OYO AI

USE CASE

USE CASE · TEXTILE MANUFACTURING

# Warehouse, production and costing

Every working scenario a textile manufacturer runs on OYO AI, written from the screens as they run: who starts it, what the system does by itself, which rule stops it, and what it leaves behind for the auditor.

INDUSTRY

Textile manufacturing · uniforms, workwear, hospitality garments

SCOPE

24 use cases · 41 screens · 6 roles

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# Contents



# 1 How to read this document

**This is not a manual and not a specification of what should be built. It is the list of things people actually do with the system, each one written from the screen that does it.**

Every use case below was walked through in a running OYO AI deployment for a textile manufacturer: a workshop that buys fabric and trim, cuts and sews to customer orders, and needs to know what each order line really cost. The field names, the button labels and the status words are the ones on screen, so a reader can put this document next to the browser and match them one for one.

### The template

Each use case is one page-ish block with the same five-line head and the same parts underneath.

| Line | What it answers |
|---|---|
| **Primary actor** | The role that starts it. Roles are system roles, not six different employees: one person may hold several. |
| **Goal** | What that person wants to be true when they are done. |
| **Trigger** | The event in the workshop that makes them open the screen. |
| **Precondition** | What must already exist, or the screen will refuse them. |
| **Screen** | The page it happens on, named as it appears in the menu. |

Then: **Main flow** (numbered), a **flow diagram**, **Rules it enforces**, and the notes and exceptions that belong to it.

### Three conventions

- **Three languages, one vocabulary.** The deployment runs in Armenian by default, with English and Russian switchable per user. This document uses the English wording; Appendix B is the full status vocabulary.
- **Every screen is named as it appears in the menu.** Appendix A is the complete screen index, in menu order.
- **The diagrams follow the flow, not the screenshot.** Each use case carries a strip that shows who acts at each step: a person, the system on its own, or a rule that can refuse.

In the flow diagrams: ● A person acts ● The system acts by itself ● A rule that can refuse

> ONE THING TO KNOW BEFORE YOU START
>
> Approval screens are queues, not forms. Every column in them is filled by the system. Pressing **Submit for approval** on any draft opens a case in its queue within a second; the approver gets a read-only card and two buttons. If a number is wrong, the document goes back to its register to be corrected. It is never edited inside the decision.

# 2 The business in one page

**The manufacturer buys fabric and trim, receives it roll by roll, issues rolls to production, and splits what was actually used across individual customer order lines. Everything else in the system exists to feed that split or to prove it.**

### The costing object is the order line, never the product code

A school shirt made for one school and the same school shirt made for another carry the same **product code** and are two completely different cost objects. So consumption is booked against an **order line**

**code**, `ORD-2026-124-L01`, and never against the product code alone. The line also carries a mandatory **full order product name**, because a code without the customer's own wording is not traceable.

### Three zones, three separate balances

| Zone | Code | What its balance means | What moves it |
|---|---|---|---|
| Raw warehouse | `WH-RAW` | The sum of every roll's balance in the raw store | Receipt + · transfer out − · return in + |
| Production zone | `WH-PROD` | What is physically on the cutting floor: the open quantity of the transfers | Transfer in + · consumption − · waste − · return out − |
| Finished goods | `WH-FG` | Accepted good units by order line | Finished-goods receipt + |

A roll does not travel. A *quantity* is cut off it and issued, which is why a roll's own balance is the raw-warehouse balance and the production zone is measured by what the transfer still has open.

### The control equation, the spine of the whole system

> **transferred = consumed + returned + wasted + still open**
>
> Checked per transfer line, not per document · tolerance 0.150 kg / 0.500 m / 0 pcs

Every settling document moves one term of that equation. While the open term is above zero the transfer reads **Partially settled**; when it reaches zero within the tolerance the transfer closes itself. If a settlement is submitted and the equation does not balance, the case is sent back to the allocation step. Nobody can post it away.

### The chain, end to end

Customer order line ▶ Production task ▶ Purchase order ▶ Receipt, creates the rolls ▶
Financial approval ▶ Transfer to production ▶ Material request (FIFO) ▶ Cutting marker ▶
Actual consumption ▶ Return · Waste ▶ Finished goods ▶ Cost per order line

> THE RULE THAT MAKES IT AUDITABLE
>
> **Nothing is edited after posting.** A posted document is corrected only by a **correction version** (which keeps the number before and the number after) or undone by a **reversal** (which writes counter-movements). Posted transactions are never physically deleted, and every change carries user, timestamp and reason into the audit trail.

## 3 Roles, and what each of them may approve

**Six system roles. They are roles, not headcount: the same person may hold several. The dividing line that matters is money: only the Director sees and confirms value.**

| Role | What they do | What only they may approve |
|---|---|---|
| **Director** | Sees the price brought in from the purchase order, adjusts price and exchange rate, adds delivery, customs and other landed costs. | The financial part of a receipt · abnormal waste · inventory counts · document corrections · reversals · closing beyond the rounding tolerance · returning a surplus remainder to the store. |
| **Warehouse keeper** | Enters and confirms the quantities actually received, transfers material to production, accepts returns, counts the stock. Does not see financial values. | Acceptance of finished goods (good vs reject) · confirmation of received quantities. |
| **Production chief** | Approves the cutting room's material request, allocates actual consumption to order lines, runs the production tasks. | The material request · the consumption allocation · which next roll is opened when the first FIFO roll is short. |
| **Cutting room** | Raises the material request, enters the marker data: sizes, spread, actual usage and waste. | Nothing. The cutting room asks and reports. |
| **Operator** | Limited data entry. The right to correct a roll's physical balance may be delegated here later. Does not see financial values. | Nothing today. |
| **Administrator** | Users, roles and the reference data. Does not see financial values. | Nothing. Set-up is not an approval. |

### Four eyes, enforced by the system and not by habit

Posting and reversing are gated by state and role together: the person who pressed **Submit for approval** cannot be the person who presses **Approve**. The approval screens are queues, not forms. The approver gets the document's card read-only and two buttons. If a number is wrong, the document goes back to its register to be corrected; it is never edited inside the decision.

> **NO ACCOUNTANT ROLE, DELIBERATELY**
>
> A separate accountant role was not created at this stage. If one is needed later it is added with the right to see values only, with no approval rights.

## 4 Nine questions from the first review

**The questions the floor asked after the first weeks, and the use case that answers each one. Every screen named here now carries a short explanation at the top of the page, in the language the user has chosen.**

| # | The question, as it was asked | Answered by |
|---|---|---|
| 1 | When I add a new order I cannot change the status; the system makes it a draft at once. | **UC-04.** The status is never typed; that is what keeps the history traceable. It moves with the row buttons Confirm the order, Start production, Mark as completed. |

| # | The question, as it was asked | Answered by |
|---|---|---|
| 2 | In Production tasks, Status and Planned quantity are closed for input, and what I filled in on the order is not carried over. | **UC-05.** Planned quantity is taken from the chosen order line and may be overridden by hand; status moves with Start and Complete. |
| 3 | After saving a production task I cannot see which order it belongs to; the list shows several Sewing rows and nothing else. | **UC-05.** The register carries Order no., Order line code and Product (order wording) as columns, which is why Sewing repeats: the rows belong to different orders. |
| 4 | In Purchase orders and Raw material receipts the status field will not let me fill it in. | **UC-06 and UC-07.** Status is the *result* of Submit and Approve, never an input. Both pages say so at the top. |
| 5 | In Rolls and lots I see the remainder but not the whole, and the same thing exists in Roll adjustments. Why do it in two places? | **UC-09.** The register shows Initial qty, Balance in raw warehouse and Used on one row. It is the result; the adjustment is the *document* in which a person changes that result by hand, with a reason and an approver. |
| 6 | Is Transfer to production not meant for internal transfers, store to cutting room? And if so, why document it at all? | **UC-10.** Yes, this is the internal transfer document: every transfer has a From and a To. For a finer split add another warehouse with zone Production zone and it appears in the To list. |
| 7 | How do we calculate waste and reject? | **UC-14** (the marker: edge waste and internal waste give the planned waste) and **UC-17** (actual waste = issued - good used - remainder; the excess is abnormal and stays off the order's cost). Reject in pieces is on the finished-goods receipt. |
| 8 | I do not understand how Purchase order and Purchase order approval are connected. | **UC-06.** Two sides of the same order: the register is the document, the queue is the decision. Submitting opens a case; approving posts the order. |
| 9 | Receipt approval, Consumption settlement, FG acceptance: I do not understand what these fields are, or whether they fill themselves. | **UC-07, UC-15, UC-18.** They are queues, not forms. Every column is filled by the system; nothing there is typed. Each row opens a read-only card with two buttons. |

