SACHET WATER PRODUCTION & DISTRIBUTION MANUAL

Sachet Water Production Operations, Packaging & Fleet Accountability

A Complete Practical Handbook for Pure Water Factory Owners, General Managers, Factory Supervisors, Machine Operators, Storekeepers, Accountants, and Delivery Drivers.

PRIMARY MISSION

Zero Inventory Leakage

Eliminate unrecorded bags, film roll wastage, diesel diversion & driver cash leakage.

CORE EQUATION

100% Bag Accountability

Dispatched = Sold Bags + Returned Bags + Verified Damaged Bags.

ECOSYSTEM SCOPE

Factories, Lines & Depots

Centralized or branch-based production, shift counters, and inter-branch transfers.

SYSTEM ROLES

10 Operational Roles

Pre-configured permissions matrix for seamless division of factory responsibilities.

TrackaBiz Technologies Ltd
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MANUAL NAVIGATION

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Why SachetProd Exists: Unlike generic point-of-sale software that only tracks retail store sales, TrackaBiz SachetProd covers the entire manufacturing lifecycle: from raw printed film rolls and diesel refills to machine counters, baggers, driver route trucks, and cash reconciliations.

CHAPTER 01

System Overview & Factory Topography

TrackaBiz Sachet Water Production is engineered specifically for Nigerian and West African water packaging factories. The software models every physical room, machine, vehicle, and person in your business to ensure that no water sachet or Naira can go missing.

1. Factory Operating Models

Every pure water enterprise operates differently depending on its branch locations, power reliability, and market demand. In `Settings → Production Operating Model`, the business owner can configure one of two operating modes:

OPERATING MODE	DESCRIPTION & WORKFLOW	IDEAL BUSINESS SETUP
Centralized Production	One primary factory branch runs all water packaging machines and produces bagged water. All other branches act as *Depots and Distribution Hubs* that receive stock exclusively through verified Inter-Branch Stock Transfers.	Businesses with one heavy-duty borehole/filtration site and multiple urban sales depots.
Branch-Based Production	Each registered branch operates its own independent packaging machines, generators, shifts, and production staff. Depots can still exist within the same network.	Businesses with factories located in different cities or regional clusters.

2. The 4 Operational Floors

Within any producing factory branch, work moves in a strict one-way chain across 4 physical departments:



Key Principle: Loose sachets produced by the machine line are not salable items. They must first be received and bagged by the Finishing Department into standard bags (e.g. 20 sachets per bag) before entering the Finished Goods Inventory.

CHAPTER 02

Initial Setup & Operational Benchmarks

Before starting production batches, the business owner must define the factory's engineering and material benchmarks under `Settings → Operational Standards` (or via the Quick Configure banner in `Raw Material Inventory`). These benchmarks serve as the mathematical foundation for audit alarms and efficiency scoring.

STANDARD PARAMETER	DEFAULT BENCHMARK	OPERATIONAL ROLE & ALARM CALCULATION
Machine Operating Speed	`2,000 sachets / hr`	Rated packaging output per machine line hour. If an 8-hour shift yields only 11,000 sachets without logged downtime, the system flags an operational efficiency shortfall.
Diesel Burn Rate	`13.5 Liters / hr`	Rated diesel consumption per generator operating hour. Used to detect fuel siphoning: if 200L was issued for 10 hours of running (20 L/hr), the system flags a 65-liter unapproved fuel variance.
Film Yield Benchmark	`330 sachets / kg`	Standard yield per 1 kilogram of printed roll film (approx. 16.5 bags per kg). If an operator uses 100kg of film and produces only 28,000 sachets (280/kg), film wastage is immediately detected.
Damage Tolerance %	`3.0% max loss`	Allowed threshold for sealing bursts, leaks, and packaging damage. Batches exceeding 3.0% burst rate require mandatory Supervisor sign-off and cannot be archived automatically.
Low Diesel Alert Level	`1,500 Liters`	Triggers yellow caution banners across dashboard cards whenever total diesel stock across factory tanks drops below this minimum threshold.

ROLL FILM PRODUCTION YIELD FORMULA

TrackaBiz continuously validates roll film consumption during batch closure:

Expected Sachets = Film Issued (kg) × Sachets Per Kg Film (330)

Variance = Actual Output – Expected Sachets. Negative variances indicate machine temperature miscalibration, cutting blade wear, or stolen film.

CHAPTER 03 & 04

Raw Materials, Procurement & Issuance

A sachet water factory depends on 4 essential raw material categories: **Printed Roll Film** (kg), **Packing Bags** (bundles of 100/1,000 pcs), **Water Treatment Chemicals** (Chlorine, Alum, Activated Carbon), and **Micro-filters & UV Lamps**.

