IATA Air Cargo Day Africa – Day 1
Johannesburg, South Africa

8-9 November 2023
Opening and Introduction

Alex Stancu
Area Manager – Southeast Africa – AME, IATA
Thank you to our Sponsors
Welcome and set the scene

Sandile Chipunza
Manager External Affairs & Sustainability– AME, IATA
Participants are cautioned that any discussion regarding matters such as fares, charges, division or sharing of traffic or revenues, or concerning any other competitively sensitive topics outside the scope of the agenda is strictly prohibited.

As a result, questions pertaining to individual policies or commercial decisions and/or being subject to bilateral commercial discussions between airlines and their suppliers or customers will not be answered.
Agenda – Day 1
Operations

• Keynote Speech
• Air Cargo Outlook
• Focus on Safety
• Infrastructure and Cargo Standards
• Focus on Pharma and Certifications
• Sustainability
• Products and Training
Keynote Speech – Safety & Security

Ms. Poppy Khoza
Director General South Africa Civil Aviation Authority
Ms. Mpumi Mpofu
CEO Airport Company South Africa
Keynote Speech - Transformation

Ms. Khangi Khoza
CEO Swissport South Africa (Pty) Ltd.
Global and Regional Air Cargo Trends

Emma Dayo
Regional Manager Cargo & Ground operations, Africa Middle East
IATA
Cargo maintains recovery trend amid challenges

After an outstanding performance in 2021, air cargo demand faced consecutive year-on-year (YoY) declines in 2022, a trend that persisted until July 2023.

However, August marked a turning point with the first annual growth since February 2022. The annual growth of ACTKs in August outpaced the previous month by 1.6 percentage points, primarily driven by the sustained strong growth of belly cargo capacity during the summer season, recording a 30.0% YoY increase.

In contrast, international capacity growth for dedicated freighters remained sluggish in August, with only a 2.0% YoY increase.

This recovery, coupled with the YTD performance, underscores the resilience of the air cargo sector as it adapts to challenges and evolving dynamics in the global economy and travel industry.
General Air Cargo Market

Challenges are mounting

- The war in Ukraine has grounded some key players and disrupted supply chains
- Economic volatility has brought inflation, a weaker trading environment, shifting currency rates and slower GDP growth
- Concerns on how China’s economy is developing

Positive developments

- E-commerce continues to grow
- Shorter delivery times
- The strong rebound of passenger traffic brings more belly capacity for cargo
- And high-value specialized cargo, such as pharma products, are proving resistant to economic ups-and-downs

Source: IATA Economics.
Growth in international CTKs by airline region of registration (YoY)

International CTKs on the major trade lanes maintained the overall momentum in August.

The annual growth rates in CTKs improved on all major trade lanes compared to the previous month, with the only exceptions being the Africa – Asia and Within – Europe markets.
Growth in international CTKs by airline region of registration (YoY)

The Africa – Asia and Within – Europe markets were the only two major trade lanes that expanded their annual contractions from the July levels. International CTKs on the Africa – Asia trade lane declined by 1.1% this month, from their 11.2% growth in July.

International CTKs of African airlines declined by 4.8% from a relatively high base in 2022 but also affected by the softened traffic on the Africa – Asia trade lane.
The value of air cargo

1% of global trade by volume

35% of global trade by value

>65 million tons of cargo a year

US $6.8 trillion worth of goods
24H in Air Cargo

80’000 flowers transported

1.1M smartphones transported

$18.6B value in cargo shipped

20M parcels sent

6’849 lives saved
Cargo changes & saves lives

Aviation plays an essential role in emergency relief operations

362 million
People in need of humanitarian assistance and protection in 2023

Cargo delivered by the UN Humanitarian Aviation Service in 2022

165 operations
Since 2020, the EU Humanitarian Air Bridge delivered more than 4000 tons of aid

7000 megatons
What are the industry priorities?

**Digitalization**
Move from the legacy messaging standard that is 50 years old to a data-sharing approach based on web APIs.

**Sustainability**
Support industry Net Zero commitments, increase efficiency and reduce waste in air cargo operations.

**Safety & Security**
Securing and facilitating cross-border movements.
IATA defines and delivers a set of consistent initiatives to support the 3 industry priorities:

### Advocacy
- Digital Transport & Logistic Forum (DTLF) of the EU Commission
- FEDeRATED Consortium

### Standard Setting
- ONE Record
- Interactive Cargo
- Cargo XML
- Cargo iQ

### Commercial Products & Services
- Cargo XML toolkit
- EPIC

<table>
<thead>
<tr>
<th>Digitalization</th>
<th>Sustainability</th>
<th>Safety &amp; Security</th>
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<tbody>
<tr>
<td>- Trade facilitation (WTO TFA)</td>
<td>- Live Animal</td>
<td>- Fire Resistant Container / Fire Containment Cover</td>
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<tr>
<td>- Compliance with customs regulations / Risk assessment</td>
<td>- Perishable Cargo</td>
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<tr>
<td>- Airmail &amp; E-Commerce Logistics</td>
<td>- Temperature Control</td>
<td>- Dangerous Goods</td>
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<tr>
<td>- Cargo Supply Chain Waste / Single use plastics</td>
<td>- Cargo Supply Chain Waste / Single use plastics</td>
<td>- Lithium Battery Shipping</td>
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</table>

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<th>Sustainability</th>
<th>Safety &amp; Security</th>
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</thead>
<tbody>
<tr>
<td>- Cargo XML toolkit</td>
<td>- LAR, PCR, TCR, CTM</td>
<td>- DGR, LBSR</td>
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<tr>
<td>- EPIC</td>
<td>- ONE Source</td>
<td>- ULDR</td>
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<tr>
<td>- CCLPH</td>
<td>- Cargo Consulting &amp; Training</td>
<td>- ISSR</td>
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<td>- CargoIS, Cargo Direct Data</td>
<td>- Cargo Consulting &amp; Training</td>
<td>- ICHM</td>
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<td>- Cargo Consulting &amp; Training</td>
<td>- Cargo Consulting &amp; Training</td>
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</table>
Thank you

www.iata.org/cargo
eCommerce Trend & Update

Andre Majeres
Head of eCommerce and Cargo Operations, IATA
E-Commerce Before The Pandemic - 2019

US $365B
France $43B
Latin America $50B
Germany $74B
UK $79B
Russia $19B
Japan $89B
South Korea $66B
China $723B
Australia $21B

Source: Statista/DHL
* Figures including services
eCommerce Growth During The Pandemic - 2021

- 33.9% North America
- 26.5% Europe
- 32.9% Russia & Central Asia
- 34.8% South America
- 22% Asia Pacific
- 30.4% Middle East & Africa
COVID-19 has grown E-Commerce exponentially across the world, especially in the U.S., Latin America, Europe and China.
eCommerce Return To Normal Growth - 2022

- NORTH AMERICA: 10.2%
- SOUTH AMERICA: 12.7%
- ASIA PACIFIC: 27.4%
- EUROPE: 15.1%
- MIDDLE EAST & AFRICA: 16%
- MIDDLE EAST & AFRICA: 16%

IATA
XB e-commerce: ~11 bn purchases in 2021

2021 volume, percent

Estimates

~11 bn orders annually\(^1\)

%  Percent of total trade  Trade lanes  Intra-regional

North America

3%  3%  3%  3%

South America

<1%  <1%

Europe (incl. Russia, Turkey)

12%  4%  6%  17%  17%

Middle East

<1%  1%  <1%  1%  1%

APAC (incl. India)

20%  7%  20%  20%

>60% of all cross-border e-commerce orders are inter-continental

1. Online orders regardless of fulfillment and shipping method (i.e., including consolidated / bulk shipment, forward located inventory, express, postal and other single cross-border parcels); volumes that cannot be accounted for trade lane are not included on slide

Source: McKinsey XB Flow
Worldwide retail sales – Growth Slowing Down

2022 (Trillion USD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Forecast</th>
<th>% Change</th>
<th>% of Online Retail Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>19.2%</td>
<td>12.5%</td>
<td>12.5%</td>
<td>19.2%</td>
</tr>
<tr>
<td>2022</td>
<td>19.3%</td>
<td>6.9%</td>
<td>6.9%</td>
<td>19.3%</td>
</tr>
<tr>
<td>2023</td>
<td>20.2%</td>
<td>3.9%</td>
<td>20.2%</td>
<td>20.2%</td>
</tr>
<tr>
<td>2024</td>
<td>21.2%</td>
<td>4.3%</td>
<td>21.2%</td>
<td>21.2%</td>
</tr>
<tr>
<td>2025</td>
<td>22.2%</td>
<td>3.7%</td>
<td>22.2%</td>
<td>22.2%</td>
</tr>
<tr>
<td>2026</td>
<td>23.3%</td>
<td>3.4%</td>
<td>23.3%</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

Source: eMarketer
Worldwide eCommerce Retail Sales – Still Growing
2019-2026 (Trillion USD)

2019  $3.351  13.8%
2020  $4.213  17.8%
2021  $5.075  19.2%
2022  $5.437  19.3%
2023  $5.920  20.2%
2024  $6.478  21.2%
2025  $7.046  22.2%
2026  $7.619  23.3%

Source: eMarketer
E-Commerce After The Pandemic - 2022

- **US**: $1640B
- **China**: $2780B
- **Japan**: $144B
- **South Korea**: $120B
- **UK**: $170B
- **Canada**: $44B
- **France**: $80B
- **Latin America**: $104B
- **Germany**: $102B

Source: Statista/DHL
* Figures including services
But forecasts always underestimated e-Commerce.

Forecasts from 2014
Actual and new forecasts
Alternative

USD Trillion $$$$
eCommerce Logistics – Massive investments

The global eCommerce logistics market was valued at:

- USD 235.70 billion in 2020
- USD 315.82 billion in 2022

Expected to grow at an annual growth rate (CAGR) of 22.3% from 2023 to 2030

- USD 1,901.97 billion in 2030

eCommerce logistics involves the provision of services such as warehousing, transportation, value-added services, and packaging.

Source: Parcel Monitor
The eCommerce Tsunami of Parcels

Volumes of parcels shipped:

- 2022 - 170 billion parcels
  4x more than 2014

- 2027 – 256 billion parcels
  +50% compared to 2022

Source: Parcel Monitor
Cross-border B2C Air cargo is built for eCommerce

80%

eCommerce represents approximately 20% of air cargo, forecasted to reach 22% in 2024.

Source: ICAO, McKinsey, PwC Analysis
### Cross-border B2C order volume, 2021

<table>
<thead>
<tr>
<th>Mode</th>
<th>Volume</th>
<th>Future growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>~11 bn</td>
<td></td>
</tr>
<tr>
<td><strong>Non-air</strong></td>
<td></td>
<td>~20-25%</td>
</tr>
<tr>
<td>Other modes</td>
<td>~30-35%</td>
<td></td>
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<tr>
<td>(regional road, sea)</td>
<td></td>
<td></td>
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<tr>
<td><strong>Air</strong></td>
<td></td>
<td>~5%</td>
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<tr>
<td>Express air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(via Integrators)</td>
<td></td>
<td>~30-35%</td>
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<tr>
<td>UPU / Postals</td>
<td></td>
<td></td>
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<tr>
<td>(via Airlines)</td>
<td>~40%</td>
<td></td>
</tr>
<tr>
<td>Others via airlines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(hybrid parcel solutions,</td>
<td></td>
<td>~40%</td>
</tr>
<tr>
<td>forward locating, etc.)</td>
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**Source:** McKinsey
For air cargo, e-commerce accounts for ~20% of total cargo volumes and the share could grow to 30% by 2027.