# 5 The use-case map

**Twenty-four use cases across seven groups. They follow the material, not the menu: reference data, demand, procurement, the raw warehouse, production, corrections, insight.**

> **NOT EVERY SCREEN IS A USE CASE**
>
> The system has 41 screens. Some are one half of a use case (the five approval queues), some are the evidence rather than the work (the nine reports, the audit trail), and some are set once and never touched again (the reference data). The complete screen index is Appendix A.

| | ID | Use case | Primary actor | Screen |
|---|---|---|---|---|
| A | UC-01 | Maintain the material catalogue | Administrator | Materials |
| A | UC-02 | Define the zones, the locations and the production stages | Administrator | Warehouse structure |
| A | UC-03 | Set tolerances, approval thresholds and the roll label | Administrator · Director | Settings |
| B | UC-04 | Register a customer order and its lines | Production chief · Director | Sales orders |
| B | UC-05 | Break an order line into production tasks | Production chief | Production orders |
| C | UC-06 | Raise a purchase order and get it approved | Warehouse keeper → Director | Purchase orders · PO approval |
| C | UC-07 | Receive a delivery: three hands, one document | Warehouse keeper → Director | Raw material receipts · Receipt approval |
| C | UC-08 | Return material to the supplier and correct the receipt | Warehouse keeper → Director | Returns to the supplier |
| D | UC-09 | Read a roll's balance | Warehouse keeper | Rolls and lots |
| D | UC-10 | Issue material to production | Warehouse keeper | Transfer to production |
| D | UC-11 | Correct a roll's physical balance | Warehouse keeper → Director | Roll adjustments |
| D | UC-12 | Count the stock, one warehouse or two | Warehouse keeper → Director | Inventory counts |
| E | UC-13 | Ask for material and let FIFO choose the roll | Cutting room → Production chief | Material requests |
| E | UC-14 | Build the cutting marker, where planned waste is born | Cutting room | Cutting markers |
| E | UC-15 | Book actual consumption against order lines and close the transfer | Production chief → Director | Actual consumption · Consumption settlement |

| | ID | Use case | Primary actor | Screen |
|---|---|---|---|---|
| E | UC-16 | Return the good remainder to the store | Production chief → Warehouse keeper | Material returns |
| E | UC-17 | Register waste and keep abnormal loss off the order | Cutting room → Director | Waste and loss · Waste report |
| E | UC-18 | Hand over the finished goods and accept them | Production chief → Warehouse keeper | Finished goods receipt · FG acceptance |
| F | UC-19 | Correct a posted document without erasing history | Document owner → Director | Document corrections |
| F | UC-20 | Reverse a posted document | Requester → Director | Reversals · Reversal approval |
| G | UC-21 | Answer “what did this order line cost?” | Director | Cost by order line · Costing analytics |
| G | UC-22 | Trace one roll from the delivery note to the finished product | Any role | Roll movement card · Material at production |
| G | UC-23 | Start the day on the dashboards | Every role | Home · the three analytics pages |
| G | UC-24 | Prove who changed what | Director · Administrator | Audit trail |

# 6 A · Reference data and setup

**ONCE, AT THE BEGINNING, AND THEN ALMOST NEVER**

Three use cases that a single administrator performs at set-up. They are in this document because half of the rules the rest of the system enforces are *configured* here: a material's unit and tracking mode, the zones that give a balance its meaning, and the tolerance beyond which a document needs the Director.

UC-01

## Maintain the material catalogue

| | |
|---|---|
| **Primary actor** | Administrator |
| **Goal** | Every material that can be received, issued or costed exists exactly once, with the unit it is counted in, the way it is tracked and its waste norm. |
| **Trigger** | A fabric or trim is bought for the first time. |
| **Precondition** | None. |
| **Screen** | Materials |

### Main flow

1. Open **Materials** and press **Create Material**.
2. Enter the **Material code** ( `FAB-004` , `RIB-001` , `BTN-002` ) and the **Material name** as the workshop says it.
3. Choose the **Category**: fabric/roll, rib, cuff, button, tape/elastic, tape by the metre, other.
4. Choose the **Base unit**: kg, m or pcs. Tape is kept **in metres**: every roll is registered separately with its own number and metreage, and the roll never becomes a second unit of measure.
5. Choose the **Tracking mode**: **by roll** (every physical roll is its own row, its own balance and its own cost) or **by lot** (buttons, packing bags, sewing thread: a supplier batch is enough).
6. Enter **Normative waste, %.** This is the norm the Waste report measures actual waste against: 3.0 to 4.0 for fabrics, 2.0 to 2.5 for rib and cuff, 0.5 for buttons.
7. Save. The material is created **Active** and appears in every picker.


**RULES IT ENFORCES**

- The material code is unique. A material that already has movements is never deleted: it is set **Inactive**, which keeps it out of new documents and leaves history intact.

**WHY TRACKING MODE MATTERS**

Tracking mode is the column that decides everything downstream: **by roll** creates a numbered roll per delivered piece and costs each one separately; **by lot** keeps a supplier batch.

UC-02

## Define the zones, the locations and the production stages

| | |
|---|---|
| **Primary actor** | Administrator |
| **Goal** | Give every balance an address and a meaning. |
| **Trigger** | Set-up; or the workshop is reorganised and a new physical area appears. |
| **Precondition** | None. |
| **Screen** | Warehouse structure |

### Main flow

1. On the **Warehouses** tab create the three zones the business runs on: `WH-RAW` raw store, `WH-PROD` production zone, `WH-FG` finished goods. Each carries a **Zone type** and a **Responsible**.
2. On **Storage locations** enter the shelf addresses, `A-01` to `C-05`. They are printed on the roll label and shown on the stock-balance report, so a keeper can be sent to the exact shelf.
3. On **Production stages** enter the reporting cut: cutting, sewing, printing, packing. These name the production tasks; there is no stage-to-stage stock transfer in this version.


**SPLITTING THE PRODUCTION FLOOR**

If **production zone** is too coarse and a separate cutting room and sewing line are wanted, add another warehouse here with zone type Production zone. It appears immediately in the **To warehouse** list of the transfer document (UC-10), and the transfer between them becomes a documented move like any other.

The **Responsible** column is who answers for the count in UC-12.