1. Recording Material Purchases

1. Navigate to `Procurement & Stores → Material Purchases`.
2. Click **+ Record Purchase**.
3. Select the Supplier, invoice number, and destination factory branch.
4. Enter line items: e.g. *500 kg of Printed Roll Film @ ₦2,200/kg*.
5. Select payment terms: Paid in Full, Part-Paid, or Credit from Supplier.
6. Upon clicking **Save Purchase**, the materials are booked into the Storekeeper's Pending Inflow list.

2. Storekeeper Physical Receipt

To prevent "ghost purchases", stock balances do not update until the Storekeeper physically weighs the film rolls, counts the packing bags, and confirms receipt in `Procurement & Stores → Material Purchases → Receive Stock`.

3. Two-Step Material Issuance Workflow

Machine operators are never permitted to walk into the store and grab film rolls. TrackaBiz enforces a strict two-step verification rule:

STAGE	ACTOR	ACTION IN TRACKABIZ	STOCK STATUS
1. Request	Production Operator	Creates Material Request in `Material Requests` specifying exact kg of film needed for the shift.	`PENDING APPROVAL` Stock still in store.
2. Approval	Factory Supervisor	Reviews shift schedule and approves the request. Can modify requested quantity if excessive.	`APPROVED` Ready for storekeeper.
3. Physical Issuance	Storekeeper	Hands over physical rolls and clicks **Issue Materials** in system.	`ISSUED` Deducted from store; credited to shift.

> **Anti-Theft Rule:** No machine shift can record batch output without an approved and issued Material Request ID linked to that shift.

CHAPTER 05 & 06

Energy Management & Batch Production

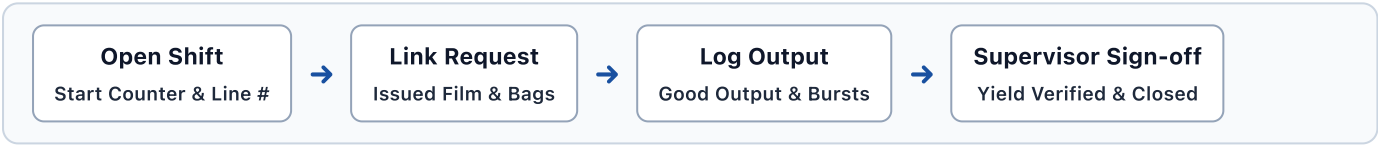
1. Diesel & Generator Operations

Diesel is treated as a high-value raw material with unit `Liters`.

- **Generator Profiling:** Under `Energy → Generators`, register each generator with its KVA rating, serial number, and fuel tank capacity.
- **Refill Logs:** Log diesel poured into the generator tank from main storage drums.
- **Run Hours & Meter Logging:** At the end of every operating shift or daily closing, log the start and end generator hour meter. The system computes actual fuel burned versus expected fuel burned based on your `dieselLitersPerHour` benchmark.

2. Running a Machine Shift

A production batch represents one continuous run of a packaging line (e.g. Dingli, Koyo, or modern multi-head form-fill-seal machines).



Step-by-Step Shift Protocol:

1. **Opening:** Operator navigates to `Production Operations → Start Batch`. Selects branch, machine line, and logs starting mechanical counter reading.
2. **Operation:** The packaging machine fills and seals sachets from the water purification tanks.
3. **Recording Output:** At shift end, operator enters:
   - End mechanical counter reading.
   - Good sachets produced (e.g. `42,000 pcs`).
   - Burst / rejected sachets (e.g. `320 pcs`).
4. **Supervisor Verification:** The Production Supervisor inspects the line, reviews the film roll cores to verify film was fully used, and approves the batch. Loose sachets are transferred to the Finishing Floor.

CHAPTER 07 & 08

Finishing, Packaging & Warehouse Storage

The Finishing Department bridges the gap between raw machine production and commercial distribution.

1. Packaging Loose Sachets into Bags

Loose sachets cannot be sold to drivers or walk-in customers. Finishing operators pack sachets into outer packing bags:

- **Packaging Standard:** Standard pure water is packed at **20 sachets (50cl) per bag**.
- **Issuing Packing Bags:** Packing bags (e.g. 2,100 packing bags) are issued from the store to the packaging crew.
- **Packaging Run Logging:** In `Finishing → Packaging Management`, log the number of completed bags produced (e.g. `2,100 bags`) and any damaged packing bags.
- **Warehouse Entry:** Once signed off by the Finishing Supervisor, the completed bags enter the **Available Bags** warehouse balance.

