

e-AWB Implementation Playbook

October 2019



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Version control



Revised by	Changes	Version	Date
David SAUV	Original	1.0	6 Dec 2016
David SAUV	Changes as per internal review with the e-Cargo team	1.1	9 Dec 2016
David SAUV	Changes as per comment from Regional Cargo Managers	1.2	19 Dec 2016
David SAUV	Minor typo and regional map changes	1.3	20 Dec 2016
David SAUV	Modification following IATA and CX feedback	1.4	16 Jan 2017
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David SAUV	Minor slide title modification (p.8)	1.6	05 Avr 2017
David SAUV	Add IBS as SP	1.7	09 Jun 2017
David SAUV	Add BOS as eAWB360 APT	1.8	14 Jun 2017
David SAUV	Change mission and vision of Digital Cargo (ex e-Cargo)	1.9	17 Jul 2017
David SAUV	Change of EVA AIR logo	1.10	7 AUG 2017
David SAUV	Add Freight Forwarder activation on step 4	1.11	25 SEP 2017
David SAUV	Replace tables with link to IATA reports	2.0	13 APR 2018
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Digital Cargo @ IATA



Our vision

To achieve a fully digitally connected and integrated air cargo supply chain

Our mission

We lead the industry with end-to-end supply chain collaboration on development of innovative technology streamlined processes and global standards



IATA supports Digital Cargo implementation by developing industry standards and offering guidance and tools that facilitate the adoption of new initiatives



Workshop & conference

Beyond the World Cargo Symposium, IATA organizes the annual Digital Cargo Conference in Geneva and regular e-Cargo workshops at the local levels. During those events, attendees benefit from a thorough understanding of new Digital Cargo initiatives and the ability to network with subject matter experts and other industry colleagues.



Solution

To support the digital transformation of the air cargo industry, IATA developed a range of solutions aiming to help the entire supply chain actors moving toward of paperless way of working:

- Matchmaker
- Cargo-XML AutoCheck
- Message Improvement Program
- EPIC



Business Process & Standard

In order to remove paper and use electronic messages it is necessary to have common and clear business process and standards, which are the foundations of Digital Cargo initiatives. IATA is driving business process and standard setting activities gathering the industry in workgroups and governance bodies.



Technology

Moving to Digital Cargo requires changes in the technologies used by the air freight stakeholders. IATA facilitates understanding of key IT requirements necessary to support Digital Cargo projects, and offer guidance with regard to solutions and services available on the market.

e-Freight

Designed to fulfill the vision

Digitization of the air cargo industry

In 2017, more **than 50%** of the global air trade rely on paper-based processes.
A shipment can generate up to **30 paper documents**
and many of the processes, such as track & trace,
still depend on human intervention

**Each year, more than 7,800 tons of paper documents are processed,
the equivalent of 80 Boeing 747 freighters filled with paper**



e-Freight: designed to fulfill the vision



e-Freight is an industry-wide program that aims to build an **end-to-end paperless transportation process for air cargo** made possible with regulatory framework, modern electronic messages and high quality of data



e-Freight is part of the StB Cargo program aiming at making air cargo easier, smarter and faster. The program portfolio holds 6 projects with the objective to accelerate change in the areas of digitization, visibility and safety



e-freight & e-AWB



ONE Record



Interactive Cargo



Smart Facility



ACID Air Cargo Incident Data



EPIC

e-Freight benefits

The ultimate goal of the e-Freight program is to bring benefits for the air cargo industry

Operational efficiency



e-Freight brings operational efficiency through the reduction of the end to end processing time (up to 24h)

Cost effectiveness



e-Freight brings cost effectiveness through the reduction of document processing and archiving costs

Data quality



e-Freight improves data quality and accuracy (e.g. auto-checks, mandatory fields, ...)

Innovation



Standardization and digitization are key enablers for the development of new innovative services and solutions, thus increasing the value of the air freight to shippers (e.g. real time status update)

Sustainability



e-Freight will eliminate more than 7,800 tons of paper documents annually, the equivalent of 80 Boeing 747 freighters filled with paper

Regulatory compliance

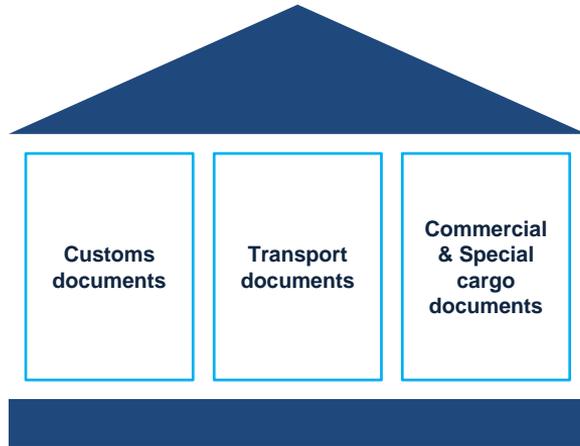


e-Freight implementation facilitates compliance to international and local regulations (e.g. facilitate Advance Electronic Information (AEI) requirements for security purpose)

The 3 pillars of the e-Freight program

Initiated by IATA in 2006, the program became an industry-wide initiative involving **carriers, freight forwarders, ground handlers, shippers, customs brokers and customs authorities**

The e-Freight roadmap outlines a shared end-to-end industry approach with clear leadership roles, around **three core components, or "pillars"**



1. Customs documents

Engaging regulators and governments worldwide to create an 'e-freight route network' with fully electronic customs procedures and where regulations support paperless shipments

