



e-AWB Implementation Playbook

September 2018





Table of Contents

General introduction to Digital Cargo	4
e-AWB progress status	. <u>17</u>
e-AWB implementation steps	. 25
Pre-requisite / Check the regulatory environment	<u>27</u>
Step 1 / Join the Multilateral e-AWB Agreement	28
Step 2 / Ensure your technology supports e-AWB	. <u>30</u>
Step 3 / Ensure high-quality electronic messages	<u>36</u>
Step 4 / Ensure business processes are set	39
Step 5 / Roll out e-AWB	44
Step 6 / Report e-AWB shipments	<u>55</u>
Wrap up	<u>57</u>

Digital Cargo @ IATA

Digital Cargo @ IATA





Our vision

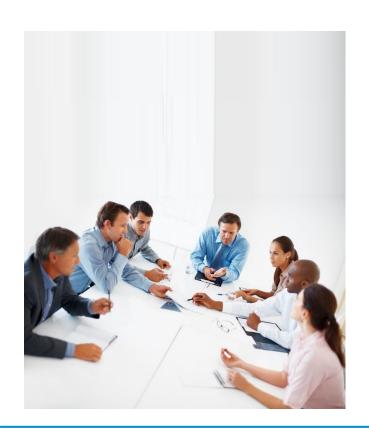
To achieve a fully digitally connected and integrated air cargo supply chain

Our mission

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

Driving change





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 e-Cargo Conference in Geneva and regular e-HCargo 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. IATA also organizes regular eAWB360 workshops to support the e-AWB adoption.



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.



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
- eAWB*Link*



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



Cargo Connect

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



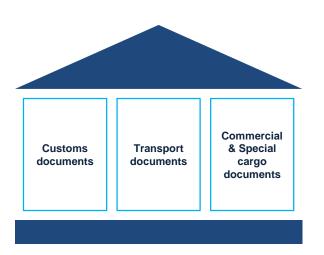
e-Freight implementation facilitates compliance to international and local regulations (e.g. facilitate Advance Electronic Information (AEI) requirements for security purpose)

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)

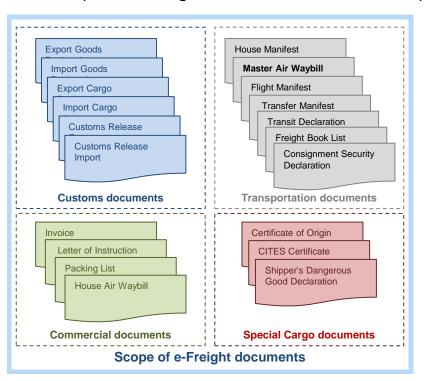
3. Commercial & Special cargo documents

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



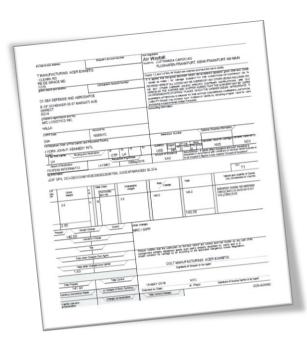


e-AWB Enabling the 100% e-Freight vision

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



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



The original transportation contract is electronic (shipment record)



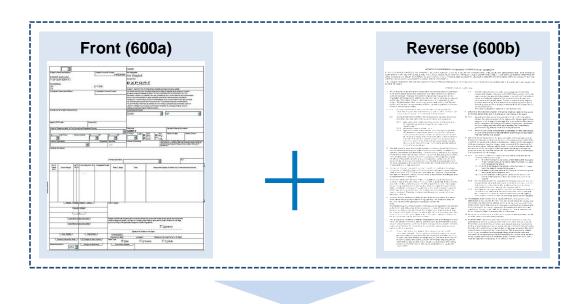
There is no longer a need to print, handle or archive the paper AWB simplifying the air cargo process

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

Electronic messages



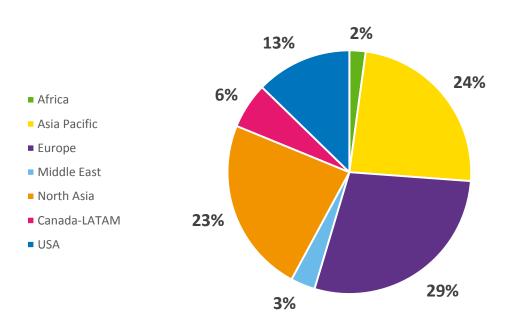
Signed e-AWB agreement

e-AWB Where do we stand now?