UC-03

## Set tolerances, approval thresholds and the roll label

| | |
|---|---|
| **Primary actor** | Administrator, with the Director |
| **Goal** | Change the numbers that govern the business without changing the software. |
| **Trigger** | The tolerance, the alert window, the label size or the notification list has to change. |
| **Precondition** | None. |
| **Screen** | Settings |

The settings register is a plain key/value list with a category and a description, so it can be read and changed by the business. These are the ones that carry business meaning:

| Setting | Value | What it governs |
|---|---|---|
| `rounding.tolerance.KG` | 0.150 | The imbalance tolerated on a roll or a transfer line counted in kilograms: per line, not per document. |
| `rounding.tolerance.M` | 0.500 | The same for materials counted in metres. |
| `rounding.tolerance.PCS` | 0 | Pieces do not round. |
| `balance.excess.requires` | DIRECTOR | Who has to approve when the tolerance is exceeded. |
| `transfer.open.alert.days` | 14 | After how many days an unsettled transfer is flagged (feeds the ageing chart and the Material at production report). |
| `label.width.mm` / `label.height.mm` | 58 / 40 | The roll and lot label: number, material code, short name, quantity and a Code128 barcode. The size follows the printer chosen; changing it is one template setting. |
| `company.*` | name, address, tax id, phone, e-mail | Printed on every PDF the system produces. |
| `notify.*` | e-mail lists | Who is written to when approval is requested, when it is granted, and when a balance alert fires. |

### Main flow

1. Open **Settings** and find the key by category; the description says what it governs.
2. Change the value. Tolerances and thresholds are numbers; approvers and notification lists are names.
3. Save. The new value applies to the next document. Nothing already posted is recalculated.


Everything a business changes over time is here: tolerances, thresholds, label size, notification lists. None of it needs a developer.

# 7 B · Demand: orders and production tasks

**WHERE THE COST OBJECTS ARE CREATED**

The order line is the object every later cost is booked against, so these two use cases decide whether the costing works at all. The rule that surprises people, that the status field cannot be typed, is exactly the rule that makes the history usable.

UC-04

## Register a customer order and its lines

| | |
|---|---|
| **Primary actor** | Production chief · Director |
| **Goal** | Turn a customer's request into the cost objects the rest of the system will book against. |
| **Trigger** | A school, a hotel or a company orders. |
| **Precondition** | The customer exists on the Partners page and the product exists on Products. |
| **Screen** | Sales orders |

### Main flow

1. **Sales orders**, then **Create Sales order**. Fill the header: **Order no.** ( `ORD-2026-124` ), Customer, Order date, Delivery date, Notes.
2. Leave **Status** alone; the field is closed. The order is born **Draft**.
3. In **Document lines** press **Add line** and enter, per line: **Order line code** ( `ORD-2026-124-L01` ), Product, **Full order product name**, Size variant, Ordered qty, Unit.
4. Repeat for every distinct thing being made. Two sizes of the same shirt, or the same shirt for two customers, are two lines, and two costs.
5. Move the order with the row buttons: **Confirm the order** to Confirmed, **Start production** to In production, **Mark as completed** to Completed.

RULES IT ENFORCES

- **The status is never typed.** It is the record of which button was pressed, by whom and when; typing it would destroy exactly the history the costing depends on.
- **A line without a full order product name is refused.** The customer's own wording, for example "children's sports shirt, for a named secondary school", is what makes a cost traceable a year later.
- **The same product code for two customers is allowed and never merged.** The unique key is the order line code, not the product code.
- **Cancel** is available until the order is completed; a draft can also be deleted.

UC-05

## Break an order line into production tasks

| | |
|---|---|
| **Primary actor** | Production chief |
| **Goal** | Plan each stage of each order line and see, at any moment, what is where. |
| **Trigger** | The order is confirmed and goes into production. |
| **Precondition** | The order line exists (UC-04) and the production stages exist (UC-02). |
| **Screen** | Production orders |

### Main flow

1. **Production orders**, then **Create Production order**.
2. Choose the order line. The **Planned quantity** is taken from that line; it can be overridden by hand when only part of the line is being made now.
3. Choose the **Production stage** (cutting, sewing, printing, packing) and the **Start** and **Due** dates.
4. Save. The task appears as `ARP-2026-0034`, **Planned**, carrying its Order no., its Order line code and the product in the order's own wording.
5. Move it with **Start** to In progress and **Complete** to Finished.

● Choose the order line → ● Stage and dates → ● Task numbered, Planned → ● Start → ● Complete

WHY SEWING APPEARS MANY TIMES

One row is one stage of one order line. Several rows reading Sewing or Printing are not duplicates: they belong to different orders, which the **Order no.** and **Order line code** columns show. Reading across one row answers the question that used to be missing: which order does this task belong to.

# 8 C · Procurement and receiving

**WHERE A ROLL GETS ITS COST**

A purchase order commits nothing to stock; a receipt creates the rolls; a Director's approval makes their cost final. Until that third step, material may be physically in the building and still cannot be issued to production, because a roll with a provisional cost would carry a provisional cost into an order line, and nothing downstream could fix it.

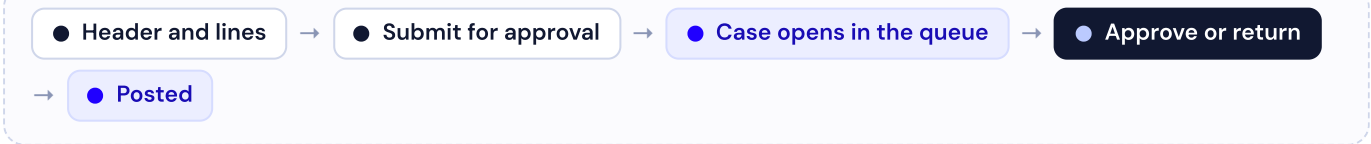
UC-06

## Raise a purchase order and get it approved

| | |
|---|---|
| **Primary actor** | Warehouse keeper (buyer) → Director (approver) |
| **Goal** | Commit to a supplier for a quantity at a price, on the record. |
| **Trigger** | Stock is low, or an order needs material that is not in the store. |
| **Precondition** | The supplier exists on Partners; the materials exist (UC-01). |
| **Screen** | Purchase orders · PO approval |

### Main flow

1. **Purchase orders**, then **Create Purchase order**. Header: **Document no.** ( `GNP-2026-00015` ), Document date, Supplier, Currency, Exchange rate, Rate date and Rate source, Expected date, External ref no, Notes.
2. Add a **document line** per material: material, ordered quantity, unit, price. **Total amount** is computed and cannot be typed.
3. Press **Submit for approval**. Two things happen at once: the order becomes **Submitted**, and an **approval case** opens in the PO approval queue in front of the Director and the keeper.
4. The approver opens the row and gets the order's card **read-only** plus two buttons.
5. **Approve**: the system posts the order itself and the status becomes **Posted**. Or **Return for correction**: the order comes back to the register as a draft for the buyer to fix.




**THE REGISTER IS THE DOCUMENT, THE QUEUE IS THE DECISION**

Order lines are edited only on the Purchase orders page, never inside the queue, whose columns (Case, Document, Date, Document status, Case state, Submitted by) are all filled by the system. An empty queue means nothing has been submitted.

RULES IT ENFORCES

- **A purchase order moves no stock.** It is a commitment; the receipt is the stock event. This is the distinction the whole procurement chain rests on.
- A posted order offers only View, Reverse, Close document and Print the order. There is no Edit and no Delete.
- The approver cannot be the submitter.

UC-07

## Receive a delivery: three hands, one document

| | |
|---|---|
| **Primary actor** | Warehouse keeper → approver → Director |
| **Goal** | Turn a physical delivery into numbered rolls with a final cost each. |
| **Trigger** | A lorry arrives. |
| **Precondition** | The materials exist; normally a purchase order exists as well. |
| **Screen** | Raw material receipts · Receipt approval |

This is the most demanding use case in the system. Three different people touch it, and each of them may see only their own part.