2. Transport documents

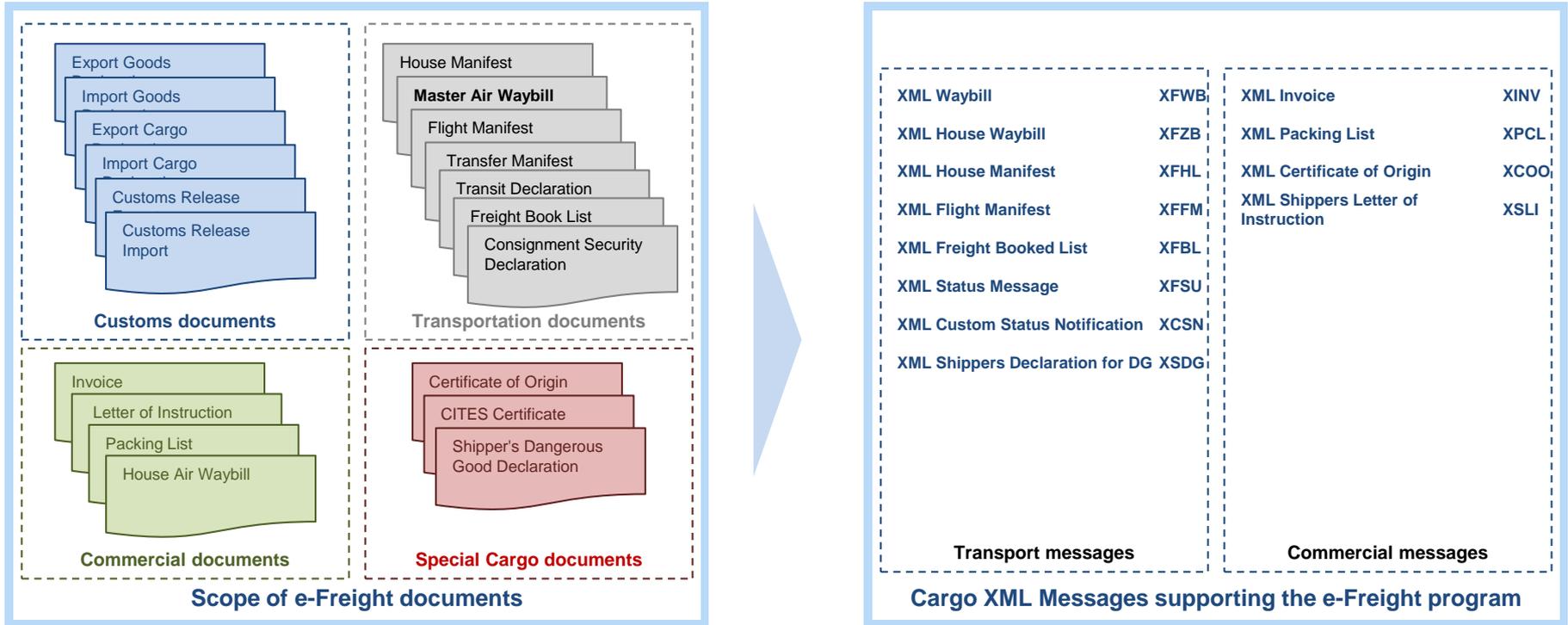
Working collaboratively within the cargo supply chain to digitize the core industry transport documents, starting with the Air Waybill (AWB)

3. Commercial & Special cargo documents

Developing a plan to digitize the commercial and special cargo documents typically accompanying airfreight today, in or outside of the 'Cargo pouch'

The scope of e-Freight

The scope of e-Freight covers **20 documents** supported by **12 Cargo XML message standards**



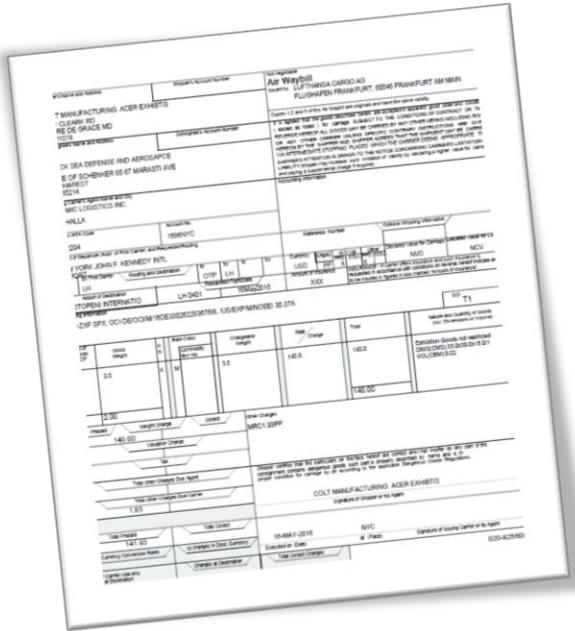
e-AWB

Enabling the 100% e-Freight vision

The Air Waybill: 1st step toward e-Freight



The Air Waybill (AWB) is a critical air cargo document that constitutes the **contract of carriage** between the “**shipper**” and the “**carrier**” (airline)



It is governed by **IATA Resolution 600a** “The Air Waybill” and **600b** “Air Waybill Conditions of Contract”



AWB and e-AWB

The electronic Air Waybill (e-AWB) is the **electronic contract of carriage** between the “**shipper**” and the “**carrier**” (airline)



The Electronic Air Waybill Resolution 672 (MeA) **removes the requirement for a paper Air Waybill**



The **original transportation contract is electronic** (shipment record)

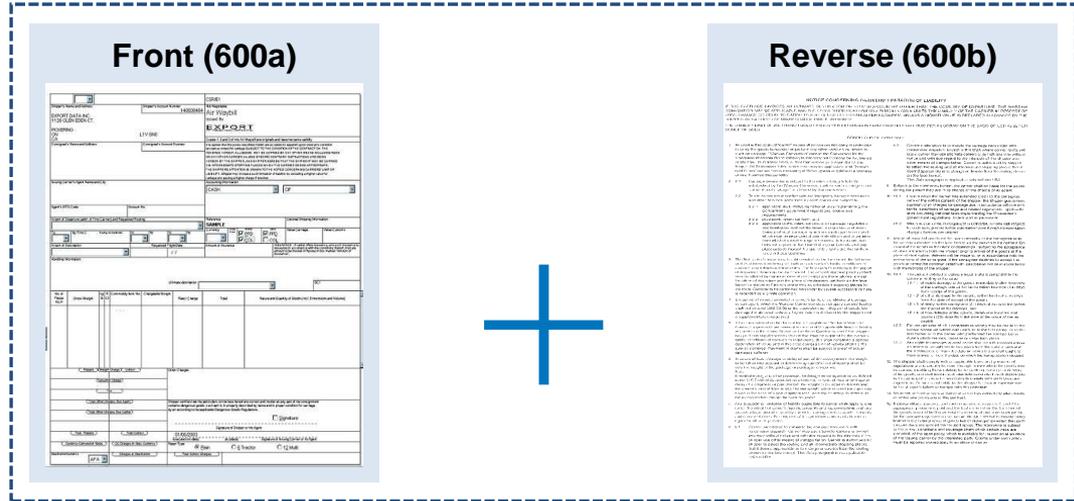


There is **no longer a need to print, handle or archive the paper AWB** simplifying the air cargo process

