise 99% — and you should be wary of quotes that do.

Monthly hosting cost

Estimated for roughly 60 concurrent users, 15,000 jobs per year, and 250 GB of document storage. Figures in USD at an assumed IDR 16,200.

COMPONENT	SPECIFICATION	USD/BLN
Application	2× Fargate 0.5 vCPU / 1 GB, auto-scaling	45–60
Database	RDS PostgreSQL Multi-AZ, db.t4g.medium	95–120
Redis	ElastiCache t4g.micro	15–20
Storage	S3 250 GB + lifecycle to cold tier	10–15
Network & security	ALB, CloudFront, WAF	30–45
Operations	Backups, logs, secrets, monitoring	20–30
Staging	Scaled down, scheduled uptime	40–55
Estimated total		255–345

≈ IDR 4.1 – 5.6 million per month on AWS Jakarta. A local provider alternative (Biznet Gio, IDCloudHost) sits around IDR 3.5–4.5 million with more limited managed services. Billed directly to your own cloud account — we do not mark up hosting.

06 — METHOD & QUALITY

We use AI every day. Which is exactly why we tightened testing.

AI speeds up pattern work by roughly 30–40% — CRUD, validation, migrations, test scaffolding. What it does not speed up: understanding your business process, architectural decisions, and judging whether something is actually correct. So we draw the division of labour sharply.

The division of labour between people and machines

ACTIVITY	AI	HUMAN
Process and business-rule mapping	Summarises your documents, drafts the question list	Analyst interviews the process owner, decides the interpretation

ACTIVITY	AI	HUMAN
Schema and architecture design	Proposes alternatives, flags consequences	Tech lead chooses, and signs the choice
Writing code	First draft, boilerplate, mechanical refactors	Engineer verifies every line; nothing merges without review
Testing	Generates candidate test cases, including edge cases	QA decides coverage; UAT scripts approved by you in week 1
Code review	Automated first-pass review on every pull request	Tech lead reviews design, security, and domain consistency
Final accountability	Never	Always. The engineer's name is on the commit; responsibility cannot be delegated to a tool

Three rules that are not negotiable

1. No AI-written code merges without human review. Every pull request is reviewed by the tech lead. Our average PR is under 300 lines — not for tidiness, but because genuine review is impossible on 1,200.

2. Your data does not enter a prompt without an agreement. We use commercial endpoints with zero retention. Customer data, rates, and invoices are never used for model training. For the AI features inside the product, this is written into the contract and auditable.

3. Code an engineer cannot explain gets rewritten. If someone cannot defend a line they committed in review, the line goes. It is the only way to stop speed from becoming technical debt you pay for after we leave.

The quality net

Q1

Automated tests

- Unit & feature tests (Pest) on the domain layer — 75% coverage target
- Browser tests (Playwright) for 12 critical flows: job, documents, variance, closing
- Load tests (k6) on the readiness boards and dashboard

Q2

Automated CI gates

- PHPStan level 8, ESLint, TypeScript strict — failure blocks merge
- Dependency and secret scanning on every commit
- Migrations tested forward and backward on an empty database

Q3

Acceptance testing by you

- Per-role UAT scripts written jointly in week 1
- Run by your team on staging, not demonstrated by us
- Defects logged in a tracker you can see, with priority

Q4

Security

- OWASP ASVS level 2 checklist on every release
- Roles tested negatively: confirming the unauthorised are actually refused
- Third-party penetration test available as a paid option

Every Friday we demo the running application — not slides. You see progress on staging weekly, so nothing is a surprise at UAT.

07 — TEAM

Six people, one owner

Projects like this fail because there are too many voices and no one accountable. We assign one tech lead from start to handover, and that person signs the technical decisions.

ROLE	RESPONSIBILITY	ALLOCATION
Tech lead / architect	Architecture, code review, technical decisions, your main contact	60%
Business analyst	Translates your flows and rules into testable specifications	50%
Full-stack engineers (2)	Module implementation, migrations, integrations	100%
QA engineer	Test automation, UAT scripts, regression, load testing	70%
DevOps	Infrastructure, CI/CD, backups, monitoring, security hardening	25%
Product designer	Data-dense screen flows, board and table legibility	30%

WORKING RHYTHM

- ✓ Weekly Friday demo on staging (30 minutes)
- ✓ One process owner on your side as a fixed counterpart
- ✓ An issue tracker you can access at any time
- ✓ Scope changes via a written change note, not conversation

90-day warranty, then maintenance on your terms

The warranty covers defect fixes at no cost. Maintenance covers something else: adapting to changed business rules, monitoring, and security updates. We separate the two so you do not pay twice for the same thing.

DEFECT SEVERITY	DEFINITION	RESPONSE	FIX
S1	Operations halted; no workaround	2 jam	1 hari kerja
S2	Core function impaired; manual workaround exists	4 jam	3 hari kerja
S3	Minor issue, does not block work	1 hari	Rilis berikutnya
S4	Cosmetic or enhancement request	3 hari	Ditawarkan terpisah

Maintenance after the warranty

E Essential IDR 4.500.000 /bln — S1–S3 defect fixes — Monthly backup verification — Dependency security updates — 2 hours of minor changes per month	S — RECOMMENDED Standard IDR 8.800.000 /bln — Everything in Essential, with full SLA — 8 hours of changes per month — 24/7 monitoring with on-call escalation — Monthly health report — Quarterly performance review	P Partner IDR 15.500.000 /bln — Everything in Standard — 20 hours of changes per month — One architect day per month for roadmap — Priority on new feature development
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Annual maintenance contract, terminable with 60 days' notice. Without a maintenance contract the code is still yours and can be continued by another party — we provide handover documentation that makes that genuinely possible.