Status as of September 2018



In September 2018, the Air Cargo industry processed more than 2.3 million Air Waybills (AWBs)

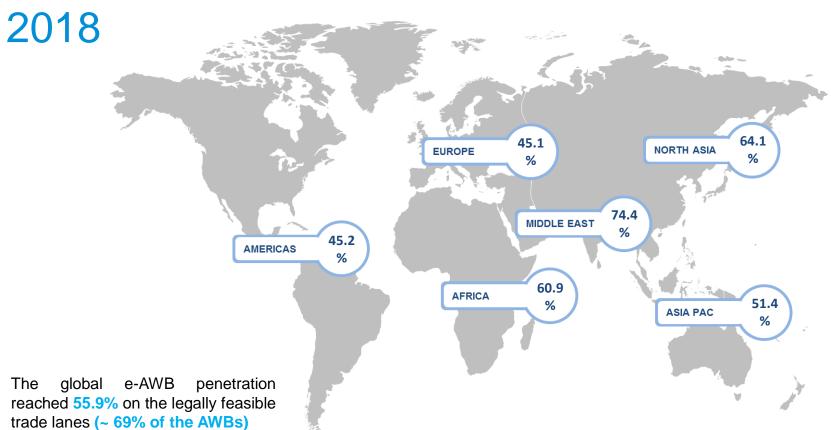


The industry is driven by three main regions representing 76% of the AWBs: Europe, Asia Pacific and North Asia



e-AWB penetration: 55.9% as of September





TOP performers / September 2018



The <u>e-AWB monthly update</u> (pdf) lists the top participating countries, airports, airlines, and freight forwarders

For more insight on the e-AWB performance at airport level, check out the <u>Top 100 Airports monthly report</u> (pdf)





e-AWB adoption / main challenges



In December 2017, the **global e-AWB penetration reached 52.6%** on the feasible trade lanes, a shortfall of 9.4 p.p. against the industry target of 62%. Main challenges are:

Regulatory constraints

 e-AWB is not possible in all airports and all trade lanes due to regulatory limitations

Lack of harmonization

 e-AWB procedures are not harmonized between freight forwarders, airlines and ground handling agents in key airports where e-AWB is live

Technology limitation

- Many of the SME forwarders do not have the technical capability/EDI enabled systems to enable them to transmit shipment data to airlines
- Some 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

Perceived complexity to do e-AWB for forwarders dealing with multiple airlines

Maturity threshold

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 identified in 2017 and will be continued and strengthen in 2018

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

- Complement the list of SOPs at e-airports (especially airports to be included in the 2018 eAWB360 roadmap)
- Developed an e-AWB Global Standard Operating Procedure (SOP)

Facilitate adoption by SME forwarders

 Launch on November 8th 2016 of an e-AWB desktop solution for Small and Medium sized Freight Forwarders (eAWB*Link*), low-cost alternative to existing solutions

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)

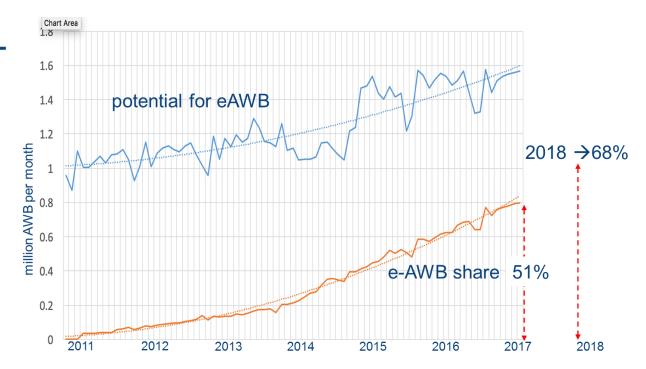


2018 e-AWB industry target: 68%



Based on the historical achievement, the forecasting model shows that an e-AWB penetration rate of 68% can be achieved by end of 2018

State of e-AWB usage

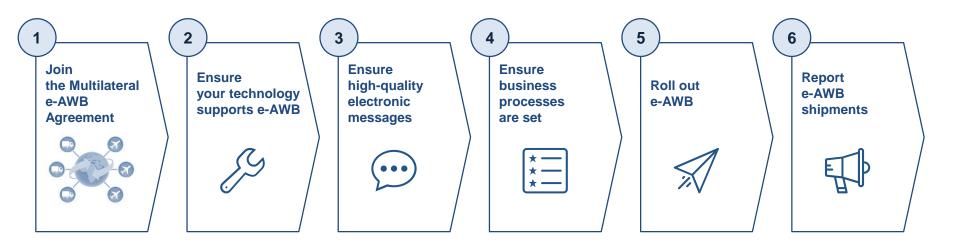


e-AWB How do we implement it?