Paper AWB versus electronic AWB

The 2 components of an AWB can be found both in the paper and in the electronic worlds

**Paper
AWB**



e-AWB

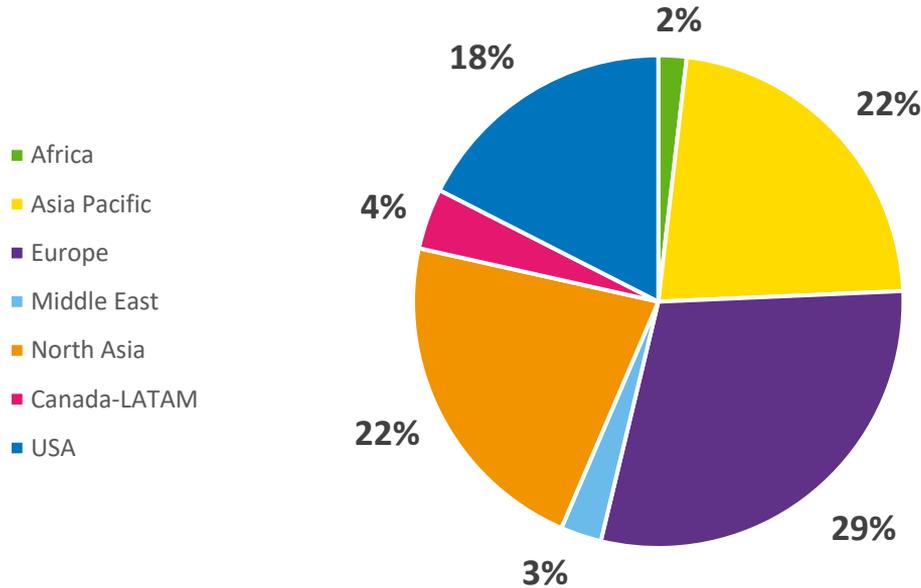


e-AWB

Where do we stand now?

Status as of October 2019

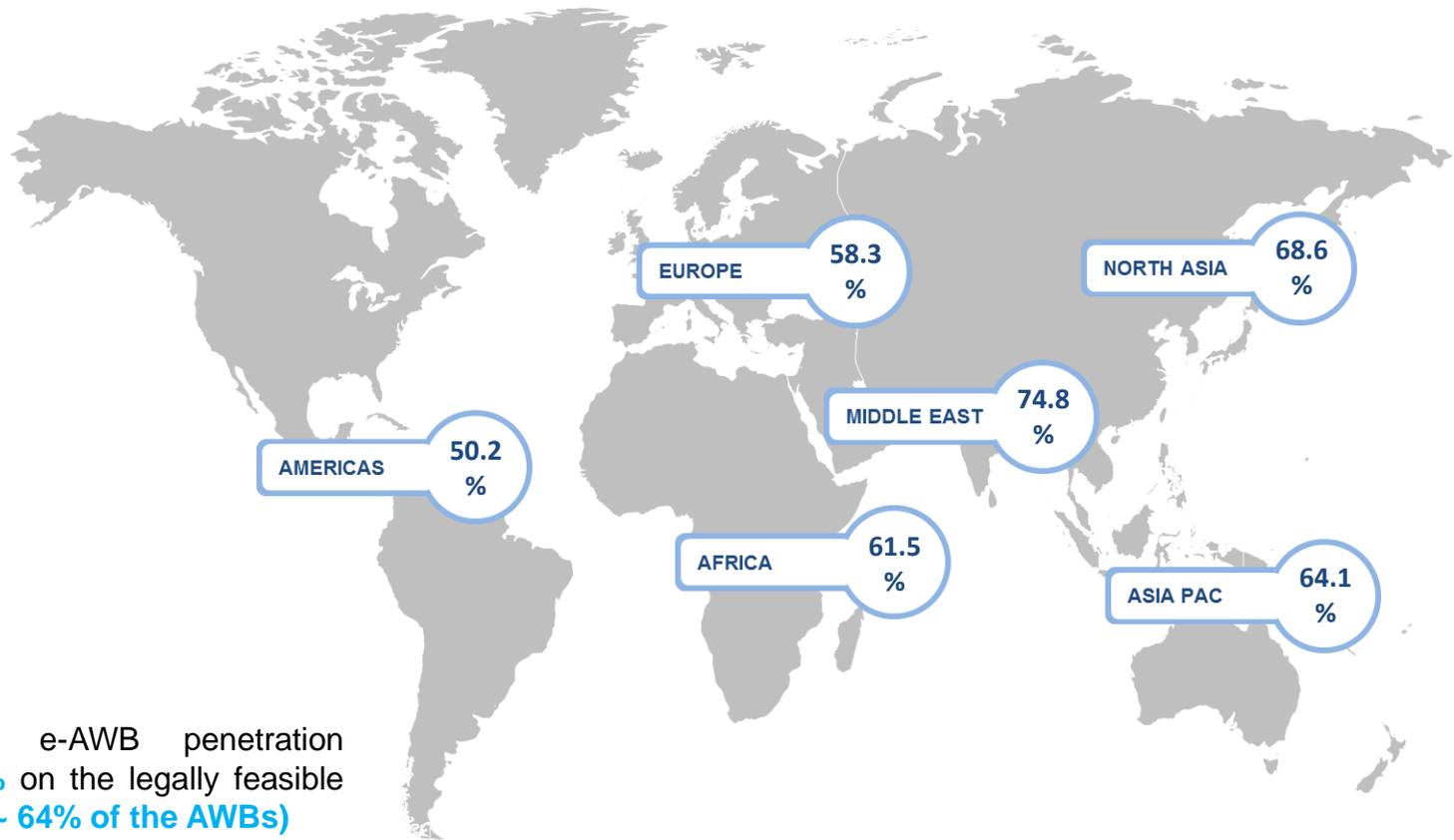
In October 2019, the Air Cargo industry processed more than **2.4 million Air Waybills (AWBs)**



