

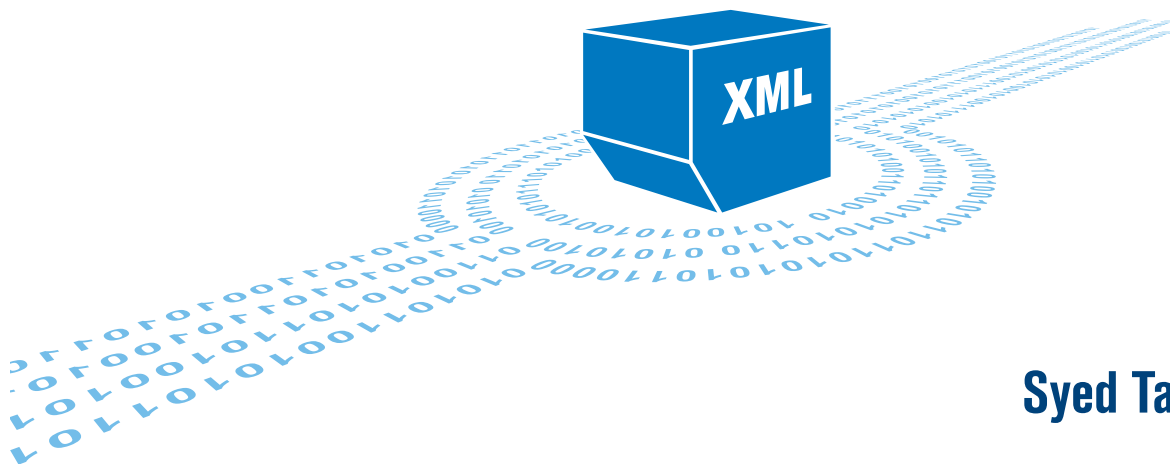


IATA Cargo XML

The new messaging standard modernizing
air cargo electronic communications

White paper

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1. Purpose

The air cargo industry is in its early stage of implementing the Cargo-XML standards. This paper is aimed at facilitating industry adoption of the Cargo-XML standards by providing different implementation strategies, migration approaches and the necessary guidelines that can be applied by the stakeholders. This paper also discusses the role of different stakeholders in adopting the standards and contains information about different tools and resources provided by IATA for Cargo-XML adoption.

2. Target Audience

This document is intended for air cargo stakeholders who are directly or indirectly involved with the electronic messaging. These include carriers, freight forwarders, ground handlers, shippers, customs and IT/messaging service providers.

3. Industry Situation

Embracing the e-vision in the air cargo supply chain communication, the air cargo industry is facing a number of challenges. One of the major challenges is the limitations of electronic messaging. Air cargo electronic messages “Cargo-IMP” were initially developed for interline purposes. Then later on, the use of these messages was extended to large freight forwarders and ground handlers for booking and operational purposes. IATA is maintaining and publishing these messages in the [Cargo-IMP Manual](#).

a. Cargo-IMP Challenges

Cargo-IMP Messages are widely used in the air cargo industry. Some of the common challenges associated with the Cargo-IMP Messages are listed in [Figure 1a](#):

- Airport to airport focus
- Airline centric
- For large players only
- Limited internet connectivity
- Costly to develop and maintain
- High transaction cost
- Poor data quality
- Length and character limitations

Figure 1a: Cargo-IMP Challenges

b. Cargo-IMP Freeze

As per industry demand, the IATA Cargo Services Conference (CSC) decided the freeze of Cargo-IMP Messages and discontinuation of the IATA Cargo-IMP Manual. Effective 1st January 2015, the Cargo-IMP Manual 34th Edition is the final edition and there will no longer be any changes to the Cargo-IMP Messages. The Cargo-IMP standard can continue to be used, however, future developments of messaging standards will occur in the Cargo-XML standards only.

Maintenance of the Cargo-IMP standard is stopped as of 1st January 2015. The Cargo-IMP Manual 34th Edition is the last and final publication for Cargo-IMP Messages.

4. The Cargo-XML Progress

As per the mandate given by IATA Cargo Committee (CC), IATA, with its members, is actively working on the development of new Cargo-XML Messaging standards as the successor to the existing Cargo-IMP Standard. [The Cargo-XML Task Force \(CXMLTF\)](#), is responsible for the development of the standard and has already developed the Cargo-XML Messages for core air cargo documents including:

- Air Waybill,
- Flight Manifest and
- House Air Waybill

These messages have been endorsed by IATA Cargo Businesses Processes Panel (CBPP) and adopted by the CSC.

a. Cargo-XML Status

As of June 2015, the CXMLTF has developed 15 Cargo-XML messages. The specifications and schemas of these messages are published in [the IATA Cargo-XML Manual and Toolkit](#).

