InCom WTMS

OPERATIONAL USER MANUAL

STANDARD OPERATING PROCEDURE • USER MANUAL

Warehouse Tracking & Management System

A complete, visual step-by-step operating manual for plant warehouse staff. Dedicated top-down workflow guides for inbound intake, dock receiving, quality inspection, rack putaway, and production order fulfillment.

WAREHOUSE MATERIAL ARCHITECTURE

ALL WAREHOUSE ROLES

The Complete Warehouse Lifecycle

How raw materials flow from delivery truck arrival to manufacturing line consumption.

1. INBOUND RECEIVING & GRN

STAGE 01

- SCM uploads supplier delivery packing list (PDF/Excel).
- Floor operators physically laser scan 100% of pallets at the dock.
- SCM confirms supplier invoice and generates official GRN.

Milestone: Goods Receipt Note (GRN) Generated

2. QUALITY CONTROL TESTING

STAGE 02

- GRN batch dispatched to Quality Control queue.
- QC technicians conduct core laboratory physical testing.
- Approved (A) pallets release to putaway; Rejected (R) lock in quarantine.

Milestone: Quality Status Approved & Released

3. STORAGE RACK PUTAWAY

STAGE 03

- Floor operator scans Pallet Barcode FIRST at staging.
- Operator transports pallet and scans Rack Location SECOND.
- SCM reviews stored rack coordinates and confirms available stock.

Milestone: 100% Pallets Stored in Warehouse Racks

4. PRODUCTION ORDER PICKING

STAGE 04

- SCM creates Work Order with automated FIFO/FEFO allocation.
- Floor operators retrieve pallets from shelves and scan barcodes.
- SCM reviews delivery and completes final stock transfer to manufacturing.

Milestone: Raw Material Issued to Work-in-Progress

ROLE MATRIX

Operational Responsibilities & Hardware Assignment

Operational Role	Hardware Device	Core Daily Actions	Mandatory Operating Rule
Supply Chain Executive	Workstation PC / Browser	Upload manifests, audit line items, confirm GRN with supplier invoices, issue Work Orders, review stock transfers.	Verify physical supplier invoice number and date before GRN submission.
Quality Control Executive	QC Lab PC / Tablet	Review pending GRN queue, conduct sample testing, record Approved (A) or Rejected (R) with reasons.	Every rejection requires a mandatory reason; rejected stock is locked in quarantine.
Warehouse Operator	Handheld Laser Scanner / Tablet	Scan arriving pallets at dock, physical rack putaway, picking requested pallets for production lines.	ALWAYS scan Pallet Barcode FIRST, then Scan Rack Location SECOND.

CHAPTER SITEMAP

24-Page Top-Down Operational Guide Index

📦 Supply Chain Chapters

Pg 4: SCM Terminal Dashboard
Pg 5: Uploading Packing List
Pg 6: Reviewing Manifest Header
Pg 7: Auditing Pallet Line Items
Pg 10: Confirming GRN Summary
Pg 11: Entering Supplier Invoice
Pg 12: Quality Analysis Dispatch

⚡ Warehouse Floor Chapters

Pg 8: Operator Terminal Navigation
Pg 9: Dock Inbound Scanning
Pg 15: Two-Step Rack Putaway
Pg 20: Starting Production Picks
Pg 21: Scanning Picked Pallets
Pg 17: Creating Work Orders
Pg 18: FIFO Pallet Allocation

🔬 Quality Control & Standards

Pg 3: Sign-In & Automatic Routing
Pg 13: Quality Control Dashboard
Pg 14: Recording QC Decisions
Pg 22: Work Order Audit History
Pg 23: Final Stock Transfer Review
Pg 24: The 5 Golden Rules & Escalation

USER AUTHENTICATION

ALL PERSONNEL

System Sign-In & Automatic Role Routing

Warehouse personnel sign in using their assigned username and password. The system automatically launches their role terminal.

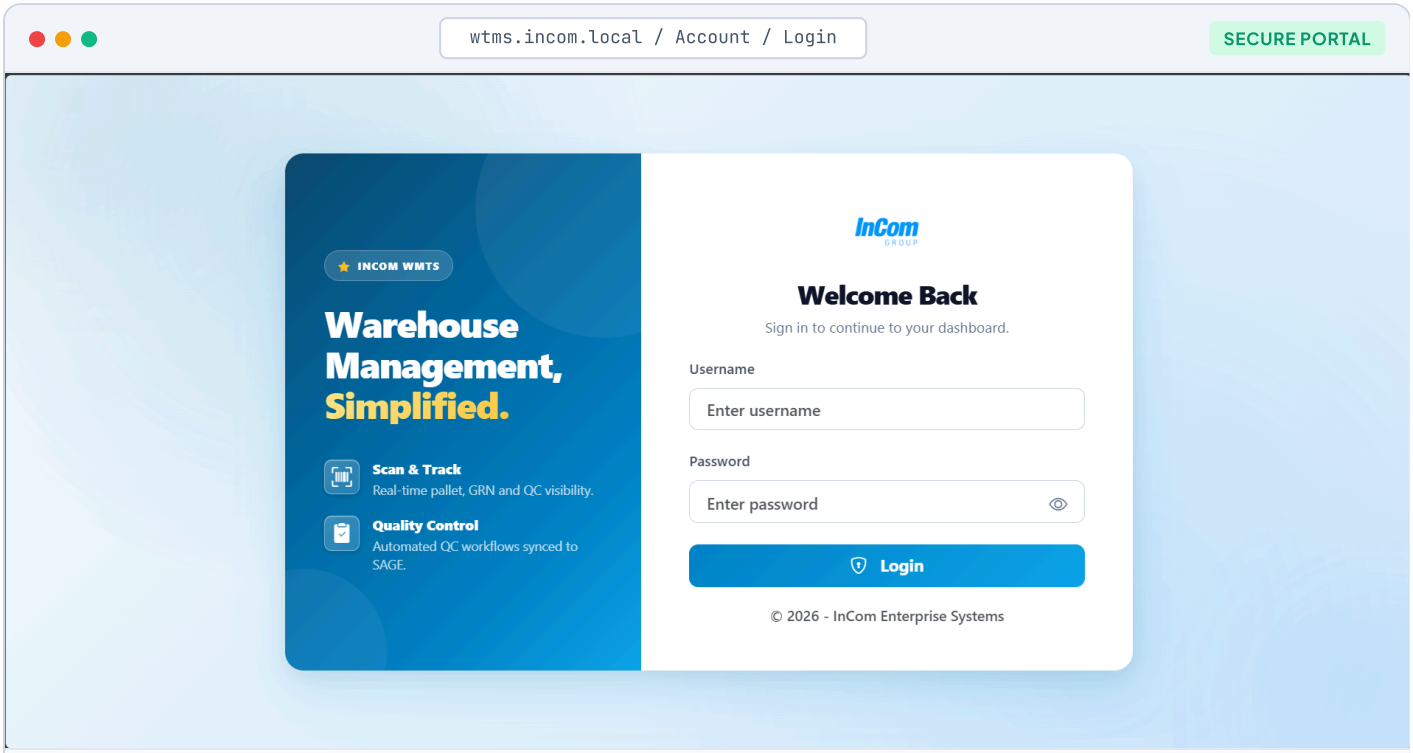


FIGURE 1.1 **WTMS Portal Sign-In Interface:** Form requiring only Username and Password credentials.

PROCEDURE

Step-by-Step Operator Action Guide

1. **Open Application:** Open the WTMS web portal on your PC, forklift tablet, or handheld terminal browser.
2. **Enter Username:** In the Username field, type your assigned personnel ID (e.g. `sce`, `qc`, or operator ID).
3. **Enter Password:** In the Password field, enter your secure password. (Use the eye icon to verify spelling if needed).
4. **Click Login:** Click the blue Login button. The system authenticates your credentials and automatically redirects you to your role dashboard.

Screen Element	Input Type	System Behavior & Automatic Routing
Username Input	Text Entry	Case-insensitive username. Identifies user account and security permissions in the database.
Password Input	Password Field	Encrypted string. Lockout protection prevents unauthorized brute-force attempts.
Automatic Routing	System Redirection	Supply Chain → /SupplyChain/Index | QC → /QC/Index | Operator → /Operator/Index

Automatic Role Redirection: There is no role dropdown on the login screen. Your assigned role (Supply Chain Executive, Quality Control, or Warehouse Operator) is stored securely in your user profile, and the system automatically opens your designated dashboard upon successful login.

SUPPLY CHAIN EXECUTIVE • OPERATIONS COCKPIT

SUPPLY CHAIN EXECUTIVE

Supply Chain Terminal Dashboard

The central control hub for monitoring active dock deliveries, starting new manifest uploads, and reviewing material movements.

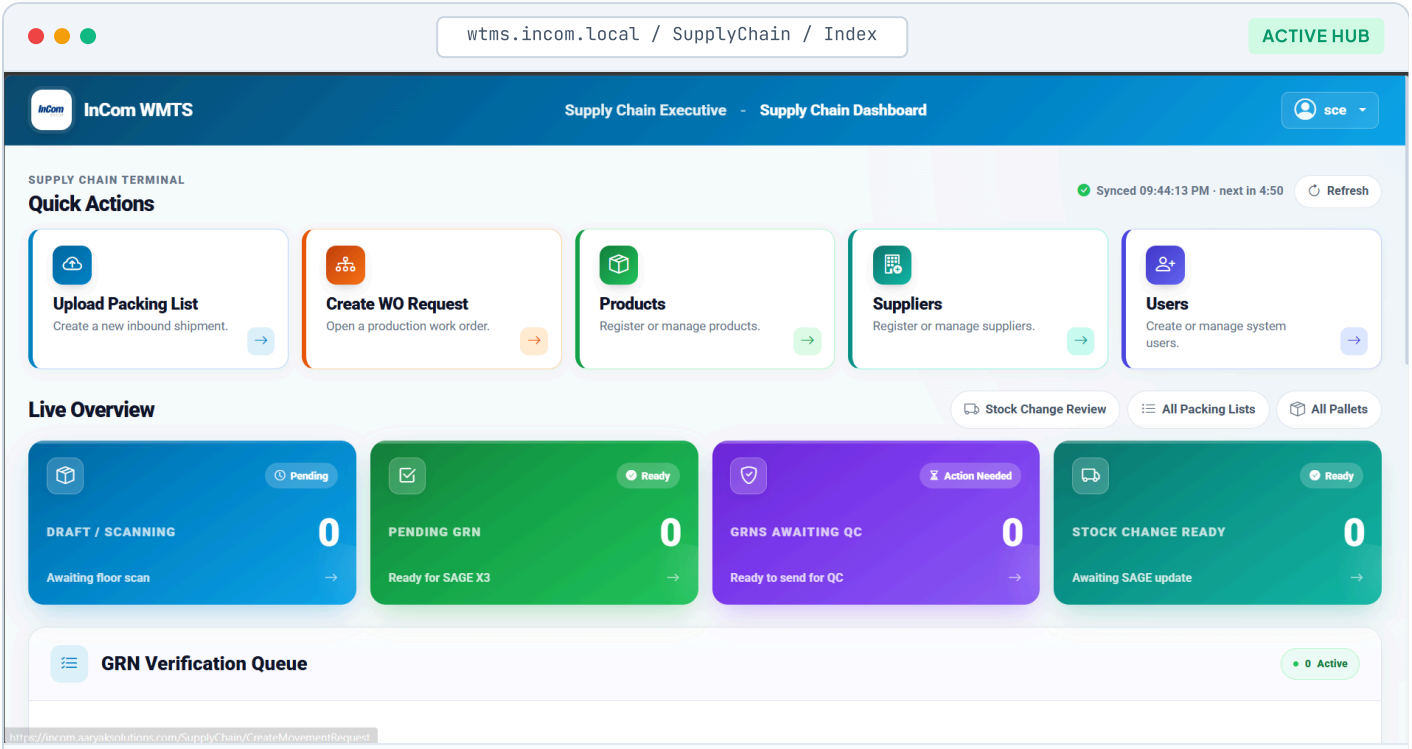


FIGURE 2.1 **SCM Executive Dashboard:** Live deliveries table, scan progress indicators, and fast-action shortcut buttons.

PROCEDURE Step-by-Step Operator Action Guide

1. **Review Inbound Panel:** Review the Inbound Deliveries panel upon login to see trucks currently being unloaded at receiving bays.
2. **Monitor Progress:** Check progress bars on active deliveries to verify how many pallets dock operators have physically scanned.
3. **Check Status Badges:** Look for green checkmarks indicating shipments that are 100% scanned and ready for GRN confirmation.
4. **Launch New Upload:** When a new supplier truck arrives at the facility gate, click the blue Upload Packing List button.

Dashboard Control	Trigger Action	Operational Purpose
Upload Packing List	Blue Primary Button	Opens the manifest upload modal to parse new incoming delivery paperwork (PDF/Excel).
Create Stock Movement	Secondary Action	Launches production work order creation when manufacturing lines request raw materials.
Active Deliveries Card	Live Data Grid	Displays vendor name, packing list number, scan progress counter, and dock intake status.

Shift Handover Note: Check the SCM terminal at the start of every shift. Any shipment marked with a green checkmark is 100% scanned by dock operators and ready for immediate GRN confirmation.

SUPPLY CHAIN EXECUTIVE • MANIFEST INTAKE

SUPPLY CHAIN EXECUTIVE

Uploading Supplier Packing List

Upload the electronic delivery manifest (PDF or Excel) provided by the raw material supplier to initialize pallet records.