Comparable systems already in production

The four projects below are the closest work we have to your scope. Client names are anonymised in an open document; full references, including contacts willing to speak with you, are provided under NDA.

01	Ocean freight forwarder — job costing system Surabaya. 140 users, ~11,000 jobs per year, 3 branches. Replaced 40+ spreadsheets with a single job flow, planned vs actual cost, and tiered variance approval. LARAVEL POSTGRESQL COSTING APPROVALS	6 min → 90 sec Processing time per vendor invoice, client-reported after 8 months
02	Trucking & depot — container and seal tracking Jakarta. 60 trucks, 4 partner depots. Driver assignment, pickup/return scheduling, container and seal capture including re-seals, and depot charges posted straight into job costing. VUE 3 REDIS SCHEDULING DEPOT	-71% Drop in depot charges lost or double-entered
03	Project cargo — document compliance and deadlines EPC contractor, Kalimantan. Heavy-module shipment milestone tracking: document completeness, customs deadlines, and automatic escalation to the project manager as deadlines approach. WORKFLOW COMPLIANCE ESCALATION	0 Customs document delays in the last 14 months
04	Distributor — operational finance and three-way match Distribution group, 6 entities. Value-based approval matrix, purchase–receipt–invoice matching, and a CSV bridge into the accounting software already in use. FINANCE APPROVALS CSV BRIDGE	4 days → 1 day Monthly close cycle

The figures above are client-reported and not independently audited. We do not display logos or names without written permission.

The code and the data are yours. Without further conditions.

We state this in black and white because many vendors say "client-owned" and then withhold something: the repository, the deployment keys, or the right to continue.

A

Intellectual property

- All copyright in code we write transfers to you on the final milestone payment
- You may modify it, sell it, or move it to another vendor
- Third-party licences stay with their owners (mostly MIT/Apache)

B

Technical handover

- Full repository with commit history, in your own GitHub account
- Infrastructure as code; cloud account and billing in your name
- Architecture documentation, data dictionary, and operations runbook
- Two-day knowledge transfer for your internal team or a successor vendor

C

Data

- Customer data, rates, invoices, and documents are entirely yours
- Never used for model training or any other purpose
- Full export in open formats (CSV, SQL dump) whenever you ask
- Permanent deletion within 30 days of contract end

D

Continuity

- Third-party source code escrow at your cost, if you want it
- No dependency on any proprietary service of ours
- We sign your NDA before process documents are shared

Data security, briefly. Encryption in transit and at rest; roles tested negatively; immutable audit trail; 35-day point-in-time backups with a 15-minute RPO and 4-hour RTO; a disaster recovery runbook tested annually. Details available in a separate security document.

Payment follows test results, not the calendar

You asked for milestone-based payment tied to test results. We agree, and we bind it tighter: each milestone can only be invoiced after the corresponding gate in section 04 has been signed off by your team.

MILESTONE	INVOICING CONDITION	%	IDR
M1	Signature & kickoff; UAT scripts approved	15%	87.750.000
M2	Gate G1 — foundation passed	20%	117.000.000
M3	Gate G2 — operations passed	20%	117.000.000
M4	Gate G3 — costing passed, accuracy reported	20%	117.000.000
M5	Gate G4 — go-live ready	15%	87.750.000
M6	Go-live, code handover, knowledge transfer	10%	58.500.000
Total		100%	585.000.000

30-day terms from invoice. If a gate does not pass, invoicing is deferred and the remedy is at our cost.

The assumptions this price depends on

- ✓ One legal entity; multi-entity offered separately

✓ Process flows and business rules available as you described

✓ One process owner and 2 key users per role for UAT

✓ Initial data available in reasonable Excel/CSV form
- ✓ Vessel schedules entered manually or by import; carrier API integration out of scope

✓ Bilingual interface (ID/EN) included; a third language is not

✓ UAT feedback returned within 3 working days per round

EXCLUDED FROM THE PRICE

VAT; cloud and domain costs; OCR/LLM API costs (estimated IDR 900,000–1,800,000 per month at 800 invoices); third-party software licences; penetration testing; travel outside Greater Jakarta.

Terms. This quotation is valid for 30 days from the document date. Currency IDR. Payment by bank transfer. Scope changes are handled through a written change note with a cost estimate before any work begins. We are ready to sign your NDA and start once the first milestone is received.

Three steps, two weeks

01

A 60-minute conversation

We walk through your process flows and the three design decisions that matter most: job structure, the definition of "ready to bill", and the variance approval matrix.

02

NDA & process documents

We sign your NDA, receive the detailed documents, and return a final quotation within 5 working days — including price corrections if anything differs from our assumptions.

03

Kickoff

Week 1: mapping workshop, joint UAT script writing, and staging setup. You see a running application in week 2.

FOR AND ON BEHALF OF MERIDIAN SOFTWARE WORKS

ACCEPTED FOR AND ON BEHALF OF THE CLIENT

Name, title, date

Name, title, date