### Main flow

1. **Raw material receipts**, then **Create Raw material receipt**. Header: Document date, Supplier, Warehouse, **Receipt type** (purchase), the purchase order it answers, **External ref no**: the supplier's own delivery note.
2. Add one line per physical roll or lot: material, roll number, the quantity *actually* received (weighed, not copied from the invoice), the kilograms per linear metre where the material is bought by the metre, and the storage location.
3. Press **Submit for approval**. The case lands in **Receipt approval**.
4. **First hand**, the approver presses **Approve the receipt**. The system posts the document and creates the rolls: every line becomes a roll with its own number, its own balance and its own cost. The alternative is **Send back to draft**.
5. **Second hand**, the keeper presses **Confirm the received quantities** back on the register. This is the keeper saying: what the document says is what is on the shelf.
6. **Third hand**, the Director presses **Approve the financial part**. Price and exchange rate are adjusted, delivery, customs and other landed costs are allocated across the lines, and each roll's unit cost becomes final.

RULES IT ENFORCES

- **The keeper never sees money.** Quantities are the keeper's; price, exchange rate and landed cost are the Director's, and are not shown on the keeper's screens.
- **Skipping a step is refused with a message.** Step 3 without step 2 is not allowed.
- **Until the financial approval, a roll cannot be transferred to production.** The **Cost is final** flag on the roll register (UC-09) is what the transfer checks.
- **Status** and **Financial status** are never typed. They show which of the three steps has happened.

Two status columns, because two different people are responsible: **Status** for the document, **Financial status** for the money. **Quantities confirmed by** names the second hand.

UC-08

## Return material to the supplier and correct the receipt

| | |
|---|---|
| **Primary actor** | Warehouse keeper → Director |
| **Goal** | Send back what was wrong and leave the stock quantity and the stock value right. |
| **Trigger** | Material is short, damaged or off-specification after it was received. |
| **Precondition** | The receipt is posted. |
| **Screen** | Returns to the supplier |

### Main flow

1. **Returns to the supplier**, then **Create Return to the supplier**: the supplier, the receipt document being returned against ( `MUT-2026-00020` ) and a line per roll with the quantity going back.
2. Open the original receipt and press **Correct the document**. A correction version opens, in which the returned quantity is subtracted from the quantity originally received.
3. The Director approves the correction. Only then does it become final.


WHAT THE SYSTEM RECALCULATES, AND WHAT IT KEEPS

100 kg received, 10 kg returned: after the Director's approval the final stock entry is 90 kg. The **warehouse cost per kilogram**, landed costs included, does not change; the total value is recalculated as 90 × unit cost. Roll quantity, total stock value and every dependent report follow. **Both versions of the document are kept.** If part of the material has already gone into production, the costs that depend on it are recalculated too, without deleting any history.

# 9 D · The raw warehouse

**FOUR USE CASES, ONE DISTINCTION**

A balance is a *result*; changing it by hand is a *document*. The roll register shows the result. The adjustment, the count and the transfer are documents. That is why the same number appears in more than one place, and it is the distinction that makes the warehouse auditable.

UC-09

## Read a roll's balance

| | |
|---|---|
| **Primary actor** | Warehouse keeper |
| **Goal** | Know, for one roll, what came in, what is left and what has been used. |
| **Trigger** | Daily: before issuing, before counting, before answering the production chief. |
| **Precondition** | The receipt that created the roll is posted (UC-07). |
| **Screen** | Rolls and lots |

The page has two tabs. **Rolls** is the real raw-warehouse balance per roll; **Lots** is the same for materials counted by batch rather than by roll: buttons, packing bags, sewing thread.

| Column | What it is |
|---|---|
| **Initial qty** | What came in on the receipt. |
| **Balance in raw warehouse** | What is there now. |
| **Used** | The difference: what has left the raw store. |
| **kg per linear metre** | The roll's own conversion factor, used whenever a marker measured in metres has to be costed in kilograms (UC-14). |
| **Cost is final** | Whether the Director has approved the financial part (UC-07). Until this is ticked the roll cannot be issued. |
| **Roll status** | Unopened · Partial · Consumed |

### Main flow

1. Open **Rolls and lots**; filter by material, warehouse or shelf.
2. Read one row: initial, balance, used, conversion factor, cost flag, status.
3. Open the roll movement card (UC-22) when the number needs explaining.

● Open the register → ● Read one row → ● The balance moves by itself

**WHY THIS PAGE AND ROLL ADJUSTMENTS BOTH EXIST**

Here the number is the *result*: it moves by itself on receipt, transfer, consumption and return. A **roll adjustment** is a *document* in which a person changes that number by hand, with a reason and an approver: a recount, a measurement error, damage. Without that document the balance **cannot** be edited by hand. That is exactly why both exist.

One line per physical roll, with its shelf, its conversion factor and its own cost, is what makes specific-identification costing possible.

UC-10

## Issue material to production

| | |
|---|---|
| **Primary actor** | Warehouse keeper |
| **Goal** | Move a quantity from the raw store to the production floor, with an address on it. |
| **Trigger** | An approved material request (UC-13), or the cutting plan for the day. |
| **Precondition** | The roll's cost is final; the balance covers the quantity. |
| **Screen** | Transfer to production |

**Main flow**

1. **Transfer to production**, then **Create Material transfer**. Choose **From warehouse** (the raw store) and **To warehouse** (the production zone, or a finer area created in UC-02).
2. Add a line per roll: the roll (the picker labels every option with its **live balance**), the quantity, and the order line it is going out for.
3. Post. At that moment the quantity leaves the raw-warehouse balance and enters the production balance.
4. The **Settlement status** column then tracks it: Open, Partially settled, Closed, as consumption, waste and returns close it out.

● From and To → ● Roll, quantity, order line → ● Post → ● Raw −, production + → ● Settlement tracked

**WHY DOCUMENT AN INTERNAL MOVE AT ALL?**

Because at that moment the roll leaves the raw-warehouse balance and enters the production balance. The document records **which roll, how many kilograms, for which order, by whom and when**, which is what sends the material cost to the right order line, lets the Material at production report show what is on the cutting floor right now, and gives every kilogram an address. Without it, both balances would be wrong.

RULES IT ENFORCES

- A transfer may not drive a roll's balance negative.
- A roll whose cost is **not final** cannot be transferred.
- The transfer line is the **source** of every later consumption: nothing may consume more than that line still has open.
- An unsettled transfer older than `transfer.open.alert.days` (14) is flagged and appears in the ageing chart of the production dashboard.

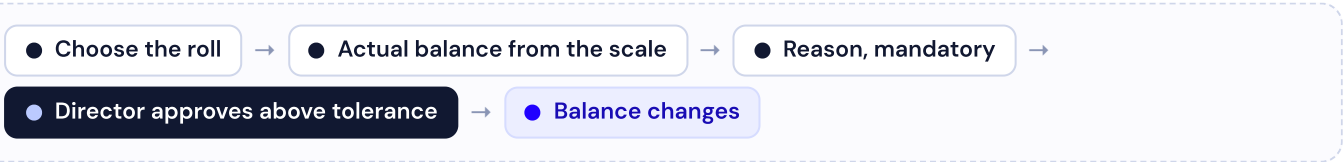
UC-11

## Correct a roll's physical balance

| | |
|---|---|
| **Primary actor** | Warehouse keeper counts → Director approves |
| **Goal** | Make the system agree with the scale, without hiding that it did not. |
| **Trigger** | A recount, a measurement error, damage, or a remainder found after cutting. |
| **Precondition** | The roll exists and has a balance. |
| **Screen** | Roll adjustments |

### Main flow

1. **Roll adjustments**, then **Create Roll adjustment**. Choose the roll; the **System balance** is filled in by the system.
2. Enter the **Actual balance** from the scale. The **Difference** is computed.
3. Choose the **Reason for the adjustment**: measurement error, damaged, recount, remainder found after cutting. The reason is mandatory.
4. Submit. Above the tolerance the Director approves; the balance changes only then.




WHAT IS KEPT

The previous quantity and the new quantity, the date, the person who did it and the reason: all of it, permanently. Initially only the Director may approve; this can be delegated to the Operator later.

