

Inventory & Compliance Manager

Doc type: technical · **Version:** v0.1 · **Status:** published · **Module slug:** inventory-compliance-manager
Exported: 2026-05-15 11:12 UTC · **By:** anonymous

Inventory & Compliance Manager – Technical Specification v2.0

Template Authority: Appointment Manager – Technical Specification v2.2.docx

Suite: Operations Suite (Optional AddOn)

1. Purpose of the Module

Inventory & Compliance Manager provides a governed, end-to-end system for managing clinical stock, suppliers, and regulatory compliance in one place, ensuring practices remain lean, safe, and inspection-ready at all times.

It exists to:

- prevent over or under stocking and expiry waste
- enforce controlled procurement and approvals
- embed compliance tasks into daily operations
- provide continuous audit readiness for CQC, GDC, and MHRA

2. Scope & Responsibilities

2.1 Inventory & Compliance Manager is Responsible For

- Maintaining a real-time inventory ledger of all consumables, instruments, medications, and kits.
- Managing purchase requisitions, approvals, and purchase orders.
- Tracking deliveries, goods received, and invoice matching.
- Managing suppliers, pricing, and group-buy comparisons.
- Scheduling and tracking clinical compliance tasks.
- Recording equipment servicing, inspections, and risk assessments.
- Managing staff training and CPD compliance records.

2.2 Inventory & Compliance Manager is Not Responsible For

- Delivering clinical care.
- Acting as a standalone accounting system.
- Making autonomous purchasing or compliance decisions.
- Performing analytics or KPI visualisation.

3. Core Concepts (Governed Objects)

3.1 Inventory Item

A structured record representing a consumable, instrument, kit, or medication.

Each Inventory Item MUST define:

- item identity and category
- unit of measure
- approved supplier(s)
- quantity per location
- reorder threshold

Optional attributes:

- batch numbers
- expiry dates
- recall flags

3.2 Supplier Record

Defines an approved supplier, including:

- contact and ordering method
- pricing and contract terms
- group buy eligibility

3.3 Purchase Requisition

A request to replenish inventory, generated manually or automatically when thresholds are reached.

Must flow through approval before becoming a Purchase Order.

3.4 Purchase Order (PO)

A governed procurement object created after approval, tracked until fully received and invoiced.

3.5 Compliance Task

A scheduled, role assigned task required for regulatory or safety compliance (e.g. autoclave tests, risk assessments, training renewals).

4. Lifecycles & State Machines

4.1 Inventory Replenishment Lifecycle

Reorder Threshold Reached → Purchase Requisition → Approval → Purchase Order Issued → Delivered → Goods Received → Stock Updated

4.2 Order & Delivery Lifecycle

- Draft Requisition
- Pending Approval

- Approved / PO Issued
- Partially Delivered
- Delivered
- Closed (Billed)

4.3 Compliance Task Lifecycle

- Scheduled
- Due
- Completed
- Overdue
- Escalated

All transitions are timestamped and attributable.

State-transition authority and module boundary. Inventory & Compliance Manager is the canonical owner of the compliance task state definitions listed above and is solely responsible for creating, scheduling, and retiring compliance tasks. However, the computation of the Overdue boolean — and the mapping of compliance task states onto the Task Manager's own internal lifecycle — is owned exclusively by Task Manager. Consuming surfaces and modules, including Inventory & Compliance Manager itself, **MUST NOT** independently compute or re-derive the Overdue flag; they **MUST** read it from the value published by Task Manager. When a compliance task transitions to Overdue or Escalated, the authoritative signal originates in Task Manager and is reflected back into this module's state. This boundary ensures a single source of truth for overdue determination and prevents divergence between the two modules' task records.

5. Creation & Update Sources

5.1 Staff-Initiated

- Usage logging and stock deductions
- Requisition requests
- Compliance task completion

5.2 System-Initiated

- Automatic low-stock alerts
- SLA reminders for overdue orders or tasks
- Expiry and recall alerts (e.g. MHRA)

6. User Interfaces (Build Contract)

6.1 Inventory Dashboard

Must show:

- stock levels by location
- low-stock and expiry alerts

- items linked to upcoming appointments

6.2 Procurement & Orders View

Must include:

- requisition and approval queue
- price comparison across suppliers
- delivery and backorder tracking

6.3 Compliance Dashboard

Must include:

- checklist status (green / amber / red)
- upcoming and overdue tasks
- evidence attachments and audit trail

7. Roles & Access Control

Illustrative RBAC roles:

- Inventory Manager / Purchasing Lead – approve orders, manage suppliers
- Compliance Manager – configure and oversee compliance schedules
- Clinical Staff – log usage and complete assigned tasks
- Practice Manager – oversight, approvals, escalation

All permissions are tenant-scoped and auditable.

