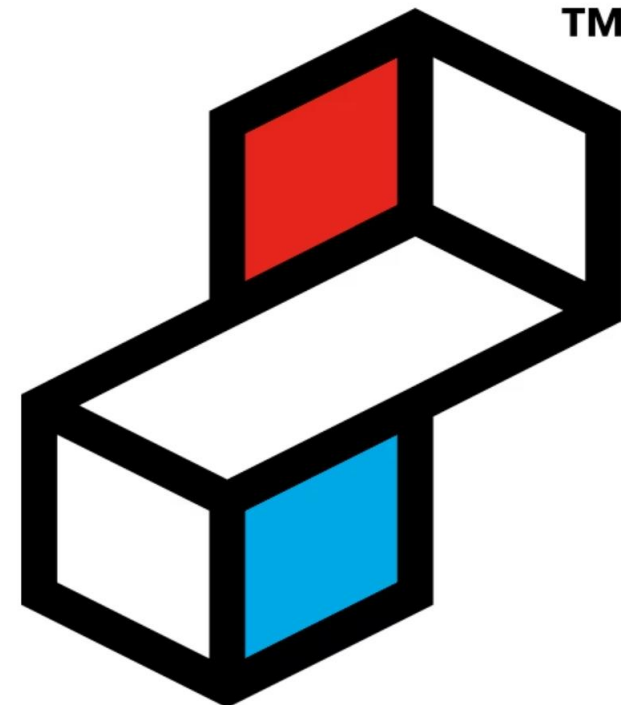




# End-to-End Cargo Handling Agent Process

A comprehensive operational guide covering every stage of air freight handling – from pre-operations readiness through export, import, transit, ULD management, safety, compliance, and post-operations close-out. Designed for cargo operations managers, ground handling supervisors, and quality teams.

EXPORT → RAMP → FLIGHT → ARRIVAL → BREAKDOWN → DELIVERY → ULD → SAFETY → COMPLIANCE



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**ADDING VALUE IS THE KEY.**

# 0. Pre-Operations — Facility & Infrastructure Readiness

Before any shipment arrives, every warehouse zone and piece of ground support equipment must be verified as operational. Zone readiness is the foundation of a compliant, incident-free shift.

## Warehouse Zones to Inspect

- General cargo, DG/ADR/ADN
- Pharma: 2–8 °C, 15–25 °C, –20 °C
- Perishables (cool rooms, humidity-controlled)
- Live animals (IATA LAR compliant)
- Valuables (vault, CCTV, dual-access)
- OOG / oversized cargo areas

## Systems & Equipment Checks

- Fire suppression, temperature monitoring, humidity sensors
- Airflow systems, pest control, lighting, floor load capacity
- ULD storage racks, dollies, slave pallets, roller beds
- High loaders, forklifts, pallet movers, tow tractors

## Daily Controls

- Facility inspection log, temperature calibration records
- ULD structural checks, equipment maintenance logs



## 0.2 IT & System Readiness

All cargo IT systems must be validated and tested before the first shipment is accepted. EDI messaging failures or unresponsive customs integrations can cascade into flight delays and compliance breaches.

### Systems to Validate

→ Cargo Management System (CMS)

Core platform for booking, acceptance, and tracking data.

→ EDI Messaging

FWB, FHL, FSU, FFM – confirm queue delivery and acknowledgement.

→ Integrated Systems

Airline DCS, customs, security screening, and ULD Control connectivity.

### Hardware to Test

Handheld Scanners

RFID Readers

Calibrated Scales

X-Ray Machines

### Controls

- System health checks and EDI queue monitoring
- Backup system activation readiness confirmed

## 0.3 Staff Readiness

Every shift begins with a structured briefing. Staff must be current on certifications, issued with appropriate PPE, and informed of special cargo movements, DG shipments, and weather conditions affecting ramp operations.

### Shift Briefing Agenda

- Safety and security alerts
- Current weather conditions
- Flight schedule and priorities
- Special cargo movements
- Active DG shipments on shift

### Staff Verification Checklist

- DG certification (IATA Cat. 6/10 current)
- CEIV Pharma / CEIV Fresh training
- Ramp safety training and airside driving permits
- PPE issued: hi-vis, safety boots, gloves, hearing protection
- Valid airside passes for all staff on shift

### Controls

- Training validity and competency matrix review
- PPE compliance sign-off before shift start



# 1.1 Truck Arrival & Gate Control

The gate is the first physical security checkpoint in the export chain. Every vehicle and driver must be verified before access is granted. No exceptions – seal integrity and booking references must match before unloading is authorised.