E-Commerce share of global air cargo volume (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2022(^1)</th>
<th>2027(^e)</th>
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<tbody>
<tr>
<td></td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
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</tbody>
</table>

Assuming 10-15% annual growth of cross-border e-commerce vs. 3-4% for general air cargo.

Source: McKinsey

1 Preliminary estimates
Air cargo models & e-tailers

**Owned and fully dedicated air transport capabilities**
Firms reduce their dependence on 3rd party carriers, limiting risks and increasing margins.

**Air freight shippers**
Companies move the goods to fulfillment centers in freight format and perform local ground distribution in the destination country.

**Hybrid model**
Mixed-use of internal and external capabilities to move freight to fulfillment centers, and also shipping of single parcels to consumers via air cargo.

**Air parcel shippers**
Firms rely on standard Courier-Express-Parcel & airmail. It is common for marketplaces due to their high dispatch fragmentation.
Five strategies for transformation

- Focus on e-commerce products & services
- Digitize to increase speed
- Build into own system
- Shift to cargo
- Compete through responsiveness and VAS

Identified pain points:
- Unstandardized services & pricing
- High international rates
- Lack of tailored products
- Insufficient service levels in fulfillment
- Low visibility of status
- Slow pricing processes & reduced rate competition
- Inflated costs of forwarding
- Poor visibility, disconnections in track & trace mechanisms and reverse logistics

80% of cross border e-commerce is transported by air
36% air cargo airline revenue in 2020
82% of consumers want recyclable packaging
Transform to build a robust air cargo

COVID-19 has accelerated e-commerce penetration and solidified the shift in consumer behavior.

e-commerce is key for industry prosperity/survival

Carriers need to address existing pain points through the 5 strategies in order to adapt to e-tailers needs.
What are the opportunities?
How to capitalize on it?

- What is eCommerce?
  How would you identify those shipments?

- Do we need to know?
  Or is it only cargo & mail?

- What would be the benefits?
Before the pandemic, e-Commerce was key to air cargo...

Now air cargo is key to e-Commerce
Thank you!

Andre Majeres
Head of eCommerce, Cargo and Mail Operations
majeres@iata.org | www.iata.org
Cargo Safety – Lithium Batteries

Bheki Ngiba
Manager Dangerous Goods, SACAA
DANGEROUS GOODS

Lithium Battery Risk

Bheki Ngiba
01 Revised Regulations
Applications and submissions

02 Cargo Entities Compliance
Summary

03 5 Phase Process
Approval Process

04 Lithium Battery risk

05 New developments
Revised Part 92 regulations overview

- **Annex 18 and Technical instructions alignment**
  - Aligning Part 92 and Annex 18 headings for ease of reference – linking the regulations to the actual standards.

- **Address regulatory gaps identified through gap analysis**
  - Dangerous goods requirements for entities other than the operators.
    - Annex 6, Part I, chapter 14 and 15
    - Annex 6, Part III Requirements for Helicopters, and
    - Annex 19- Risk assessment requirements.

- **Requirements for approval for operators to carry Dangerous goods**
  - Addition of clear requirements and process for operators wishing to apply for approval to carry Dangerous Goods as cargo.

- **Requirements for operators not approved to carry dangerous goods**
  - Addition of clear requirements for operators that are not approved to carry dangerous goods as cargo.

- **Requirements for Aviation Training Organizations’ Training Dangerous Goods**
  - Addition of requirements and process for ATOs to train Dangerous Goods – in line with Part 141 approval regulations.
Revised Part 92 regulations overview

- Requirements for instructor certification
- Competency based training and assessment
- Requirements for other entities
- Requirements for DG handling approval
- Part 187 Fess

Addition of requirements for Dangerous Goods instructor certification
Addition of the Dangerous Goods competency training and assessment approach requirements.
Addition of requirements for other entities such as Freight forwarders, Airports, Couriers, Packers and Package testing organizations.
Requirement for approval to handle Dangerous goods by Cargo Handling organizations.
Fess amendments to align with the new proposed amendments and related applications.
Cargo and other entities compliance summary

01 All Entities with no approval

- Any cargo handling entities in the supply chain including Aerodromes
- ✓ Submit an MOP for approval
- ✓ MOP must contain CBTA program
- ✓ Ensure declaration for non-dg cargo is given to the handling agent or operator
- ✓ Does not handle dangerous goods
- ✓ Hand dangerous goods cargo to approved agent for final acceptance
- ✓ Reject or rescreening in the absence of declaration
- ✓ Report incidents

02 Entities requiring approval

- Any entities doing final acceptance of cargo/ dangerous goods before it is loaded onto an aircraft
- ✓ Application for Certification
- ✓ Submit MOP with CBTA program
- ✓ Five Phase Process will apply
- ✓ Will be added on the CAA list
- ✓ Ensure declaration for non-DG cargo is given to the operator
- ✓ Keeps all DG Documentation
- ✓ Reject or rescreening in the absence of declaration
- ✓ Report incidents
Cargo and other entities compliance summary

03 Operators- NO DG approved

- Non- DG approved
- ✓ Application for CBTA approval
- ✓ OM DG Section containing CBTA program
- ✓ CBTA Manual and assessments
- ✓ Does not handle dangerous goods
- ✓ Hand COMAT dangerous goods cargo to approved agent for final acceptance
- ✓ Reject or rescreening in the absence of declaration
- ✓ Report incidents

04 DG approved Operators

- Any entities doing final acceptance of cargo/ dangerous goods before it is loaded onto an aircraft
- ✓ Application for Certification and for CBTA
- ✓ Submit OM DG Section with CBTA program
- ✓ CBTA Manual and assessments
- ✓ Five Phase Process will apply
- ✓ Will be added on the CAA list
- ✓ Ensure declaration for non-DG cargo is given to the operator
- ✓ Keeps all DG Documentation for DG shipments
- ✓ Reject or rescreening in the absence of declaration
- ✓ Report incidents
5 Phase process

1. Pre-Application Phase
   - Initial discussion based on intent.
   - SACAA gives A-Z information pack on how to do a particular approval/certification

2. Formal Application Phase
   - Formal application
     - Application form
     - Proof of payment
     - Submission of relevant manuals - MOP/TPM/CBTA/FO M

3. Document evaluation
   - Formal evaluation of manuals by the CAA
     - CBTA program
     - MOP
     - TPM
     - OM
     - CBTA manual and assessments

4. Demonstration Phase
   - Demonstration
     - Audit is conducted at place (s) of operation to verify the manuals contents
     - In case of air operator, a demo flight may be required.

5. Certification Phase
   - Certification
     - Evaluation of the entire process
     - Issuance of the certificate

Explain Phase 2 - 5
Lithium Battery Risks

Lithium Battery:

- US Federal Aviation Administration data from May 2023 showed there had been at least one lithium battery incident on a passenger plane each week since 2021, an increase of 42 per cent increase since 2018.
Lithium cells and batteries are Class 9 (miscellaneous) Dangerous Goods.

- Stand-alone—Package contains only the cells/batteries—no equipment:
  - UN3090, Lithium metal batteries including lithium alloy batteries
  - UN3480, Lithium ion batteries including lithium ion polymer batteries

- Packed with—Package contains not only the equipment, but also cells/batteries that are not installed in the equipment:
  - UN3091, Lithium metal batteries packed with equipment including lithium alloy batteries
  - UN3481, Lithium-ion batteries packed with equipment including lithium ion polymer batteries

- Contained in—Package contains equipment with cells/batteries installed:
  - UN3091, Lithium metal batteries contained in equipment including lithium alloy batteries
  - UN3481, Lithium-ion batteries contained in equipment including lithium ion polymer batteries

- Vehicles—Package or shipment contains a vehicle powered by lithium batteries:
  - UN3171, Battery-powered vehicle
  - Cargo Transport Unit—Lithium batteries installed in a cargo transport unit and designed only to provide the cargo transport unit.
  - UN3536, Lithium batteries installed in cargo transport unit lithium ion batteries or lithium metal batteries
Lithium cells and batteries are Class 9 (miscellaneous) hazardous materials. What are the risks associated with Lithium batteries?

Lithium cells or batteries can short circuit, overheat, and sometimes cause fire. The heat from a single cell in thermal runaway can propagate from cell to cell and package to package until the entire shipment has been consumed. Temperatures experienced involving lithium cells or batteries in thermal runaway are sufficient to ignite typical fibreboard packaging and nearby materials.

Lithium battery risk maybe increased when batteries have been:

- Misused,
- mishandled,
- modified,
- improperly packaged,
- improperly stored,
- overcharged,
- damaged,
- And when they are defective
Lithium cells and batteries are Class 9 (miscellaneous) hazardous materials.

Images of shipments on fire at Hong Kong Airport have circulated on What’s App. The freight included a batch of China-manufactured Vivo smartphones and accessories due to be shipped to Bangkok – reportedly the Y20 model. The phones were loaded across three pallets, all of which caught fire, and it reportedly took the emergency services some 40 minutes to put out the blaze. Sources told local media that, while the airport’s operations were not affected, a 24 by 12 metre space on the tarmac was damaged.

13 April 2021
Mitigating the risk

• Batteries must be of a type which meets the requirements of the UN manual of Tests and Criteria, Part III, subsection 38.3

• Check packing instructions and the related special approval carefully

• Check Table 2.3.A of the IATA DGR or Table 8-1 of the ICAO Technical Instructions for items related to provisions for passengers and crew
01 Data Loggers and transmitting and receiving devices

Portable electronic devices (PEDs) such as dataloggers and cargo tracking devices, that are designed to remain active throughout their transport from shipper to consignee, have a potential to interfere with aircraft navigation or communication systems. The operator must determine which ones will not interfere with the safe operations of the aeroplane.

02 Use of smart bags (0.3g metal or 2.7 Wh)

Recent developments of innovative baggage with integrated lithium batteries, commonly known as “smart luggage” are being marketed and sold to the traveling public. These devices include integrated lithium batteries, motors, power banks, GPS, GSM, Bluetooth, RFID or Wi-Fi technology. The presence of the lithium batteries can contravene various regulatory requirements. These devices require careful attention – even if permitted by the applicable regulations.

“smart” luggage features may include items such as:
- Lithium ion battery and motor allowing it to be used as a personal transportation device, either as a stand-up scooter, or sit on vehicle. These devices do not meet the criteria of a mobility device.
- Lithium ion battery power bank that allows charging of other electronic devices such as mobile phones, tablets and laptops.
- GPS tracking devices with or without GSM capability.
- Bluetooth, RFID and Wi-Fi capability.
- Electronic baggage tags.
- Electronic lock/s.
- Lithium ion battery, motor and tracking device (GPS) allowing the bag to self-propel and ‘follow’ the owner.

03 Self-balancing scooters and Hoverboards

Most airlines enforce a stringent ban of all hoverboards due to the risk of fire and explosion.

UN 3171 Battery powered vehicles, or UN3481 Lithium ion batteries contained in equipment.
New developments from the Dangerous Goods panel

01

- UN3556 – Vehicle, Lithium Ion Powered PI 952
  - Includes hoverboards and self-balancing wheels
  - Hybrid vehicle PI 950 and 951

  Proposal to have the battery state of charge reduced to 30 to 35 percent

02

Exceptions for data loggers and cargo tracking devices

The exceptions will be added under Part 1; 1.1.5.1 of the Technical Instructions for usage of data loggers and cargo tracking devices

03

30 percent State of charge extended UN3481 and UN3171

Proposal to extend 30 percent state of charge is to UN3481 – lithium batteries packed with equipment and UN3481 – Lithium batteries contained in equipment
UN3171- Battery powered equipment
UN3171- Battery powered vehicle
DGP-WG/UN Harmonization provided two options for DGP-WG/23 to consider:

a) merging the provisions for sodium ion with the provisions for lithium ion batteries in Packing Instructions 965, 966, 967; or

b) one new standalone packing instruction for sodium ion batteries that contained separate sections for sodium ion batteries packed on their own, packed with equipment, and contained in equipment.