UC-12

# Count the stock, one warehouse or two

| | |
|---|---|
| **Primary actor** | Warehouse keeper counts → Director approves |
| **Goal** | Prove the book balance against the shelf and post the difference once, visibly. |
| **Trigger** | Period end, or a spot check. |
| **Precondition** | None. |
| **Screen** | Inventory counts |

### Main flow

1. **Inventory counts**, then **Create Inventory count**. Choose the **Scope**: one warehouse or two warehouses.
2. Choose the **Warehouse** and, in the two-warehouse scope, the **Second warehouse**. The raw store and the finished-goods store can be counted in one document.
3. Count and enter the actual quantities. **Difference, warehouse 1** and **Difference, warehouse 2** are kept apart on purpose, so that two stores' differences never mix.
4. The Director approves. System balances change only after that approval.


**Counted by** and **Approved by** are two different people, by design.

# 10 E · Production

**THE SIX USE CASES THE SYSTEM EXISTS FOR**

Material is asked for, a marker decides what it *should* cost, the floor books what it *actually* used against individual order lines, the remainder goes back, the waste is classified, and the finished units are accepted. Get this group right and the costing report is right by construction.

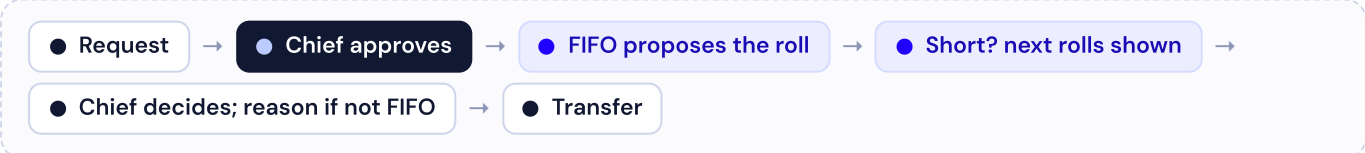
UC-13

## Ask for material, and let FIFO choose the roll

| | |
|---|---|
| **Primary actor** | Cutting room → Production chief → Warehouse keeper |
| **Goal** | Get the right material out of the store in the right order, and leave a record of who decided what. |
| **Trigger** | A cutting plan for an order line. |
| **Precondition** | The order line exists; there is stock. |
| **Screen** | Material requests |

### Main flow

1. The cutting room creates a **Material request** ( `PAH-2026-00011` ) naming the product code, the full name, the **order line** and the quantity required.
2. The production chief **approves** it. **Requested by** and **Approved by** stay on the register.
3. The keeper does *not* pick a roll freely. The system proposes the **oldest available roll**: FIFO. If its balance covers the request, the material is issued from it.
4. If the oldest roll is short, the system shows the **missing quantity** and the next rolls in FIFO order. The keeper tells the production chief that another roll must be opened.
5. **The production chief decides which roll is opened.** The system's default is the next one in FIFO order; choosing a different roll requires a stated reason.
6. The keeper issues the material with a transfer document (UC-10).




Two names on every row, who asked and who approved, and the supplier's or workshop's own reference where one exists.

UC-14

# Build the cutting marker, where planned waste is born

| | |
|---|---|
| **Primary actor** | Cutting room |
| **Goal** | Decide, before a single cut, what this spread *should* consume and what it *should* waste. |
| **Trigger** | The marker is prepared and printed. |
| **Precondition** | The material is on the floor (UC-10); the order line is known. |
| **Screen** | Cutting markers |

The marker is the only place in the business where the **norm** can honestly be computed, because the answer depends on the size mix: a marker of only XL and 3XL behaves differently from S and M. So the norm is computed per marker, not per product.

## What is entered

- The product code, the full name and the order line.
- The **sizes** in the marker and the quantity of each.
- The marker's **length** and **width**.
- The total **spread length** and the fabric's **actual width**.
- The **roll numbers** used.
- The **marker efficiency %** from the cutting program, or the planned internal waste.

**The calculation, on a worked example**

| Step | Worked example | Result |
|---|---|---|
| Plies | spread 50 m ÷ marker 5 m | 10 plies |
| Spread area | 50 m × 1.80 m (actual fabric width) | 90.0 m² |
| Marker area | 50 m × 1.75 m (marker width) | 87.5 m² |
| Edge waste | 90.0 - 87.5, purely the width difference | 2.5 m² ≈ 1.39 linear m |
| Internal waste | from the cutting program's efficiency % | per marker |
| Planned waste | edge + internal | the norm this marker is judged against |

> **issued and spread - used in the product - planned waste = expected good remainder**
>
> The four numbers the register always shows, per marker

**Main flow**

1. **Cutting markers**, then **Create Cutting marker** against the order line.

2. Enter the sizes and quantities, the marker length and width, the spread length and the fabric width, and the roll numbers used.
3. Enter the efficiency % from the cutting program, or the planned internal waste.
4. Save. The register shows plies, issued and spread, used in the product, planned waste and the expected good remainder.


**METRES INTO KILOGRAMS**

Where the material's base unit is the kilogram, metres are converted with **that roll's own kg per linear metre** (UC-09) or, failing that, the material card's grammage. The conversion is per roll, because two rolls of the same fabric genuinely differ.

**THE TWO EXCEPTIONS THAT NEED THE DIRECTOR**

- **A surplus remainder.** If the good remainder is *larger* than the expected one, returning it to the store must be approved; the store balance rises only after the approval. The register flags it in the **Surplus needs approval** column.
- **Waste above the plan.** The excess is registered as abnormal waste, with a reason and the Director's approval, and it stays out of the order's cost (UC-17).

UC-15

## Book actual consumption against order lines, and close the transfer

| | |
|---|---|
| **Primary actor** | Production chief → approver (Director) |
| **Goal** | Put what was really used onto the order lines that caused it, and prove the transfer adds up. |
| **Trigger** | Cutting is done for a spread. |
| **Precondition** | A posted transfer with an open quantity; a marker; the order lines. |
| **Screen** | Actual consumption · Consumption settlement |

**This is the central screen of the system. Everything upstream exists to feed it and everything downstream is computed from it.**

### Main flow

1. **Actual consumption**, then **Create Material consumption**. Header: Document date, the **Material transfer** being settled ( `PHV-2026-00024` ), the Production zone, the Production order, the Cutting marker, the Responsible, External ref no, Notes. Total qty, Total amount, Status and Revision are filled by the system.

2. Add one line per **roll × order line**: the Roll, the Order line, the Consumed qty and the unit. The material name and the order product name are written in as **snapshots**.
3. **One roll may be split across several order lines**; that is the entire point of the system. Ten kilograms off one roll can become 4.0 for one school, 3.5 for another and 1.5 for a third.
4. Press **Submit for approval**. A **Consumption settlement** case opens.
5. Step 1, **Allocate the consumption**: the production lead checks how much of the transferred material went to which order line.
6. Step 2, **Confirm the consumption**: the approver presses **Approve and post** and the system posts it.


**transferred = consumed + waste + returned + remaining**

Checked between the two steps. Out of balance: the case goes back to allocation, and the transfer stays Partially settled.

RULES IT ENFORCES

- **Consumption without an order line is refused.** There is no such thing as material consumed by nobody.
- **A line may not exceed its source transfer line's open quantity**: checked per line, at the level of the transfer line, not against the document total.
- **The cost booked is the roll's own cost**: consumed qty × that roll's unit cost. Specific identification, not an average.
- **Snapshots are written by the system at posting** (material code and name, product code, full order product name), so renaming a product next year cannot rewrite last year's cost.
- **Quantities are typed on this page, before Submit.** The queue card is a decision, not an editor: if a number is wrong, send the document back and correct it on the register.
- A posted consumption offers View, Reverse, Print the consumption act and Correct the document. Never Edit, never Delete.

