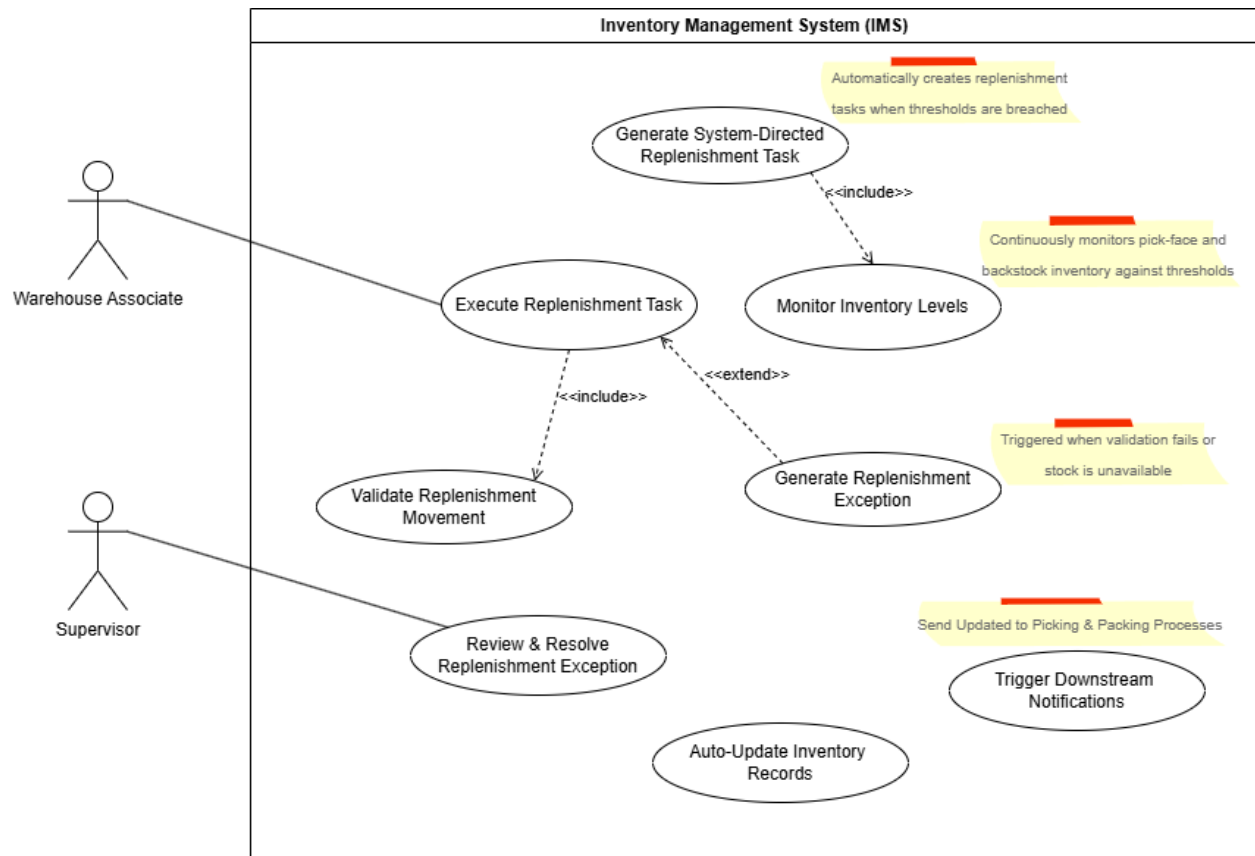


# Use Case Diagram



# Use Case Specifications & Wireframes

## UC-RP-01: Monitor Inventory Levels

### Primary Actor

IMS

### Brief Description

Detect replenishment needs proactively.

### Preconditions

- SKU thresholds configured
- Inventory records available

### Postconditions

- Replenishment need identified

### Main Success Scenario

1. IMS monitors pick-face inventory continuously
2. Compares levels against min/max or ROP
3. Flags SKUs requiring replenishment

### Business Rules & Notes

- Thresholds may vary by SKU and category
- Monitoring runs continuously

## UC-RP-02: Generate System-Directed Replenishment Task

### Primary Actor

IMS

### Brief Description

Create replenishment tasks automatically.