Data share with the DGP-WG suggested that there was no risk of propagation associated with solid state lithium batteries making them a better alternative to traditional Lithium battery technology.
Report Dangerous Goods incidents on
AVSECIncidents@caa.co.za and Dangerousgoodsoperations@caa.co.za

Contact us on:
Dangerousgoodsoperations@caa.co.za
ULD Safety Campaign and the IATA GADM

Andre Majeres
Head of eCommerce and Cargo Operations, IATA
What is Aircraft ULD?
Aircraft Unit Load Device (ULD) is a device for grouping and restraining cargo, mail and baggage for air transport. It is either an aircraft container or a combination of an aircraft pallet and an aircraft pallet net. Aircraft ULD is designed to be directly restrained by the aircraft Cargo Loading System (CLS).
Aircraft Container
Aircraft Pallet + Aircraft Pallet Net
<table>
<thead>
<tr>
<th>State/Authority</th>
<th>China Civil Aviation Administration of China (CAAC)</th>
<th>Europe European Aviation Safety Agency (EASA)</th>
<th>Japan Civil Aviation Bureau (JCAB)</th>
<th>U.S.A. Federal Aviation Administration (FAA)</th>
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<tbody>
<tr>
<td><strong>Area concerned</strong></td>
<td><strong>Equipment approval requirements</strong></td>
<td><strong>ULD design/tests and certification</strong></td>
<td><strong>Aircraft airworthiness certification</strong></td>
<td><strong>Carrier certification and operations</strong></td>
</tr>
<tr>
<td>China</td>
<td>CCAR-21 Certification Procedures for Products and Parts CTSO</td>
<td>CTSO C90 Cargo pallets, nets and containers</td>
<td>CCAR-25 Airworthiness Standards Transport Category Airplanes</td>
<td>CCAR-121 Air Carriers Certification and Operations</td>
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<td>Europe</td>
<td>EASA Part 21 Certification of aircraft and related products, parts and appliances CS-ETSO</td>
<td>ETSO C90 Cargo pallets, nets and containers</td>
<td>EASA CS-25 Certification Specifications for Large Aeroplanes</td>
<td>EU-OPS 1 Commercial Air Transportation (Aeroplanes) OPS 1.035, 1.037 &amp; AMC Quality System Safety Management System</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td>Airworthiness Standard Part 3 Civil Aeronautics Act Art. 10</td>
<td>Civil Aeronautics Act &amp; Ordinance for Enforcement Chapter VI, Operation of Aircraft and VII, Air Transport Services and application Circulars No. 4 and 5</td>
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<tr>
<td><strong>Service providers safety system</strong></td>
<td><strong>Operations, cargo</strong></td>
<td><strong>Maintenance of approved equipment</strong></td>
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<tr>
<td></td>
<td>EU Reg. 376/2014 Reporting, analysis and follow-up of occurrences</td>
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<td></td>
<td>AC 120-85B Carriage of Cargo</td>
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</tr>
</tbody>
</table>

Regulatory Framework Applicable to Aircraft ULD
Where does compliance with regulations start in the carriage of cargo?

Whose Responsibility?
ULD Operations across Air Cargo Supply Chain

Shipper → Cargo Handling Agent → Ramp Handling Agent → Freight Forwarder → Ramp Handling Agent → Cargo Handling Agent → Consignee → Freight Forwarder
FAA jurisdiction starts at the airplane threshold *

- The AIRLINE is always responsible for all cargo carried on its aircraft. Including all aspects that have occurred outside of the airplane such as accurate weights, ULD build-up, ULD serviceability check, etc.
- The moment the airline is accountable is when the cargo crosses the threshold.
It doesn’t matter to the FAA who builds the pallet, the AIRLINE becomes responsible for this build-up once it is loaded on the airplane.
ULD Regulations – Industry’s Solution
“one means of compliance containing a single set of regulations for all parties involved conforming to all legally applicable and industry agreed regulations”

Airworthiness & Flight Safety Regulations

Airline Compliance

Air Cargo Industry Compliance
What have been achieved?

The industry continues to promote the ULD Safety Campaign after its launch

- 1200+ stakeholders downloaded the artwork package
- 50+ organizations requested for co-branding/ in local languages
- Available in 14 languages
- Various regional workshops/ webinars organized
Relaunch of ULD Safety Campaign

ULD, it’s not just a box...

It needs your care and attention

It’s a seatbelt for the content

Correct handling saves millions

You can put the safety of passengers, crew and aircraft at risk

ULD repairs cost the industry $330 million / annum

80% of ULD repair costs could be avoided if handled correctly

iata.org/ULD
Relaunch of ULD Safety Campaign

ULD, it’s not just a box...

It can damage the aircraft

Mishandled ULD is the N°1 cause of aircraft ground damage

It delivers your promise

Incorrect ULD handling damages your profit and reputation

It’s YOUR responsibility

- Handle ULD with care, it’s treated as aircraft part
- Protect the passengers, crew and aircraft by loading airworthy ULDs
- Inspect ULDs prior to use and at every transfer
- Ensure all staff are properly trained
- Remember ULD build-up is aircraft pre-loading and contributes to flight safety

- Don’t damage ULDs
- Don’t put the safety of passengers, crew and aircraft at risk
- Don’t forget to inspect ULD for damage
- Don’t handle ULDs if you are not properly trained
- Don’t ignore the aircraft operating limitations in ULD build-up

iata.org/ULD
Aircraft/ULD Operating Limitations Applicable to ULD Build-Up:

- Max. Gross Weight Limitation per ULD Position
- Area Load Limitation
- Linear (Running) Load Limitation
- Center of Gravity Limitation for ULD
- Aircraft Contour Limitation for ULD
- Pallet and Net Compatibility Limitation
- Non-certified Aircraft Container Acceptability
- ULD Operational Max. Gross Weight
- ULD Max. Allowable Damage Limitation

Always Remember: ULD build-up is aircraft pre-loading!
Promote ULD Safety Compliance across Air Cargo Supply Chain
Global Aviation Data Management

• IATA’s Operations, Safety & Security Division
• Safety & Operational Data and Analytics Programs
GADM Participants Overview

GADM Members: 276 Participants
IDX Participants: 256 Participants
FDX Participants: 200 Participants
IDX Reports (*submitted in 2023*): +214K Events

The members are keep growing.
Operational Units

- Dangerous Goods
- Bird Strike **
- Flight Operations
- Ground Operations
- Security
- Engineering and Maintenance
- Occupational Health and Safety

- Dangerous good carriage, dangerous goods handling, dangerous goods security procedures,
- Runway excursion, runway incursion, tail strike, LOC-I, TCAS, unstable approach,
- Unruly Passenger, Smoke/Fire/Fumes, Turbulence, Inadvertent Slide Deployment,
- Aircraft Damage, loading errors, ULD, load control, etc

** Here we classify Bird Strike as an “operational unit” just for display purposes, but we do acknowledge it is not one.
Thank you!

Andre MAJERES  
Head of eCommerce, Cargo & Mail Operations  
Operations, Safety and Security (OSS). IATA  
majeres@iata.org | www.iata.org
Cargo Facility of the Future

Marcel Langeslag
Director Aviation Africa, NACO
The Airport Agri-Hub:
Unlocking Resilience through Real Estate and Air Cargo Developments in Africa

"Cultivating the Future of African Aviation: The Rise of Agri-Focused Airport Cities"
NACO is a world-leading aviation consultancy and airport engineering firm

- Over 70 years’ experience
- Projects at 700 airports worldwide
- Supported by 6000 multi-disciplinary professionals of group company – Royal Haskoning DHV
- Over 150 colleagues from 25+ countries

Expertise:

- Sustainable Aviation and Climate Resilience
- Airport Infrastructure
- Customer Experience
- Air Cargo and Intermodal Transport Hubs
- Asset Optimisation, Airport Systems and Operations
- Airport Master Planning and PPP Transactions
- Air Traffic Forecasting and Economics
- Airport Buildings and Terminal Design
Unlocking Resilience through Real Estate and Air Cargo Developments in Africa
Chapter 1
Air Traffic
Pandemic impact and recovery

- Domestic traffic recovering faster than international
- Revenue-passenger-kilometers (RPKs), YoY% change vs. 2019

Source: IATA
Pandemic impact and recovery

- Divergent pattern in recovery of scheduled seat capacity on the continent

Source: Diio Mi
Pandemic impact and recovery

- Softening of air cargo demand (CTK)
- Air cargo capacity (ACTK), increased primarily due to restoration of belly cargo capacity

Source: IATA
Pandemic impact and recovery

Airport industry revenue dropped
Direct link between (passenger) traffic and revenues

Source: ACI Economics Report 2023
Chapter 2
Airport Revenue
The case for airport real estate

Decline in airport revenues in Africa 2020 v 2019

-42%

-48%

-29%

-12%
The case for airport real estate

African airports rely heavily on aeronautical income

- Non-operating: 6%
- Aeronautical: 66%
- Non-aero: 29%
The case for airport real estate

Real estate accounts for 7%

- Non-operating
- Aeronautical
- Non-aero
The case for airport real estate

Real estate revenue outpaces passenger traffic

Real estate revenue outpaces passenger traffic.
Chapter 3
Macro-trends and Industry Developments
Urbanization in Africa

By 2050...
Urban population will double
57% of people will live in cities
Over 30 cities with more than 5 million people
In 2022, Intra-African Exports represented $71B, a number anticipated to be catalyzed by the full implementation of the African Continental Free Trade Area (AfCFTA).

Source: Tralac, 2022
Provided full implementation, the Single African Air Transport Market is anticipated to generate up to $4.2b over the next 20 years.

Anticipated CAGR over the next 10 years:

- Without SAATM: 5.5%
- With SAATM: 6.6%

+ USD 2.5b to 4.2b
Chapter 4
Airport Real Estate & Cargo Development
Airport real estate development

Chapter 4 – Real Estate & Cargo
Airport real estate development
Airport real estate development

Chapter 4 – Real Estate & Cargo
Securing the air cargo supply chain

ICAO & World Customs Organization (WCO): Moving Air Cargo Globally

Security controls applied by **aircraft operators**
Securing the air cargo supply chain

ICAO & World Customs Organization (WCO): Moving Air Cargo Globally

Security controls applied by regulated agents
Securing the air cargo supply chain

ICAO & World Customs Organization (WCO): Moving Air Cargo Globally – Security controls applied by known consignors
First line facility design

Landside-airside boundary
Landside precinct interface
Securing the air cargo supply chain

Multiple stakeholders and operating models
Thank you!

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Cargo Standards

Andre Majeres
Head of eCommerce and Cargo Operations, IATA
Landside activities with airside connections
Cargo Priorities

- Safety and Security
- Digitalization
- Sustainability
IATA Cargo Handling Manual (ICHM)

2017 - ICHM 1st Edition is published
505 (2022) vs. 444 (2021)
Master Operating Plan (MOP)

• The industry MOP maps the processes and sub-processes typically involved in the planning and movement of air cargo consignments from shipper to consignee.

• A total of **19 main processes** have been identified and belong to one of five categories. The 19 processes are detailed in sub-processes and additional information is in then in turn available.

• [https://docs.wixstatic.com/ugd/722a02_e289dc70805f4bd491a467906f728abc.pdf](https://docs.wixstatic.com/ugd/722a02_e289dc70805f4bd491a467906f728abc.pdf)
The IATA Cargo Handling Manual (ICHM) is a complete set of standards for everyone involved in cargo operations. The ICHM helps airlines and cargo handlers to operate more effectively together, to improve efficiency and safety in air cargo operations.