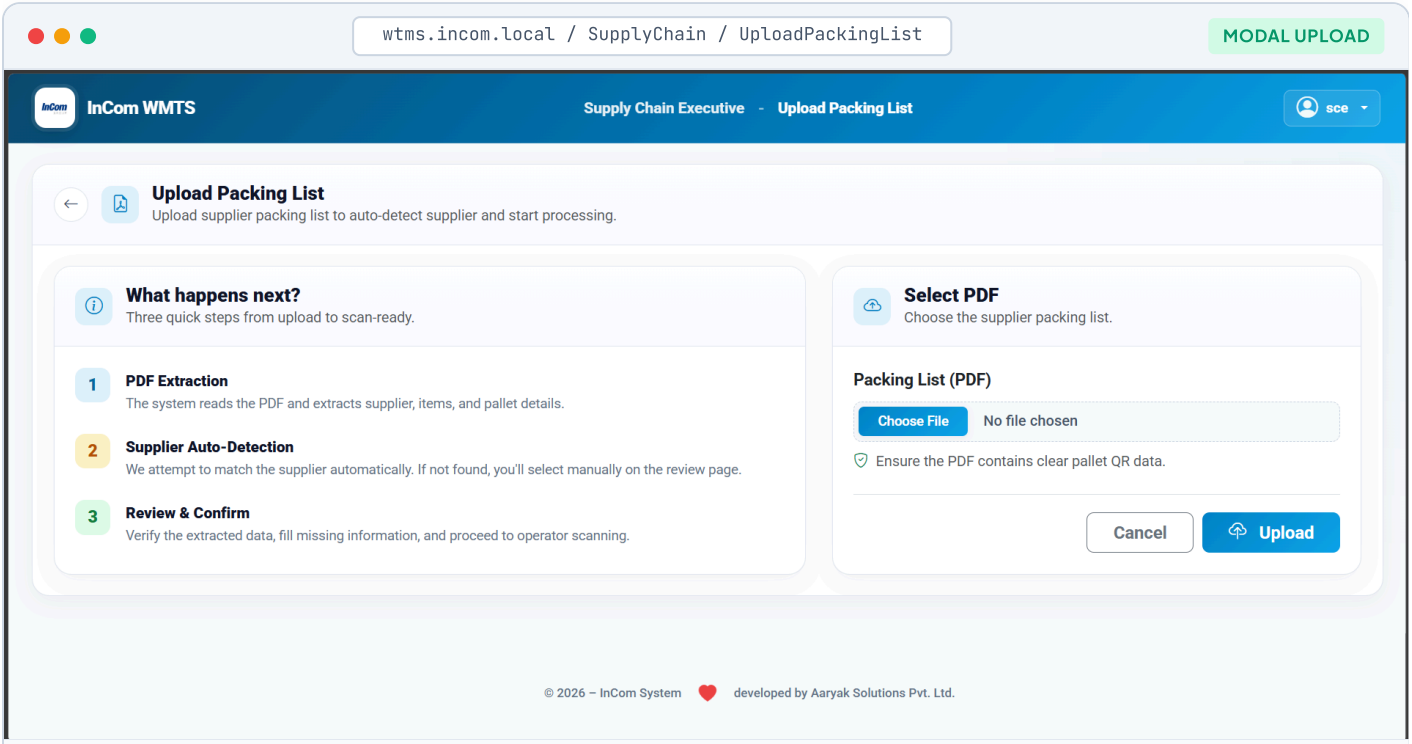


FIGURE 2.2 **Upload Packing List Modal:** Drag-and-drop file zone supporting supplier PDF and Excel formats.

PROCEDURE Step-by-Step Operator Action Guide

1. **Obtain Document:** Obtain the electronic packing list document from the supplier email or transport carrier flash drive.
2. **Drop File:** Drag and drop the file directly into the dotted upload box, or click Browse Files to select it from your computer.
3. **Verify File Format:** Verify that the file is accepted (e.g. Owens-Corning packing list file: `8001238964.pdf` or `.xlsx`).
4. **Execute Extraction:** The system automatically parses all individual pallet codes, product items, batch numbers, and net/gross weights.

Upload Field	Allowed Format	System Processing Action
Drag & Drop Box	PDF, XLSX, CSV	Extracts line-by-line tabular pallet records and converts vendor codes to plant SKU masters.
Progress Indicator	Visual Progress Bar	Shows file parsing progress. Displays green checkmark upon successful extraction.
Cancel / Close	Modal Action	Discards the current file upload without creating any database records.

✓ **Zero Manual Data Entry:** Automated document extraction completely eliminates manual keying errors. Pallet weights and barcode IDs are populated directly from the manufacturer's verified manifest.

SUPPLY CHAIN EXECUTIVE • MANIFEST AUDIT

SUPPLY CHAIN EXECUTIVE

Reviewing Extracted Manifest Header

Cross-check top-level delivery details extracted by the system against the physical paper delivery note.

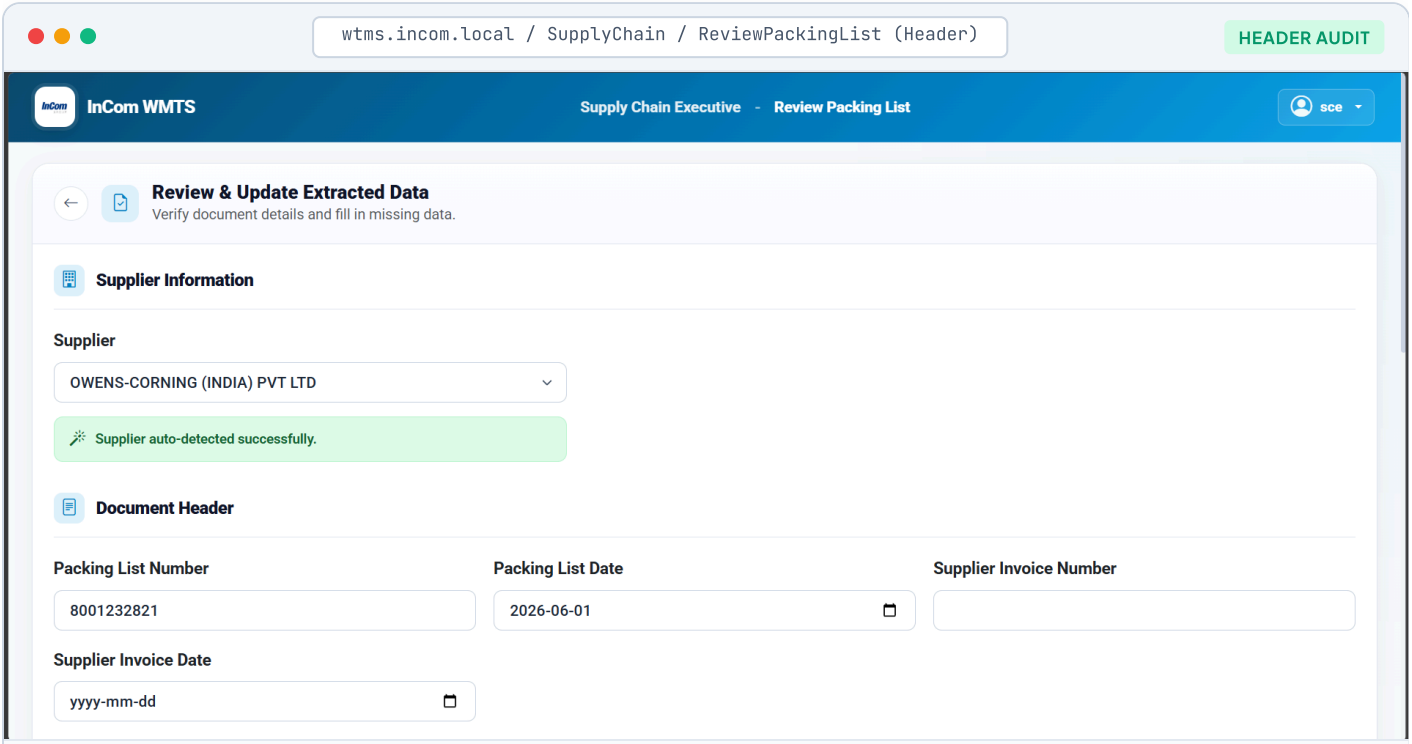


FIGURE 2.3 **Extracted Manifest Header:** Summary showing Supplier Name, Packing List Number, Date, and Pallet Count.

PROCEDURE Step-by-Step Operator Action Guide

1. **Match Packing List #:** Compare the Packing List No. on screen (e.g. `8001238964`) with the vendor delivery receipt.
2. **Verify Vendor Name:** Confirm the Supplier Name matches the approved vendor master (e.g. `OWENS-CORNING (INDIA) PVT LTD`).
3. **Check Packing Date:** Check the Packing Date (e.g. `22 Jul 2026`) to ensure the shipment is within manufacturing shelf-life limits.
4. **Audit Pallet Count:** Verify that Total Pallets matches the physical count loaded on the delivery vehicle (e.g. `16 Pallets`).

Extracted Header Field	Sample Value	Verification Rule
Packing List No.	8001238964	Must uniquely identify this shipment. Used as the dock receiving identifier.
Supplier Name	OWENS-CORNING (INDIA) PVT LTD	Must match registered supplier master code in the system.
Total Pallets	16	Total physical pallets expected to be unloaded at the receiving dock.

⚠ **Discrepancy Procedure:** If the physical pallet count on the truck differs from the extracted number, do not proceed to dock scanning. Notify the transport driver and contact the supplier representative immediately.

SUPPLY CHAIN EXECUTIVE • LINE-ITEM VERIFICATION

SUPPLY CHAIN EXECUTIVE

Verifying Pallet Manifest Line Items

Audit each extracted pallet barcode, product SKU, and weight to prepare the shipment for dock laser scanning.

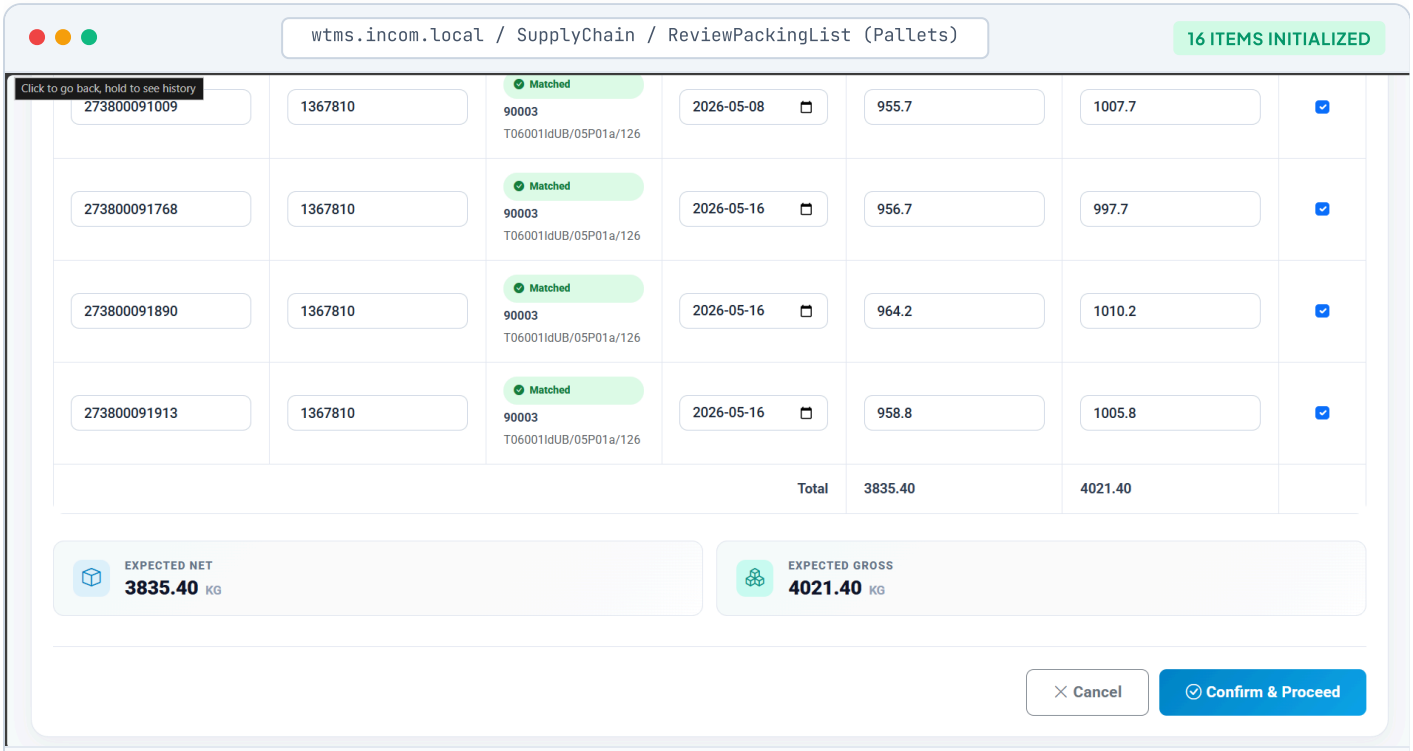


FIGURE 2.4 **Extracted Pallet Table:** Line-item grid displaying 12-digit pallet codes, product descriptions, net/gross weights, and initial scan state.