2. The 3 Inventory Buckets

To guarantee that stock is never double-counted or sold twice, TrackaBiz Finished Goods Inventory is segregated into three real-time buckets:

INVENTORY BUCKET	MEANING & OPERATIONAL STATE	ALLOWED ACTIONS
1. Available Bags	Finished bags stacked on pallets in the warehouse, fully inspected, and available for driver dispatch or depot transfer.	Dispatch to driver, transfer to branch, walk-in cash sale.
2. Reserved for Orders	Bags allocated to pending driver dispatches or booked distributor pickup orders awaiting physical loading.	Locked; cannot be sold to another customer.
3. In-Transit to Depots	Bags loaded onto transfer haulage trucks traveling from the main factory to a remote depot.	Awaiting destination manager receipt.

> **Warehouse Damage Policy:** If bags burst inside the warehouse due to stacking pressure or handling, record them immediately via `Record Damage`. Never adjust the quantity silently.

CHAPTER 09 & 10

Inter-Branch Transfers & Driver Dispatches

1. Inter-Branch Stock Transfers (Factory → Depot)

For multi-branch operations where the factory feeds regional depots:

1. **Initiate Transfer:** Go to `Stock Transfers → Create Transfer`. Select Source Branch (e.g. Kano Factory) and Destination Branch (e.g. Ringim Depot). Specify quantity (e.g. `1,200 bags`).
2. **In-Transit Lock:** The 1,200 bags move from Factory *Available* to *In-Transit*.
3. **Destination Physical Check:** When the haulage truck arrives at Ringim Depot, the Depot Manager inspects the load and clicks **Confirm Receipt** in TrackaBiz.
4. **Partial Delivery & Transit Damage:** If 1,190 bags arrive safely and 10 burst en-route, the Depot Manager enters `1,190 Received, 10 Transit Damage`. The 1,190 bags unlock in Ringim Available stock; the 10 damaged bags are charged to the haulage log.

2. Driver Fleet & Vehicle Dispatching

Drivers are registered staff users with an assigned vehicle (e.g. Mitsubishi Canter, Isuzu Elf, or Tricycle):

STEP	RESPONSIBLE ROLE	ACTION IN TRACKABIZ
1. Dispatch Creation	Dispatch Officer	Go to `Driver Dispatch → New Dispatch`. Select Driver, Vehicle, and number of bags (e.g. `300 bags`).
2. Physical Loading	Warehouse Loader	Physically loads 300 bags into driver's vehicle.
3. Driver Acceptance	Delivery Driver	Driver inspects load and clicks **Confirm Receipt** on their mobile device or signs the dispatch slip. *The 300 bags are now in the driver's legal and financial custody.*

> **Legal Handover:** Once a driver confirms dispatch receipt, they are 100% financially accountable for either delivering those bags or returning them at day's end.

CHAPTER 11 & 12

Driver Sales, Remittances & The Golden Equation

1. Driver Mobile Sales Register

As the driver covers their delivery route, they log sales to shops, restaurants, and retail distributors:

- **Cash Sales:** Customer pays immediately in cash (e.g. 50 bags @ ₦350 = ₦17,500).
- **Bank Transfer:** Customer transfers money to the company's verified bank account. Driver notes transaction reference.
- **Credit Sales:** Customer has an approved credit limit and will pay later. Logged under Customer Debtors.

2. The Golden Distribution Accountability Equation

At the end of every route, the driver returns to the factory. TrackaBiz enforces the iron-clad accountability formula before the driver's shift can be closed:

THE GOLDEN DISTRIBUTION ACCOUNTABILITY EQUATION

```
Issued Bags = Bags Sold + Bags Returned + Verified Transit Damage
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Example: 300 Bags Issued = 260 Bags Sold + 36 Bags Returned + 4 Bags Damaged.
Variance = 0 Bags (100% Balanced).

3. Two-Sided Remittance Reconciliation

Reconciliation requires two separate actors to confirm money and stock:

1. **Driver Remittance Submission:** The driver hands over cash in hand and transfer receipts to the Factory Accountant, clicking **Submit Remittance** in the system.
2. **Accountant Bank & Till Verification:** The Accountant checks the bank mobile app for received transfers and counts physical cash notes.
3. **Reconcile or Dispute:**
   - If funds match: Accountant clicks **Confirm & Reconcile**. The driver's account is cleared.
   - If cash is short: Accountant logs the shortfall. TrackaBiz automatically creates a **Driver Shortage Deduction** against the driver's next salary or commission payout.

CHAPTER 13 & 14

Customer Debts & Staff Roles Matrix

1. Customer Debtors Governance

Uncontrolled credit is the #1 killer of sachet water businesses. TrackaBiz provides automated guardrails:

- **Credit Limits:** Every customer has a strict credit ceiling (e.g. ₦50,000). Drivers cannot sell on credit to any customer whose balance exceeds this limit without Manager authorization.
- **Debt Aging:** Debts are tracked as *Current (1–7 days)*, *Due (8–14 days)*, and *Overdue (>14 days)*.
- **Route Debt Collection:** When a driver visits a debtor, they can collect cash/transfer against previous debt invoices and issue an instant payment receipt.

2. The 10 Operational Role Templates

Staff accounts under `Staff → Add Staff` are assigned tailored operational roles:

OPERATIONAL ROLE	CORE RESPONSIBILITY	ACCESS PRIVILEGES
General Manager	Oversees factory-wide operations, sales volume, branch transfers, and financials.	Full operational visibility; cannot modify bank credentials.
Branch Manager	Manages assigned factory or depot, approves material requests, and verifies driver dispatches.	Branch-scoped operational and stock management.
Production Supervisor	Verifies machine line counters, approves shift batch outputs, and checks roll film cores.	Production batches, material request approvals, machine logs.
Production Operator	Operates packaging machines, requests raw materials, and logs mechanical meter counts.	Shift batch entry, material requests.
Finishing Operator	Receives loose sachets, packages them into outer bags, and records packaging runs.	Finishing receipts, bagging run entries.
Storekeeper	Receives raw film, packing bags, and diesel; issues materials against approved requests.	Material stock balances, purchase receipts, material issuance.
Dispatch Officer	Allocates vehicle loads, creates driver dispatches, and checks returning delivery trucks.	Driver dispatches, vehicle allocations, finished stock view.
Driver / Distributor	Confirms loaded stock, sells to route customers, collects money, and remits funds.	Mobile route register, receipt confirmation, own remittances.
Factory Accountant	Counts cash, audits bank alerts, reconciles driver remittances, and tracks customer debts.	Reconciliations, sales audit, debtors ledger, expenses.
Internal Auditor	Inspects physical warehouse stock, audits diesel burn rates, and reviews audit logs.	Read-only access across all ledgers, batches, and logs.

CHAPTER 15

Executive Reports & Daily SOP Checklist

1. The 15 Standard Executive Reports

Under `Reports & Analytics`, factory executives can export PDF and Excel reports across 15 operational disciplines:

REPORT CODE	REPORT TITLE	PRIMARY KPI & DECISION METRIC
REP-01	**Daily Production Summary**	Total sachets produced, good output yield %, burst rate %.
REP-02	**Raw Materials Utilization**	Film kg consumed vs. theoretical yield (330 sachets/kg).
REP-03	**Diesel & Generator Audit**	Run hours vs. actual liters consumed (burn rate variance).
REP-04	**Packaging & Finishing Run**	Loose sachets converted into bags; bagging reject rate.
REP-05	**Warehouse Inventory Balance**	Available, Reserved & In-transit stock valuations.
REP-06	**Inter-Branch Transfer Audit**	Haulage transfer volumes, verified receipts & transit losses.
REP-07	**Driver Performance & Sales**	Bags sold per route, sales revenue generated, cash vs transfer.
REP-08	**Driver Accountability Audit**	Dispatched vs Sold + Returned reconciliation variance.
REP-09	**Daily Remittance & Cash In**	Total physical cash collected vs. confirmed bank alerts.
REP-10	**Customer Debtors Aging**	Outstanding credit balances (Current, 7-day, 14-day, 30+ days).
REP-11	**Operating Profit & Loss (P&L)**	Revenue minus raw materials, diesel, wages & factory expenses.
REP-12	**Machine Line Efficiency**	Output per operating hour vs. machine speed benchmark.
REP-13	**Supervisor Approval Trail**	Timestamped logs of every batch & material authorization.
REP-14	**Branch Comparative Analysis**	Multi-factory benchmarking of revenue, yields, and margins.
REP-15	**Staff Roster & Performance**	Active operators, drivers on route, and activity timestamps.

2. Daily Factory Standard Operating Procedure (SOP)

Morning Opening (07:00 – 08:30):

- Storekeeper inspects raw material stock levels (film & bags).
- Generator operator checks diesel tank level and logs starting meter reading.
- Production Supervisor inspects water filtration tanks and UV sterilizers.
- Machine Operators open shifts, submit material requests, and begin line warming.
- Dispatch Officer conducts vehicle loading for early morning driver routes.

Evening Closing (17:00 – 19:30):

- Drivers return from delivery routes; Dispatch Officer logs physical bag returns.

- Accountant verifies cash and bank transfers; reconciles all driver remittances.
- Finishing Department finishes packaging all loose sachets into bags for warehouse restock.
- Production Supervisors close machine shifts and confirm final counter readings.
- General Manager reviews the Daily Executive Dashboard for zero-variance closure.

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