01

## Driver & Vehicle Check

Verify driver ID, inspect vehicle, check for damage or tampering.

02


## Cargo Verification

Confirm AWB/booking reference, inspect seals (if sealed cargo), run radiation portal scan if required.

03

## Dock Assignment

Assign unloading dock, log vehicle entry time in access control system.

 **Controls:** CCTV coverage, access control log, seal integrity record, vehicle safety compliance checklist.



# 1.2 Warehouse Acceptance

Acceptance is the critical quality gate for export cargo. Every discrepancy in weight, dimension, packaging condition, or DG compliance must be identified and recorded here – not on the ramp. Cargo must not be accepted unless all checks pass.

## Physical Checks

- Piece count, gross weight (calibrated scale), dimensions
- Packaging integrity and label verification
- DG compliance: DGD, labels, packaging group, quantity
- Temperature check for pharma and perishables
- Live animal welfare assessment on arrival

## System Entry & Storage Assignment

- Enter all cargo data into CMS
- Assign to appropriate warehouse zone:

Racking / Floor

Cool Room

DG Cage

Valuables Vault

## Controls

- Weight discrepancy tolerance applied, damage reported on IRR
- DG acceptance checklist signed, temperature log validated

# 1.3 Security Screening

All export cargo must be screened to the applicable regulatory standard before it enters the security-restricted area. Screening status must be traceable to the operator, method, machine, and timestamp. Records must be retained for a minimum of 5 years.

## Approved Screening Methods



### X-Ray & ETD

Primary methods for general cargo, pallets post-build, and oversize items.



### Canine & Physical

Used where X-ray is impractical or as supplementary screening.

## Regulatory Framework

- ACC3, RA3, KC3 status requirements
- EU Reg. 2015/1998 compliance

## Security Status Applied

- **SPX** – Secure: screened and cleared
- **SCO** – Screened cargo only
- **Unknown** – Must be screened before acceptance

## Record Required

- Operator ID, method, machine ID, timestamp
- Retention: minimum 5 years

# 1.4 Documentation & Data Capture

Accurate documentation underpins customs compliance, DG safety, and airline acceptance. Every AWB record in the CMS must mirror the physical shipment. EDI messages must be transmitted and acknowledged before cargo is tendered to the airline.

## Documents to Validate

- MAWB and HAWB accuracy and consistency
- FWB / FHL EDI messages – confirmed acknowledgement
- Export customs declaration (EAD / MRN)
- Dangerous Goods Declaration (DGD) – IATA format
- Temperature handling instructions
- Live animal documentation (health cert, CITES if applicable)

## System Data Entry

- CMS, airline DCS system, customs platform

## Documents to Print / Generate

- Cargo labels (destination, routing, special cargo)
- NOTOC – Notification to Captain (DG list)
- Cargo manifest for flight

## Controls

- EDI validation and AWB data consistency check
- DG documentation accuracy – cross-check against physical

# 1.5 Build-Up Operations

ULD build-up is the most operationally complex step in the export chain. Incorrect loading – especially for DG, temperature-sensitive, or live animal cargo – can result in aircraft incidents, regulatory violations, and cargo loss.

01

## Build Planning

Confirm weight & balance allocations, DG segregation rules, temperature zone placement, OOG dimensions, and valuables/live animal positions.

02


## Physical Build

Place cargo, apply nets and straps per airline spec, engage pallet locks, seal ULD. Ensure DG items are not stacked inverted or adjacent to incompatible classes.

03

## Post-Build Checks

ULD integrity check, final weight verification, destination/flight labelling, RFID tag applied, load plan updated in CMS.

 **Controls:** Load plan compliance, ULD structural integrity, DG segregation matrix compliance, temperature cargo zoning, live animal welfare.

# 1.6 Ramp Transfer — Landside to Airside

Moving ULDs from the warehouse to the airside is a high-risk phase. FOD incidents, ramp collisions, and airside access breaches are all live risks. Every vehicle and operator must comply with airside safety protocols before and during transfer.

## Transfer Equipment

- Dollies connected to tow tractors
- Dedicated transfer vehicles for oversized ULDs

## Pre-Transfer Checks

- Airside access control — valid permits verified
- ULD seal integrity confirmed
- Ramp safety compliance signed off

## On-Ramp Safety Actions

- FOD check of transfer route before movement
- Weather risk assessment: wind speed, active lightning protocol
- Observe speed limits on all ramp areas
- Maintain safe distance from taxiing aircraft

## Controls

- Airside permit verification at access gate
- FOD prevention log, weather SOP compliance
- Speed limit monitoring (CCTV/supervision)

## 1.7 Aircraft Loading

Aircraft loading is the final export step before departure. The loadmaster's plan governs position, weight, and restraint. Any deviation must be re-approved before door closure. The NOTOC must reach the flight crew before engine start.