The ICHM brings together the 90% of information that is common to individual carrier cargo handling manuals.

Hundreds of Handlers @ Thousands of Airports

The Benefits

- **Harmonization & Standardization**
  ICHM is the single industry standard that ensures core cargo operations are performed in a harmonized way.

- **Quality**
  ICHM eliminates the complexity of today, to make the industry more scalable for tomorrow’s demands.

- **Efficiency**
  ICHM provides a streamlined approach which helps reduce costs, improve speed and efficiency.

- **Logistics chain**
  Freight forwarders and shippers are able to see where their processes impact the cargo operation.
Gap Analysis – 1\textsuperscript{st} step to compliance!

From basic to excellence!
The Changes

- Introduction to One Record
  - Future work will be to understand operational impact
- Interactive Cargo – Operational Requirements
  - At Booking
  - Sending XFWB
- Scales Calibration requirements
  - Process
  - Timelines
- Segregation Chart
- Cargo Damage Report Template
- Operational Risk Assessment
  - Risk identification
  - Risk Mitigation
  - Risk Index

Effective 1 January - 31 December 2023
The ORA – Operational Risk Assessment

Risk Index Rating

By combining the occurrence probability and the severity of the risk (i.e. likelihood x severity), a risk index rating can be assigned. This risk index rating will give an indication on how tolerable the risk is and can assist and guide an operator to put more focus and investment on risk mitigation measures for the high-risk areas.

<table>
<thead>
<tr>
<th>Operational Risk</th>
<th>Probability</th>
<th>Catastrophic A</th>
<th>Hazardous B</th>
<th>Major C</th>
<th>Minor D</th>
<th>Negligible E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>5</td>
<td>5A</td>
<td>5B</td>
<td>5C</td>
<td>5D</td>
<td>5E</td>
</tr>
<tr>
<td>Occasional</td>
<td>4</td>
<td>4A</td>
<td>4B</td>
<td>4C</td>
<td>4D</td>
<td>4E</td>
</tr>
<tr>
<td>Remote</td>
<td>3</td>
<td>3A</td>
<td>3B</td>
<td>3C</td>
<td>3D</td>
<td>3E</td>
</tr>
<tr>
<td>Improbable</td>
<td>2</td>
<td>2A</td>
<td>2B</td>
<td>2C</td>
<td>2D</td>
<td>2E</td>
</tr>
<tr>
<td>Extremely Improbable</td>
<td>1</td>
<td>1A</td>
<td>1B</td>
<td>1C</td>
<td>1D</td>
<td>1E</td>
</tr>
</tbody>
</table>

Table 3 – Example of an operational risk matrix

<table>
<thead>
<tr>
<th>Operational Risk Index Range</th>
<th>Operational Risk Description</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>5A, 5B, 5C, 4A, 4B, 3A</td>
<td>INTOLERABLE</td>
<td>Take immediate action to mitigate the risk or stop the activity. Perform priority operational risk mitigation to ensure additional or enhanced preventative controls are in place to bring down the operational risk index to tolerable.</td>
</tr>
<tr>
<td>5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A</td>
<td>TOLERABLE</td>
<td>Can be tolerated based on the operational risk mitigation. It may require management decision to accept the risk.</td>
</tr>
<tr>
<td>3E, 2D, 2E, 1B, 1C, 1D, 1E</td>
<td>ACCEPTABLE</td>
<td>Acceptable as is. No further operational risk mitigation required.</td>
</tr>
</tbody>
</table>

Table 4 – Possible operational risk tolerability
The ORA – Operational Risk Assessment

General: Shipment security status needs to be checked. Ready for carriage checks need to be performed and ultimately the actual shipment needs to match the booking. In this process checks and balances on several items such as adding or adjusting SHCs or relaying the security data in the FW are performed.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security status unknown or jeopardized</td>
<td>1. Unsecured cargo is a high risk for an airline, security status needs to be re-established.</td>
</tr>
<tr>
<td>Data to be sent to and used by downline stations is insufficient or incorrect.</td>
<td>2. Security data not available for downline stations – needs to be present or in the FWB.</td>
</tr>
<tr>
<td>Shipment does not match the booking</td>
<td>3. (security)data to be sent to downline stations is insufficient or incorrect which leads to seizures by customs authorities to verify the content of a shipment. Also redirecting an aircraft due to unsecure shipments is a risk.</td>
</tr>
<tr>
<td>4. Carrier Customs Declaration (ACI) is incorrect which will lead to fines or penalties.</td>
<td></td>
</tr>
<tr>
<td>5. Missing or incorrect Special Handling Codes (SHC) might lead to mishandling of the shipment or even pose risks due to insufficient segregation of separation of the cargo.</td>
<td></td>
</tr>
</tbody>
</table>

How to Prevent those Risks:

1. Always establish the security status of a shipment and, if applicable, relay the information as per RA regimes in the FWB message.
2. Always make sure that the shipment documents match the actual booking.
3. Never assume that all data is available, check for missing or incorrect SHCs.

The primary objective for cargo acceptance is to ensure that consignments are ‘Ready-for-Carriage’ in compliance with:

- carrier requirements;
- local export rules and regulations;
- rules and regulations of the transit airport(s) and air spaces, if any;
- import regulations of the destination country or station.
Compassionate Transportation Manual

Contains the guidance needed for funeral operators, airlines and freight forwarders on how to prepare, ship and handle this special cargo.

What's inside the manual

- State & Operator information
- Requirements on documentation, packing, handling, marking and labeling
- CTM checklist
- Sustainable and Environmentally friendly options
- Up-to-date government requirements pertaining to the transport of human remains
- Requirements on packing, handling, marking and labeling
- Information on the necessary documentation needed when transporting human remains
- Special shipping guidelines for infectious human remains
- Guidelines for the air transportation of human remains in reference to the Industry Master Operating Plan (MOP) and IATA CSC Recommended Practice 1683

Contributors

IATA Member Airlines - Funeral Home Associations - Manufacturers and Distributors
Special Cargo

Demand
Special Cargo Demand

Special Cargo Chargeable Weight Index from 2019 to 2022

Based on IATA CargoIS
Reduce illegal trade in wildlife

- Illegal wildlife trade worth between $7 and $23 billion a year. 4th largest illegal global trade.
- The trafficking of wildlife by-passes health checks at borders and presents a threat of disease transmission to both animals and humans.
- IATA signed a Memorandum of Understanding with the World Association of Zoos and Aquariums (WAZA) to enhance standards of transportation for live animals and benefit the conservation of species of wild fauna.
Reducing perishables waste

- Growing consumer demand for healthy products all year round.
- UN Sustainable Development Goals (UN SDGs) to "ensure sustainable consumption and production patterns".
- Temperature excursion more frequent in transit.
- Real-time data to prevent wastes.
- Increased use of specialized storage rooms to guarantee freshness.
Growing demand for healthcare

- World's population grows, becomes wealthier and ages. Demand for treatment of chronic diseases is rising, increase in healthcare products transports.
- Deliver quickly and safely with no incident that would affect efficacy.
- Digitalization and cybersecurity drive end-to-end visibility and security of the healthcare supply chain. Temperature monitoring with real-time tracking devices for better visibility of shipments and intervention in case of deviations.
- Industry-recognized certification programs are becoming more common place for better compliance with regulations.
Digital transformation

Data quality and control
• Full control of data quality. Data stays at the source and owners grant access

Visibility and transparency
• Cover end-to-end transportation chain, from shippers to consignees. Share data with relevant parties

Plug & Play connectivity
• Facilitates direct connectivity between all stakeholders with web API. New cooperative IT solutions and innovation
Special Cargo Regulations
IATA supports aviation with global standards for airline safety, security, efficiency and sustainability.

IATA sets standards for the airline industry’s business processes and operations.
Live Animal Transport by Air

Animal safety & welfare considerations

Compliance (containers, equipment, facilities, etc.)

Training, communication and information sharing
Live Animals Regulations (LAR)

2023 Significant Changes:

- In-Cabin Live Animal Acceptance Checklist
- Amendments to Shipper’s Responsibilities on Sedation
- 8.1.4.1 Sedation, Tranquilization and use of Psychoactive Drugs
- Container Requirements – CR2 Container Size, Frame, Sides, Floor, Roof, etc.
- 10.1 Best Practice for Operators
- 10.3.1/10.4.1 Handling Requirements
- State & Operator variations
Time is of the essence with perishables

- Delaying premature product deterioration
- Time and temperature sensitive goods
- Prevent damage, spoilage
Perishable Cargo Regulations (PCR)

2023 Significant Changes
- Perishable Facts & Types
- Added definitions from the IATA ULD Regulations
  - Active Temperature Controlled Container; Aircraft Container; Aircraft ULD; Non-Aircraft Container; ULD, etc.
- State & Operator variations

New! IATA Perishable Cargo Working Group
- Industry effort to enhance the IATA PCR with standards and regulations and address sustainability requirements, such as reduction of single-use plastics and product loss.
Reducing Perishable Loss in Air Cargo

What do we mean by perishable “loss”?

Perishable “loss” occurs before the goods reach the consumer as a result of issues in the production, storage, processing, and distribution phases.

Globally, around 14 percent of food produced is lost between harvest and retail.
Strength of the Uninterrupted Cold Chain

Supply Chain  +  Temperature Control  =  Cold Chain Logistics

✓ Speed Operations Logistics
✓ Packaging Documentation Labeling Storage Facilities

Industry Collaborative Efforts
Guidance for Vaccine and Pharmaceutical Logistics and Distribution

Set of considerations and awareness on large scale handling, transport and distribution of vaccines, pharmaceutical, life science and medical products.

Industry preparedness

- Capability and connectivity
- Operational environment
- Board management
- Security environment
- Risk management
- Digital environment
- Sustainability and CO2 emissions
- Multimodal
Setting standards for industry by industry

IATA Airlines

Industry Experts

Live Animals & Perishables Board (LAPB)
12 members

LAPB Advisory Group
6 members

Perishable Cargo Working Group
20 members

Healthcare Cargo Working Group
20 members

Join us to take part in standard setting activities.
Thank you

Andre MAJERES
Head, eCommerce, Cargo & Mail
Operations

Contact: larper@iata.org
Introduction to CEIV.
Center of Excellence for Independent Validators

Emma Dayo
Regional Manager Cargo & Ground operations, Africa Middle East
IATA
The **Center of Excellence for Independent Validators (CEIV)** is a certification awarded to organizations recognizing their excellence in the handling and transportation of special cargo shipments in the area of pharmaceutical, perishables, live animals and lithium batteries.