PROCEDURE Step-by-Step Operator Action Guide

1. **Examine Pallet Codes:** Examine the Pallet Code column (e.g. `204450582953`) to confirm all 16 unique barcodes are present.
2. **Verify Product SKU:** Verify the Product Code (e.g. `9001 - BX1200ldUB/10K01/126s`) matches purchase order requirements.
3. **Check Weight Columns:** Check the Net Weight (kg) and Gross Weight (kg) columns for reasonable values (e.g. ~720 kg net).
4. **Notify Dock Team:** Confirm that all items are in Waiting for Dock Scan status. Notify the warehouse floor operators to begin unloading.

Table Column	Sample Value	Operational Significance
Pallet Code	204450582953	The unique serial barcode printed on the physical pallet label.
Product	9001	The internal plant item code and technical composite grade specification.
Status	Waiting for Dock Scan	Indicates the pallet is registered in the database and awaits physical scanner confirmation at the dock.

Ready for Dock Receiving: As soon as you complete this review, the delivery manifest becomes visible on all handheld scanner terminals at the receiving dock.

WAREHOUSE FLOOR OPERATOR • TERMINAL NAVIGATION

WAREHOUSE OPERATOR

Operator Touch Terminal Navigation

The high-contrast, touch-optimized interface used by floor operators on rugged mobile scanners and forklift tablets.

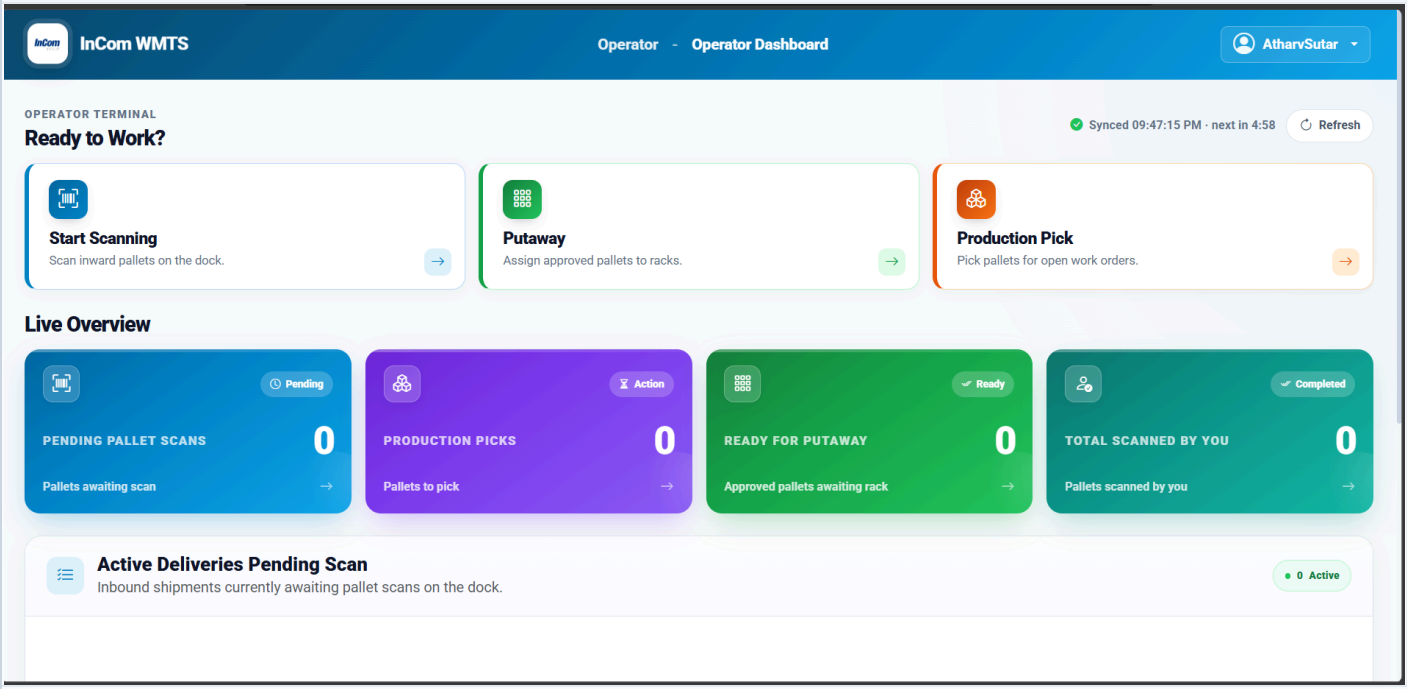


FIGURE 3.1 **Operator Touch Terminal:** Three large, high-visibility operational action tiles for receiving dock, putaway, and picking.

PROCEDURE Step-by-Step Operator Action Guide

1. **Sign In to Scanner:** Turn on your rugged handheld scanner or forklift terminal. Log in with your operator username and password.
2. **Review Action Cards:** The terminal immediately displays the 3 primary operational cards designed for glove-friendly touch interaction.
3. **Identify Assignment:** Dock Inbound Scan (for unloading), Putaway Pallets (for storage racks), Production Picking (for line orders).
4. **Tap Selected Activity:** Tap Dock Inbound Scan to begin receiving the newly arrived delivery truck.

Terminal Tile	Physical Location	Floor Staff Activity
Dock Inbound Scan	Receiving Bay / Dock	Scan incoming pallet barcodes as forklift unloads pallets from the truck.
Putaway Pallets	Warehouse Storage Aisles	Scan Pallet FIRST, then Scan Rack Location SECOND to store inventory.
Production Picking	Racks → Production Staging	Retrieve pallets from racks according to work order pick lists.

Automatic Fullscreen Optimization: The Operator Terminal is designed with oversized buttons and high contrast to ensure quick scanning even when wearing industrial safety gloves in dim lighting.

WAREHOUSE FLOOR OPERATOR • INBOUND RECEIVING

WAREHOUSE OPERATOR

Dock Inbound Barcode Scanning

Physically scan each arriving pallet as it is unloaded at the dock. The live checklist updates in real time.

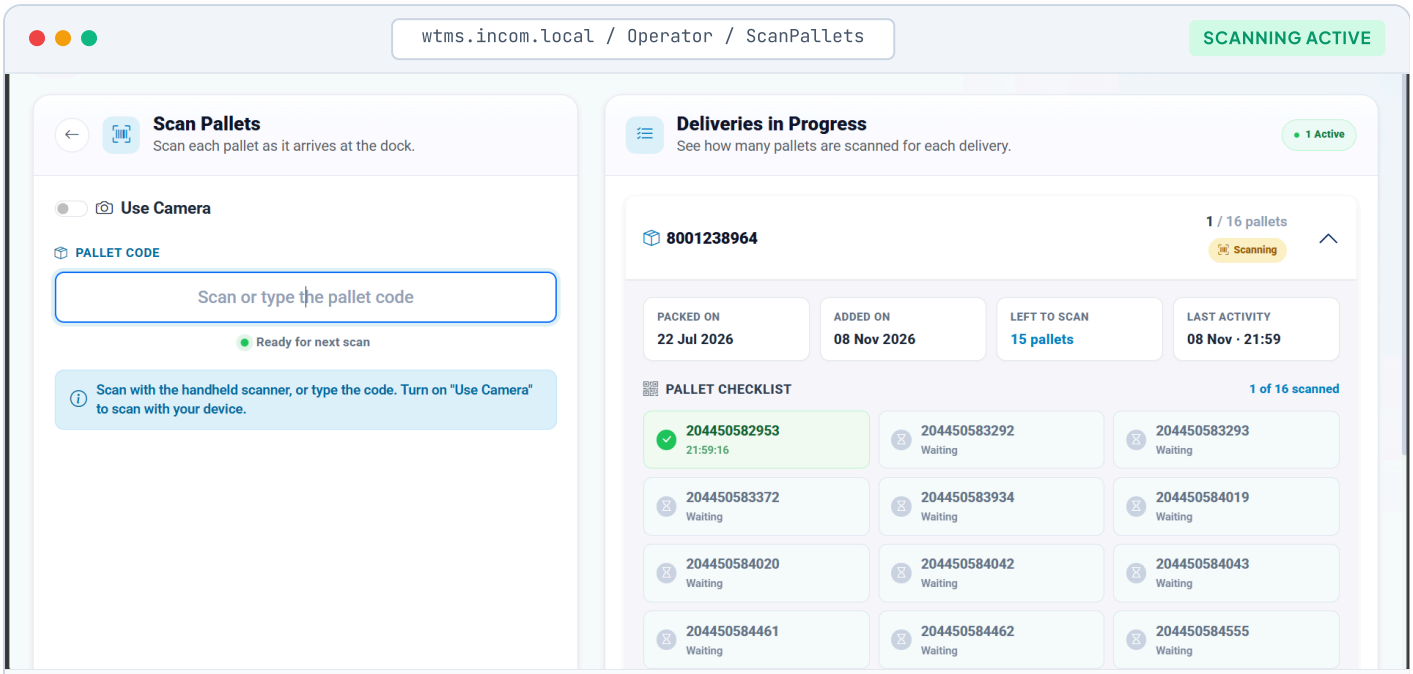


FIGURE 3.2 **Dock Inbound Scan Screen:** Barcode input box, active delivery checklist, and green checkmark timestamp confirmation.

PROCEDURE Step-by-Step Operator Action Guide

1. **Expand Active Delivery:** Ensure the active delivery card (e.g. `8001238964`) is expanded on the right panel.
2. **Aim Laser Scanner:** Aim your handheld laser scanner at the barcode label affixed to the plastic shrink-wrap of the pallet.
3. **Confirm Audio & Visual:** Upon a successful scan, the terminal emits an audible beep and the pallet immediately turns GREEN with a timestamp (e.g. `21:59:16`).
4. **Complete Checklist:** Watch the counter update: `1 / 16 pallets scanned • 15 pallets left to scan`. Continue until all 16 pallets show green checkmarks.

Screen Feature	Visual State	Operational Meaning
Scan Input Field	Ready for next scan	Scanner cursor automatically focuses here. Ready to receive the next barcode immediately.
Use Camera Toggle	Switch (On / Off)	Turn ON to use tablet/phone camera if laser hardware is unavailable.
Pallet Checklist	Green vs Grey pills	Green = Confirmed received at dock. Grey = Still waiting to be unloaded.

⚠ **Duplicate & Unknown Code Alarm:** If you scan a pallet that belongs to a different delivery or try to scan the same pallet twice, the terminal emits a distinct double-buzz warning and displays an error prompt.

SUPPLY CHAIN EXECUTIVE • GOODS RECEIPT NOTE

SUPPLY CHAIN EXECUTIVE

Reviewing Scanned Pallets & GRN Readiness

Once all physical pallets are scanned at the dock, verify total received weights and confirm readiness for GRN creation.

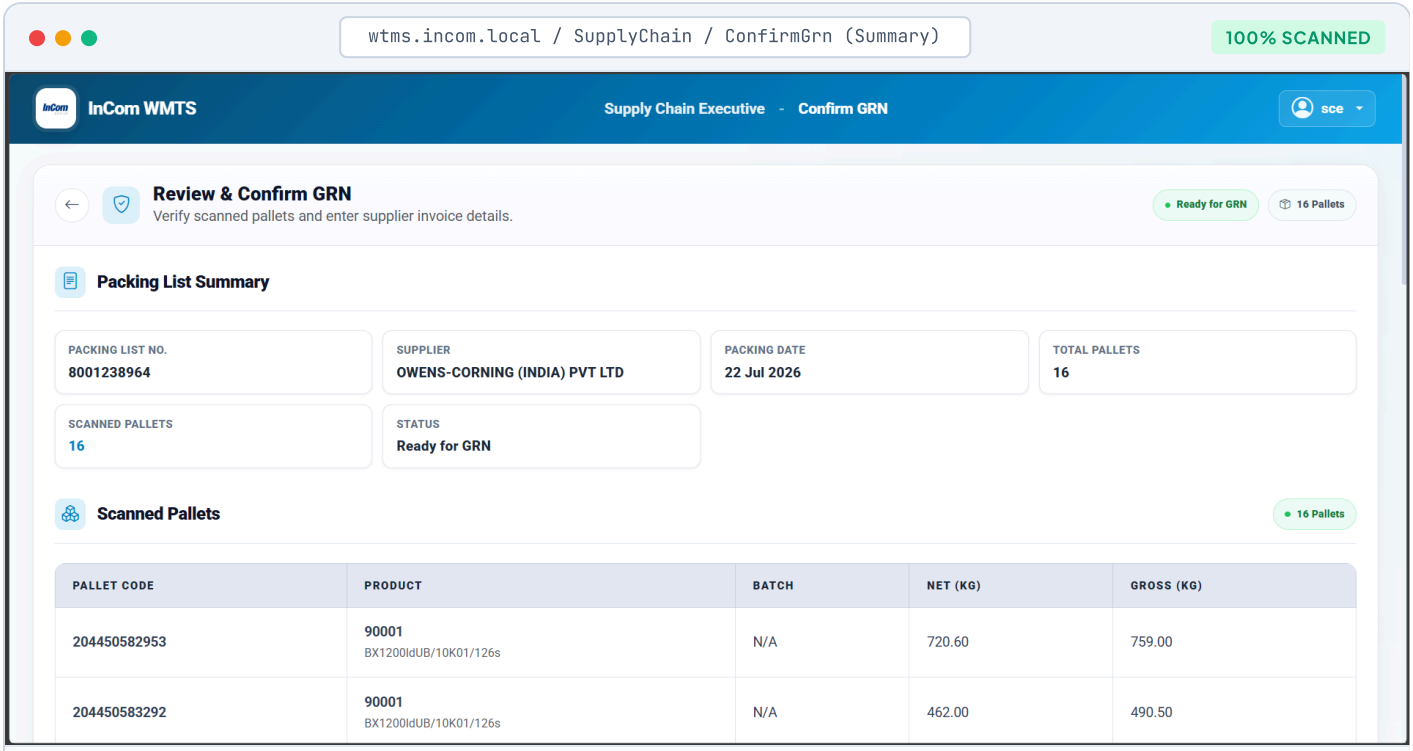


FIGURE 4.1 **Confirm GRN Summary Screen:** Verified status 'Ready for GRN' with 16 / 16 scanned pallets and aggregate weights.