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 2018, the **feasible trade lanes** represented **69%** of the AWBs.

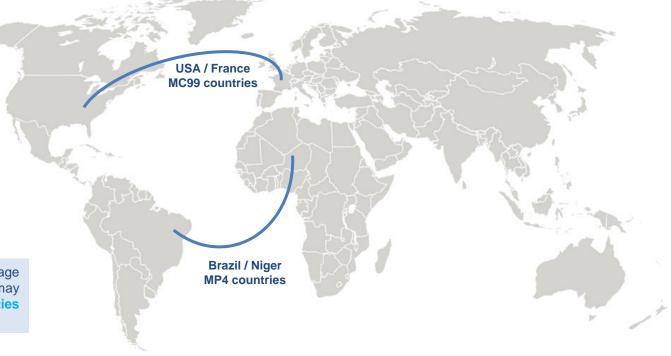
Feasible trade lane is defined as such when country of origin and country of destination ratified the same treaty - either the Montreal Protocol No. 4 of 1975 (MP4) or the Montreal Convention of 1999 (MC99)



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:

Freight Forwarders process

- Complete and submit the Online Joining Form
- Receive the Agreement by email from IATA Cargo
- Review and esign the Agreement
- Receive Final agreement after counter-signed by IATA
- Freight
 Forwarder will be listed as party to the MeA

Airlines process

Download and read the Resolution 672

Download, fill-in and sign the Resolution 672, Attachment 'D'

- Send the Airline Submission Form to IATA
- Airline to be listed as party to the MeA

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 <u>Airlines</u> and <u>Freight Forwarders</u> are listed on the IATA website. For more info, please visit: <u>www.iata.org/eawb-multilateral</u>

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



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
http://www.iata.org/about/sp/Pages/partners.aspx

Please filter "Area of Involvement"

























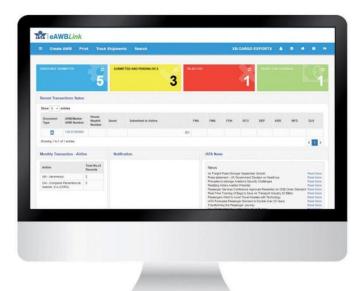


Step 2 / eAWBLink by IATA



Are you looking for an easy-to-use eAWB tool?

eAWB*Link* is a low-cost desktop solution designed to enable Small and Medium Freight Forwarders to create, send and manage electronic shipment data



Why Use eAWBLink?

- · Reduces processing costs
- Enhances quality
- · Improves productivity and reliability
- Enables shipment tracking
- · Facilitates Regulatory Compliance
- Track performance

Benefits

- Single window to over 120 carriers
- Easy to use
- Compliant with IATA standards
- · Avoids manual processes
- Affordable

Step 2 / eAWBLink features



profile management



document preparation



3

security



4

track + trace





5



end-to-end e-AWB process

User management Customer management Stock management e-AWB e-HAWB e-House Manifest e-CSD

FSU FOH (On hand)
FSU RCS (Accepted)
FSU DEP (Departed)
FSU ARR (Arrived)
FSU RCF (Received from flight)
FSU NFD (Notified)
FSU DLV (Delivered)

Monthly usage reports

Step 2 / eAWBLink connectivity



eAWB*Link* connect with 120+ Airlines using IATA standard Cargo-XML and Cargo-IMP messages







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:



- · Start the roll-out with a pilot
- Define test cases based on real life shipment to ensure all the mapping tables are properly configured
- Test the message integration in the systems to avoid message rejection
- Perform FNA/XFNM analysis as a basis for the root cause analysis
- Print and compare the results to identify truncated information issues





Run phase

- Perform FNA/XFNM analysis as a basis for the root cause analysis
- Monitor the message arrival time to ensure message arrive on time
- Automate the sending process to avoid late message due to human error
- Airlines and Freight forwarders to work closely to address message content issues and define the appropriate action plan

IATA offers you to validate your Cargo XML message for free

For more info, please visit: http://www.iata.org/cargo-xml-autocheck

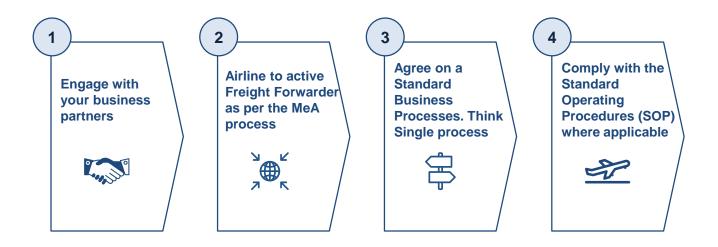
Join the IATA Message Improvement Program (MIP) to have access to your free monthly messaging quality reports – Note that they are focus on the technical quality of the message and not on the content For more info, please visit: http://www.iata.org/MIP