- **50k** Manuals delivered
- **5k** Workforce trained
- **2.1k** Audits conducted
Insight: Key Findings & Opportunities for Improvement

Consistent Standards & Product Integrity
- Implementation across all hub/stations
- Document control system
- Management of overall resource capacity

Ensuring Animal Safety & Welfare
- Checklists incorrectly completed (AVI acceptance checklist, venomous/poisonous procedures not followed), limited evidence available
- No procedure in place for IWT

Preventing Food Loss
- Risk assessment at all CCPs
- Internal syllabus incomplete/out of date
- New employee training program
- Pre-planned recurrent training

Mitigating Risk of Lithium Batteries
- Documents (templates) in English – Procedures/Ras/Forms/Training
Certification Methodology

Training
- Mandatory training for personnel involved in handling of special cargoes
- Thorough review of Audit Checklist requirements in preparation for the Assessment

Assessment
- Assessment audit by Independent Validator
- Assessment versus Audit Checklist
- Comparison against best practice
- Gap analysis report with applicable findings and recommendations

Validation
- Validation audit by Independent Validator
- Validator to review progress made on recommendations established during the assessment
- Remote validation option to be determined by IV
- Certification granted if all gaps are closed

Certification
- Achieved once no non-conformances remain
- Re-certification occurs every 2-3 years
- Spot audits may occur in the interim

Re-certification & continuous improvements
Implementation Approach

**Individual & Network**

- One company decides to get CEIV certified at **one location**
- One company decides to get CEIV certified at **several stations**

**Community**

- A group of companies (airline, forwarders, ground handlers) decide to get CEIV certified
  - Form a “CEIV gateway”
  - Supply chain approach
  - Coordinated and/or sponsored by airport or local association

**BENEFITS**

Contribute to standardization of processes and procedures
Benefit from partners’ knowledge and expertise through joint training
Cost-efficient solution
Center of Excellence for Independent Validators (CEIV)

Benefits

1. Ensures compliance with the latest standards
2. Globally recognized as a sign of professionalism and expertise
3. Delivers quality handling and transport
4. Builds trust throughout the supply chain

✓ Provide your partners with **assurance and reliability** of your services and **trust in compliance** with regulations

✓ **Obtain visibility** as a high-performing player in the supply chain

<table>
<thead>
<tr>
<th>Certification Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEIV Pharma certified stations</td>
<td>509</td>
</tr>
<tr>
<td>CEIV Live Animals certified stations</td>
<td>23</td>
</tr>
<tr>
<td>CEIV Fresh certified stations</td>
<td>43</td>
</tr>
<tr>
<td>CEIV Lithium Batteries certified stations</td>
<td>34</td>
</tr>
</tbody>
</table>
ONE Source – Creating transparency and visibility

New Certifications

CEVA Logistics - PVG
Shanghai
CEVA Lithium Batteries

What is ONE Source?

IATA ONE Source is the industry platform for validated aviation capability and infrastructure information. Find the right business partner for your needs, from specific infrastructure requirements such as temperature-controlled rooms to IATA certifications:

- Free of charge: Registering your station in ONE Source is free of charge.
- Reliable: Only place to find up-to-date information about IATA validations, company equipment, and infrastructure.
- Global reach: Publish your station information on a global, industry-recognized platform.
- At your fingertips: Find the right business partners right where you need them.
Creating Industry transparency

IATA ONE Source:
- Free industry platform
- Up-to-date certification and infrastructure information
- Reliable information
- Easy to use
- Unparalleled transparency and visibility
- Enables you to find the right business partner for your needs
Find your aviation business partner

Find out more: onesource.iata.org

What is ONE Source?
ONE Source is the industry platform for validated aviation capability and infrastructure information. Find the right business partner for your needs, from specific infrastructure requirements such as temperature-controlled rooms to IATA certifications. The platform makes it easier for you to find the right services where you need them.

Do you want to be listed?
Attract new customers by creating a free profile on ONE Source. Stand out from your competitors and highlight your facility's capacities and IATA certifications and accreditations.
Thank You

ONE Source: https://onesource.iata.org

Andre MAJERES
Head of eCommerce, Cargo & Mail Operations
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Focus on Pharmaceutical Transportation

Moderator:
Alex Stancu
Area Manager, Southeast Africa, AME, IATA

Panelists:

Annette Naude,
Regional Head of Life Sciences & Chemicals – MEA, DHL

Albashir Ismael,
Manager Special Products, Kenya Airways

TBC
CEIV from an Airline’s Perspective

Albashir Ismail
Manager Special Products- Kenya Airways
CEIV PHARMA

THE KENYA AIRWAYS JOURNEY.

ALBASHIR ISMAIL
MANAGER, CARGO SPECIAL PRODUCTS

8TH NOVEMBER 2023
BACKGROUND

- HANDLING
- NO STANDARDS
- QUALITY CONCERNS
- FACILITY LIMITATIONS
WHY CEIV PHARMA?

NEED FOR STANDARDS

COMPETITIVE EDGE

FOCUS ON SPECIAL PRODUCTS

IMPROVE QUALITY

PARTNERSHIPS
THE PROCESS

- PRE-ASSESSMENT
  - DOCUMENT REVIEW
  - ONSITE ASSESSMENT
  - CERTIFICATION

- FACILITY UPGRADE AND
  - INFRASTRUCTURAL
  - IMPROVEMENTS

- TRAINING AND INTERNAL
  - PROCESSES ALIGNMENT
THE FACILITY.

Size 600 sqm2, Scalable

Deviation Monitors

AMBIENT
15°-25° C

COL
2°-8°C

FRO
-20° C
CHALLENGES AND MITIGATION

- STATION LIMITATIONS
- CLEAR ON ARRIVAL
- MONITORING & VISIBILITY
- DATA SHARING & COLLABORATION
- TARMAC EXPOSURE
- WAREHOUSE TO AIRCRAFT 30M AT CARGO APRON
SEAL OF APPROVAL

06\textsuperscript{TH} APRIL 2023
INCREASE IN VOLUMES BY 13% IN THE 6-MONTH PERIOD AFTER INCREASED MOVEMENT FROM NEW MARKETS THROUGH OUR CDG, AMS AND LHR GATEWAYS.

PARTNERSHIP WITH KEY LOGISTICS MOVERS.

INCREASE IN VOLUMES TO NEW MARKETS IN AFRICA

OPERATIONAL EFFICIENCY

INVESTMENT IN NEW FREIGHTERS TO IMPROVE CONNECTIVITY
CONTINUOUS IMPROVEMENT....
One Source

Get all details of our validated capabilities on IATA One Source.
Thank You
Air Cargo and Sustainability

Andre Majeres
Head of eCommerce and Cargo Operations, IATA
Air cargo is a key driver toward the achievement of the UN Agenda 2030 Sustainable Development Goals (SDGs).

The industry directly contributes to meeting the targets of seven of the goals:

1. **No Poverty**
   - 1, 4, 1.5, 1.a
2. **Zero Hunger**
   - 2.1, 2.3, 2.b
3. **Good Health and Well-being**
   - 3.8, 3.b
4. **Decent Work and Economic Growth**
   - 8.1, 8.2, 8.3, 8.4, 8.5, 8.8
5. **Industry, Innovation and Infrastructure**
   - 9.1, 9.2, 9.3, 9.4, 9.5, 9.a
6. **Responsible Consumption and Production**
   - 12.3, 12.5, 12.6
7. **Partnerships for the Goals**
   - 17.9, 17.10, 17.11, 17.17
What is driving sustainable transformation?

Regulatory requirements

Customer & social demands

Technological innovation

Industry initiatives
No longer a “nice to have”

The industry is speeding up its efforts to address demands, but there is an overwhelming and scattered number of initiatives tackling different aspects of sustainability.

<table>
<thead>
<tr>
<th>Airlines</th>
<th>Sustainability has become a strategic priority.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airports</td>
<td>Have increased their resources on environment and sustainability.</td>
</tr>
<tr>
<td>Ground &amp; Cargo Handlers</td>
<td>Are aware of the need to prioritize environment and sustainability. Currently looking for the best option to approach the topic.</td>
</tr>
<tr>
<td>Freight Forwarders</td>
<td>Seeking to reduce their operational impact on the environment and to attract new customers by thinking greener.</td>
</tr>
</tbody>
</table>
Our priorities for Cargo Sustainability

Contributing to key industry commitments to achieve net zero emissions by 2050
CO2 Emissions Measurement & CO2 Connect

Reducing perishable loss along the supply chain

Reducing plastic waste in air cargo operations and enabling circular economy practices

Driving sustainability and efficiency in cargo handling & operations
IATA Environmental Assessment (IEnvA)
Contributing to key industry commitments to achieve net zero emissions by 2050
Objective Net Zero 2050

Target aligned with Paris Agreement goal to keep global warming under 1.5 °C

If Business-as-Usual in 2050

+10b passengers
1.8 Gigatons of CO2 to abate

Industry plan for net zero

65% Sustainable Aviation Fuels (SAF)
13% New technologies
3% Operations & infrastructure
19% Carbon capture and offsetting
## Objective Net Zero 2050

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Aviation Fuel</td>
<td>Production needs to increase from 100 million liters today to at least 449 billion liters in 2050</td>
</tr>
<tr>
<td>New technologies</td>
<td>Electric, hybrid and hydrogen propulsion will play a role. New types of planes could come into service in 2030’s and 2040s.</td>
</tr>
<tr>
<td>Operations &amp; Infrastructure</td>
<td>Lightweight ULDs, aircraft retrofitting, fuel efficiency management systems, reduced engine taxiing, air traffic management programs</td>
</tr>
<tr>
<td>Carbon capture and offsetting</td>
<td>Quality Carbon Capture, Utilization and Storage (CCUS) removes carbon from the atmosphere and could be used for SAF production.</td>
</tr>
</tbody>
</table>

iata.org/flynethero
Reducing perishable loss along the supply chain
Reducing perishable loss along the supply chain

Perishable loss occurs before the goods reach the consumer as a result of issues in the production, storage, processing, and distribution phases.

Globally, around 14 percent of food produced is lost between harvest and retail.

Our objective: contribute to creating economic growth through global access to perishables while reducing loss along the supply chain.
Innovating to achieve zero loss

Creating innovative solutions to prevent perishable loss and find alternatives for use and disposal of waste is critical to achieve our sustainable development targets.
Reducing plastic waste in air cargo operations and enabling circular economy practices
Reducing plastic waste in cargo operations

The air cargo industry works to reduce SUP usage.

- Explore the use of biodegradable plastics in operations and regulatory challenges
- New reusable covers for cargo
- Research on alternative materials for netting & spreading
- Recycle and repurpose ULD components

1.25 billion ‘water bottles’ each year

12,500 tons of plastic used by air cargo per year

Reduce  Reuse  Replace  Recycle
Driving sustainability and efficiency in cargo handling & operations
The cargo facility of the future will be safe and secure, green, automated, connected and smart. This will ensure it is fit for purpose in size, location and for the people who use it.
IATA Environmental Assessment (IEnvA)

- Environmental Management System Standard for aviation
- Based on IOSA & ISO14001 Standards
- External Assessment and registration program
- Oversight by members
IEnvA in numbers

- 56 Subscribed organizations
- 580+ Course participants
- 300% Membership growth/ year
- 70+ External assessments

Developed for aviation

- Airlines
- Airports
- Cargo
- Ground Handlers
- Freight Forwarders

www.iata.org/ienva
Thank You

ONE Source: https://onesource.iata.org

Andre MAJERES
Head of eCommerce, Cargo & Mail Operations
majeres@iata.org
Products and Trainings

Caroline Karanja
Manager Industry Solutions - AME, IATA
Air Cargo Day
Train with the best
• IATA courses are designed by the industry for the industry

• IATA Training is the gateway to a successful career in aviation

• 96% of participants say that our instructors are experts in their field

• IATA Training qualifications are internationally recognized

• In 2023, over 3K students trained and upskilled on Cargo and Logistics Standards
Self-study courses

- Self-study puts you in control
- Study at your own pace and create the right habits for career success

Classroom Training

- Classroom courses don't just teach about the industry, they lead it forward
- Get the personal touch from instructor-led courses

In-house Training

- In-house courses provide a high-value, intensive environment
- The best option to train larger groups internally and address concerns for your own organization
Get Trained on Preloading Advance Cargo Information (PLACI)

Why
- Understand cargo business processes and stakeholder interactions for greater efficiency.
- Ensure precision in Cargo-XML electronic message structure, including specifications, fields, code lists, and layouts.
- Implement Cargo-XML messaging and achieve compliance with customs’ preload advance cargo information (PLACI) and e-cargo initiatives.
- Improve data quality management within your organization, leading to smoother operations.