PROCEDURE Step-by-Step Operator Action Guide

1. **Open GRN Summary:** Navigate to Review & Confirm GRN on the SCM Terminal.
2. **Verify Ready Badge:** Check the top summary badge: Ensure it reads Ready for GRN and 16 Pallets.
3. **Audit Weight Totals:** Review total aggregate weights: Total Net: `8,888.10 KG` and Total Gross: `9,440.90 KG`.
4. **Proceed to Invoicing:** Confirm that all 16 pallet codes are listed with zero missing items. Scroll down to proceed to supplier invoice entry.

Summary Block	Screen Value	Verification Check
Scanned Pallets	16 of 16	100% completion required. GRN cannot be generated if even 1 pallet is unverified.
Total Net Weight	8,888.10 KG	Must match bill of lading material weight within accepted scale tolerance.
Total Gross Weight	9,440.90 KG	Net weight plus tare weight of wooden pallets and strapping.

✓ **Ready for Official Intake:** The physical count on the dock matches the digital manifest 100%. The system now unlocks the Supplier Invoice entry form.

SUPPLY CHAIN EXECUTIVE • FINANCIAL TIE-IN

SUPPLY CHAIN EXECUTIVE

Entering Supplier Invoice & Submitting GRN

Tie the physical shipment to the vendor's financial invoice to officially generate the Goods Receipt Note in the plant system.

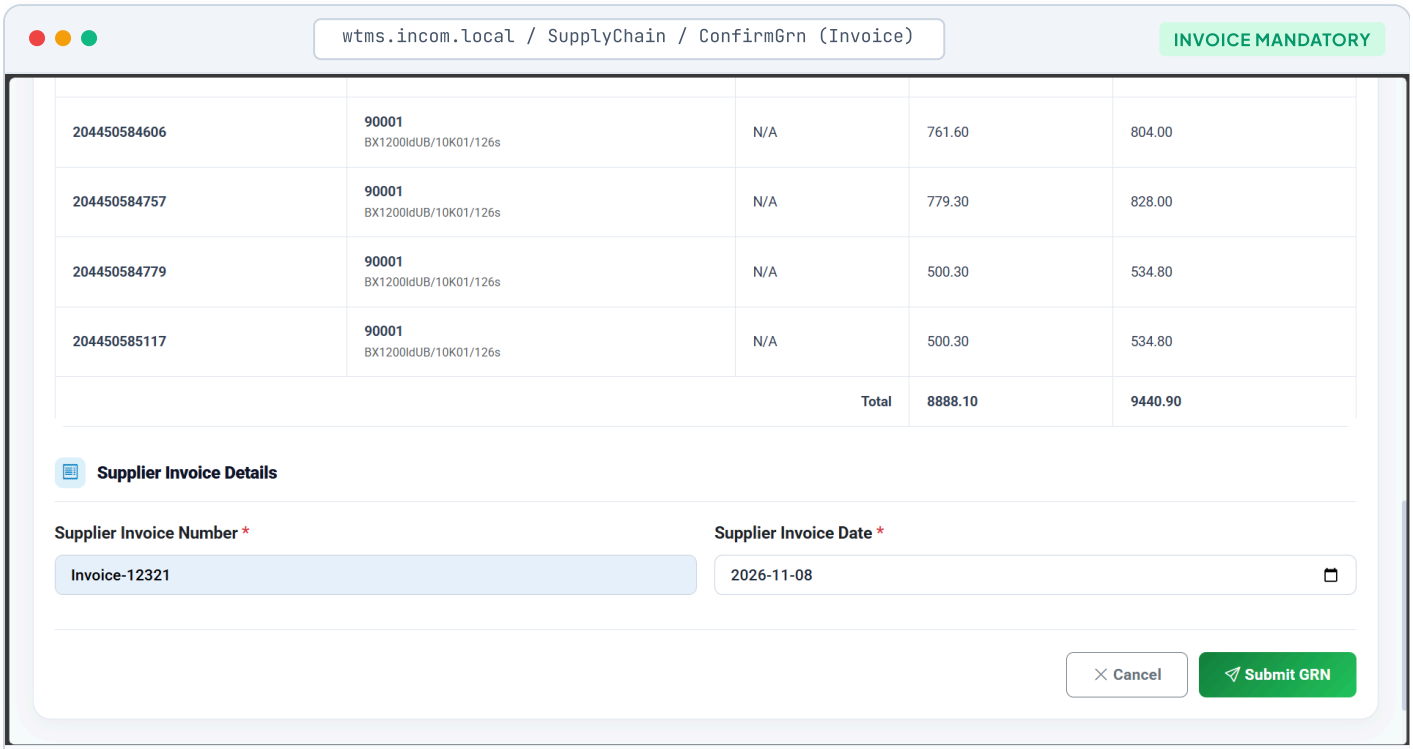


FIGURE 4.2 **Supplier Invoice Details Section:** Invoice number entry, date picker, and green Submit GRN confirmation button.

PROCEDURE Step-by-Step Operator Action Guide

1. **Locate Paper Invoice:** Locate the physical tax invoice provided by the transport driver from the vendor.
2. **Type Invoice #:** In the Supplier Invoice Number field, type the invoice reference exactly as printed (e.g. `Invoice-12321`).
3. **Select Invoice Date:** In the Supplier Invoice Date field, select the date printed on the vendor invoice using the date picker.
4. **Submit GRN:** Click the green Submit GRN button. The system generates an official Goods Receipt Note (e.g. `GRN-20261108-0001`).

Input Field	Validation Requirement	Operational Importance
Supplier Invoice Number *	Required Text	Directly linked to Accounts Payable and purchasing matching. Prevents duplicate billing.
Supplier Invoice Date *	Required Date	Used to establish raw material warranty and batch shelf-life calculations.
Submit GRN Button	Action CTA	Permanently locks the receipt in plant records and automatically creates the Quality Control inspection request.

✓ **Automatic QC Handover:** Upon clicking Submit GRN, the system immediately routes all 16 pallets to Quality Control. They cannot be placed in storage racks until QC issues an Approved status.

SUPPLY CHAIN EXECUTIVE • QUALITY ROUTING

SUPPLY CHAIN EXECUTIVE

Dispatching Pallets for Quality Testing

Transmit the newly generated GRN batch to the Quality Control department so lab technicians can begin sampling.

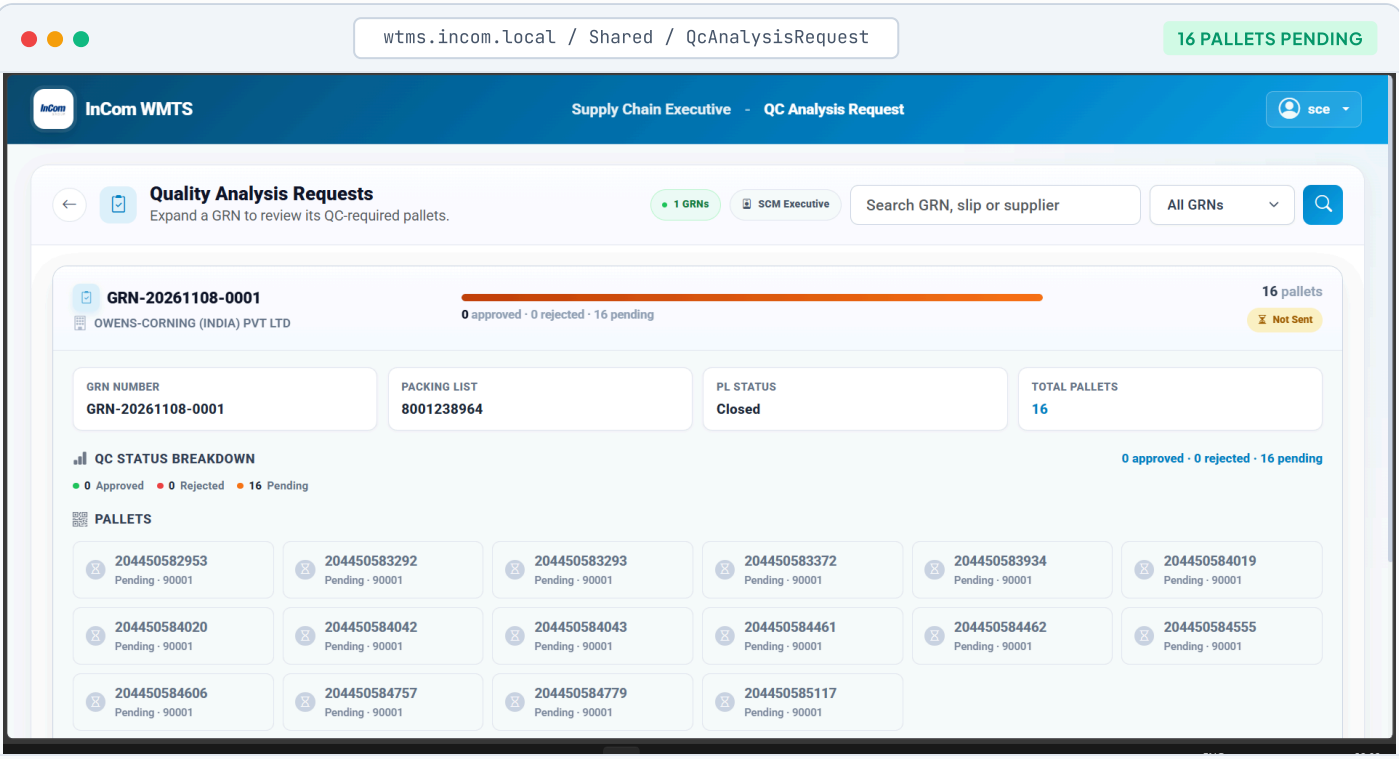


FIGURE 4.3 **Quality Analysis Requests Screen:** Status breakdown showing 0 approved, 0 rejected, 16 pending pallets ready for QC transmission.

PROCEDURE Step-by-Step Operator Action Guide

1. **Open QA Requests:** In the SCM Terminal, navigate to the Quality Analysis Requests screen.
2. **Locate GRN Record:** Locate the GRN record: `GRN-20261108-0001 • OWENS-CORNING • 16 Pallets`.
3. **Review Status Bar:** Review the status breakdown bar: 0 Approved • 0 Rejected • 16 Pending. (Status badge reads: Not Sent).
4. **Transmit to QC:** Click the Send to QC button. The status updates to Under Inspection and appears on the QC Dashboard.

Breakdown Field	Visual State	Operational Significance
QC Status Breakdown	Horizontal Progress Bar	Color-coded overview: Green = Approved, Red = Rejected, Orange = Pending inspection.
PL Status	Closed	Indicates dock receiving is 100% finished and manifest is closed to further inbound scans.
Send to QC Button	Action CTA	Alerts the Quality Control lab that physical raw material is staged at the dock ready for core sampling.

Automatic Safety Gate: Until Quality Control enters an official decision for each pallet, the system strictly forbids warehouse floor operators from moving items into regular storage racks.

QUALITY CONTROL EXECUTIVE • INSPECTION QUEUE

QUALITY CONTROL EXECUTIVE

Quality Control Dashboard & Inspection Queue

The dedicated workbench for QC technicians to view pending GRN deliveries awaiting laboratory sampling.