Step 4 / Ensure business processes are set

Step 4 / Ensure business processes are set



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



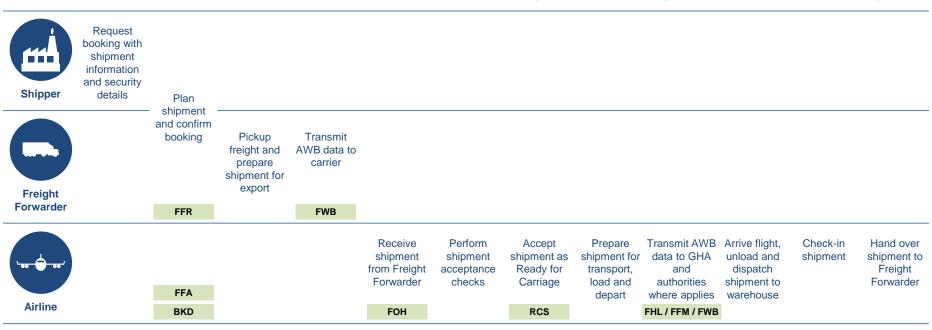
The SOP describes the operational steps that stakeholders of the air cargo supply chain need to follow when shipping air cargo in compliance with the e-AWB functional specifications

The e-AWB Global SOP is available at: https://www.iata.org/whatwedo/cargo/e/eawb/Documents/IATA_eAWB_Global_SOP.pdf

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.

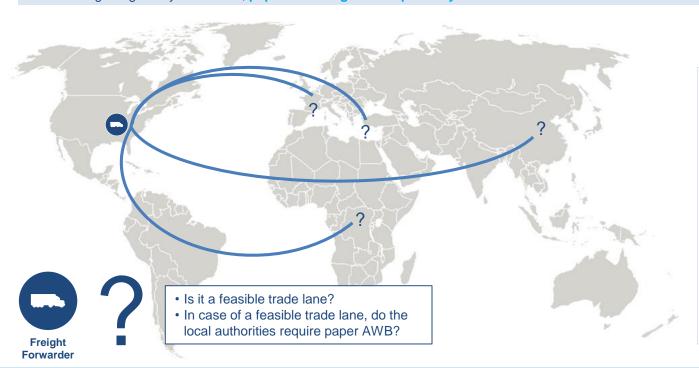
For more information, please visit: http://www.iata.org/whatwedo/cargo/cargoiq/Pages/master-operating-plan.aspx

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 face these questions. It always sends an e-AWB to the Airline and is accepted cargo without AWB. paper 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

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

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

- High potential airports across several countries vs all airports within one country
- By freight forwarders / By airlines

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





eAWB360

100% eAWB ADOPTION @ 50 E-AIRPORTS



eAWB360 - The concept

eAWB360 - Community driven approach



HARMONIZED IMPLEMENTATION + SYNCHRONIZED COMMUNICATION



SINGLE PROCESS

eAWB360 Airlines commit to implementing Single Process

AIRPORT SOP

Common e-AWB SOP for GHAs at **eAWB360** airports

COMMUNICATION

Coordinated and synchronized communication that e-AWB is the preferred means for shipping cargo from eAWB360 airports

eAWB360 – Synchronized communication



eAWB360 airlines need to send the **following core message** to their Freight Forwarder customers during the **same agreed week**

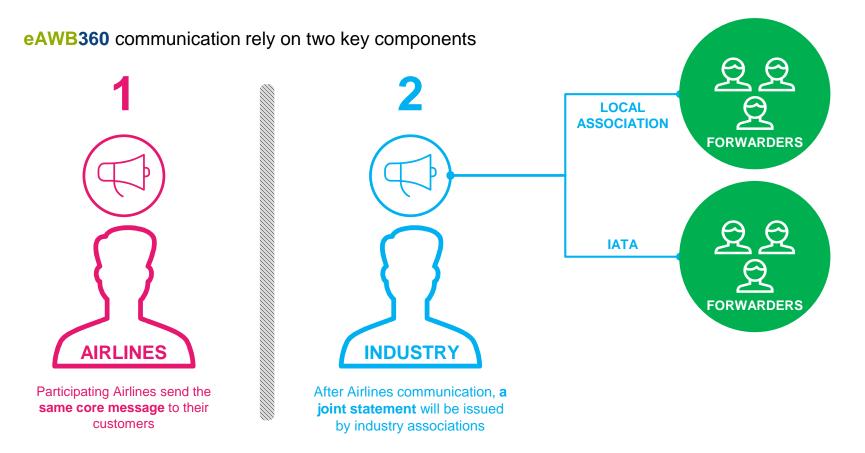


"We are switching over to e-AWB as the preferred means for shipping cargo to all destinations by using the e-AWB single process at ABC airport effective XYZ date."