The industry is driven by three main regions representing **73% of the AWBs: Europe, Asia Pacific and North Asia**



e-AWB penetration: 66% as of October 2019



The global e-AWB penetration reached **66%** on the legally feasible trade lanes (~ **64% of the AWBs**)

TOP performers / September 2019



The [e-AWB monthly update](#) (pdf) lists the top participating countries, airports, airlines, and freight forwarders

e-AWB international monthly report				February 2019				
Top-10 countries of origin (ranking by e-AWB volume)				Top-10 airports of origin (ranking by e-AWB volume)				
Rank	Country	e-AWB percentage of total	e-AWB volume (in thousands)	Rank	Airport	e-AWB percentage of total	e-AWB volume (in thousands)	
1	(2)	US - United States of America	46.7%	47.8%	1	HKG - Hong Kong Int'l, Hong Kong, HK	63.9%	63.6%
2	(1)	CN - People's Republic of China	36.9%	36.7%	2	PVG - Pudong, Shanghai, CN	59.0%	54.8%
3	(3)	HK - Hong Kong (SAR), China	12.9%	12.6%	3	CGK - Soekarno-International, Soekarno, ID	52.5%	49.2%
4	(4)	DE - Germany	3.9%	38.2%	4	SHA - Chengde, Tangshan, SD	74.1%	72.4%
5	(5)	KR - Korea (South)	12.8%	12.1%	5	AMS - Schiphol Airport, Amsterdam, NL	62.0%	61.1%
6	(7)	IN - India	10.6%	10.6%	6	FRA - Frankfurt Int'l, Frankfurt, DE	38.1%	38.7%
7	(8)	SG - Singapore	74.1%	72.4%	7	TPE - Taoyuan, Taipei, TW	69.8%	73.2%
8	(10)	NL - Netherlands	12.1%	12.4%	8	DXB - Dubai, Dubai, AE	91.2%	86.6%
9	(6)	AZ - United Arab Emirates	18.4%	18.2%	9	MDW - Chicago International, Chicago, US	42.9%	48.9%
10	(11)	JP - Japan	30.6%	30.8%	10	LHR - Heathrow, London, GB	36.7%	37.6%

Top-10 airlines (ranking by e-AWB volume)				Top-10 freight forwarders (ranking by e-AWB volume)					
Rank	Airline	e-AWB percentage of total	e-AWB volume (in thousands)	Rank	Freight forwarder	e-AWB percentage of total	e-AWB volume (in thousands)		
1	(1)	CAK - Carair Pacific Group	69.3%	69.6%	1	(1)	DDP - DHL GLOBAL FORWARDING	58.6%	58.4%
2	(2)	AFG - Air France - KLM Group	69.8%	70.3%	2	(2)	SCHENKER	68.0%	68.2%
3	(3)	OR - Qatar Airways	87.4%	80.8%	3	(3)	KUWAIT - KAGEL	44.2%	43.5%
4	(4)	UFL - Lufttransport Cargo	48.2%	46.7%	4	(4)	EXPRESSCARGO GROUP	59.2%	58.9%
5	(5)	DG - DGA Cargo	75.7%	77.0%	5	(5)	PANALPIRA	62.0%	62.6%
6	(6)	KE - Kavian Air	62.2%	62.3%	6	(6)	BOLLORE	60.4%	60.7%
7	(7)	EX - Emirates	38.1%	38.3%	7	(7)	NIPPON EXPRESS	49.0%	48.6%
8	(10)	IG - International Airline Group	48.2%	53.6%	8	(8)	DDV AIR & SEA	55.8%	58.6%
9	(8)	CI - China Airlines	69.2%	63.6%	9	(9)	UPS - UNITED PARCEL SERVICE	61.3%	58.6%
10	(9)	AA - American Airlines	71.2%	71.7%	10	(10)	KANTOJU	55.3%	47.8%

For more insight on the e-AWB performance at airport level, check out the [Top 100 Airports monthly report](#) (pdf)



e-AWB adoption / main challenges

Since its global rollout, the industry adoption of e-AWB faces the bellow main challenges:

Regulatory constraints	<ul style="list-style-type: none">e-AWB is not possible in all airports and all trade lanes due to regulatory limitations
Lack of harmonization	<ul style="list-style-type: none">e-AWB procedures are not harmonized between freight forwarders, airlines and ground handling agents in key airports where e-AWB is live
Technology limitation	<ul style="list-style-type: none">Many of the SME forwarders do not have the technical capability/EDI enabled systems to enable them to transmit shipment data to airlinesSome large forwarders face the same issue: their local branches are the result of SME forwarders acquisition and their IT system have not been aligned with the rest of the company
Complex process	<ul style="list-style-type: none">Perceived complexity to do e-AWB for forwarders dealing with multiple airlines
Maturity threshold	<ul style="list-style-type: none">Some markets reached a certain level of maturity where major actors (airlines / freight forwarders) already achieved the biggest potential



e-AWB adoption / supporting initiatives

In order to address the **e-AWB adoption challenges** and to **accelerate the growth** in the penetration rate, the following supporting **initiatives** have been delivered:

Expand number of trade lanes where e-freight and e-AWB are possible

- Continue the government supported e-freight initiatives in key locations

Harmonize e-AWB procedures in key airports across forwarders airlines/GHA

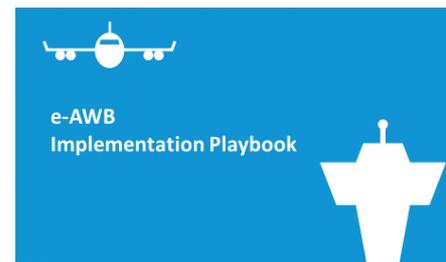
- Developed an e-AWB Global Standard Operating Procedure (SOP)

Provide implementation guidance and materials

- Developed an implementation playbook to support the adoption of e-AWB

Coordination efforts of industry in key e-airports

- Strengthen the e-AWB penetration rate in the existing eAWB360 airports
- Deploy eAWB360 initiatives at additional airports (in particular in Europe)