8. Audit & Compliance

The module MUST record:

- all inventory movements
- all approvals and procurement decisions
- compliance task completion and evidence
- equipment service history and reports

This data forms the authoritative evidence base for inspections.

9. Core Behaviour Rules (Non-Negotiable)

- Stock may not be reordered without approval.
- Only approved items and suppliers may be used.
- Compliance tasks cannot be silently missed.
- Expired or recalled items must be flagged immediately.
- All actions must be attributable to a named user.

10. Non-Functional Requirements

Performance: Inventory updates propagate near real-time.

Reliability: No inventory or compliance record is lost on connectivity failure.

Security & Governance: Tenant isolation, RBAC, encrypted data at rest and in transit.

11. Metrics Emitted (Read-Only)

The module emits the following metrics to Performance Dashboards and Financial Insights:

- stock turnover and valuation
- expiry and wastage rates
- supplier spend and price variance
- on-time delivery rate
- compliance task completion rate

The module does not analyse or visualise metrics itself.

12. Medication / Controlled Drugs Extension (v2.0)

This extension applies when a practice enables Medication & Controlled Drugs management within the Inventory & Compliance Manager. It builds on the same governed inventory and compliance framework and introduces additional safeguards required for medicines and controlled substances under UK regulations.

12.1 Scope of the Extension

The Medication / Controlled Drugs extension covers:

- prescription-only medicines (POMs)
- emergency drugs
- sedation and anaesthetic agents
- Controlled Drugs (CDs) subject to Misuse of Drugs Regulations

The extension does not alter clinical prescribing decisions; it governs storage, stock control, recording, and auditability only.

12.2 Medication & Controlled Drug Records

Each medication item extends the Inventory Item model with additional mandatory fields:

- medication name and strength
- formulation (e.g. ampoule, tablet, liquid)
- legal classification (POM, CD Schedule)
- approved storage location(s)
- running balance (Units In / Units Out)

For Controlled Drugs, the system MUST maintain an immutable Controlled Drug Register entry stream.

12.3 Controlled Drug Register (Digital)

When enabled, the module provides a digital Controlled Drug Register that:

- records every receipt, administration, and disposal event
- enforces chronological, non-editable entries
- records:
 - date and time
 - quantity in / out
 - running balance
 - patient reference (where applicable)
 - clinician and witness (role-based)
- prevents retrospective alteration

All entries are attributable and inspection-ready.

12.4 Receipt, Administration & Disposal Workflows

Receipt:

- CDs must be received against a validated Purchase Order
- quantity and batch verified at receipt
- register updated immediately

Administration:

- medication usage logged against:
 - patient
 - appointment / procedure
 - administering clinician
- stock balance updated in real time

Disposal / Destruction:

- expired or unused CDs logged as disposal
- witness requirement enforced (where applicable)
- reason for disposal recorded

12.5 Storage & Access Controls

12.6 Alerts & Governance Controls

The system MUST automatically:

- alert on low emergency drug levels
- flag expired or soon-to-expire medications
- highlight balance discrepancies
- surface missed CD register entries
- escalate overdue checks to Compliance Manager

12.7 Reporting & Inspection Readiness

The extension must support on-demand generation of:

- Controlled Drug Register (date-bounded)
- medication stock and expiry reports
- administration logs by clinician or period
- disposal and wastage records

Reports are exportable for inspection and auditing purposes.

12.8 Core Behaviour Rules (Medication & CDs)

- No controlled drug movement may occur without a register entry.
- Register entries are immutable once saved.
- Running balances must reconcile at all times.
- Only authorised roles may handle or record controlled drugs.
- Discrepancies must be explicitly acknowledged and investigated.

13. Acceptance Criteria (QA Contract)

Inventory & Compliance Manager v2.0 (with Medication / Controlled Drugs extension enabled) is complete when:

- All medication stock is traceable by batch, location, and balance.
- Controlled Drug Registers are complete, immutable, and chronological.
- Administration and disposal workflows enforce governance.
- Alerts surface risks before patient safety or compliance breaches.
- Evidence for medicines management inspections can be produced on demand.

End of Document