The IATA Cargo-XML messages are listed in [Figure 1b](#).

Transport Messages	Acronym	Commercial Messages	Acronym
<i>XML Waybill</i>	<i>XFWB</i>	<i>XML Invoice</i>	<i>XINV</i>
<i>XML House Waybill</i>	<i>XFZB</i>	<i>XML Packing List</i>	<i>XPCL</i>
<i>XML House Manifest</i>	<i>XFHL</i>	<i>XML Certificate of Origin</i>	<i>XCOO</i>
<i>XML Flight Manifest</i>	<i>XFFM</i>	<i>XML Shippers Letter of Instruction</i>	<i>XSLI</i>
<i>XML Freight Booked List</i>	<i>XFBL</i>		
<i>XML Status Message</i>	<i>XFSU</i>		
<i>XML Response Message</i>	<i>XFNM</i>		
<i>XML Booking Message</i>	<i>XFFR</i>		
<i>XML Custom Status Notification</i>	<i>XCSN</i>		
<i>XML Shippers Dec for DG</i>	<i>XSDG</i>		
<i>XML Generic Request</i>	<i>XGRQ</i>		

Figure 1b: Cargo-XML Messages

b. Cargo-XML Benefits

The Cargo-XML standards offer a wide variety of benefits. Some of the common benefits are listed in the [Figure 2a](#).

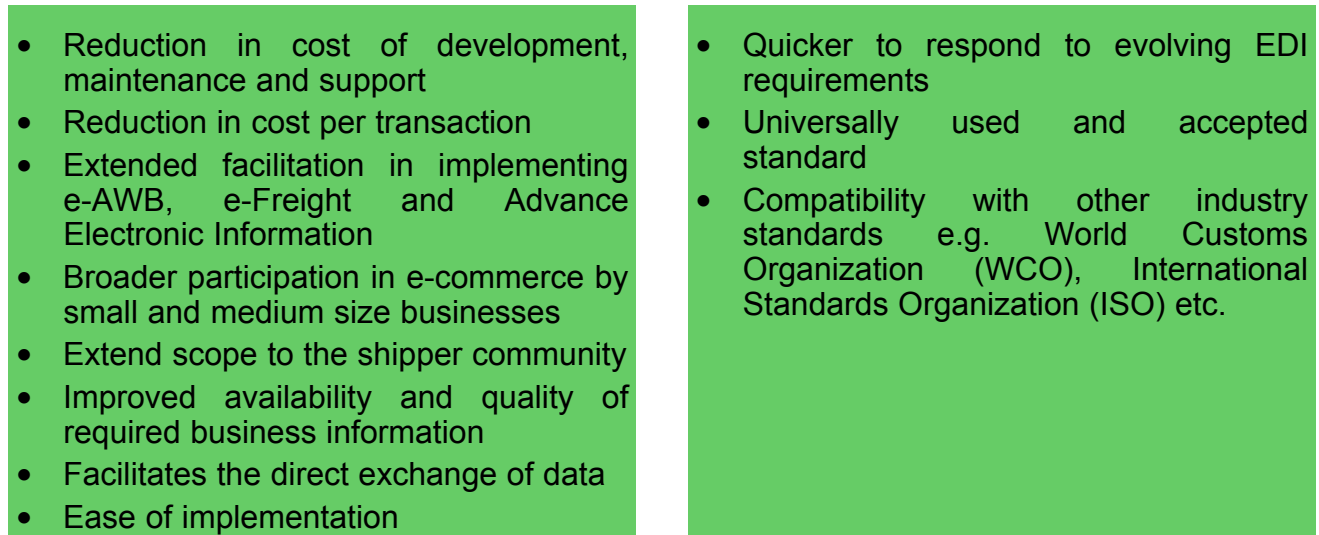
- 
- Reduction in cost of development, maintenance and support
 - Reduction in cost per transaction
 - Extended facilitation in implementing e-AWB, e-Freight and Advance Electronic Information
 - Broader participation in e-commerce by small and medium size businesses
 - Extend scope to the shipper community
 - Improved availability and quality of required business information
 - Facilitates the direct exchange of data
 - Ease of implementation
- Quicker to respond to evolving EDI requirements
 - Universally used and accepted standard
 - Compatibility with other industry standards e.g. World Customs Organization (WCO), International Standards Organization (ISO) etc.