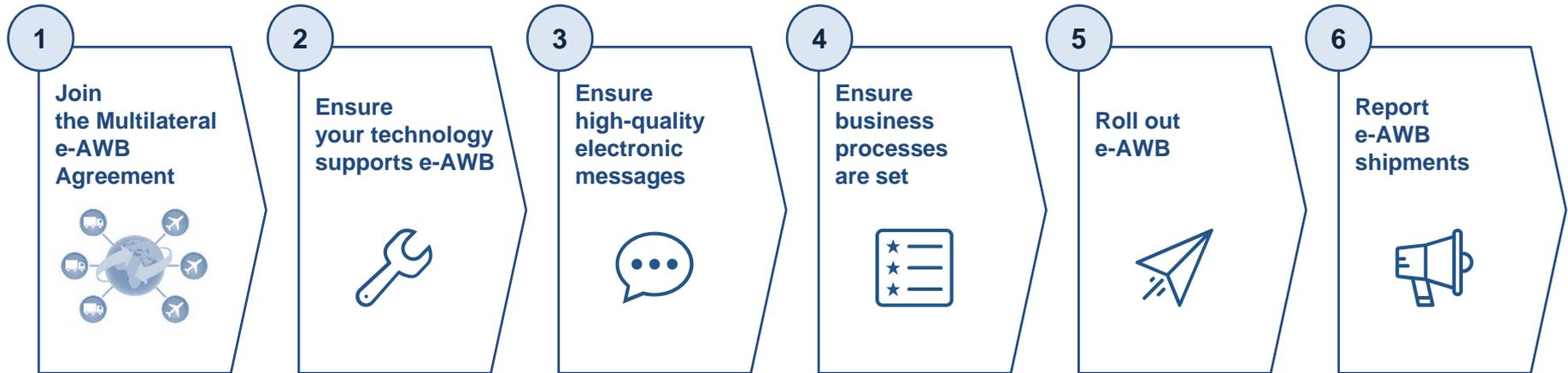


e-AWB

How do we implement it?

Implementing e-AWB in 6 steps

The following **6 steps** are key to ensure the success of an **e-AWB implementation**



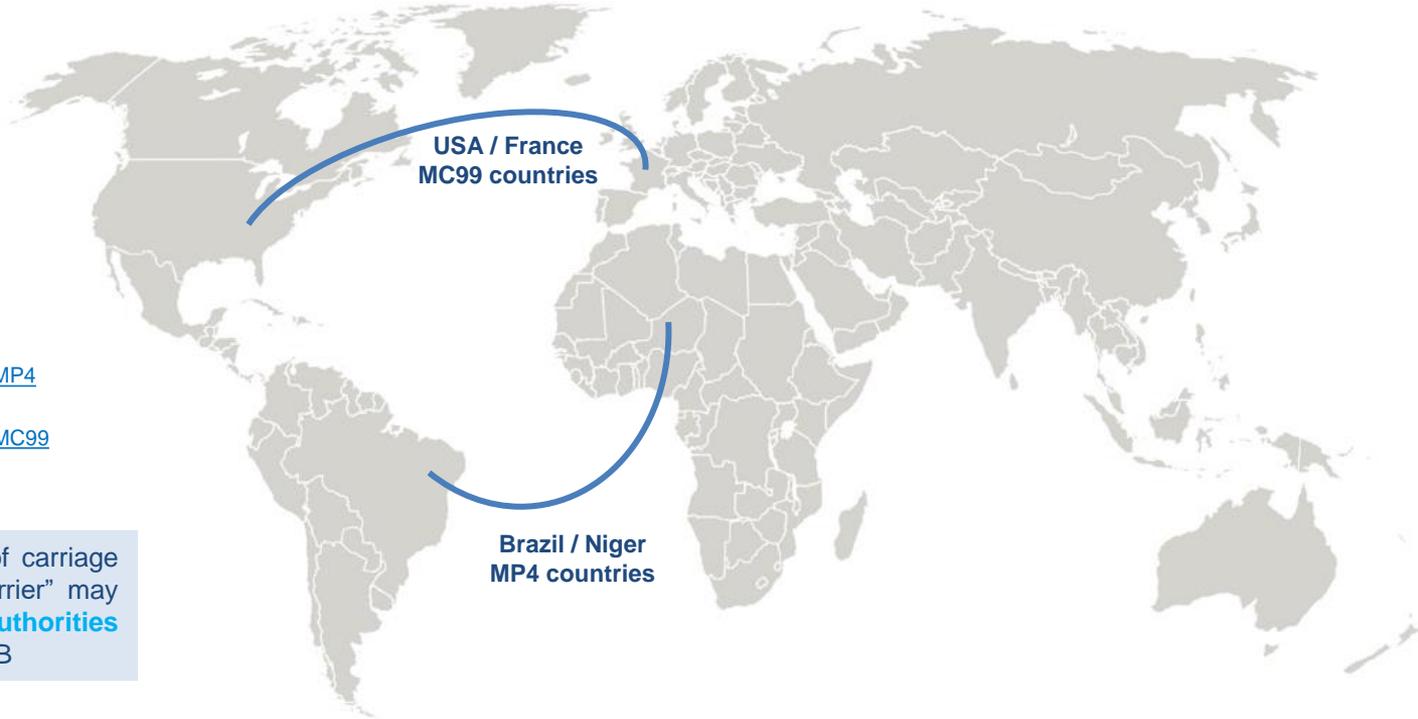
As a prerequisite, please verify that local regulations authorize the use of e-AWB as a contract of carriage between the “shipper” and the “carrier”

Pre-requisite / *Check the regulatory environment*

Regulatory framework for e-AWB

The use of e-AWB as a means to establish the contract of carriage is **only recommended on feasible trade lanes**. In September, the **feasible trade lanes** represented **64%** of the AWBs.