### Preconditions

- Replenishment need detected

### Postconditions

- Task ready for execution

### Main Success Scenario

1. IMS creates replenishment task
2. Assigns source (backstock) and destination (pick-face)
3. Queues task for associate

### Business Rules & Notes

- One active replenishment task per SKU-location
- Tasks prioritized by urgency

## SYSTEM-DIRECTED REPLENISHMENT

Task ID:

[RP-55641]

SKU:

Milk 2L (SKU-060)

Required Qty:

40 units

### From (Backstock):

Zone B | Rack 07 | Bin 21

### To (Pick Face):

Aisle A | Shelf 03 | Slot 08

Scan Source Location

Scan Destination Location

Confirm Replenishment

Flag Issue

### System Message:

✓ Replenishment recorded successfully

## UC-RP-03: Execute Replenishment Task

### Primary Actor

Warehouse Associate

### Brief Description

Replenish pick-face inventory.

### Preconditions

- Task assigned and visible

### Postconditions

- Replenishment executed or exception raised

### Main Success Scenario

1. Associate selects replenishment task
2. Moves stock from backstock to pick-face
3. Scans SKU and destination location
4. Submits completion

### Alternative Flow

- If stock unavailable → UC-RP-05

### Business Rules & Notes

- Location and SKU must match task
- Partial replenishment must be confirmed

## UC-RP-04: Validate Replenishment Movement

### Primary Actor

IMS

### Brief Description

Ensure replenishment accuracy.

### Preconditions

- Associate submits replenishment

### Postconditions

- Movement validated

### Main Success Scenario

1. IMS validates SKU and location
2. Confirms quantity moved
3. Approves replenishment

### Business Rules & Notes

- Validation is real-time
- Invalid scans trigger exception

## UC-RP-05: Generate Replenishment Exception

### Primary Actor

IMS

### Brief Description

Escalate replenishment issues.

### Preconditions

- Validation failure or stock shortfall

### Postconditions

- Exception awaiting review

### Main Success Scenario

1. IMS creates exception
2. Routes exception to supervisor

### Business Rules & Notes

- Exceptions logged with reason codes
- Duplicate exceptions not allowed

## UC-RP-06: Review & Resolve Replenishment Exception

### Primary Actor

IMS

### Supporting Actors

Warehouse Supervisor

### Brief Description

Resolve replenishment issues efficiently.

### Preconditions

- Exception generated

### Postconditions

- Exception resolved

### Main Success Scenario

1. Supervisor reviews exception
2. Approves adjustment, reroutes task, or rejects
3. Confirms resolution

### Business Rules & Notes

- Supervisor approval required
- All actions audit logged



## REPLENISHMENT EXCEPTION REVIEW

Exception ID:

[RP-EX-8831]

SKU:

Milk 2L (SKU-060)

### Issue Detected:

Insufficient backstock

Location inaccessible

### Suggested Actions:

- ☐ Delay replenishment
- ☐ Assign alternative location
- ☐ Escalate to Inventory Control

### Supervisor Notes:

Confirm Action

## UC-RP-07: Auto-Update Inventory Records After Replenishment

### Primary Actor

IMS

### Brief Description

Maintain inventory accuracy.

### Preconditions

- Replenishment validated or exception approved

### Postconditions

- Inventory synchronized

### Main Success Scenario

1. IMS updates QOH and ATP
2. Records transaction history

### Business Rules & Notes

- Updates must be atomic
- No manual override allowed

## UC-RP-08: Trigger Downstream Notifications

### Primary Actor

IMS

### Brief Description

Maintain operational flow.

### Preconditions

- Inventory updated

### Postconditions

- Downstream processes resumed

### Main Success Scenario

1. IMS notifies picking and planning
2. Clears replenishment blockages

### Business Rules & Notes

- Notifications are asynchronous
- Failures logged but do not block updates