Figure 2a: Cargo-XML Benefits

As XML is considered the favorite language for developing the messaging standards, the IATA Cargo-XML messages are interoperable with standards used by other modes of transport (maritime, road and rail).

c. Cargo-XML Adoption

A number of airlines, freight forwarders and ground handlers (mainly the CXMLTF members) have already taken the lead in implementing certain Cargo-XML messages. Most of these stakeholders were involved in developing the standard and/or part of Proof of Concepts (PoC).

IT Service Providers, mainly the IATA Strategic Partner, are also involved in Cargo-XML initiative.

As of June 2015, the Cargo-XML adoption status of the CXMLTF members is shown in the Figure 2b.

CXMLTF Cargo-XML Adoption Status Date: 15th June 2015

Company Name	Transport Messages									
	XFVB	XFZB	XFHL	XFHM	XFBL	XFSL	XFNM	XFRR	XCSN	XSDG
Air Canada	Live	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Air France/KLM Cargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
ALHA Group	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
American Airlines Cargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
British Airways IAG	Live	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Cargolux	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Cathay Pacific Cargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
DACHSER	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Delta Air Lines	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
DHL GF	Live	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Emirates SkyCargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
HACTL	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
INDITEX	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
K+N	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Korean Airline Cargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Lufthansa Cargo AG	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Qantas Freight	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
SAS Cargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Singapore Airlines Cargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Swissport	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year
Swiss WorldCargo	Planned within one year	Planned within one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year	Planned beyond one year

Figure 2b: Cargo-XML adoption by CXMLF Members

5. Implementation Strategies

The wider air cargo community has yet to embrace the Cargo-XML standard. Industry members are highly dependent on the IT companies providing solutions in air cargo domain. One of the impediments to the adoption of the Cargo-XML standard is the dependency on Cargo-IMP. One common concern of air cargo stakeholders is how to support its partners who continue to use Cargo-IMP once they have transitioned to Cargo-XML. Though it is possible to support users of Cargo-IMP within a Cargo-XML solution, this may result in compromising certain benefits of adopting Cargo-XML. On the other hand, to take the full advantage of the Cargo-XML standard, updates to the existing cargo/messaging systems as well as backend databases is required.

Although it is possible to support the Cargo-IMP partners in a Cargo-XML implementation however, it may result in compromising certain benefits of the Cargo-XML messages.

On the other hand, it is required to update the existing cargo/messaging systems as well as backend databases to take full advantage of the Cargo-XML Messages.

Broadly speaking, Cargo-XML adoption can be categorized into two different types:

- (a) Direct Cargo-XML adoption
- (b) Migration from Cargo-IMP to Cargo-XML

a. Direct Cargo-XML adoption

The industry members implementing any IATA cargo messaging standard for the first time falls under category “**Direct Cargo-XML adoption**”. Generally, this includes small and medium size companies who in the past, could not afford costly Cargo-IMP messaging infrastructure nor the operational (message transaction) cost. The lower cost of development, maintenance and transport of the Cargo-XML standard is an appealing aspect for these small and medium size companies to adopt the Cargo-XML.

The maximum benefits of the Cargo-XML messaging are achieved by Direct Cargo-XML adoption. Some of the key benefits of direct Cargo-XML adoption are listed in [Figure 2c](#).

- Availability of additional Information (additional fields in Cargo-XML)
- Extended length of existing Information
- Compatibility with other modes of transport such as Maritime, Rail and Road.
- Improved functionality of each single message.

Figure 2c: Additional Benefits of Cargo-XML

b. Migration from Cargo-IMP to Cargo-XML

The industry members currently using Cargo-IMP messages and migrating to the Cargo-XML standard, falls under the “**Migration from Cargo-IMP to Cargo-XML**” category. These are generally large airlines, ground handlers, freight forwarders and some customs administrations. Adoption of the Cargo-XML standards is highly dependent on business partners (with whom you they are exchanging messages). Since, the entire industry is not yet prepared to exchange information using Cargo-XML, even companies already using Cargo-XML are still obliged to exchange Cargo-IMP messages with the partners who have not yet migrated to Cargo-XML.

Companies migrating to Cargo-XML Messages need to have a solution in place to support their Cargo-IMP Partners.