Feasible trade lane is defined as such when country of **origin and country of destination ratified the same treaty** - either the Montreal Protocol No. 4 of 1975 (MP4) or the Montreal Convention of 1999 (MC99)



[Countries that have ratified MP4](#)

[Countries that have ratified MC99](#)

The use of e-AWB as a contract of carriage between the “shipper” and the “carrier” may also **depends on government authorities** recognizing and accepting the e-AWB

Step 1 / ***Join the Multilateral e-AWB*** ***Agreement***

Step 1 / Multilateral e-AWB Agreement

The IATA Multilateral e-AWB Agreement (IATA Resolution 672) provides a single standard e-AWB agreement that airlines and freight forwarders can sign once with IATA and start doing e-AWB with all other parties to the Agreement. By signing the Agreement with IATA, freight forwarders and airlines effectively enter into e-AWB Agreements with each other, i.e. enabling them to execute contracts for the carriage of air cargo shipments by electronic means, in lieu of paper AWBs. The agreement does not amend the Air Waybill conditions of contract.

Multilateral e-AWB Agreement

Sign once, connect all!



Before starting e-AWB, Airlines and freight forwarders are required to sign the Multilateral e-AWB Agreement (MeA) following the below steps:



Benefits

-  Free of charge
-  Provides the necessary legal framework for establishing electronic cargo contracts (e-AWB)
-  Avoids the need to negotiate numerous bilateral e-AWB agreements with Airlines
-  Enables to do e-AWB with all participating Airlines

Participating [Airlines](#) and [Freight Forwarders](#) are listed on the IATA website. For more info, please visit: www.iata.org/eawb-multilateral

Step 2 /

***Ensure your technology supports
e-AWB***

Step 2 / e-AWB messaging capability

Communicating effectively requires Freight Forwarders, Airlines and GHAs to exchange standard messages



Required capability	FF	AL	GHA
Send Air Waybill message	✓	✓	✓
Receive Air Waybill message		✓	✓
Send Status Update message		✓	✓
Receive Status Update message	✓ <i>recommended</i>		
Produce Cargo Receipts for FF		✓	✓
Archive electronic messages	✓	✓	✓
Print on-demand AWB information if need be	✓	✓	✓

The Resolution 670 rules the Cargo electronic data interchange message standard, supported by the recommended practice 1670 (Carriage of Cargo using Electronic Data Interchange), the recommended practice 1672 (Cargo-Fact/Cargo-IMP Message Standards) and the recommended practice 1675 (Cargo-XML Message Standards)

The table below describes the different messages as per the 2 IATA message standards – Cargo-IMP and Cargo-XML:

Message type	Cargo-XML	Cargo-IMP
Air Waybill message	XFWB	FWB
Status Update message (Freight on Hand - FOH, Ready for Carriage - RCS)	XFSU	FSU
Error message	XFNM	FNA
Message Acknowledgment	XFNM	FMA

Cargo-IMP message standard is no longer maintained since 2014. IATA recommends to use standard IATA Cargo-XML to exchange electronic information along the air freight supply chain as the alternative to IATA Standard Cargo-IMP

For more information, please visit: www.iata.org/cargo-xml

Step 2 / The industry can support you



Our IATA Strategic Partners can support you to implement your e-AWB capability



The details of our IATA Strategic Partners profile and areas of expertise are available at <https://www.iata.org/about/sp/Pages/partners-directory.aspx>

Please filter "Area of Involvement" to Cargo Electronic Messaging

Step 3 /

***Ensure high-quality electronic
messages***

Step 3 / Understand the quality issues

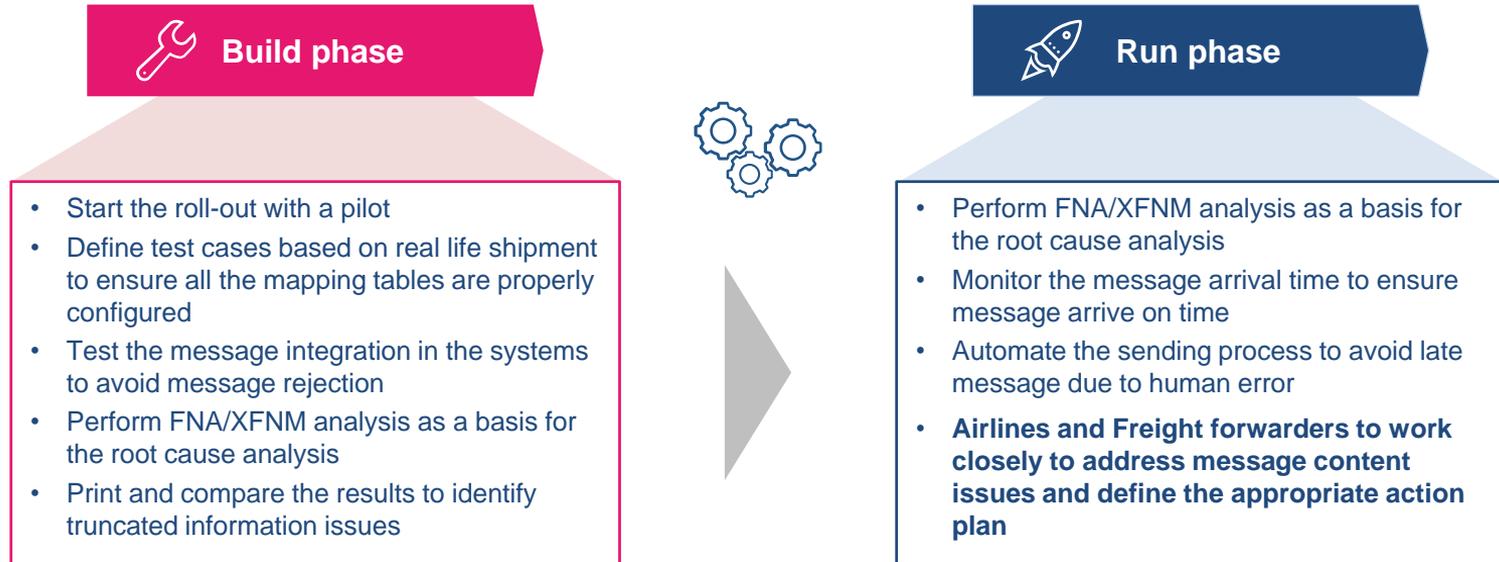
Ensuring the high quality of the electronic message is a key enabler toward a full paperless process. The main causes of quality issues are:

-  **Invalid or missing data**
-  **Message syntax error**
-  **Cargo system not configured properly (message integration, print layout)**
-  **Message not sent in time**