UC-16

## Return the good remainder to the store

| | |
|---|---|
| **Primary actor** | Production chief → Warehouse keeper |
| **Goal** | Put unused material back where it can be found and used, without charging it to the order that borrowed it. |
| **Trigger** | Cutting is finished and there is usable fabric left. |
| **Precondition** | An open transfer line. |
| **Screen** | Material returns |

**Main flow**

1. **Material returns**, then **Create Material return**. Choose the **Material transfer** and the **To warehouse** (the raw store).
2. Per line: the roll and the quantity coming back. State whether the material returns to the **same roll** or comes back as a **new package**, in which case the system creates a new roll number and prints a new label.
3. The keeper **weighs and accepts** it. The raw balance rises, the production balance falls.
4. The transfer's open quantity falls by the same amount: the return is one of the four terms that close it.


RULES IT ENFORCES

- **A return carries zero cost to the order.** The order pays for what it consumed, not for what it borrowed.
- A return may not exceed the transfer line's open quantity.
- A remainder larger than the marker's expected remainder needs the **Director's approval** before the store balance rises (UC-14).
- If the physical remainder then disagrees with the system, that is a separate **roll adjustment** (UC-11), not a quiet edit.

UC-17

## Register waste, and keep abnormal loss off the order

| | |
|---|---|
| **Primary actor** | Cutting room · Production chief → Director for abnormal |
| **Goal** | Account for the material that did not become product, and charge it to the right place, or to nobody. |
| **Trigger** | The spread is cut; the scraps are weighed. |
| **Precondition** | A marker (for the plan) and an open transfer (for the source). |
| **Screen** | Waste and loss · Waste report |

**actual waste = issued − good used − actual remainder**

On the material, in kg or m. Everything above the marker's planned waste is abnormal.

| Kind | Where its norm comes from | Does it enter the order's cost? |
|---|---|---|
| **Normative waste** | The marker: edge waste = spread length × (fabric width − marker width) ÷ fabric width; internal waste = spread × marker width × (1 − efficiency %) ÷ fabric width. Their sum is the planned waste. | **Yes.** It is ordinary production loss and belongs to the units that caused it. |
| **Abnormal waste** | Whatever exceeds the plan. Needs a **reason** and an **approval**. | **No**, deliberately. Otherwise one order would pay for another's loss. It is reported as a separate loss. |
| **Normative reject** | Pieces, on the finished-goods receipt: **good qty** and **reject qty**. | **Yes.** The material behind it stays in the good units' cost. |
| **Abnormal reject** | The part of the reject split out as abnormal. | **No.** Its share is taken out of the order's cost. |

### Main flow

1. **Waste and loss**, then **Create Waste act**, against the **Material transfer** the material came from.
2. Per line: material, the **order line**, the quantity, the **waste type** and the **reason**; the marker where one applies.
3. A line typed **abnormal** forces the document through approval: abnormal loss is a value decision and the Director makes it. The register shows it in the **Has abnormal** column.
4. Post. The production balance falls; the transfer's open quantity falls with it.
5. Check the result in the **Waste report**: planned, actual, variance, reason, responsible, per material, per order line, per period.


**WHERE THE NORM IS SET**

A material's own norm lives on the Materials page, field **Normative waste, %** (UC-01). The marker refines it for a specific spread; the material card is the fallback and the sanity check. The formula is printed on the waste page itself, so that nobody has to remember it.

UC-18

## Hand over the finished goods and accept them

| | |
|---|---|
| **Primary actor** | Production chief → Warehouse keeper |
| **Goal** | Get the made units into the finished-goods store, split into good and reject, against the order line that ordered them. |
| **Trigger** | A batch comes off the line. |
| **Precondition** | The order line exists; the production task is running. |
| **Screen** | Finished goods receipt · FG acceptance |

### Main flow

1. **Finished goods receipt**, then **Create Finished goods receipt**: the finished-goods warehouse, the production order, the date.
2. Per line: the **order line**, the **good qty** and the **reject qty**, with the abnormal part of the reject split out.
3. **Submit for approval** opens an **FG acceptance** case.
4. The keeper accepts good versus reject. On a dispute the case goes to a **re-check** instead of being posted.
5. On acceptance the document is posted and the finished-goods balance rises.


RULES IT ENFORCES

- A finished-goods line without an order line is refused.
- **The accepted good quantity is the denominator of the unit material cost** (UC-21): unit cost = material cost ÷ accepted good quantity. A declaration that was never accepted changes no cost.

# 11 F · Corrections and reversals

**TWO WAYS TO BE WRONG, TWO DIFFERENT REMEDIES**

A **correction** changes a number and keeps both versions: use it when the document was right in kind but wrong in quantity. A **reversal** undoes the whole document with counter-movements: use it when the document should not exist. Neither of them ever deletes anything, and both end with the Director.

UC-19

## Correct a posted document without erasing history

| | |
|---|---|
| **Primary actor** | Whoever owns the document → Director |
| **Goal** | Fix a wrong quantity on a posted document and let every dependent number follow. |
| **Trigger** | A recount, a return to the supplier, a mis-keyed quantity. |
| **Precondition** | The document is posted. |
| **Screen** | Document corrections |

The rule applies to raw receipts, transfers to production, actual consumption, returns from production, finished-goods receipts and inventory counts: in other words, to **everything that moves stock**.

| What is recalculated | What is kept for ever |
|---|---|
| Material movements | The number before and the number after |
| Roll and warehouse balances | The date of the correction |
| The product's cost, including consumption already booked | The person who did it, and the person who approved it |
| Every report that depends on them | The mandatory reason, in free text |

### Main flow

1. On the posted document press **Correct the document**. A correction version opens: Revision 1, then 2, and so on.
2. Enter the corrected quantity and the mandatory reason.
3. The Director **finalises** it. Only then does anything change.
4. The **Document corrections** register keeps the record: source document type, source document no., revision, quantity before, quantity after, reason, approved by, status.

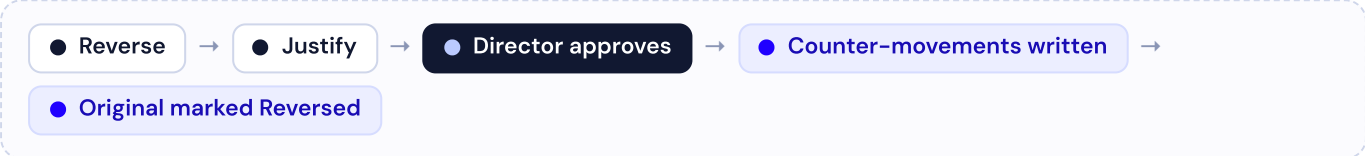
UC-20

# Reverse a posted document

| | |
|---|---|
| **Primary actor** | The requester → Director |
| **Goal** | Undo a document that should not have been posted, leaving the original visible. |
| **Trigger** | The wrong roll, the wrong order line, a duplicated document. |
| **Precondition** | The document is posted and has no reversal open already. |
| **Screen** | Reversals · Reversal approval |

### Main flow

1. Press **Reverse** on the posted document, or create the reversal from the register. A reversal document ( `HAK-2026-00006` ) opens, pointing at the source document.
2. **Submit for approval** opens a **Reversal approval** case.
3. Step 1, **Justify the reversal**: the submitter writes the reason and submits the justification.
4. Step 2, **Approve the reversal**: the Director approves.
5. The system then writes the **counter-movements** itself. Balances go back to where they were and the original document becomes **Reversed**.




**RULES IT ENFORCES**

- A posted document is never deleted by hand; only this way.
- Pressing Reverse does not mark anything reversed by itself: it opens a reversal document, and refuses if one is already open for that document.
- A reversal cannot terminate a workflow case that is still in flight. Finish or cancel that case from the Processes page; the counter-movements are written regardless. The reversal form says so.

The **Reversal reason** column is the one an auditor reads first.