01

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### Load Plan Receipt

Receive approved load plan from airline loadmaster. Brief ramp supervisor and high-loader operator on ULD sequence and positions.

02

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### Loading Execution

Load ULDs per weight & balance plan. Observe DG placement restrictions, temperature cargo positions, and live animal locations. Engage locks, restraints, and nets for every position.

03

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### Final Walk-Around

Inspect all holds, confirm all restraints engaged. Close and secure doors.

04

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### Load Sheet & NOTOC

Finalise load sheet, issue NOTOC to flight crew, obtain captain's signature. File in CMS.



## 2.1 Aircraft Arrival

Ramp readiness for arrival must be confirmed before the aircraft parks on stand. The chocking sequence, GPU connection, and door opening are safety-critical steps that must follow the approved arrival SOP without deviation.

### Stand Preparation

Position high loader, dollies, and tow tractors at stand. Confirm FOD-free environment before aircraft arrives.

### Aircraft on Stand

Chocks on, safety cones positioned, GPU/ASU connected. Await signal from flight crew before approaching doors.

### Priority Cargo

Temperature-sensitive and live animal cargo must be offloaded first and transferred immediately to controlled storage.

- ☐ **Controls:** Ramp safety SOP compliance, DG arrival procedures active, temperature cargo priority protocol confirmed with team.



## 2.2 Aircraft Unloading

Unloading must be systematic and damage-aware. Every ULD leaving the aircraft is a potential liability – seal status, physical condition, and temperature integrity must all be logged at the point of offload, not retrospectively in the warehouse.

### Unloading Sequence

1. Offload ULDs in sequence per load plan
2. Place onto dollies immediately upon offload
3. Move to airside transfer zone under supervision
4. Do not break ULD integrity on the ramp

### Point-of-Offload Checks

- **ULD seal check:** intact or broken – record status
- **Damage check:** visible damage to ULD or cargo
- **Temperature check:** verify cool chain integrity for pharma/perishables
- **Live animal welfare:** assess condition, ventilation, water

### Controls

- ULD integrity log, DG arrival compliance check
- Temperature excursion report initiated if breach detected

## 2.3 Breakdown Operations

Breakdown is the mirror of build-up – high-risk for damage and chain-of-custody failures. Every item removed from a ULD must be logged, inspected, and routed to the correct warehouse zone before the ULD is cleared for return.

### Breakdown Process

→ Move ULD to Breakdown Area

Dedicated breakdown zone, clear of other ULD traffic.

→ Open & Remove

Cut nets and straps carefully. Remove cargo without dragging.  
Inspect each piece.

→ Sort & Place

Sort by airline, destination, consignee, customs status. Route to correct zone.

### Controls

- Damage reporting: Irregularity Report (IRR) raised immediately
- Temperature cargo: moved to controlled zone within agreed time limit
- DG segregation maintained in breakdown area
- Valuables: dual-custody chain maintained from ULD to vault

## 2.4 Customs Handling

Customs compliance is non-negotiable. Cargo must not be released to any forwarder or consignee until full customs clearance is confirmed in the system. Bonded warehouse procedures apply to all cargo pending clearance.

### Submissions Required

- Import declaration filed with correct HS codes
- Cargo manifest submitted to customs authority
- AWB data transmitted via customs EDI link

### Customs Intervention Types

Inspection

X-Ray

Sampling

Hold

### Post-Clearance

- Release confirmed in CMS and customs system
- Cargo moved from bonded to cleared zone

### Controls

- HS code validation, customs seal integrity, bonded warehouse SOP



## 2.5 Delivery to Forwarder / Consignee

Cargo release is the final step in the import chain and carries the highest liability risk. Proof of delivery must be captured for every shipment. No cargo leaves the warehouse without confirmed authorisation and a clean damage check.

01

### Arrival at Gate

Forwarder or trucker presents at gate. Gate officer verifies driver ID and vehicle details.

02


### AWB Verification

Confirm AWB number, piece count, and customs release status in CMS before cargo is pulled from storage.

03

### Cargo Handover

Conduct final damage check. Hand over cargo. Capture POD – signed and timestamped in CMS.

 **Controls:** Gate access log, cargo release authorisation confirmed in CMS, damage check completed and recorded prior to release.