Who
- E-Cargo project managers
- IT implementation managers and service providers
- Data quality managers
- Technology managers from customs or border protection authorities

When
- Singapore, Singapore (IATA), 25 - 27 March 2024
- Switzerland, Geneva (IATA), 22 - 24 July 2024
- United States, Miami (IATA, ACCET Accredited), 16 - 18 December 2024
Get Trained on Special Cargo Standards

Temperature Control Regulations
- CEIV Pharma Refresher
- Temperature Controlled Cargo Operations
- Temperature-Controlled Container Operations
- Audit, Quality and Risk Management for Temperature Controlled Cargo

Perishable Control Regulations
- Perishable Cargo Transportation
- Perishable Cargo Logistics Management
- CEIV Fresh Refresher course for Key Personnel

Live Animal Regulations
- CEIV Live Animals Refresher
- Live Animals Transportation
- Live Animals Cargo Logistics Management
- Live Animals Regulations (LAR) course with LAR Manual (partner-taught or self-study)
You will greatly enhance your knowledge of the complex methods and procedures applied in the global air cargo industry. You will acquire solid cargo knowledge, helping you and your company to face the challenges of your highly competitive working environment.

This course is designed to provide comprehensive training for personnel involved in Unit Load Device (ULD) operations. You will be well-equipped with the necessary knowledge and skills to effectively carry out your responsibilities in ULD operations.

This course will provide you with the necessary tools and techniques to complete a professional cargo accident investigation process taking into account both the process and the human factor involved. The course follows a model similar to accident investigation and is based on the ICAO Annex.

This course provides an overview of the Lean Six Sigma concept and how it can be applied to the Air Cargo and Logistics industries. It will give you insight into the tools and techniques applied in the methodology, as well as analysis and application of the DMAIC cycle.
CARGOIS

The Air Cargo Market Intelligence leader providing a **reliable snapshot of market dynamics** (Tonnage, Yields, Commodity and Service information)

Sourcing its data from Airway Bills settled through **CASS & Contributed Direct Data**.

**Benefits**
- Develop your business
- Develop your network
- Increase your revenues

**Key Input for**
- Market Strategy
- Account Management
- Sales & Procurement
- Performance Management

**For:** Airlines, GSAs, Freight Forwarders, Shippers, GHA, Airports and Aircraft manufacturers

**197**

**200 Bn+ Kgs**
Weight Transported

**24 M**
Airway bills captured

**100K+**
Unique Trade-lanes

**28+**
Direct Data Contributor

Available online & via Data Feeds
A digital solution that enables you to automatically validate a Shipper’s Declaration for Dangerous Goods (DGD) against each relevant provision in the IATA Dangerous Goods Regulations (DGR).

**Benefits**
- Improves Safety
- Improves Speed & Accuracy
- Improves Time management
- Improves Quality of acceptance checks
- Reduces compliance-related errors and cost
- Provides business intelligence data

**For:** Airlines, Ground handlers, Freight Forwarders

**Available online with API connection**

**35+ Customers**

**300,000+ Acceptance checks performed**

**50%+ Time saving**
Caroline Karanja  
Manager Industry Solutions  
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Mohamad El Diab  
Senior Manager Industry Solutions  
eldiabm@iata.org

Visit:  
iata.org/dg-autocheck  
iata.org/cargois
Closing Remarks

Alex Stancu
Area Manager – Southeast Africa – AME, IATA
IATA Air Cargo Day Africa- Day2

Johannesburg, South Africa

8-9 November 2023
Opening and Introduction

Alex Stancu
Area Manager – Southeast Africa – AME, IATA
Thank you to our Sponsors
Welcome & Set the Scene – Focus on Africa

Sandile Chipunza
Manager External Affairs and Sustainability – AME, IATA
Participants are cautioned that any discussion regarding matters such as fares, charges, division or sharing of traffic or revenues, or concerning any other competitively sensitive topics outside the scope of the agenda is strictly prohibited.

As a result, questions pertaining to individual policies or commercial decisions and/or being subject to bilateral commercial discussions between airlines and their suppliers or customers will not be answered.
Agenda – Day 2
Digitalization

• Opening Keynote
• Embracing ONE Record
• IoT in Air Cargo
• Warehouse Innovation
• Cargo Distribution with ONE Record
• Pre-Loading Advanced Cargo Information (PLACI)
• Digital Ecosystem
• ONE Record implementation – Roadmap
• Inspiring Innovation
Focus Africa
Spotlight Session

Sandile Chipunza - Manager External Affairs & Sustainability Africa
Agenda

- Outlook
- Africa’s Opportunities
- Challenges
- Focus Africa
- Q&A

2.1%  
Africa’s % of global aviation

2024  
African airlines return to profitability

$3.5bn  
African airline losses: 2020-22
Africa will be leading the growth in the working-age population in the 21\textsuperscript{st} century

Source: United Nations, World Population Prospects 2022
Growth potential in Africa's aviation sector is undeniable – 2035 projections

7.7 million jobs

$63bn GDP

260+ million passengers by 2035
Challenges

- Infrastructure constraints
- High costs
- Lack of connectivity
- Safety
- Access to secure and cost-efficient financial services
- Blocked funds
### Air transport infrastructure pillar ranking

#### Western Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>Global rank 2019</th>
<th>Global rank 2021</th>
</tr>
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<tbody>
<tr>
<td>Cape Verde</td>
<td>57</td>
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<tr>
<td>Ghana</td>
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<td>88</td>
</tr>
<tr>
<td>Benin</td>
<td>111</td>
<td>96</td>
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<td>Senegal</td>
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<td>Côte d'Ivoire</td>
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<td>Nigeria</td>
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<tr>
<td>Sierra Leone</td>
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<tr>
<td>Mali</td>
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<td>100</td>
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<tr>
<td>Chad</td>
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#### Southern Africa

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<tr>
<td>Botswana</td>
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<td>110</td>
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<tr>
<td>Zambia</td>
<td>84</td>
<td>95</td>
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<tr>
<td>Lesotho</td>
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<td>101</td>
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</table>

#### Northern Africa

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<thead>
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<th>Country</th>
<th>Global rank 2019</th>
<th>Global rank 2021</th>
</tr>
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<tbody>
<tr>
<td>Egypt</td>
<td>41</td>
<td>32</td>
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<tr>
<td>Morocco</td>
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<td>50</td>
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<tr>
<td>Tunisia</td>
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<td>83</td>
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<tr>
<td>Algeria</td>
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<td>32</td>
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#### Eastern Africa

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<th>Country</th>
<th>Global rank 2019</th>
<th>Global rank 2021</th>
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<tr>
<td>Mauritius</td>
<td>39</td>
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<tr>
<td>Kenya</td>
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<td>Tanzania</td>
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<td>Rwanda</td>
<td>99</td>
<td>91</td>
</tr>
<tr>
<td>Malawi</td>
<td>113</td>
<td>113</td>
</tr>
</tbody>
</table>

The World Economic Forum’s Travel and Tourism Competitiveness Report assesses the set of factors and policies that enable the sustainable development of the Travel and Tourism sector, which in turn contributes to the development and competitiveness of a country.

Source: IATA S&E Economics, WEF
Challenge: High Costs

In 2021, African carriers had excessive costs in several areas.

Differences in cost sources: Africa vs. Industry

- Aircraft Fuel and Oil
- Depreciation and Amortization
- User Charges
- Flight Equipment Maintenance and Overhaul
- Flight Equipment Insurance
- Other Expenses
- Passenger Services
- Ticketing, Sales and Promotion
- Station Expenses
- Flight Equipment Rentals
- General and Administrative
- Other Operating Expenses
- Flight Crew Salaries and Expenses

The 0% line indicates the industry average. Higher than industry average. Lower than industry average.

Percentage point difference in shares of total regional costs

Source: IATA S&E Economics, IATA Statistics
Challenge: Connectivity in Africa is limited

Source: IATA S&E Economics, OAG and UN data
Challenges: Safety

Governments need to step up:

Implementation of ICAO Standards for safety needs to be improved:

• 21 States in Africa remain below the Effective Implementation (EI) of State Safety Programs

Opportunities with:

• Communication, Navigation, Surveillance (CNS)
• Aeronautical Information
• ATM
• Data-sharing
Challenges: Blocked Funds

Blocked funds:

- 2.33 billion Blocked Globally
- 1.69 billion total amount of blocked funds in Africa in Aug
- 73% of all blocked funds are in Africa

Opportunities with:

Improving access to international settlement systems for more rapid cash flow support and modernization of aviation across the continent
Focus Africa Priority Areas

- **Safety:** Improve operational safety through a data driven, collaborative program to reduce safety incidents and accidents, in the air and on the ground.
- **Infrastructure:** Facilitate the growth of efficient, secure, and cost-effective aviation infrastructure.
- **Connectivity:** Promote the liberalization of intra-African market access through the Single African Air Transport Market (SAATM).
- **Finance and Distribution:** Accelerate the implementation of secure, effective and cost-efficient financial services and adoption of modern retailing standards.
- **Sustainability:** Assist Africa’s air transport industry to achieve the “Net Zero by 2050” emissions targets agreed to by industry and the UN’s International Civil Aviation Organisation (ICAO).
- **Future Skills:** Promote aviation-related career paths and ensure a steady supply of diverse and suitably skilled talent to meet the industry’s future needs.
Example Focus Africa Initiatives:
Safety: CASIP – A Program Built for Africa

A Partnership Program
Bringing together the expertise of global aviation specialists invested in working under a framework of trust, cooperation and collaboration to deliver safety improvement across the continent of Africa bringing Africa to within the Global Safety Standards

CASIP Objectives

• Reducing the accident and serious incident rate across the continent of Africa
• Improving operational safety performance through identifying deficiencies and implementing corrective action plans
• Provision of Safety training and workshops continent wide
• Ensuring the value of aviation and relatedness to airline safety, flight operations, regional connectivity, and operational and environment efficiency is fully understood
• Delivering a data driven approach to achieve safety improvement, enriching the region with available safety data, fostering information sharing, and assuring timely reporting of accident and incidents
Infrastructure

Global API / iAPI Implementation Status

API: 73 UN States – 11 Territories
iAPI: 20 UN States – 2 Territories

Legend

Source: IATA API PNR World Tracker

14 November 2023
There are three major showstoppers for more connectivity in Africa:

- **Affordability** (high fares due to high costs of operations)
- **Protectionism** (Air Services Agreements not being observed in their full letter & spirit, this includes the effective deployment of SAATM by signatory states)
- **Travel impediments** (Visa fees and processing inefficiencies, Travel documents, Forex rate fluctuations and shortages, Tourism Infrastructures,

Assess readiness of countries & support their effort to deploy open sky in collaboration with key Stakeholders
Sustainability

Jet A1 is 12% more expensive in Africa compared to the world average price.

Fuel represents 40% of airlines’ cost in Africa.

SAF is both an opportunity and challenge for the Continent.

Need for cooperation for capacity build up between countries – producers – distributors.

• **Level-up knowledge and resources on sustainability**
  The level up initiative is designed to support airlines in Africa on their journey to net-zero, sustainable aviation. It provides unique access to resources and seeks to support airlines develop reduction programs in line with the industry’s 2050 CO2 emissions strategy.

• **Work with partners to secure airlines’ access to sustainable finance**
  The continued importance of sustainability for aviation will accelerate the requirement for capital to develop new technologies, infrastructure, and fuels. Green Finance will play a huge role in driving these industry initiatives forward, ensuring that projects are properly financed, measured, and accounted for, and providing a supportive investment framework. This initiative seeks to enhance African Airlines’ access to sustainable finance institutions and unify airline sustainability metrics that impact access to capital.