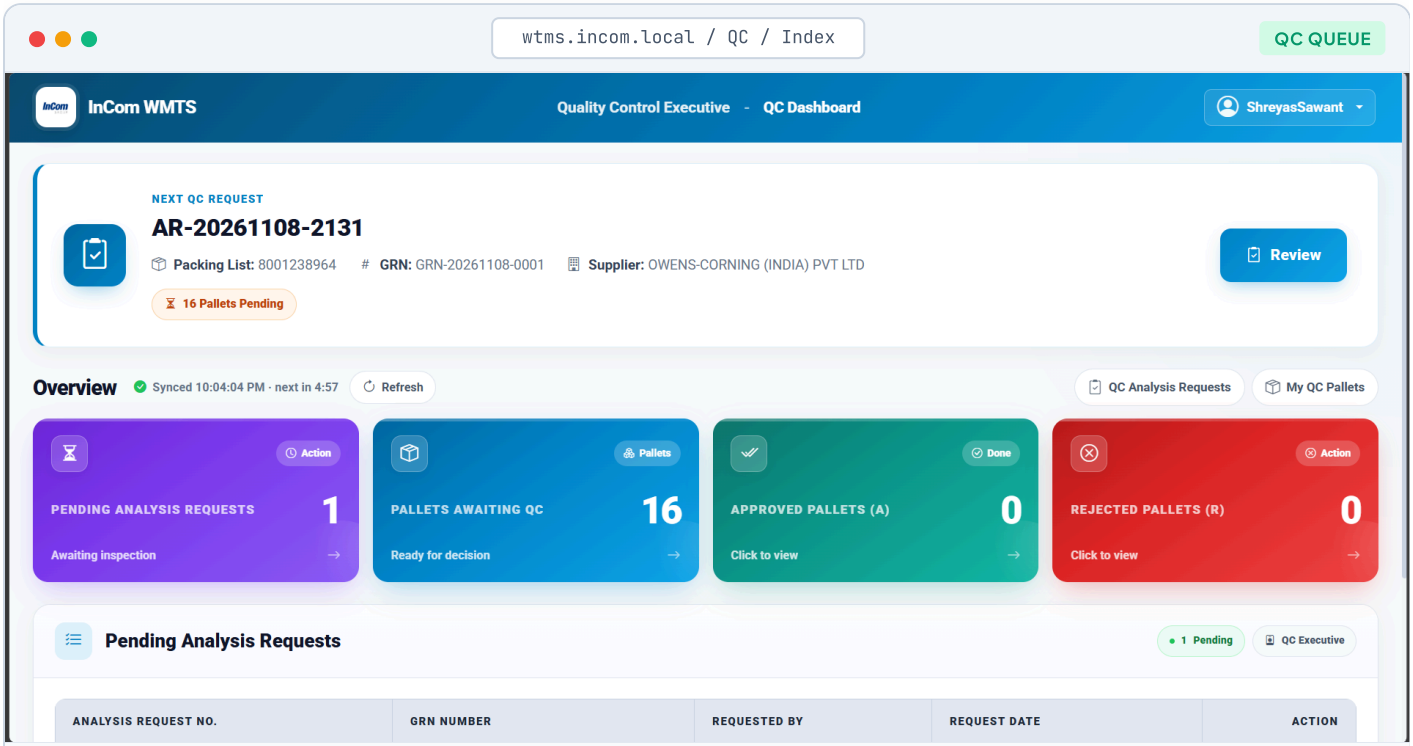


FIGURE 5.1 **QC Inspection Dashboard:** Card view of pending GRN batches showing pallet counts, vendor names, and inspection progress.

PROCEDURE Step-by-Step Operator Action Guide

1. **Sign In to QC:** Sign in with your Quality Control credentials. The system routes you directly to `/QC/Index`.
2. **Inspect Queue Cards:** Review the cards representing incoming shipments awaiting inspection (e.g. `GRN-20261108-0001`).
3. **Filter by Priority:** Filter or search by supplier name or GRN number to locate urgent production materials.
4. **Open Worksheet:** Click on the target GRN card to expand the 16 individual pallet records and open the sample entry form.

Dashboard Feature	Display Format	Operational Meaning
GRN Summary Card	Interactive Card	Displays GRN number, supplier name, packing date, and total number of pallets requiring testing.
Search & Filter Bar	Input / Dropdown	Allows quick filtering by 'Pending', 'Partially Inspected', or specific product codes.
Status Breakdown	Color Indicator	Displays approved vs rejected count in real time as each pallet is tested.

Sampling Priority: Prioritize raw materials flagged with urgent production tags to prevent manufacturing line downtime. Staged pallets remain safely held in receiving.

QUALITY CONTROL EXECUTIVE • TESTING & DISPOSITION

QUALITY CONTROL EXECUTIVE

Recording QC Decisions: Approved & Rejected

Record physical lab results for each pallet. Approved pallets are released for rack putaway; rejected pallets are quarantined.

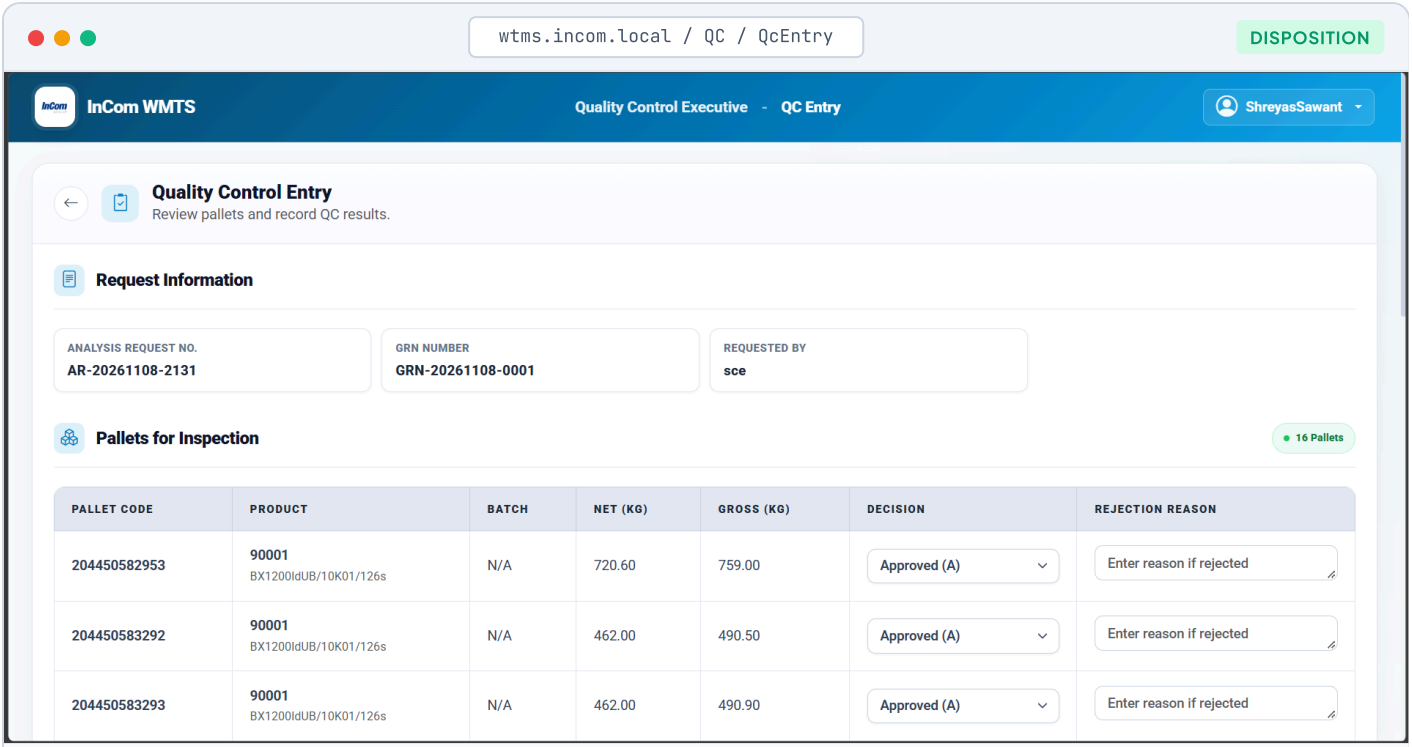


FIGURE 5.2 **QC Decision Entry Modal:** Select Approved (A) or Rejected (R) status with mandatory rejection reason and testing comments.

PROCEDURE Step-by-Step Operator Action Guide

1. **Conduct Lab Tests:** Perform standard laboratory physical tests on the raw material sample (e.g. moisture content, glass fiber tensile check).
2. **Select Disposition:** In the QC entry modal, choose Approved (Status A) or Rejected (Status R).
3. **Mandatory Rejection:** If selecting Rejected, you MUST pick a Rejection Reason (e.g. Moisture Contamination, Damaged Packaging).
4. **Save Decision:** Type testing notes in the Comments box and click Confirm QC Decision to permanently record disposition.

QC Decision Field	Accepted Selection	System Consequence
Status: Approved (A)	Standard Pass	Pallet transitions to 'Ready for Putaway'. Forklift operators can immediately store it in racks.
Status: Rejected (R)	Quality Fail	Pallet is instantly locked. System prevents putaway and restricts material from production orders.
Rejection Reason	Dropdown (Mandatory on R)	Options: Moisture Contamination, Damaged Packaging, Chemical Out-of-Spec, Label Defect.

Mandatory Quarantine Enforcement: Any pallet assigned Status R is automatically quarantined. It is physically tagged with a red Quarantine label and moved to the locked Quarantine Bay.

WAREHOUSE FLOOR OPERATOR • FORKLIFT OPERATIONS

WAREHOUSE OPERATOR

Storage Rack Putaway: Mandatory Two-Step Rule

Transport QC-approved pallets into designated warehouse racks using the strictly enforced two-step scan sequence.

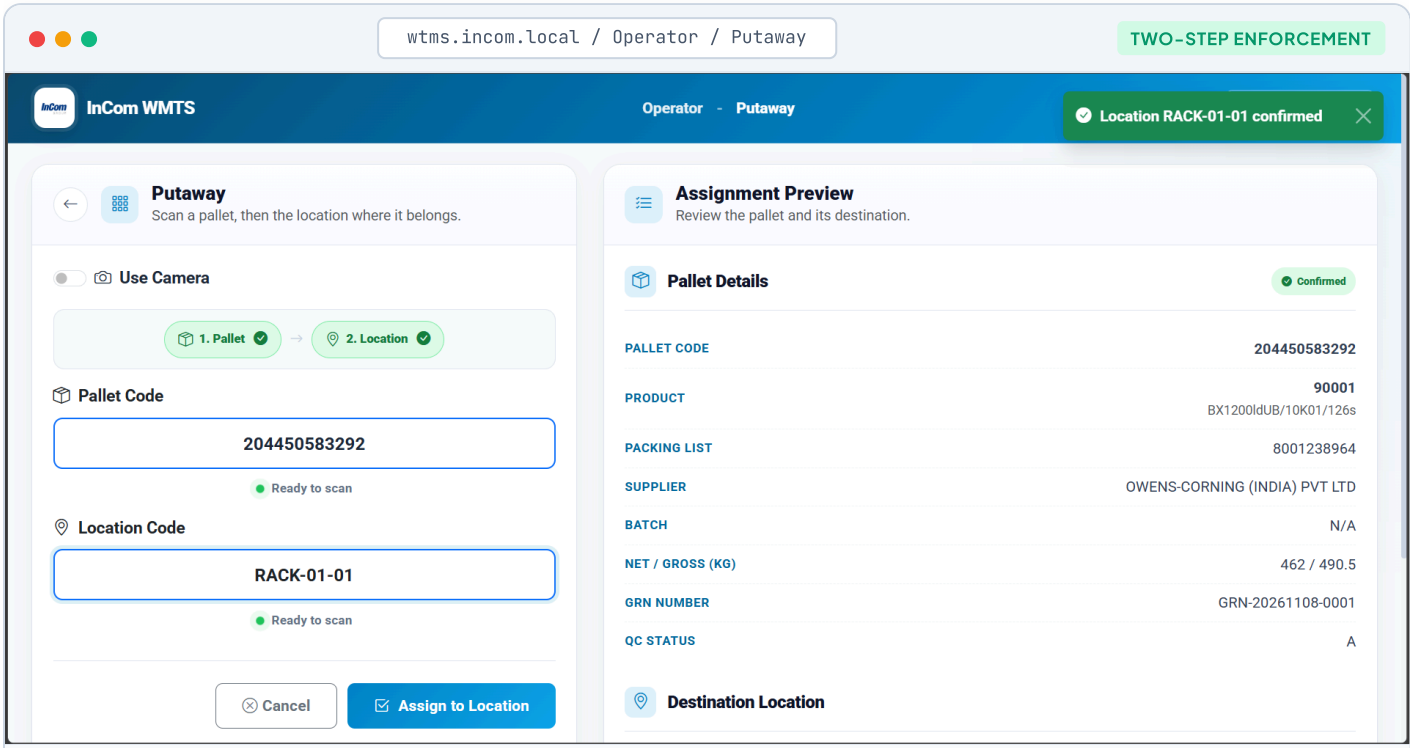


FIGURE 6.1 **Operator Putaway Screen:** Step 1: Scan Pallet Code • Step 2: Scan Destination Rack Location.

PROCEDURE Step-by-Step Operator Action Guide

1. **Scan Pallet Barcode FIRST:** Drive the forklift to the staging area and scan the barcode on the physical pallet label. (Do not scan shelf first!).
2. **Verify QC Approval:** The terminal validates QC status is Approved (A), and displays product specification and weight.
3. **Transport to Rack:** Drive the pallet to the assigned storage shelf (e.g. Rack `A01-02-01`) and place the pallet onto the beam.
4. **Scan Rack Barcode SECOND:** Scan the barcode on the rack shelf beam. The screen flashes green with confirmation: 'Pallet successfully placed.'

Putaway Sequence	Terminal Display	Scanner Behavior
Step 1: Pallet Barcode	Scan Pallet Code	Laser reads 12-digit code. Validates QC approval. Rejects rejected or un-inspected pallets.
Step 2: Rack Location	Scan Rack Location	Laser reads rack coordinate (e.g. A01-02-01). Maps pallet to this shelf coordinate.
Auto-Reset	Green Banner Confirmation	Terminal resets within 1.5 seconds, ready for the operator to scan the next pallet.

MANDATORY OPERATING RULE: SCAN PALLET FIRST → SCAN RACK SECOND

The terminal strictly requires you to scan the Pallet Barcode FIRST. If you scan the rack location shelf barcode before scanning the pallet, the scanner will emit an error buzzer and refuse the operation!

SUPPLY CHAIN EXECUTIVE • INVENTORY RECONCILIATION

SUPPLY CHAIN EXECUTIVE

Putaway Review & Central Stock Availability

Validate rack placements and synchronize central inventory records so production planners can allocate materials.

