

NHR SOFT

Precision-Engineered Software

PHARMACEUTICAL ERP

One system for the regulated pharma enterprise

Operations · Quality · Commercial · Finance · Governance — unified on a single, audit-ready platform.

Product overview · Prepared for client review

Why a purpose-built pharma ERP

Generic ERPs bolt compliance on afterward. This platform is built around GxP workflows and traceability from day one.



End-to-end traceability

Every material batch tracked GRN → quarantine → QC → release → dispatch, with full genealogy.



Compliance by design

Append-only audit trail, e-signatures, no hard deletes, versioned migrations — GxP-friendly patterns baked in.



One source of truth

22 domain modules on one deployable app — no fragile integrations between siloed tools.



Built to validate

Deterministic workflows, RBAC and segregation of duties support your CSV / SOP validation.

22 modules, five business domains

Strong domain boundaries, one deployable modular monolith.

OPERATIONS	QUALITY	COMMERCIAL	FINANCE & HR	GOVERNANCE
Procurement	QC	Sales	Finance	Auth
Inventory	QA	CRM	HR	RBAC
Production	Regulatory	Finished Goods	Maintenance	Users
Packaging	Documents			Audit
Master Data				Admin Config

Compliance-oriented foundations

Designed toward GxP patterns; suitability for regulated use is established through your validation and SOPs.

1

Append-only audit trail

audit_logs, e-signatures and inventory transactions are protected against UPDATE/DELETE at the database level.

2

No hard deletes

Regulated records are retired via status flags, never destroyed. Corrections use reversing entries.

3

Electronic signatures

Signature capture on critical actions, with who / when / why recorded on every regulated record.

4

Deny-by-default RBAC

Permission catalog with segregation-of-duties controls guarding every action.

5

Full record metadata

Every entity carries created/updated/approved by & at, version number and active status.

6

Versioned migrations

Schema evolves through auditable, versioned TypeORM migrations — reproducible environments.

Architecture & technology

Modular monolith

- One deployable NestJS application with strong domain boundaries.
- Modules communicate through exported services — no distributed-systems overhead.
- Cross-cutting concerns (RBAC guard, audit interceptor, workflow states, numbering) live in a shared common layer.
- External systems (barcode, weighing scale, email, SMS, BI, object storage) isolated as swappable adapters.

Frontend	Next.js · React · TypeScript
Backend	NestJS modular monolith (TS)
Database	PostgreSQL 16 · UUID PKs
Cache / jobs	Redis 7
Queue	RabbitMQ 3.13
Object storage	MinIO (S3-compatible)
API docs	Swagger / OpenAPI
Quality	ESLint · Jest · TS strict · CI

Delivered in phases

Foundational controls first, then progressively broader business coverage — all phases implemented through the current roadmap.

1

Foundation

Auth, RBAC, append-only
audit, e-signatures, master
data, batch inventory

2

Procure & QC

Procurement, GRNs, QC
specs/tests, quarantine &
release, core workspaces

3

Production

Production orders,
BOM/material issue,
packaging, finished goods

4

Commercial

CRM, complaints, sales
orders, dispatch, pricing,
credit, returns

5+

Enterprise

Finance, HR, regulatory,
maintenance, documents,
reporting, integrations

All phases implemented • Ready to walk through a live demo