## 3.1 Interline Transfer

Transit cargo occupies a security grey zone – it has left its origin but not yet reached its final destination. Security revalidation and unbroken chain-of-custody documentation are mandatory at every interline handover point.

### Interline Transfer Process

1. Receive cargo from Airline A with full documentation
2. Inspect seals and condition on receipt
3. Store in designated transit zone (secured)
4. Build into ULD for Airline B per load plan
5. Perform security revalidation per ACC3/EU Reg. 2015/1998

### Documentation & Data Actions

- Transfer documentation updated on both airline systems
- EDI messages transmitted: FWB and FSU/TFD to Airline B
- Chain-of-custody record maintained from Airline A receipt to Airline B tender

### Controls

- Transit security status validated before build-up
- Airline-to-airline chain-of-custody record retained

## 3.2 Short-Connection Handling

Tight connection cargo demands priority treatment from the moment of offload. Every minute matters – security escort, priority warehouse routing, and direct ramp-to-ramp transfer (where regulations permit) must be pre-planned before the inbound aircraft lands.

### Priority Offload


Pre-identify short-connection shipments on the manifest. Brief ramp team before aircraft arrival to ensure ULDs containing connection cargo are offloaded first.

### Escorted Transfer

A dedicated agent escorts the cargo through the warehouse or directly via ramp-to-ramp transfer if permitted by the airline and security authority.

### SLA Monitoring

Connection SLA tracked in CMS. Any breach triggers an immediate irregularity notification to the airline and the receiving station.

 **Controls:** Connection SLA adherence logged, security escort documented, direct ramp transfer pre-approved by security authority.



## 4.1 ULD Stock Control

ULD inventory inaccuracies cost airlines significant money in repositioning fees and demurrage charges. Every unit on the premises must be tracked in real time – location, condition, and ownership are the three pillars of effective ULD control.

### Tracking Parameters (per ULD)

- ULD type (pallet, container, igloo)
- Current location (warehouse zone, ramp, aircraft)
- Condition: serviceable / damaged / quarantined
- Airline ownership / ULD pool (e.g. Jettainer, ACL)

### Operational Activities

- Inventory counts – minimum daily, ideally real-time via RFID
- ULD pooling requests submitted to airline or pool manager
- Repositioning of surplus ULDs coordinated with airline

### Controls

- ULD tracking accuracy: target 100% location accountability
- Damage reporting: Damage Advice raised at point of discovery

## 4.2 ULD Maintenance

A damaged ULD placed into service is both a safety hazard and a regulatory violation. Structural integrity, net condition, and locking mechanisms must be verified before every use. Damaged units must be quarantined immediately – never reintroduced into the build-up cycle.

### Inspection Points

#### Structural Frame

Check for cracks, bent rails, floor deformation.

#### Nets & Straps

Inspect for tears, broken clips, or fraying. Replace if in doubt.

#### Doors & Locks

Test all latches, locks, and door seals on containers and igloos.

### Quarantine & Repair Process

1. Tag damaged ULD with clear "U/S – Do Not Use" label
2. Move to quarantine zone immediately
3. Raise Damage Advice to airline / pool manager
4. Coordinate repair with approved maintenance provider
5. Re-inspect and certify before return to service

### Controls

- Maintenance logs retained per airline requirement
- Safety compliance: no unserviceable ULD in active use

## 5.1 Safety

Safety is not a checklist item – it is the operating culture. Every team member is responsible for identifying and reporting hazards before they become incidents. Zero tolerance for FOD, PPE non-compliance, and unsupervised equipment operation.



### Ramp Safety

Mandatory hi-vis PPE, speed limits enforced, safe distances from aircraft maintained at all times. Pre-movement vehicle checks required.



### Warehouse Safety

Forklift pedestrian zones enforced, floor markings maintained, racking load limits observed, spill kits positioned at DG areas.



### FOD Prevention

FOD walks conducted pre-shift and after each aircraft departure. FOD bins at all ramp access points. Incident reporting mandatory.



### Equipment Inspection

Daily pre-use checks on all GSE. Defective equipment tagged out of service immediately and not used until cleared by maintenance.

## 5.2 Security

Security integrity depends on layered controls working together. A breach at any single layer – access control, CCTV, screening, or secure storage – can compromise the entire chain. Regular audits and staff awareness training are essential to maintaining standards.

### Access Control

Biometric or badge-based access to all secure areas. Access rights reviewed quarterly. Visitor log maintained for all non-badged persons.

### CCTV Coverage

All cargo handling areas, access points, and secure storage zones under continuous CCTV coverage. Footage retained per regulatory minimum.