Step 3 / Improve the message quality

To address the main quality issues the following best practices are encouraged:



IATA offers you to validate your Cargo XML message for free

For more info, please visit: [cargo-xml-autocheck](https://www.iata.org/en/pressroom/2018/01/20180123-cargo-xml-autocheck)

Join the IATA Message Improvement Program (MIP) to have access to your free monthly messaging quality reports – Note that they are focus on the technical quality of the message and not on the content

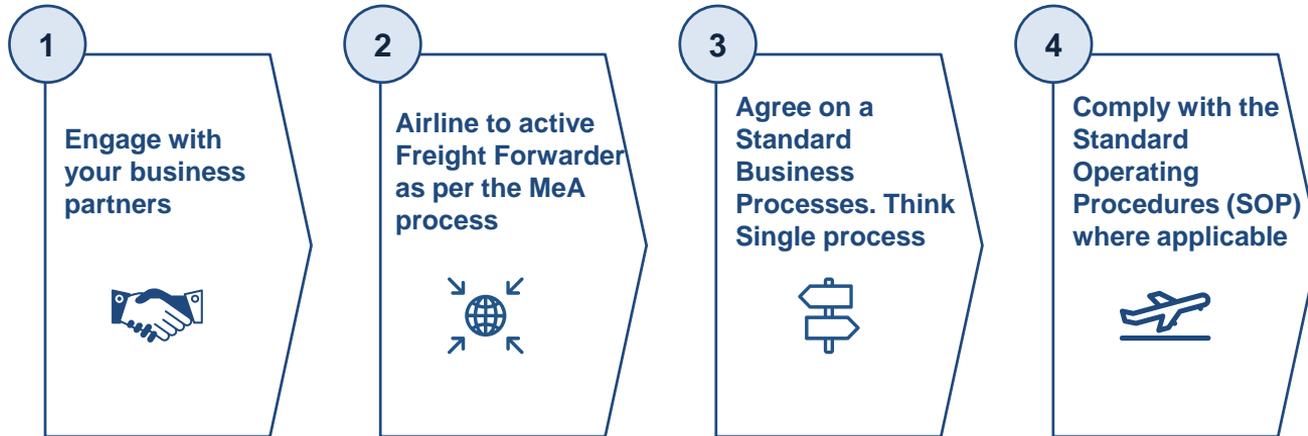
For more info, please visit: [MIP](https://www.iata.org/en/pressroom/2018/01/20180123-cargo-xml-autocheck)

Step 4 /

Ensure business processes are set

Step 4 / Ensure business processes are set

Review your business processes, together with your business partners, to make sure they are adapted to the **new paperless way of operating**



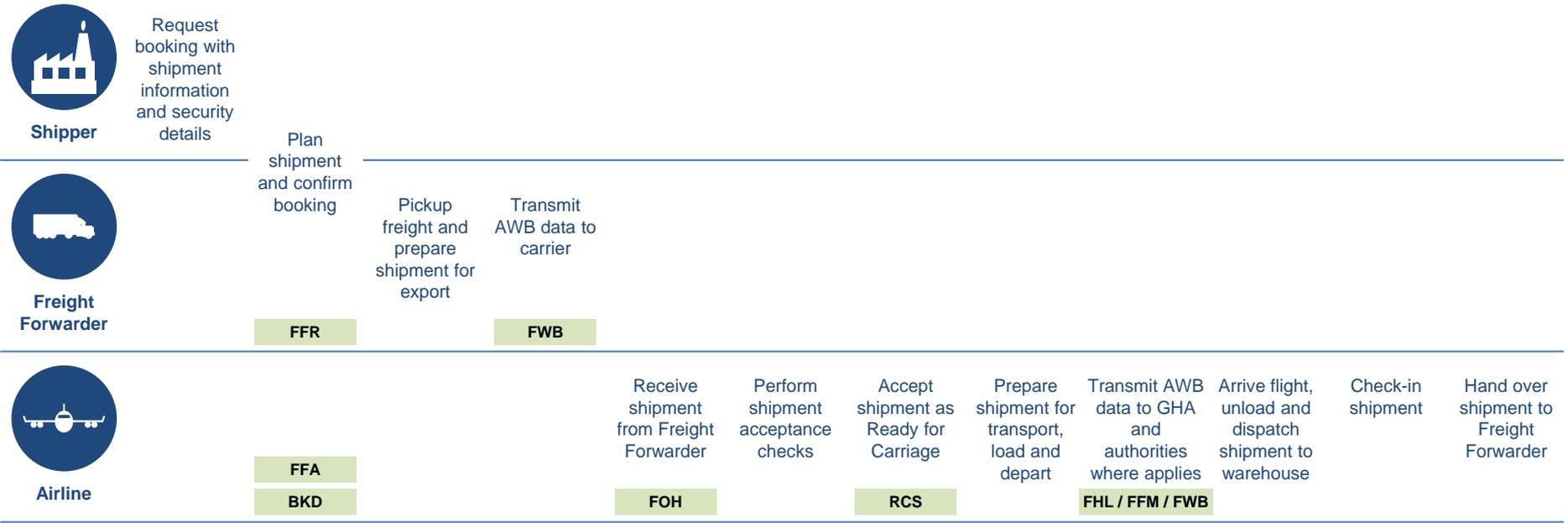
The SOP describes the operational steps that stakeholders of the air cargo supply chain need to follow when shipping air cargo in compliance with the e-AWB functional specifications

The list of applicable SOP are available at: <https://www.iata.org/en/programs/cargo/e/eawb/eawb360/>

Step 4 / A full paperless air cargo process



The below chart presents a simplified view of a paperless air cargo process using the main e-AWB messages



Cargo iQ Members initially developed the Master Operating Plan (MOP) to support implementation of quality management processes and metrics. The MOP describes the key processes and sub-processes involved in transporting air cargo from shipper to consignee in a systematic and harmonized manner.

For more information, please visit: [MOP](#)

Step 4 / Why do we need a Single process?