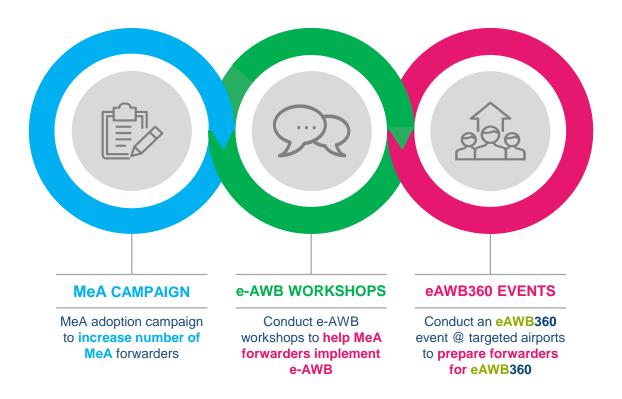
eAWB360 - Communication activities





eAWB360 – Engagement activities





eAWB360 – Where do we stand?

31 participating airlines at 37 airports

































































31 participating airlines at 37 airports





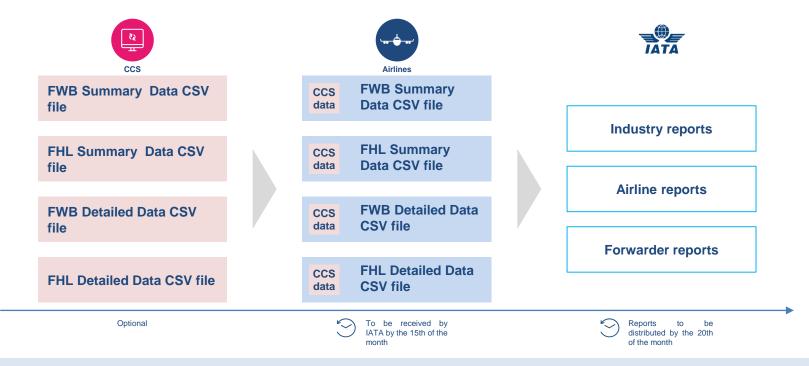
Airport	Go Live Date	AA	AC	AF	AM	AY	ВА	BR	CA	CI	СХ	DL	ET	EY	HU	IB	KE	KL	KQ	LA	LH	LX	МН	QR	SA	SN	SQ	SV	TK	UA	VS	Y8
AMS - Amsterdam	01-Jan-16																															
CDG - Paris	01-Feb-16																															
FRA - Frankfurt	01-Feb-16																															
DXB - Dubai	01-Mar-16																															
JNB - Johannesburg	01-Mar-16																															
LHR - London	01-Mar-16																															
MXP - Milan	01-Mar-16																														ı	
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HKG - Hong Kong	01-Jun-16																															
YUL - Montreal	01-Jun-16																															
YVR - Vancouver	01-Jun-16																													ш		
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DFW - Dallas	01-Jul-16																															
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CPT - Cape Town	01-May-17																													ш		
JED - Jeddah	01-Jun-17																													ш		
MAD - Madrid	01-Jun-17																															
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SEA - Seattle	01-Sep-17																															
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BRU - Brussel	01-Oct-17																															
CAN - Guangzhou Baiyun Int'l Airport	16-Oct-17																													ш		
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TPE - Chiang Kai Shek	01-Sep-17																		ļ											ш		
NRT - Narita	01-Nov-17			_																						<u> </u>				\vdash		
ICN - Incheon	01-Dec-17												<u> </u>		<u> </u>																	

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)



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



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: http://www.iata.org/e-awb



2. Ensure your technology supports e-AWB

- □ Ensure your organization is capable of sending and receiving Cargo-XML or Cargo-IMP messages
- ☐ Consider the use of eAWBLink on www.iata.org/eawblink



5. Roll out e-AWB

- ☐ Define your e-AWB roll out strategy
- ☐ Airlines to activate Freight Forwarders in Matchmaker
- ☐ Consider to join an eAWB360 initiative. More info available at http://www.iata.org/eAWB360



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



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



David SAUV sauvd@iata.org



Cargo Tracker iata.org/optin



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