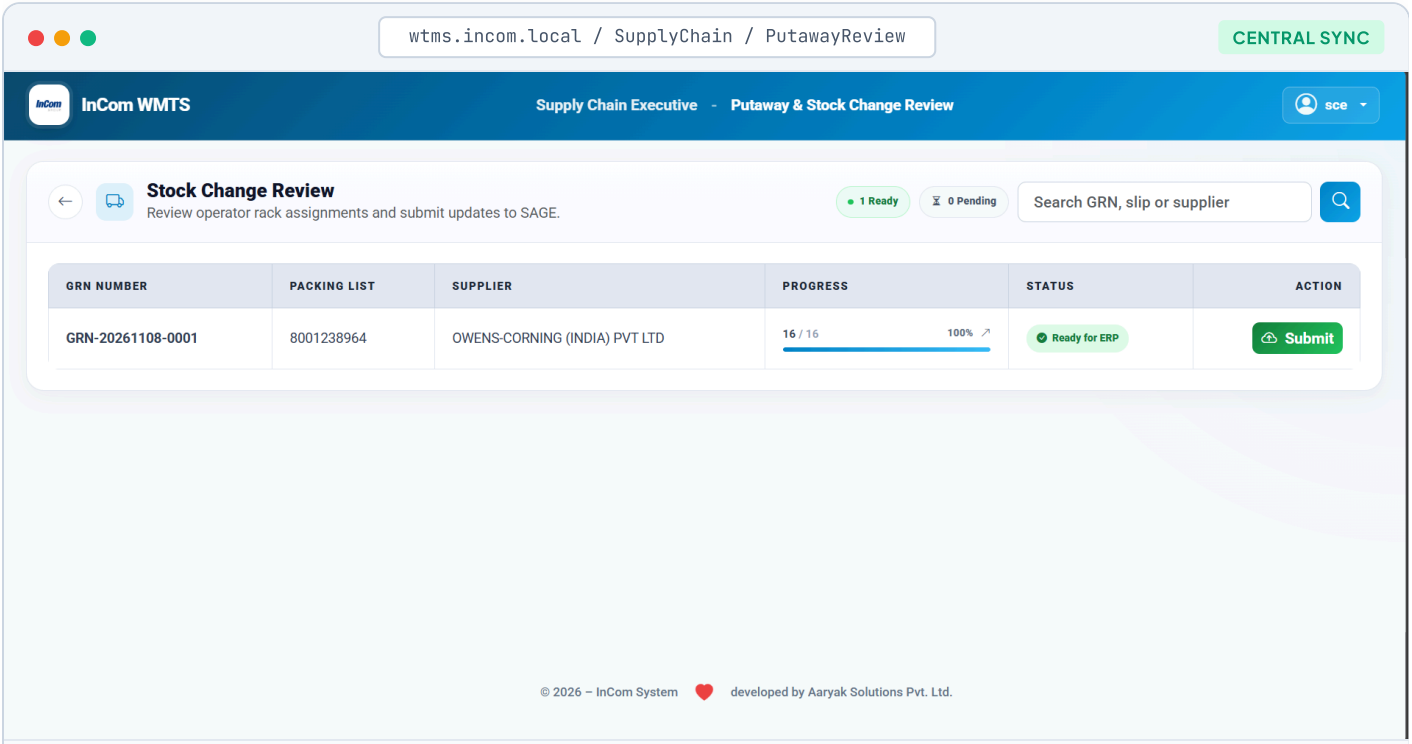


FIGURE 6.2 **Putaway Review Screen:** Audit grid of stored pallets, confirmed shelf coordinates, and central inventory synchronization status.

PROCEDURE Step-by-Step Operator Action Guide

1. **Open Putaway Review:** Open the Putaway Review module on the SCM Terminal.
2. **Audit Coordinates:** Review the mapped rack location for each pallet (e.g. Pallet `204450582953` stored at `A01-02-01`).
3. **Check Unassigned Staging:** Ensure zero unassigned pallets remain stranded in receiving dock staging areas.
4. **Sync Central Inventory:** Click Confirm Putaway Sync. The status updates from Staged to Available Stock for production planning.

Audit Field	Sample Value	Operational Purpose
Pallet Code	204450582953	Unique pallet serial number verified against physical barcode.
Rack Coordinate	A01-02-01	Exact physical warehouse position (Aisle A01, Bay 02, Shelf Level 01).
Inventory Status	Available	Material is officially available for production scheduling and work order reservation.

✓ **100% Inventory Accuracy:** Because rack locations are confirmed via barcode scans, physical warehouse shelves match digital inventory with zero discrepancy.

SUPPLY CHAIN EXECUTIVE • PRODUCTION REQUESTS

SUPPLY CHAIN EXECUTIVE

Creating Production Work Orders

Generate raw material pick requests when manufacturing lines call for composite materials.

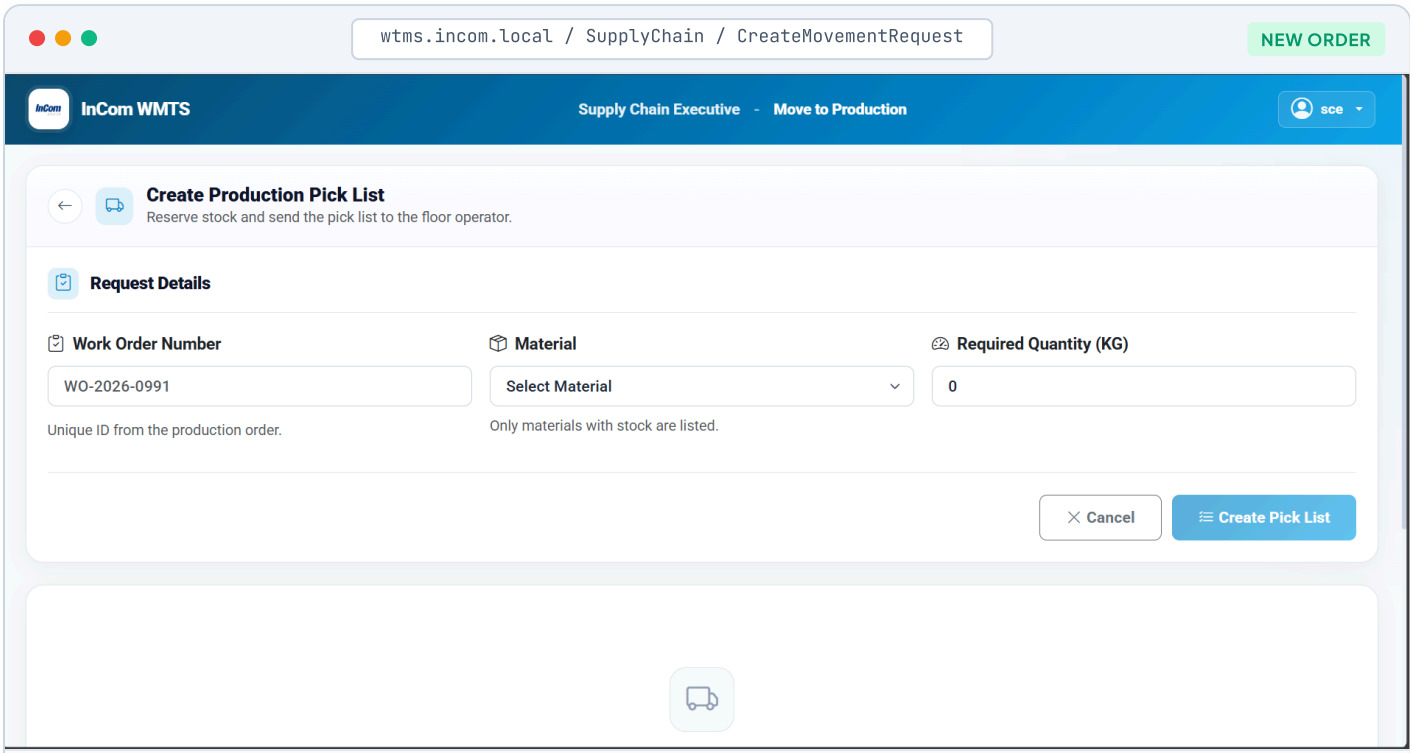


FIGURE 7.1 **Create Movement Request Form:** Enter manufacturing Work Order number, select destination production line, and specify product codes.

PROCEDURE Step-by-Step Operator Action Guide

1. **Initiate Movement:** Click Create Stock Movement on the SCM Terminal.
2. **Type Work Order #:** In the Work Order Number field, enter the production job reference (e.g. `WO-2026-1108`).
3. **Select Line & SKU:** Select the Destination Line (e.g. `LINE-01`) and choose the required product code from the catalog.
4. **Set Requested Quantity:** Specify the required material weight or number of pallets. Click Next to generate pallet recommendations.

Form Field	Sample Value	Operational Meaning
Work Order #	WO-2026-1108	Links the material movement to the manufacturing batch order on the plant floor.
Destination Line	LINE-01	Tells warehouse operators where to physically deliver the picked pallets.
Product SKU	9001	Specifies the exact raw material grade requested by the production engineers.

Automatic Stock Reservation: Once submitted, the system temporarily reserves matching pallets in storage racks, preventing another operator from picking the same inventory.

SUPPLY CHAIN EXECUTIVE • SMART ALLOCATION

SUPPLY CHAIN EXECUTIVE

Movement Insights & Automated FIFO Allocation

The WTMS engine automatically analyzes storage racks to recommend the oldest pallets first and minimize forklift travel.

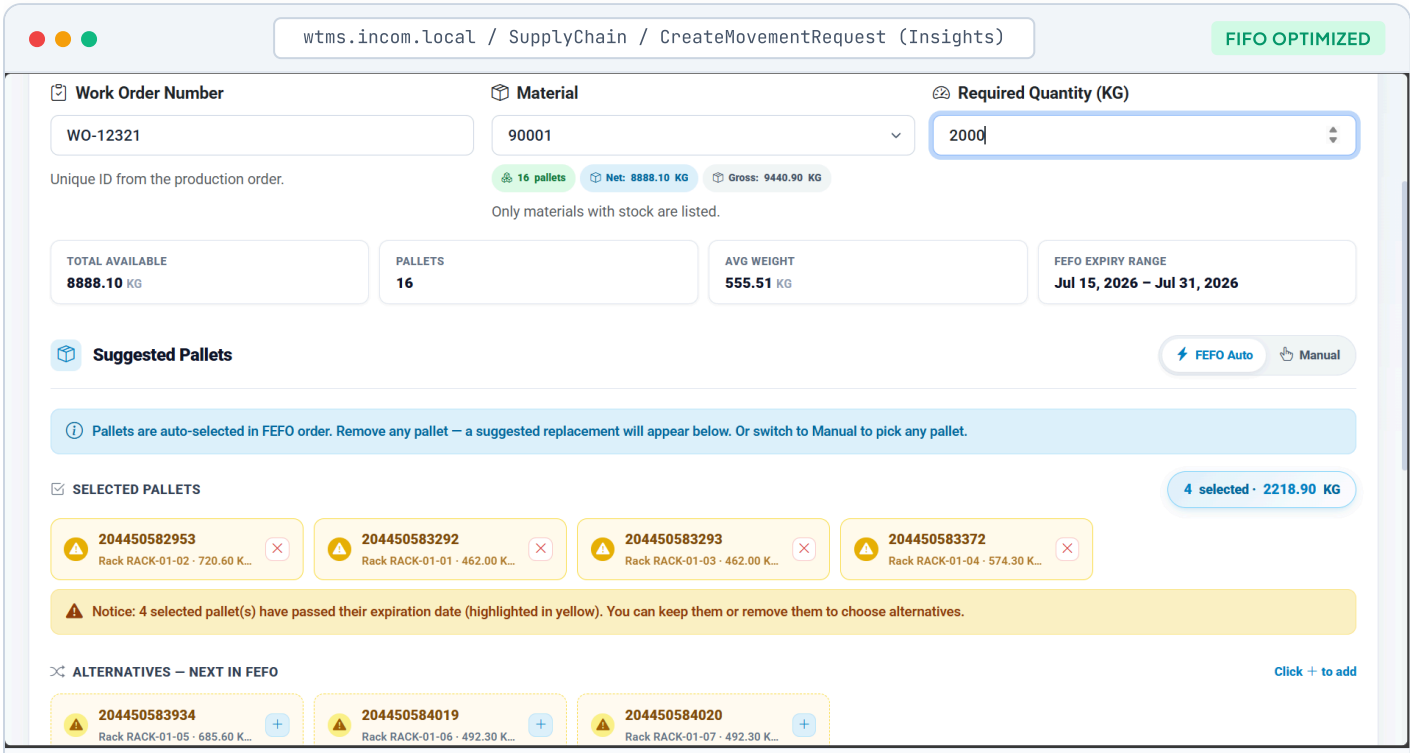


FIGURE 7.2 **Movement Insights Screen:** Automated pallet allocation list showing oldest receipt dates, rack aisle positions, and weight balances.

PROCEDURE Step-by-Step Operator Action Guide

1. **Review FIFO Logic:** Examine the recommended pallet list generated by the system's FIFO (First-In, First-Out) algorithm.
2. **Verify Oldest Pallets:** Verify that the oldest received pallets are prioritized to prevent aging and raw material degradation.
3. **Check Aisle Clustering:** Check the Rack Location column: The algorithm selects pallets from adjacent aisles to minimize travel distance.
4. **Proceed to Safety Check:** Click Proceed to Expiry Validation to run the automated safety check before issuing the pick list.