### Screening Logs

All screening records traceable to operator, method, machine, and timestamp. Retention minimum 5 years. Spot audits conducted monthly.

### Secure Storage

Valuables vault: dual-access control, CCTV, entry log. DG cage: locked and segregated. Live animals: monitored, limited access.

# 5.3 Regulatory Compliance Framework

Compliance with multiple overlapping regulatory frameworks is a daily operational requirement, not an annual audit event. Every agent must know which standards apply to their role and maintain current certification at all times.

 <p><b>IATA (global standards for cargo and DG handling)</b></p>	 <p><b>ICAO (international civil aviation regulations)</b></p>	 <p><b>EASA (European aviation safety standards)</b></p>	 <p><b>EU Reg. 2015/1998 (aviation security regulations)</b></p>
 <p><b>CEIV (IATA Centre of Excellence for pharma and perishables)</b></p>	 <p><b>ISAGO (IATA ground operations safety audit)</b></p>	 <p><b>Airline SLAs (individual airline handling agreements)</b></p>	

IATA and ICAO form the global baseline. EU Reg. 2015/1998 governs security in European operations. CEIV certification demonstrates excellence in pharma and perishables handling. ISAGO provides third-party safety audit validation. Airline SLAs define the specific operational standards required by each carrier contract.

## 6.1 Billing

Accurate and timely billing closes the operational loop and protects revenue. Every chargeable service must be captured in the CMS at the point of delivery – retrospective billing increases dispute risk and damages client relationships.

### Handling Charges

Per-kilogram and per-shipment handling fees based on agreed tariff. Calculated from accepted weights recorded at acceptance.

### Screening Fees

Charged per screening event. ETD, X-ray, and canine screening may attract different rates. Billable to forwarder or airline per contract.

### Storage Fees

Free time period defined in SLA. Storage charges accrue daily after free period. Temperature storage billed at premium rate.

### ULD Repair Fees

Damage to ULDs caused during handling is billed to the responsible party. Damage Advice raised at point of discovery supports cost recovery.

## 6.2 KPI Reporting

KPIs are the operational health check of the cargo handling operation. They must be reviewed at every shift debrief and reported to airline clients on the agreed cycle – typically daily for critical metrics, monthly for SLA compliance.

### OTP

On-Time Build-Up

ULDs available at airside within agreed deadline before STD. Target typically 95%+.

### OTD

On-Time Delivery

Import cargo available for collection within agreed hours post-arrival. Target varies by airline SLA.

### 100%

Screening Compliance

All export cargo screened before airside movement. Zero tolerance for unscreened cargo.

### DR%

Damage Rate

Damaged pieces as a percentage of total pieces handled. Target typically below 0.1%.

### ULD%

ULD Utilisation

Ratio of active ULDs to total ULD inventory. Low utilisation indicates repositioning required.

## 6.3 Claims Handling

Every claim is a post-operational failure that must be tracked to its root cause. Prompt, thorough claims handling minimises liability exposure, preserves client trust, and generates the data needed to prevent recurrence.



### Damage Claims

IRR raised at point of discovery. Photographs taken before any cargo is moved. Airlines notified within agreed timeframe per AWB conditions.



### Loss Claims

Full traceability audit initiated: CMS scan history, CCTV review, chain-of-custody records. Airline and insurer notified promptly.



### Delay Claims

Delay root-cause analysis conducted. SLA breach notifications sent automatically by CMS. Remediation plan documented.



### Temperature Excursion

Temperature excursion report initiated immediately. Cool chain investigation covers every handling step. Consignee and shipper notified per CEIV protocol.

## 6.4 Data Archiving


Data archiving is not administrative housekeeping – it is a regulatory requirement and a critical operational safeguard. Complete, accessible records protect the GHA in the event of claims, audits, and regulatory inspections. Retention periods must be observed rigorously.

### Documents to Archive

- **AWBs:** MAWB and HAWB – minimum 2 years (airline-specific)
- **Screening logs:** operator, method, machine, timestamp – 5 years (EU Reg. 2015/1998)
- **Customs documents:** import/export declarations – per national customs authority requirements
- **ULD logs:** inventory, damage advices, maintenance records
- **Load sheets & NOTOCs:** per airline contractual requirement

### Archiving Best Practices

- Digital archiving preferred – indexed, searchable, backed up off-site
- Access control on archived records – retrieval log maintained
- Retention schedule reviewed annually against current regulations
- Physical documents scanned and stored within 24 hours of flight departure

 **Audit Readiness:** All archived records must be retrievable within 24 hours in response to a regulatory authority request.