The use of **e-AWB** is regulated by international treaties (MP4/MC99) and/or local laws

e-AWB is **only authorized on feasible trade lanes**. **Outside** of this regulatory framework, the use of **paper AWB** is still **required**. However, even within the right regulatory framework, **paper AWB might be required by local authorities**



With the Single process, the Freight Forwarder does **not** need to **face these questions**. It **always sends** an **e-AWB** to the Airline and the **cargo is accepted without paper AWB**, regardless of the trade lane. If required, the paper **AWB can be printed** by the Airline or the Ground Handler

Step 4 / How does the Single process work?



Regardless of the trade lane, the Freight Forwarder **always sends an e-AWB** to the Airline



Freight Forwarder sends a XFWB/FWB message to Airline and delivers the Cargo without paper AWB, regardless of the trade lane

Based on the trade lane and the local authorities procedures, Airline or Ground Handler determines whether a paper AWB is required

ECC: If paper AWB is not required, the AWB is electronic and all the required information is in the system

ECP: If paper AWB is required, Airline or Ground Handler prints the paper AWB on behalf of Freight Forwarder

Note: this can be done either at Origin, Transit or Destination

In **any case**, the Freight Forwarder delivers the Cargo **without paper AWB**. All **required information** is sent through the **XFWB/FWB message**

e-AWB Special Handling Codes at a glance: <https://www.iata.org/eawb-special-codes.pdf>

Step 5 / *Roll out e-AWB*

Step 5 / Define your e-AWB roll out strategy

Once your organization is **ready** from both the **business processes** and the **IT** perspective, you will need to define your **e-AWB roll out strategy**. Some area you may consider:

- Pilot vs Big Bang
- Home location vs remote locations
- High potential airports across several countries vs all airports within one country
- By freight forwarders / By airlines

Airlines, don't forget to activate your Freight Forwarders in Matchmaker

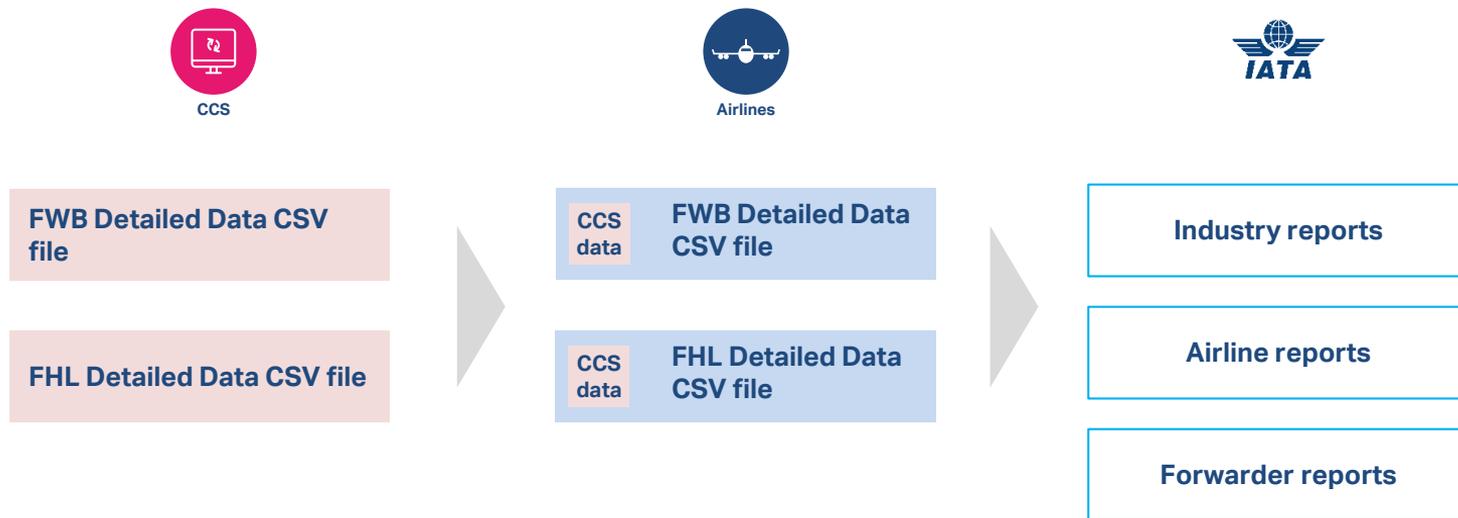
To help the industry **accelerate e-AWB** adoption, IATA launched **eAWB360**, an industry call-to-action initiative, consisting of series of **coordinated industry communication and engagement activities** aimed at encouraging airlines, freight forwarders and ground handlers to adopt e-AWB



Step 6 / *Report e-AWB shipments*

Step 6 / Report e-AWB shipments

Participating Airlines can report e-AWB shipments through the [Message Improvement Program \(MIP\)](#)



Optional



To be received by IATA by the 15th of the month



Reports to be distributed by the 20th of the month

The detail of the data flow and file specification is documented in the e-Freight MIP Strategy document. This document is available at: <http://www.iata.org/whatwedo/cargo/e/Documents/e-freight-mip-strategy.pdf>

e-AWB

How do we implement it?

Wrap up

e-AWB implementation - Wrap up



1. Join the Multilateral e-AWB Agreement

- Start your journey on www.iata.org/eawb-multilateral to join the Multilateral e-AWB Agreement



2. Ensure your technology supports e-AWB

- Ensure your organization is capable of sending and receiving Cargo-XML or Cargo-IMP messages



3. Ensure high-quality electronic messages

- Ensure your system produce high quality messages
- Validate your Cargo XML message for free on <http://www.iata.org/cargo-xml-autocheck>
- Join the Message Improvement Program (MIP) on <http://www.iata.org/MIP>



4. Ensure business processes are set

- Engage with your business partners
- Agree on a standard business processes and think Single process
- Comply with the Standard Operating Procedures (SOP) where applicable. The list of applicable SOP are available at: https://www.iata.org/eawb_global_sop



5. Roll out e-AWB

- Define your e-AWB roll out strategy
- Airlines to activate Freight Forwarders in Matchmaker



6. Report e-AWB shipments

- Report your e-AWB shipments through the Message Improvement Program (MIP)
- Details on <http://www.iata.org/whatwedo/cargo/e/Documents/e-freight-mip-strategy.pdf>

THANK YOU



Website
iata.org/cargo



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E-freight@iata.org



Cargo Tracker
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Twitter
twitter.com/iata