Algorithm Feature	Applied Logic	Warehouse Operational Benefit
FIFO Rule	Oldest Receipt First	Ensures raw materials do not sit in warehouse racks past their optimal processing life.
Travel Clustering	Same Aisle Prioritization	Groups picks in the same rack bay so forklift drivers do not zig-zag across warehouse aisles.
Total Weight Sum	Batch Matching	Matches requested manufacturing batch weight within exact resin/glass tolerances.

Travel Optimization: The system calculates the optimal forklift route, reducing warehouse transit time and battery consumption on material handling equipment.

SUPPLY CHAIN EXECUTIVE • QUALITY SAFEGUARDS

SUPPLY CHAIN EXECUTIVE

Pallet Expiry Alerts & Automated FEFO Safeguards

The system automatically flags expired or near-expiry materials and locks them from being dispatched to production lines.

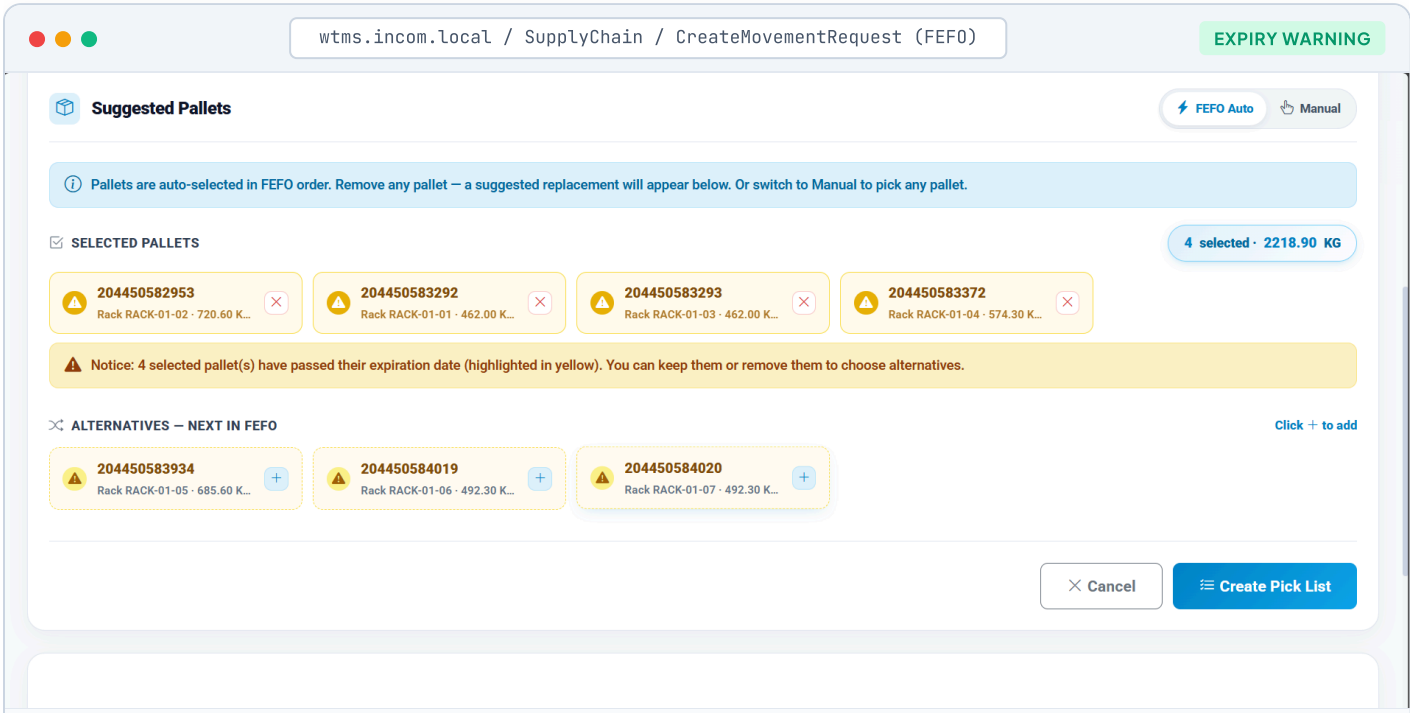


FIGURE 7.3 **FEFO Expiry Alert Banner:** Yellow warning box highlighting expired or near-expiry batches and locking them from pick lists.

PROCEDURE

Step-by-Step Operator Action Guide

1. **Observe Expiry Warning:** If a yellow alert banner appears, examine the flagged pallet code and expiration date displayed on the warning card.
2. **Do Not Bypass Alert:** Do not attempt to bypass the alert. The system automatically substitutes the expired item with the next valid fresh pallet.
3. **Audit Valid Pallets:** Review the verified list of approved, fresh pallets ready for picking.
4. **Issue Handheld Pick List:** Click Confirm & Issue Pick List. The pick task transmits immediately to the Warehouse Operators' handheld scanners.

Safeguard Element	Visual Notification	System Protection Behavior
Expiry Warning Banner	Yellow Alert Box	Warns SCM Executive that a batch has exceeded allowed days in storage.
Automated Lock	Disabled Checkbox	Prevents the expired pallet from being selected or transmitted to handheld pick lists.
Substitution Engine	Automatic Replenishment	Automatically replaces locked stock with the next oldest non-expired pallet in inventory.

⚠ **AUTOMATED QUALITY SAFEGUARD IN ACTION:**
Notice the yellow warning banner in Figure 7.3. When the system detects a pallet nearing expiry or past its shelf-life date, it immediately locks the item out of production dispatch. Only fresh, fully compliant raw material is released to manufacturing.

WAREHOUSE FLOOR OPERATOR • ORDER RETRIEVAL

WAREHOUSE OPERATOR

Production Order Picking: Work Order Assignment

Warehouse Operators open assigned production work orders and view target rack locations to retrieve.

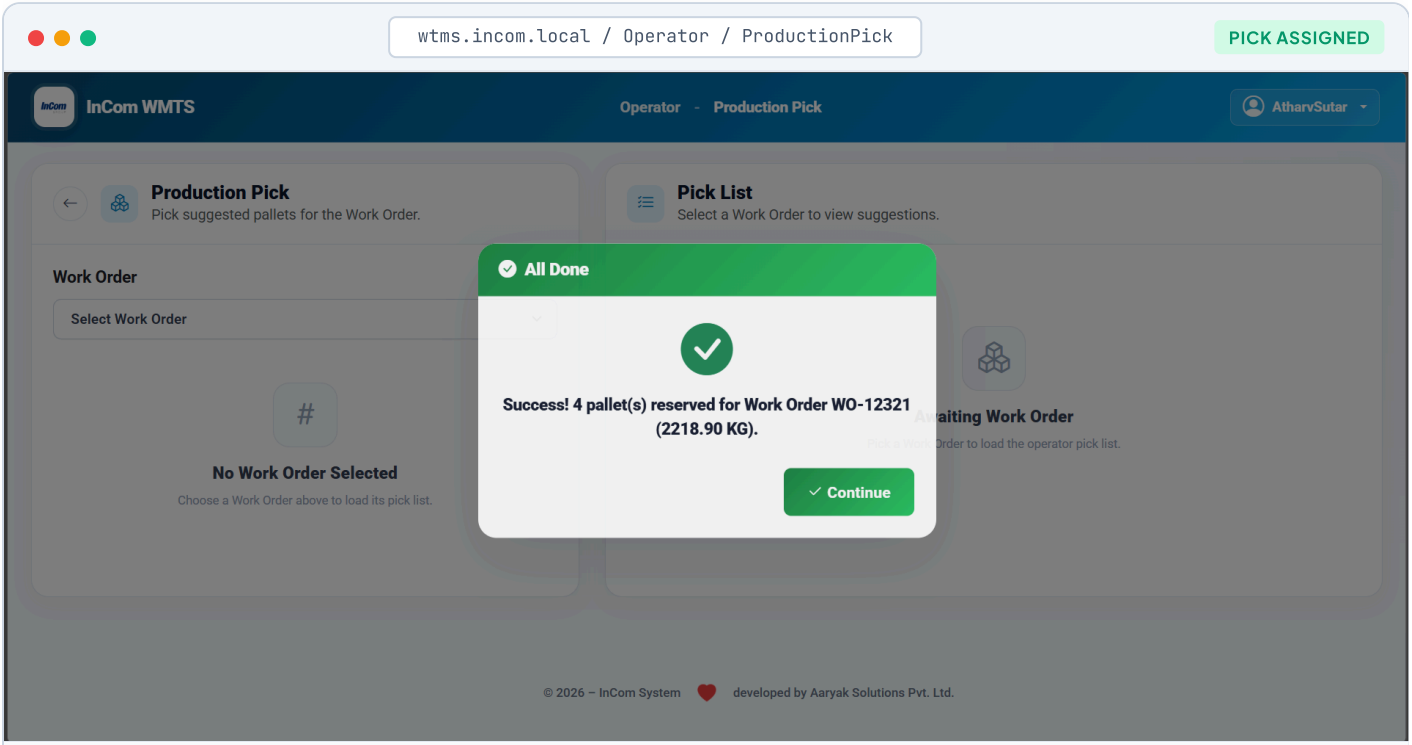


FIGURE 8.1 **Production Pick List Screen:** Assigned Work Orders, target production lines, and exact warehouse rack locations.

PROCEDURE Step-by-Step Operator Action Guide

1. **Open Production Picking:** On your Operator Terminal, tap the purple tile: Production Picking.
2. **Select Active Job:** Select the active Work Order assigned to your shift (e.g. `WO-2026-1108 • Line 1`).
3. **Review Target Locations:** Review the pick route displayed on screen: It directs you to specific rack aisles (e.g. `A01-02-01`).
4. **Drive Forklift to Rack:** Drive the forklift to the first designated rack location. Tap Start Picking to begin scanning.

Pick Screen Feature	Sample Value	Operator Guidance
Work Order #	WO-2026-1108	The manufacturing job requiring material. Check this matches the plant dispatch slip.
Target Location	LINE-01 Staging	The designated floor drop mark where picked pallets must be physically transported.
Rack Aisle Guide	A01-02-01	Aisle number, bay number, and shelf level. Shows the shortest forklift travel route.

Aisle Clearance: Keep forklift safety lights illuminated when picking from high rack beams. Ensure pedestrians are clear of the aisle before retrieving pallets.

WAREHOUSE FLOOR OPERATOR • ORDER RETRIEVAL

WAREHOUSE OPERATOR

Production Picking: Rack Barcode Confirmation

Retrieve the requested pallet from the shelf and scan its barcode to confirm the pick for the manufacturing line.

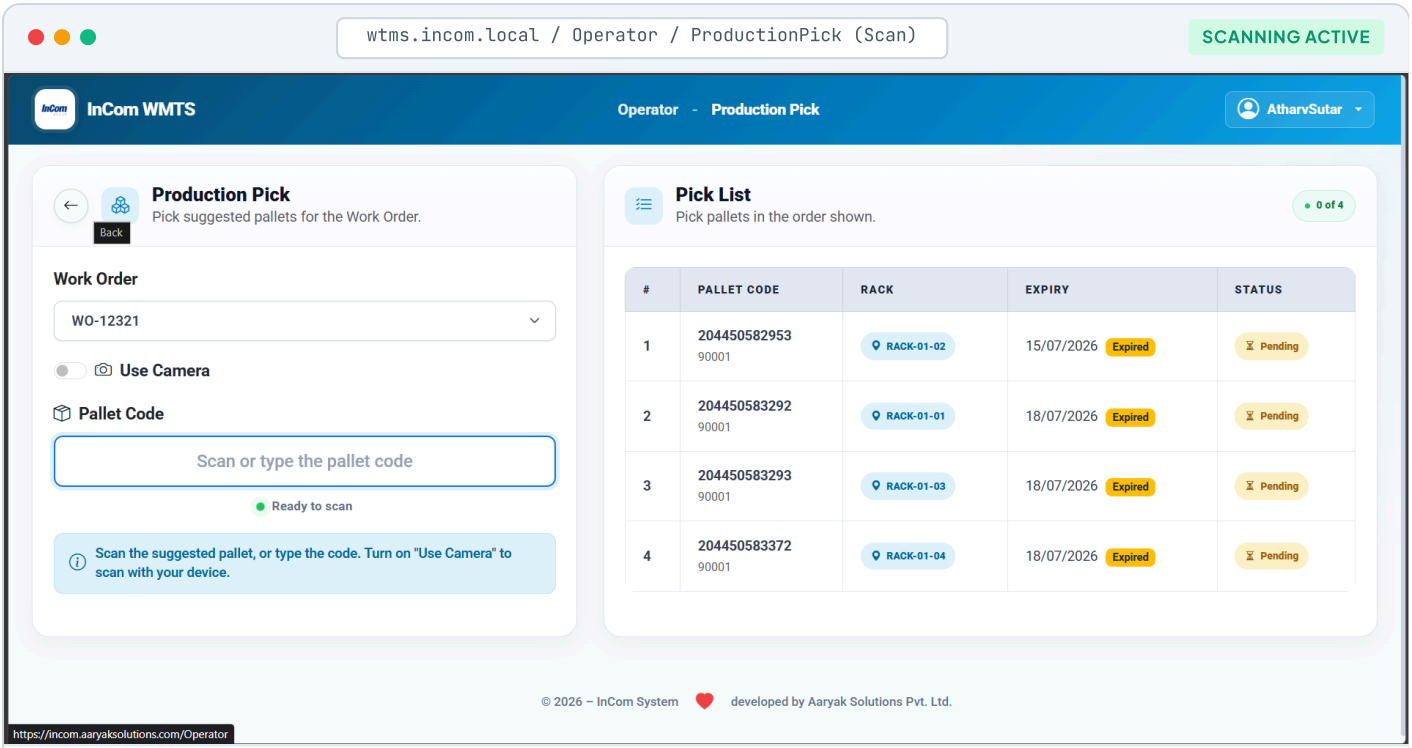


FIGURE 8.2 **Production Pick Scan Screen:** Real-time progress counter updating as pallets are scanned (e.g. 1 of 4 picked).