# 12 G · Insight: reports, dashboards, audit

**THE FOUR THINGS THE BUSINESS ASKS THE SYSTEM**

What did this order line cost? Where did this roll go? What does the day look like? Who changed that number? Everything in this group is read-only: it is the evidence, not the work.

UC-21

## Answer “what did this order line cost?”

| | |
|---|---|
| **Primary actor** | Director |
| **Goal** | Get the material cost and the unit material cost of one order line, and be able to defend both. |
| **Trigger** | Pricing the next order; closing the month; a customer question. |
| **Precondition** | The consumptions are posted and the finished goods accepted. |
| **Screen** | Cost by order line · Costing analytics |

**unit material cost = Σ (consumed qty × that roll’s unit cost) ÷ accepted good quantity**

Specific identification by roll, never a weighted average

### How to read the report

| Column | What it means |
|---|---|
| **Order line code** | The cost object. `ORD-2025-103-L01`. |
| **Full order product name** | The customer’s own wording, carried from the order line and snapshotted on every consumption. |
| **Total material cost** | The sum of the posted consumption lines for that order line, each valued at its own roll’s unit cost. |
| **Good qty / Reject qty** | As accepted on the finished-goods receipt (UC-18). |
| **Unit material cost** | Total material cost divided by the accepted good quantity. |

### Main flow

1. Open **Cost by order line**; filter by customer, order or period.
2. Read one row: material cost, good and reject, unit material cost.
3. Open **Costing analytics** for the structure: cost by material, abnormal waste cost, the movement reconciliation. Every bar is a filter.

● Open the report → ● One row per order line → ● Costing analytics

**A WORKED LINE**

One hooded sweatshirt line for a named school: 300 ordered · material cost 75,548.81 · 155 good and 1 reject accepted so far · **487.41 per unit**. The same product code made for another customer is a different line with a different unit cost, and the two never merge.

**WHAT IS DELIBERATELY NOT IN THE COST**

- **Returns carry zero cost.** The order pays for what it consumed.
- **Abnormal waste and the abnormal part of reject are excluded**: they are reported as their own loss, so that one order never subsidises another.
- **Normative waste and normative reject are included**, because they are ordinary production loss caused by these units.

UC-22

## Trace one roll from the delivery note to the finished product

| | |
|---|---|
| **Primary actor** | Any role |
| **Goal** | Show, movement by movement, everything that happened to one physical roll. |
| **Trigger** | An audit, a customer complaint, a stock difference. |
| **Precondition** | The roll exists. |
| **Screen** | Roll movement card · Material at production |

The roll card runs over *all* of a roll's movements and shows a running balance that counts only the raw-warehouse legs, which is why it agrees with the stock-balance report to the gram. Section 13 walks one roll all the way through.

Its companion, **Material at production**, answers the other direction: what is on the floor right now, how old it is, and how much of each transfer is still open. That is the open term of the control equation, itemised.

**Main flow**

1. Open **Roll movement card** and choose the roll number from the label.
2. Read the movements top to bottom: receipt, issue, consumption per order line, waste, return.
3. Switch to **Material at production** for what is still open, by transfer line, with its age in days.

UC-23

# Start the day on the dashboards

| | |
|---|---|
| **Primary actor** | Every role, on its own screen |
| **Goal** | See the state of the business in ten seconds, then click into the exception. |
| **Trigger** | Every morning. |
| **Precondition** | None. |
| **Screen** | Home · Warehouse analytics · Production analytics · Costing analytics |

| Dashboard | For | What it answers |
|---|---|---|
| **Home** | Everyone | Rolls on hand, quantity on hand, stock value, and what is still open at production. |
| **Warehouse analytics** | Warehouse keeper | Balance by warehouse, roll statuses, receipts by supplier, ordered versus received gaps. |
| **Production analytics** | Production chief | Open at production, consumed quantity, the abnormal share of waste against its target, ageing of unsettled transfers, output by order line. |
| **Costing analytics** | Director | Material cost, unit material cost, abnormal waste cost, cost structure by material, and the movement reconciliation. |

### Main flow

1. Open **Home**: four numbers answer the morning question.
2. Open the role's own analytics page.
3. Filter by **Since**, **Material category** and **Warehouse**; click a bar or a slice to filter the whole page by it.


**THREE FILTERS, AND EVERY CHART IS ONE TOO**

Since, Material category and Warehouse drive every chart on the page. Clicking a bar or a slice filters the whole page by it. Stock carries no date, so the Since filter honestly says when it does not apply. The production gauge is the one number worth arguing about: abnormal waste as a share of all waste, against a 5 % target.

UC-24

# Prove who changed what

| | |
|---|---|
| **Primary actor** | Director · Administrator |
| **Goal** | Reconstruct any number in the system, and who is answerable for it. |
| **Trigger** | An audit, a dispute, a month-end review. |
| **Precondition** | None. |
| **Screen** | Audit trail |

Every create, submit, post, approve and reverse is written with **when, which table, which document number, what action, by whom and why**. Posted transactions are never physically deleted, so the trail is complete by construction: a correction adds a revision, a reversal adds counter-movements, and both are visible here.

### Main flow

1. Open **Audit trail**; filter by document number, table, user or period.
2. Read upward through one document number: created, submitted, posted, corrected, reversed.
3. Export the slice for the auditor.

# 13 End to end: one roll, from delivery to unit cost

**This is not an illustration. These are the movements of one roll, `R-000245`, as the system holds them, read off the roll movement card.**

| Date | Movement | Document | Zone | In | Out | Balance |
|---|---|---|---|---|---|---|
| 2026-05-18 | Receipt | MUT-2026-00023 | WH-RAW | 10.0 | | 10.0 |
| 2026-05-22 | Issue to production | PHV-2026-00001 | WH-RAW | | 10.0 | 0.0 |
| 2026-05-22 | Receipt at production | PHV-2026-00001 | WH-PROD | 10.0 | | |
| 2026-05-27 | Actual consumption | CAX-2026-00001 | WH-PROD | | 4.0 | |
| 2026-05-27 | Actual consumption | CAX-2026-00001 | WH-PROD | | 3.5 | |
| 2026-05-27 | Actual consumption | CAX-2026-00001 | WH-PROD | | 1.5 | |
| 2026-05-27 | Waste | TAP-2026-00001 | WH-PROD | | 0.5 | |
| 2026-05-28 | Return out | VER-2026-00001 | WH-PROD | | 0.5 | |
| 2026-05-28 | Return in | VER-2026-00001 | WH-RAW | 0.5 | | 0.5 |

**10.0 = (4.0 + 3.5 + 1.5) + 0.5 + 0.5 + 0**

transferred = consumed + wasted + returned + open · the transfer closes itself

**Three consumption lines from one roll on one day** are three different order lines: the split the whole system was built for. Each of them was valued at `R-000245`'s own unit cost, so three customers carry three honest costs from one physical roll. The 0.5 that came back rejoined the raw warehouse and cost the orders nothing; the 0.5 wasted was charged if it was within the marker's plan and reported separately if it was not.

Two rows for every transfer, one leaving the raw store and one arriving at production, is what keeps the two zone balances independent and correct.

THE ACCEPTANCE TEST, ON LIVE DATA

**T02** transfer 10 kg from one roll · **T03** split it across three orders · **T05** return 0.5 kg to the same roll with no change to the order's cost · **T10** trace the roll to the finished product and back. Four of the ten acceptance scenarios are visible in this single card.