• **Encourage countries in Africa to increase SAF production and explore development opportunities**
  Sustainable Aviation Fuel has been identified as one of the key elements in helping achieve the industry’s net zero 2050 carbon goal. This initiative aims to engage with a wide range of industry and policy stakeholders on all SAF topics and facilitate cooperation and promote partnerships between them. Focus areas include providing policy support for the commercialization of SAF and removing barriers to the realization of a cost competitive SAF.
Finance and Distribution: New ISS Operations

Expanding IATA settlement systems coverage and increasing IATA’s relevance in AFI

• Sierra Leone BSP: Go Live 1 Aug 2023
• Ivory Coast CASS: Go Live 15 July 2023
• Ghana CASS: Go Live 15 July 2023
• South Sudan/Somalia BSP
• Ethiopia and Malawi BSP USD
Future Skills - Caroline

We Encourage you all to visit her Desk for more on this…
Partnerships are critical + internal support
Value of aviation in Africa

Jobs supported by aviation
7.7 million jobs

Total GDP supported by aviation
$63 billion

Tourism catalytic GDP supported
$44 billion

Annual passengers
115 million

% of global passenger traffic
2.1%

Annual air freight
1 million tonnes

Source: IATA / ATAG ABBB Report 2020
Aviation contributes to UN SDG’s Africa of lifting 50 million people out of poverty by 2030 and reducing poverty levels by two-thirds by 2050.
Embracing ONE Record

David Sauv
Senior Manager Digital cargo, IATA
ONE Record

One step closer to digital cargo

David Sauv
Senior Manager, Digital Cargo, IATA

Embracing ONE Record: Implications and Opportunities for Air Cargo Operations
Digitalization?
Digitalization of the global economy

By 2025: 24.3% of the global economy is digital (vs 15.5% in 2016)\(^1\)

1) Oxford Economics

Major e-commerce player - stock price
Digitalization of the global economy

The air cargo has more than 15 years of lag in its digital transformation journey
International trade is about moving goods. What is going on in the Air Cargo industry?
Each year, more than 7'800 tons of paper documents are processed.

It’s the equivalent of 80 Boeing 747 freighters filled with paper.
The air cargo digital transformation journey

From paper to electronic

Cargo IMP / Cargo XML

Digitization

The industry needs to get rid of the documentary flow and leverage on data to speed up the cargo flow

2005

2018

2020
e-AWB: ~85%
e-freight: nonsignificant
Avg shipping time: 5.5 days

Transforming the industry through data

ONE Record / Interactive Cargo

Digitalization / Digital Transformation

IATA
ONE Record Concept
The essence of the ONE Record is to move from a peer-to-peer messaging model to a data sharing model relying on a Virtual Shipment Record.
The ONE Record concept is based on 3 pillars enabling to define:

WHAT, HOW, with WHOM data can be shared
ONE Record
Data Model
Design principles of the data model

**Piece-centric**
- Shift to piece-level management
- Piece is at the center of the model

**One single source of truth**
- Clear ownership of data that remains at its source, enhanced transparency
- Data quality and integrity

**The digital twin concept**
- Physical entities have digital twins in the model
- Easy understanding of the model and how object interact with each other

**Data-centric**
- Data, not documents!
- Use of Linked Data principles to avoid redundancy of data
ONE Record data model scope

Airline Core Ontology

- Minimal requirements for the transport of general cargo
- Detailed and extensive enough to enable piece-level management and tracking
Data Model high level overview

PhysicalLogisticsObjects
- Item
- Piece
- Shipment
- Product

Transport Movement
- Storage
- UnitComposition

LogisticsActivity / LogisticsAction
- Waybill

Link used if shipment is known

ULD

BillingDetails
- Booking Request
- Booking Option Request
- Booking Option
- BookingShipment
- BookingPiece

Link between actual shipment and the Waybill represents the link between Distribution and Operations

Price
- Ratings

Simplified shipment and piece objects may be used for Distribution only

Distribution data
ONE Record is a data-centric model and NOT a document-centric model.
Industry

Benefits
Data quality and control
Visibility and transparency
Plug & Play Connectivity
Future of digital cargo
Welcome a new generation
ONE Record unlocks new use cases that couldn’t be achieved with the legacy messaging standards.
Digital cargo acceptance, encompassing piece-level management and tracking
Comprehensive data sharing of cargo tracking and monitoring devices
A digital integration approach for air cargo security information
Digital collaboration for customs reporting
New digital business processes and new data driven value added services
Or anything you could think of!
ROI and Investments
ONE Record – a long term vision

It is important to consider both the short-term and long-term ROI. Although the initial investment in ONE Record may seem significant, the long-term benefits can outweigh the costs and ultimately lead to a more efficient and profitable air cargo industry.
Investment Considerations
Consideration for 1R implementation

Beyond costs of implementations, technology and industry collaboration are key elements to consider.

Costs and effort
Technology
Industry collaboration
Consideration for 1R implementation

Beyond costs of implementations, technology and industry collaboration are key elements to consider

- Implementation costs and effort
- Cost of messaging vs data sharing operating cost
- Lower cost of maintenance of unified infrastructure vs current cost of maintenance of complex infrastructure
- Training cost to upskills staff / teams
Beyond costs of implementations, technology and industry collaboration are key elements to consider.

**Technology**

- Architecture for ONE Record implementation (in-house infrastructure vs outsourced/hosted infrastructure)
- Data security / identification
- Data retention / archive
- Availability / SLA
- Adoption of linked data approach
- Performance of legacy system in an API environment
- Legacy cargo management system update (including screens update)
Consideration for 1R implementation

Beyond costs of implementations, technology and industry collaboration are key elements to consider.

- Availability of open-source solution
- Plug & Play connectivity using standard web API
- Customs / regulatory compliance and connectivity (including sanctions)
- Integration of all logistic partners such as trucking companies and other industry stakeholders
- Critical mass vs community led approach
- Learnings / lessons learned from early adopters and pilot projects
Stop looking back when the future is ahead

To achieve a successful digital transformation the air cargo industry needs to leverage on 15 years of digitization attempts and fully embrace its digitalization.
Thank You

More info

www.iata.org/one-record
Streamlining Warehouse Operations

DHL Express
Digitalization Shaping the Future of Cargo

Hartmut Brueckner
Vice President Sales, Africa, IBS Software
Innovation and Digitalization in Air Cargo

Hartmut Brueckner
Vice President, Sales, Europe and Africa
Air cargo showed its true value during the pandemic

How do we continue...

Further the mindset shift on the value of air cargo

Enhance airline revenue and yield

Prioritize digital over legacy
Today’s digital environment is fast and furious
But the cargo industry is challenged with congestion.
And legacy technology and processes are holding us back.
Cargo operators must understand actions and issues throughout the entire ecosystem.
Air cargo demand in Africa continues to outperform pre-pandemic levels, with prospects for investment and growth.

But fundamental challenges remain:
- Fuel costs
- Connectivity issues
- Policy frameworks
- Bilateral agreements
- Market fragmentation
Defining business excellence and the future of cargo through digitalization

Digital Business
Continuing to redefine and transform the core business for improved efficiency and returns

Digital Connectivity
Expanding boundaries with an integrated ecosystem that creates new opportunities

Digital Intelligence
Creating an intelligent ecosystem with AI to build predictability value across the supply chain
The cargo industry is seeing tremendous change

- Volatile demand and growth patterns
- Rapidly evolving business landscape
- New innovative technologies
- Changing customer expectations
Customers and partners have higher expectations today

- Speed
- Reliability
- Predictability
- Security
- Safety
The Data Driven Digital ‘DDD’ air freight ecosystem

AI / ML in Cap Planning & Dynamic Pricing

3-D Air Freight Enterprise

Hyper-Personalized Offerings

Digitally Created

Regulation & Compliance By Exception

Digitally Engaged

Early Detection & Correction Cash Flow

Real Time Process Optimization

Loyalty programs

Seamless SCM Integration

Digitally Sourced & Managed

Digitally Sourced

Digitally Managed & Settled

Customers Digitally connected, engaged & serviced (Shippers, FF, Consignees, et al)

Loyalty programs

Seamless SCM Integration
To meet expectations, the ecosystem must work together
If you only remember three things from this keynote

1. Digital is here to stay. Air cargo must capitalize on the opportunity. Make your data visible, accessible, and useful.

2. Embrace analytics and AI for smarter growth. Invent new business models where the digital twins of our business allow us to cross the boundaries of our imagination.

3. Technology providers are increasingly delivering solutions on a SaaS basis, and it is now easier than ever to buy what you need and importantly, stop buying what you don't.
Thank you

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Vice President, Sales, Europe and Africa

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Redefining the Future of Travel through Technology
Innovation
www.ibsplc.com
Pre-Loading Advanced Cargo Information (PLACI)

Emma Dayo
Regional Manager Cargo & Ground operations, Africa Middle East
IATA
Getting ready for new air cargo PLACI regulatory requirements

Air Cargo Day South Africa
Johannesburg
09th November 2023
Reacting to security threats and incidents, WCO and ICAO have jointly introduced an additional layer in the management of air cargo security risk.

Customs and aviation authorities are increasingly enforcing new security protocols to identify and mitigate ‘bomb in the box’ from being loaded onto aircrafts.

Airlines and freight forwarders must ensure compliance with these new security directives otherwise face consequences.
What is EU- Import Control System(ICS)2?

- EU is modernizing its customs legislation with a new fully electronic customs advance cargo information system that will facilitate trade flow through improved data-driven customs security processes.

- ICS2 will collect data about all goods entering the EU at the latest before the goods are loaded onto the aircraft which will bring them into the EU.

- The system will be used by EU customs authorities to ensure security and safety.

https://ec.europa.eu/taxation_customs/customs-4/customs-security/import-control-system-2-ics2-0_en#heading_1
What is required?

- Adapt new **set of procedures** e.g.
  - Get Customs **OK TO LOAD** prior to loading
  - Immediate action for **DO NOT LOAD**
  - Setup 24 x 7 contact

- Upgrade **IT systems** for exchange of information with customs

- Take steps to ensure **high-quality, precise data** is provided

- **Support desk & Training** to staff
Non-Compliance

Non-compliance may have following impacts:

- **Sanctions** on carriers, incl. financial penalties
- Cargo will be **stopped** at the border
- **No customs** clearance of goods
- **Unnecessary** interventions
- **Rejection** of poor-quality declarations
When does ICS2 becomes operational?
Other Similar Initiatives

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<thead>
<tr>
<th>Country</th>
<th>Program</th>
<th>Description</th>
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<td>United States (US)</td>
<td>ACAS</td>
<td>Air Cargo Advance Screening</td>
</tr>
<tr>
<td>United Kingdom (UK)</td>
<td>PREDICT</td>
<td>Pre-Departure Information for Cargo Targeting</td>
</tr>
<tr>
<td>Canada (CA)</td>
<td>PACT</td>
<td>Preload Air Cargo Targeting</td>
</tr>
<tr>
<td>United Arab Emirates (UAE)</td>
<td>NAI Center</td>
<td>National Advance Information Center</td>
</tr>
</tbody>
</table>

Other governments are expected to follow similar initiatives.
What is IATA doing on this currently?