PROCEDURE Step-by-Step Operator Action Guide

1. **Lower Pallet from Beam:** Position your forklift at the designated rack beam (e.g. `A01-02-01`). Carefully lower the physical pallet.
2. **Scan Pallet Barcode:** Aim the laser scanner at the barcode label on the pallet.
3. **Verify Progress Counter:** The terminal beeps and registers the pick immediately: The counter updates (e.g. `1 of 4 picked`) and turns green.
4. **Deliver to Line Staging:** Repeat for remaining pallets until the counter reaches `4 of 4 picked`. Transport the material to the Line 1 staging bay.

Terminal Indicator	Screen Display	Scanner Behavior
Pick Counter	1 of 4 picked	Increments in real time with each successful pallet barcode confirmation.
Progress Pill	Green Checkmark	Displays exact timestamp when the pallet was retrieved from the rack.
Wrong Pallet Alarm	Red Screen Alert	Emits a loud warning buzz if an operator accidentally scans an incorrect pallet from the rack.

✓ **Foolproof Verification:** The terminal prevents mistakes. Even if two pallets look identical, the scanner ensures that only the exact lot number requested by production can be confirmed.

SUPPLY CHAIN EXECUTIVE • OPERATIONS MONITORING

SUPPLY CHAIN EXECUTIVE

Work Order History & Live Operator Monitoring

Track real-time picking progress across all manufacturing lines and review operator fulfillment timestamps.

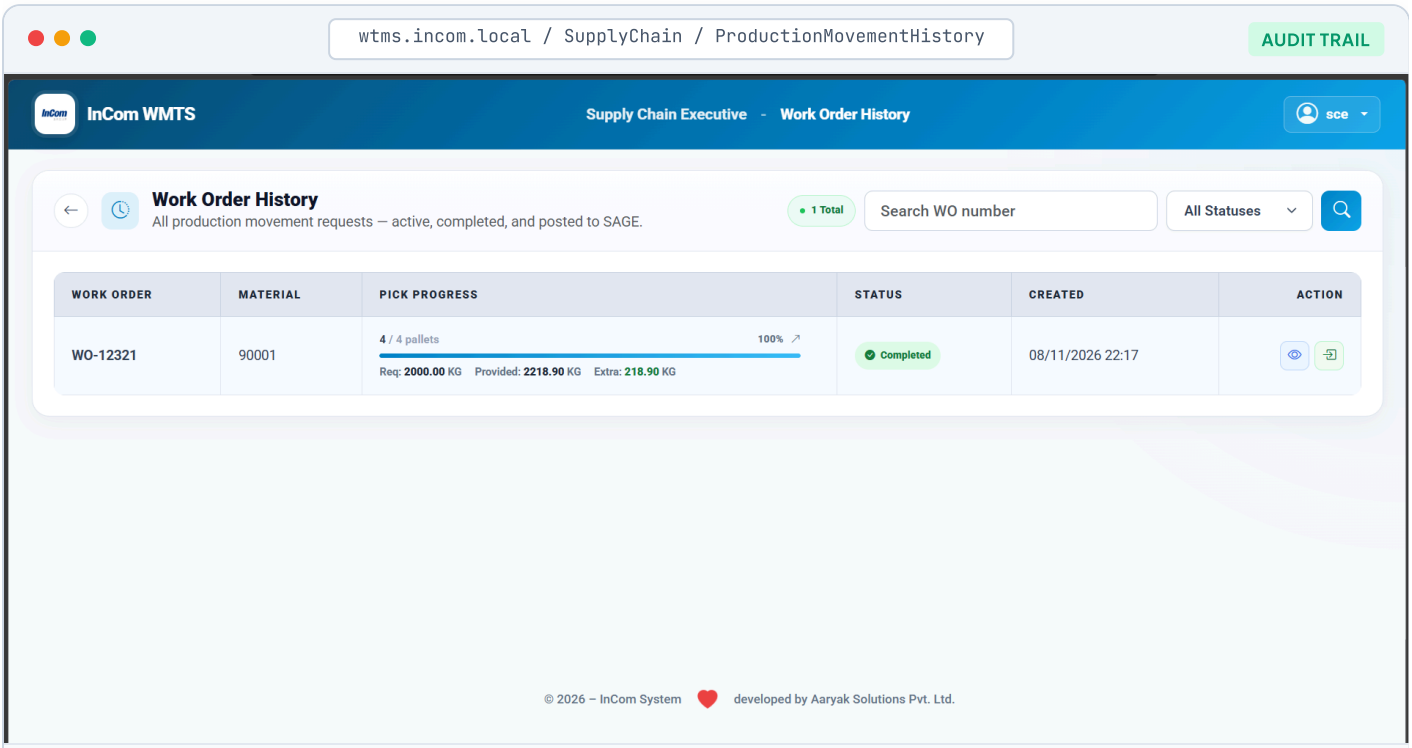


FIGURE 9.1 **Work Order History Screen:** Live audit trail table showing fulfillment status, operator IDs, line destinations, and timestamps.

PROCEDURE Step-by-Step Operator Action Guide

1. **Open History Module:** Open the Work Order History view on the SCM Terminal.
2. **Track Status Badges:** Monitor live status badges (e.g. `Picking in Progress` vs `Completed`).
3. **Verify Operator Identity:** Review the assigned operator ID to verify which forklift driver is handling the delivery.
4. **Audit Line Timings:** Check completion timestamps against production shift schedules to ensure manufacturing lines are never starved of materials.

History Column	Sample Value	Audit Trail Meaning
Work Order #	WO-2026-1108	The unique production batch identifier.
Fulfilled / Requested	4 / 4 Pallets	Shows whether the full batch has been picked or if items remain in racks.
Operator Badge	OP-9000	Accountability record showing the exact operator who executed the physical movement.

Complete Historical Audit: All historical movements remain permanently stored in the audit log, providing complete batch genealogy for plant quality reviews.

SUPPLY CHAIN EXECUTIVE • TRANSFER RECONCILIATION

SUPPLY CHAIN EXECUTIVE

Final Stock Transfer Review & Issue to Production

Review the picked pallets and click Complete Stock Transfer to relieve warehouse inventory and issue material into active manufacturing.

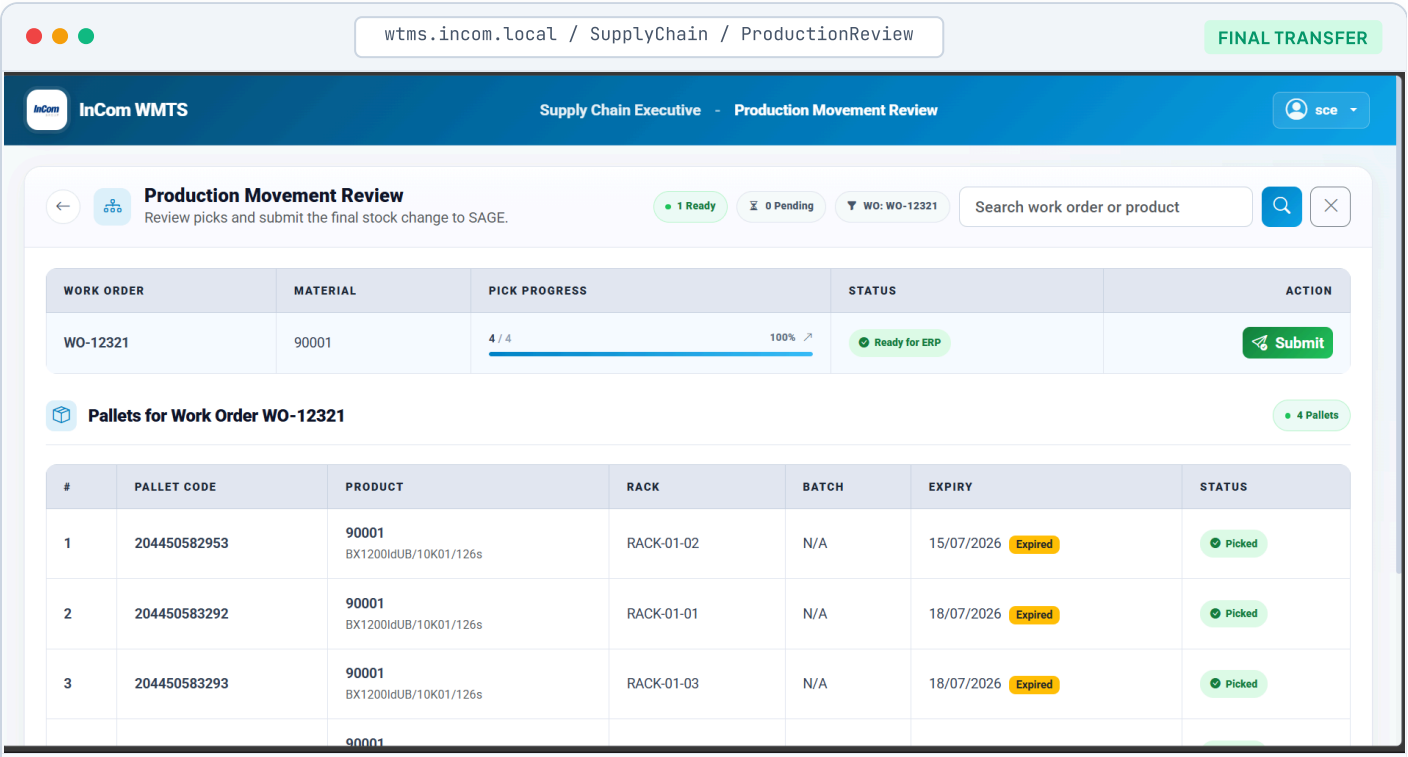


FIGURE 9.2 **Production Stock Movement Review:** Complete list of transferred pallets, final weights, and the Complete Stock Transfer action button.

PROCEDURE Step-by-Step Operator Action Guide

1. **Verify Physical Arrival:** Confirm with the line supervisor that the physical pallets have arrived at the manufacturing staging marker.
2. **Audit Review Screen:** On the Production Review screen, verify the list of pallet codes, weights, and product specs.
3. **Click Complete Transfer:** Click the green Complete Stock Transfer button.
4. **Update Central Stock:** The central system updates inventory balances instantly, relieving raw material from storage and issuing it to Work-In-Progress (WIP).

Review Field	System Value	Inventory Impact
Transferred Pallets	4 Pallets (Verified)	Pallet status changes from 'In Transit' to 'Consumed in Production'.
Total Net Consumed	2,884.20 KG	Raw material inventory balance is deducted; Work-In-Progress inventory balance increases.
Complete Transfer	Final CTA Button	Permanently closes the movement transaction and records completion in central ERP records.

✓ **Full Lifecycle Completed:** The full chain of custody—from initial truck arrival and dock scanning to QC testing, rack putaway, and production issue—is now 100% completed and closed.

OPERATIONAL EXCELLENCE

WAREHOUSE STANDARDS

The 5 Golden Rules of Warehouse Operations

Mandatory operating standards for all facility staff. Keep posted at all workstations and charging docks.

1 **PUTAWAY ORDER: PALLET BARCODE FIRST → RACK LOCATION SECOND**

Never scan the shelf first! The scanner strictly enforces scanning the physical pallet label before scanning the destination shelf barcode.

2 **ONE PALLET • ONE PHYSICAL SCAN**

Never copy-paste or guess codes. Every pallet must be physically scanned with the laser scanner at the unloading dock and again at the storage rack.

3 **STRICT QUARANTINE FOR REJECTED PALLETS**

Any pallet marked as Rejected (R) by Quality Control is strictly quarantined. Never attempt to place rejected stock into regular warehouse racks.

4 **RESPECT AUTOMATED FEFO EXPIRED PALLET LOCKS**

When the yellow alert banner appears during work order creation, do not bypass it. Notify the shift supervisor immediately to pull the batch for review.

5 **IMMEDIATE STAGING CONFIRMATION**

Once picked, deliver the material directly to the production line boundary marker so the SCM team can perform the final digital transfer without delay.

SUPPORT MATRIX

Shift Escalation & Troubleshooting Directory

Operational Issue	Responsible Team	Standard Resolution Path
Damaged / Unreadable Barcode	Receiving Dock Lead	Use camera scanner mode or print reprint label via SCM Terminal.
Packing List Mismatch	Supply Chain Executive	Hold truck unloading, cross-check vendor manifest with delivery note.
QC Sample Re-testing	Quality Control Lab	Update remarks in QC Entry modal; notify production planner.
Scanner Connection Lost	Warehouse Floor Lead	Check facility Wi-Fi signal; terminal automatically caches scans offline.

— Official Standard Operating Procedure • InCom Composite Materials (India) Pvt Ltd —