# 14 The business-rule catalogue

**Thirteen rules the system enforces rather than requests. Each one is a refusal with a message, not a note in a manual.**

| Rule | What happens when it is broken | Where |
|---|---|---|
| Material consumed without an order line | Refused. There is no such thing as material consumed by nobody. | Consumption form |
| A product code without the full order product name | Refused on the order line and on every snapshot taken from it. | Sales order line |
| The same product code for two customers | Allowed, and the two costs never merge. The unique key is the order line code. | By design |
| Consuming more than the source transfer line has open | Refused, per line, at the level of the transfer line. | Consumption line |
| Returning more than the transfer line has open | Refused. | Return line |
| Any movement that would drive a balance negative | Refused. | Transfer, consumption, waste |
| Closing a transfer with an imbalance beyond tolerance | Refused: 0.150 kg / 0.500 m / 0 pcs per line. Beyond it, a reason and the Director's approval. | Settlement gateway |
| Editing a posted document | Refused. A correction version or a reversal, nothing else. | Row actions |
| Transferring a roll whose cost is not final | Refused until the Director has approved the financial part of its receipt. | Transfer line |
| Abnormal waste | Reason and Director's approval required; never charged to the order's cost. | Waste line |
| A surplus remainder returned to the store | The store balance rises only after the Director's approval. | Marker, then return |
| Picking a roll out of FIFO order | Allowed, with a stated reason; the production chief decides which roll is opened. | Material request |
| Approving one's own submission | Refused. Post and Reverse are gated by state *and* role. | Every queue |

## What the system fills in by itself, and therefore nobody types

**Document status**
The record of which button was pressed, by whom and when.

**Financial status**
Which of the three receipt steps has happened.

**Settlement status**
Driven by the control equation, not by a person.

**Totals and amounts**
Summed from the lines at each roll's own unit cost.

**Snapshots**
Material and product wording, frozen at posting.

**Revision**
Raised by each correction version.

# 15 Traceability: requirement, use case, acceptance test

**The left column is the requirement or the confirmed answer from the design review; the right is the acceptance scenario that proves it.**

| Requirement | Use case | Test |
|---|---|---|
| Three zones with separate balances | UC-02, UC-10 | T02 |
| Material card, tracking mode, waste norm | UC-01 | T01 |
| Every roll is a row, with its own cost | UC-07, UC-09 | T01 |
| Order line with the full order product name | UC-04 | T04, T09 |
| Purchase order moves no stock | UC-06 | |
| Receipt creates the rolls | UC-07 | T01 |
| Transfer decreases raw, increases production | UC-10 | T02 |
| Consumption split across order lines | UC-15 | T03, T04 |
| Return to the same roll or as a new package | UC-16 | T05 |
| Waste, normative and abnormal | UC-14, UC-17 | |
| Finished-goods receipt against an order line | UC-18 | T09 |
| The control equation and its prohibitions | UC-15 | T06, T07 |
| Posted documents are corrected only by a reversing document | UC-19, UC-20 | T08 |
| Specific identification by roll; returns at zero cost | UC-21 | T10 |
| Audit: user, time, old value, new value, reason | UC-24 | T08 |
| The nine reports | UC-21, UC-22, UC-23 | T10 |
| Financial approval finalises the roll cost | UC-07 | |
| Tolerance per line, not per document | UC-03, UC-15 | T06 |
| Marker-based planned waste | UC-14 | |
| FIFO roll suggestion, the chief decides | UC-13 | |
| Count one warehouse or two | UC-12 | |
| Supplier return recalculates quantity and value | UC-08 | |

| Requirement | Use case | Test |
|---|---|---|
| Correction version, approved by the Director | UC-19 | |
| Tape counted in metres | UC-01 | |
| 58 × 40 mm label with Code128 | UC-03 | |
| Roles and approval rights | Section 3, every queue | |

| Acceptance scenario | Where it is visible |
|---|---|
| **T01** three rolls of one material, three independent balances | Rolls register (UC-09) |
| **T02** transfer 10 kg from one roll | Section 13, rows 2 and 3 |
| **T03** split 10 kg across three orders | Section 13, rows 4 to 6 |
| **T04** same code, two schools, costs never merge | Cost by order line (UC-21) |
| **T05** return 0.5 kg to the same roll | Section 13, rows 8 and 9 |
| **T06** closing with 0.2 kg unallocated is refused | Settlement gateway (UC-15) |
| **T07** consuming more than available is refused | Consumption line (UC-15) |
| **T08** reversing a posted consumption keeps the original | Reversals (UC-20) |
| **T09** a finished-goods receipt with no order line is refused | UC-18 |
| **T10** trace roll to finished product, both directions | Section 13 and UC-21 |

# 16 Appendix A · The screen index

All 41 screens, in menu order.

| Group | Screens |
|---|---|
| Dashboards | Home · Warehouse analytics · Production analytics · Costing analytics |
| Reference data | Materials · Partners · Products · Warehouse structure |
| Sales orders | Sales orders · Production orders |
| Purchasing | Purchase orders |
| Raw warehouse | Raw material receipts · Rolls and lots · Transfer to production · Inventory counts · Roll adjustments · Returns to the supplier |
| Production | Material requests · Cutting markers · Actual consumption · Material returns · Waste and loss · Finished goods receipt · Reversals · Document corrections |
| Processes | PO approval · Receipt approval · Consumption settlement · FG acceptance · Reversal approval |
| Reports | Stock balance · Roll movement card · Material at production · Consumption by order · Consumption by product code · Cost by order line · Waste report · PO vs receipt variance · Movement reconciliation |
| Settings | Settings · Audit trail |

# 17 Appendix B · Status vocabulary

The product runs in three languages. A status shown in a grid follows the deployment's default language; the form and filter dropdowns follow the user's language switcher. This is the table to read a grid with.

| Document status, every document type | Editable? | Way out |
|---|---|---|
| **Draft** | yes | Submit · Delete |
| **Submitted for approval** | no | Approve · Return for correction |
| **Posted**, stock has moved | no | Reverse · Correct · (auto) settle |
| **Partially settled** | no | Settle further · Reverse |
| **Closed** | no | Reverse |
| **Reversed**, counter-movements written | no | terminal |

**Sales order**

Draft · Confirmed · In production · Completed · Cancelled

**Production task**

Planned · In progress · Finished

**Roll**

Unopened · Partial · Consumed

**Settlement**
Open · Partially settled · Closed

**Waste type**
Normative, enters the cost · Abnormal, never does

**Financial status**
Awaiting financial approval · Financially approved

**Inventory scope**
One warehouse · Two warehouses

**Material status**
Active · Inactive

**Tracking mode**
By roll · By lot

# 18 Appendix C · Document numbering

Every register numbers itself. The prefix says what the document is, so a number on a printed act is enough to find it.

| Prefix | Document | Created in | Moves stock? |
|---|---|---|---|
| ORD- | Sales order | UC-04 | no, it is the demand |
| ARP- | Production task | UC-05 | no |
| GNP- | Purchase order | UC-06 | no, a commitment |
| MUT- | Raw material receipt | UC-07 | raw +, creates the rolls |
| MVR- | Return to the supplier | UC-08 | raw − |
| PHV- | Transfer to production | UC-10 | raw −, production + |
| CSH- | Roll adjustment | UC-11 | raw ± |
| GUY- | Inventory count | UC-12 | ± after approval |
| PAH- | Material request | UC-13 | no |
| GCX- | Cutting marker | UC-14 | no, it sets the norm |
| CAX- | Actual consumption | UC-15 | production −, order cost + |
| VER- | Return from production | UC-16 | production −, raw +, cost 0 |
| TAP- | Waste act | UC-17 | production − |
| PAM- | Finished goods receipt | UC-18 | finished + |
| UGH- | Document correction | UC-19 | recalculates the source |
| HAK- | Reversal | UC-20 | counter-movements |
| R- / LOT- | Roll / lot | created by the receipt | the balance itself |

# About this document

Compiled in September 2026 from the deployment requirements, the confirmed answers of the design review, the shipped user manual, and a screen-by-screen walk of the live system. Where the document says the system refuses something, it was read from the rule that refuses it. Customer identity, internal addresses and demonstration data are left out on purpose.