- **Standards** through Board and Working Group
- Advocacy with governments
- Industry Engagement & Communication
- Implementation support
- Publications
- Recommended Practice
- Evaluating Potential Solutions
Legal basis

PLACI Air Cargo Security referrals:

- Commission Implementing Regulation (EU) 2015/2447
  *Economic Operators’ obligations vis-à-vis EU customs authorities – RfI, RfS, DNL (Art 186)*

  *Obligations of entities vis-à-vis EU AVSEC authorities for PLACI implementation in point 6.8.7*

PLACI and full ENS data requirements:

- Union Customs Code
  *Obligation to lodge an Entry Summary Declaration (Art 127)*

- Data elements: Commission Delegated & Implementing Regulations 2015/2446 & 2447/2015 (as amended)
IATA PLACI Manual

- Purpose: To harmonize PLACI processes
- Contents:
  - Eligible Filers
  - 3rd Party Filers
  - Data Set
  - General Principles
  - Business Processes data filing
  - Guidance on:
    - Mail Advance Filing
    - Self filing Freight Forwarders
  - PLACI Case Study
- Website: https://www.iata.org/placi
IATA Cargo-XML Manual and Toolkit

- Purpose: To disseminate Cargo-XML standards

- Contents:
  - Cargo-XML Messages
    - Specifications & Schema
    - Conversion Guidelines between C-IMP & XML
  - Implementation Guidelines
  - C-IMP Manual (pdf)
  - Sample Messages
  - Code List
  - OCI Composition Rule Table
  - Mail & Cargo Messaging Synchronization

Training

Training courses available:
1. Air Cargo Business Processes
2. Electronic Messaging and Pre-Load Data Filing
3. Cargo Security Awareness

For details, visit: https://www.iata.org/training/
EU ICS2 Compliance

Nicholas Liseche
Area Customer Service Manager East, North Africa & Mauritius- IAG
Compliance with the current EU ICS2 requirements

IAG Cargo

Nov 2023
Agenda

01 ICS2 (Import Control System 2)
02 Importance of ICS2
03 Role of Digital systems
04 Go Live - challenges
05 Successes
ICS2 (Import Control System 2)

- ICS 2 – The EU’s IT system to collect data about “all” goods entering or transiting the EU prior to their arrival for all carriers.

- On 1\textsuperscript{st} July 2023 goods arriving at the EU via AIR must comply with new requirements for \textit{pre-loading} and \textit{pre-arrival} customs risk assessments (ICS2 Phase 2).

- The Pre-Loading Advance Cargo information (PLACI) data is filed to the EU Member State via ICS2 Shared Trader Interface (STI) to enable risk profiling.

- Customs will be able to send various notifications back to carriers and/or economic operators via ICS2 known as referrals (RFI,RFS,DNL).

- Additional data elements required pre-loading and pre-arrival. i.e. EORI (Economic Operator Registration Identification) and 6-digit HS Codes at AWB/MAWB and HAWB level.

- Change to acceptance procedures.

- Freight Forwarders can apply for an extension until 2nd October 2023 if they wish to be a declarant, ie self/house filing.

- FWB and FHL messages play a vital role in ICS2 compliance, as they facilitate the exchange of critical shipment information. It is imperative that accurate and complete FWB and FHL messages are provided for every shipment to ensure efficient processing and compliance with regulatory requirements.
Importance of ICS2 (Import Control System 2)

• ICS2 – The EU’s IT system to collect data about “all” goods entering or transiting the EU prior to their arrival for all carriers.

• European Union's EU-ICS2 program, is a vital initiative that aims to enhance air cargo security and streamline customs processes by ensuring that relevant cargo information is provided in advance.

• This proactive approach allows authorities to conduct risk assessments and perform necessary security checks before the cargo is loaded onto an aircraft. By implementing PLACI, we are demonstrating our commitment to maintaining a safe and efficient air cargo system.

• ICS2 (Import Control System 2) is a comprehensive framework designed to strengthen import control procedures and enhance security throughout the supply chain. By leveraging advanced information technology and risk assessment methodologies.

• ICS2 enables customs authorities to effectively identify and target high-risk shipments, ensuring compliance with applicable regulations and safeguarding the integrity of international trade.
Role of Digital systems

• Air cargo needs to continuously improve its efficiency. The area with greatest potential is digitalization. IATA outlined three goals:

• 100% airline capability of ONE Record by January 2026. This initiative will replace the many data standards used for transport documents with a single record for every shipment. The Cargo Services Conference agreed that it wants to achieve 100% airline capability by 1 January 2026 and the Cargo Advisory Council supports this vision.

• Ensuring digital standards are in place to support the global supply chain. Guidance has been finalized on tracking devices – the IATA Interactive Cargo guidelines - used to monitor the quality and accuracy of conditions of time and temperature sensitive goods being shipped across the world.

• Ensuring compliance and support for customs, trade facilitation and other government processes that are increasingly digitalized. i.e., ICS2 compliance - integration of PLACI and ICS2 principles into our operations is very key and thus Airlines, Ground Handling Agents, Freight Forwarders need to upgrade their systems to facilitate compliance.

• Digitalization plays an important role in evolving strategies for trade facilitation, reducing operational barriers at borders and managing the flows of goods securely.
Post go live - challenges

- Four member states did not go live on 1st July and adopted BCP, including Greece and Denmark. There were delays in response to filings. Agreement gained in Sep that enabled forward on condition that we have received an acceptance of our filing (not approval) and MRN number issued.

- Personal effects challenge

- FWB, FHL with errors from Forwarders. Mainly HS and Post codes.

- Last minute products due to their nature i.e. PER.

- EU, ICS2 challenges log helped to address issues for continuous improvement.

- Consolidation – HAWB must be present and code NC used, MAWB – code NG.
Successes

- Continuous monitoring of EU transit / terminating shipments for AC.
- FWB, FHL compliance dashboard to track performance.
- SME's across the network.
- Team work across relevant departments.
- Drop in sessions – creating awareness from all Ops and commercial staff.
- Weekly meetings – SME’s.
- Contact list – National Service Desks (customs) of all EU member states – escalate delays.
- FAQs in The Loop.
Your questions

Thank you - QUESTIONS?
Customs Reporting and ONE Record

David Sauv
Senior Manager Digital Cargo, IATA
Customs are evolving

- Advance Cargo Information (ACI) in accordance with WCO SAFE

- Various EDI requirements: XML messages, Cargo-XML messages or other formats
Advance Cargo Information in a nutshell

Pre-Loading ACI
“7+1” data
Security

Pre-Arrival ACI
~30 data
Safety & Security

Short haul: at “Wheels up”
Long haul: 4hrs prior to arrival

On arrival
Complete data
Safety, Security, Fiscal, etc.
Data sharing standards need to evolve to keep up with upcoming Customs requirements.
Customs and ONE Record integration maturity

#3 - Full ONE Record integration with Customs:
• Airlines, CCS and Customs are able to share data via ONE Record APIs

#2 - ONE Record integration on Airline*/CCS side:
• Airlines and CCS are able to share data via ONE Record APIs
• Customs still receive information through message standards, same as current

#1 - Current situation based on:
• Cargo IMP and Cargo XML messaging standards on Airline/CCS side
• XML, CXML (e.g. ASYCUDA) or other formats on Customs side

* In the case where the forwarder is doing a self-filing, the same architecture is applicable
#1 – Current situation

**Airlines* communicate with Customs:**

1. Via CCS by sending CIMP/CXML messages to CCS. CCS then sends appropriate message to Customs via their interface
2. Directly by sending required message formats (CXML with ASYCUDA, XML or other formats)

* In the case where the forwarder is doing a self-filing, the same architecture is applicable
#2 - ONE Record integration on Airline and CCS side

**Airlines* communicate with Customs:**

1. CCS has access to Airline data through the ONE Record API. CCS then sends appropriate message to Customs via their interface.
2. Directly by sending required message formats (CXML with ASYCUDA, XML or other formats).

* In the case where the forwarder is doing a self-filing, the same architecture is applicable.
#3 – Full ONE Record integration with Customs

**Airlines* communicate with Customs:**

1. Customs have access to Airline data through the ONE Record API, either directly on the Airline server or through the CSS

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* In the case where the forwarder is doing a self-filing, the same architecture is applicable
Key take-aways

- CIMP is not maintained anymore, therefore it is not fully compliant with upcoming Customs requirements like PLACI programs.

- CXML enables to mitigate some of CIMP technical limitations. However, the information is only at shipment level.

- Move to ONE Record is a critical enabler to comply with customs and legal requirements in the future.
Collaborating for success
The Digital Ecosystem

Moderator:
Annette Naude,
Regional Head of Life Sciences & Chemicals – MEA, DHL

Panelists:
Dick Murianki, Director Cargo, Kenya Airways
Hartmut Brueckner, Vice President Sales, Africa, IBS Software
Burt Jonker, GM Cargo, Swissport
Digitalization Shaping the Future of Cargo

Sam Munda
Regional Sales Representative, Cargo Flash
ONE Record: The Road Ahead

David Sauv
Senior Manager Digital Cargo, IATA
ONE Record
One step closer to digital cargo

David Sauv
Senior Manager, Digital Cargo, IATA

The Road Ahead: Preparing for ONE Record Implementation
Shape the future with Digital Transformation

- **Digitization** (data sharing with ONE Record)
- **Digitalization** (document in electronic message)
- **Digital Transformation**

**Capture information in electronic format** (CIMP-CXML / electronic document)

**Define new business processes through the use of data & optimize operations** / Data centric by default

**Create new value-added services, transform the business model** / Digital mindset by default

**CIMP is no longer supported since 2015. CXML addresses few technical limitations of CIMP but is still a messaging standard based on document.**
An end-to-end digital logistics and transport supply chain where data is easily and transparently exchanged in a digital ecosystem of air cargo stakeholders, communities and data platforms.
How do we get there?
The air cargo industry has a choice

Fully implement year 2000 document-based messaging standards before migrating to the next generation with a 20-year lag

Reset expectations and align air cargo with current web technologies and enable data driven businesses and operations
Proceeding has implications

Reset expectations and align air cargo with current web technologies and enable data driven businesses and operations

- The standard must be ready
- The industry must commit
- No change without deadline
“The CSC endorsed the policy item to execute the activities required to target One Record to be the only IATA effective data sharing standard as of 01st January 2026”
## Proposed - IATA Digital Roadmap

### Governance
- **2022**: Policy Item to CSC to explain the transition plan from messaging to 1R
- **2023**: Policy Item adopted by CSC
- **2024**: Policy item to explain the change required and report on the roadmap progress
- **2025**: Submission of amendment proposals for mail vote
- **2026**: Resolutions and Recommended Practices effective with a permanent status

### 1R Standard
- **2022**: Cargo XML (CXML) as effective standard
- **2023**: Cargo IMP (CIMP) as effective standard and put in containment
- **2024**: Stabilized release of 1R specifications (Data Model and API)
- **2025**: On going standard maintenance following CSC governance mechanism

### Support
- **Implementation guide**: [https://iata-cargo.github.io/ONE-Record](https://iata-cargo.github.io/ONE-Record)
- **MOP review / Detailed API workflow and data / IATA tool (network view)**
- **Network view demonstrator**
- **Operational Interface demonstrator**
- **Test Suites - Unit Test**
- **Testing Suit - Integration Test**

### Key Milestones
- **ONE Record as effective standard**
- **Cargo XML (CXML) put in containment (except for regulatory requirements)**
- **Cargo IMP (CIMP) put in containment**
Endorse the target date of 01st January 2026 to set ONE Record to be the only IATA effective data sharing standard
Call for Action
Pilot Project 2024
1. Digital cargo acceptance, encompassing piece-level management and tracking
Comprehensive data sharing of cargo tracking and monitoring devices
A digital integration approach for air cargo security information
Digital collaboration for customs reporting
Digitalization of the Shipper's Declaration for Dangerous Goods
Digital connectivity for the distribution of cargo products from carriers to forwarders
Call for Action

Need to have commitment of pilot project participants by end of 2023 to start the projects in January 2024 latest
Thank You

More info

www.iata.org/one-record
Closing Remarks

Alex Stancu
Area Manager – Southeast Africa – AME, IATA