Considering the industry is now using both the Cargo-IMP and Cargo-XML standards to exchange information, different combinations are possible:

i. Category 1: Exchanging message (Send) with Cargo-IMP Partner

- (i) Generate Cargo-XML Message -> Convert to Cargo-IMP-> Send Cargo-IMP Message
- (ii) Generate Cargo-IMP Message -> Send Cargo-IMP Message

ii. Category 2: Exchanging message (Send) with Cargo-XML Partner

- (i) Generate Cargo-IMP Message -> Convert to Cargo-XML-> Send Cargo-XML Message
- (ii) Generate Cargo-XML Message -> Send Cargo-XML Message (Somewhat similar to Direct Adoption)

In the above scenarios Category 1(i) and Category 2(ii), a core Cargo System supports Cargo-XML Messages while Category 1(ii) and Category 2(i) refer to the core Cargo System supporting Cargo-IMP Messages only.

The above scenarios also imply that users of Cargo-IMP can also communicate with their partners who are using Cargo-XML by using message conversion solution. In Cargo-IMP messages exchange, “Messaging Conversion” from one version to another is quite common.

“Messaging Conversion” from one version to another is quite common in the Cargo-IMP messaging exchange.

CARGO-IMP to Cargo-XML conversion is simple and straight forward as all commonly used information in the CARGO-IMP messages is also available in the equivalent Cargo-XML messages. Cargo-XML messages, however, contain additional information that is not part of the CARGO-IMP messages. This additional information in the Cargo-XML messages is either optional or mandatory however all mandatory elements have default values so it provides the flexibility for converting a CARGO-IMP to Cargo-XML message.

It is recommended that parties involved in Cargo-XML messages exchange, upgrade their Cargo Management and/or Messaging Systems to include these additional fields of the Cargo-XML messages otherwise; there is a risk of data/information loss.

It is recommended that parties involved in Cargo-XML messages exchange, upgrade their Cargo Management and/or Messaging Systems to include these additional fields of the Cargo-XML messages otherwise; there is a risk of data/information loss.

Though air cargo messaging partners can still successfully communicate with each other using different messaging standards, it is very important to identify the Cargo-IMP Messages and their versions that will be supported by the conversion solution.

c. Migration Plan

To successfully migrate from Cargo-IMP to Cargo-XML, a robust migration plan plays a key role. The migration plan must include:

1. Identifying the core business processes to be covered by the Cargo-XML Message
2. Identifying your partners
3. Selecting the Cargo-XML messages to be supported
4. Developing a Cargo-XML system
5. Engaging your partners
6. Preparing a pilot
7. Defining a success criteria
8. Executing a deployment plan
9. Going live

d. Migration Approach

The migration to Cargo-XML could be accomplished though a phased or an all-inclusive approach. In the phased approach, Cargo-XML messages are implemented in phases while the all-inclusive approach implements all Cargo-XML messages at once. The phased approach is the preferred over all-inclusive approach and all current Cargo-XML implementations have adopted this phased approach.

In the phased migration approach, The XML Waybill message (XFWB) and the XML Response (XFNM) are the preferred messages to be implemented and the subsequent messages are the XML House Waybill (XFZB), XML Status Message (XFSU), XML Flight Manifest (XFFM), XML Booking Message and then the rest of the Cargo-XML messages.

In the phased migration approach, The XML Waybill message (XFWB) and the XML Response (XFNM) are the preferred messages to be implemented.

i. Case Study–DGF

DHL Global Forwarding (DGF) implementation of Cargo-XML is a good example of migration from Cargo-IMP to Cargo-XML while supporting the Cargo-IMP partners. DGF's core cargo system only supports Cargo-XML messages however, DGF's partners who continue to support Cargo-IMP receive messages for DGF in Cargo-IMP format. In order to communicate with their Cargo-IMP messaging partners, DGF is using message conversion services from an IT partner. Any communication between the DGF core system and the messaging conversion partner is in Cargo-XML format. The messaging service provider partner ensures the message conversion to (when Sending) and from (when receiving) with the DGF partners. For the sake of conversion, DGF is supporting FWB versions between 9 and 16.

ii. Message Conversion Guidelines

During the transition phase, when both Cargo-IMP and Cargo-XML exist in the industry, there is an increased demand to convert from one format to other. Considering the industry need, IATA has developed the Conversion Guidelines between Cargo-IMP and Cargo-XML Messages. These are published in the [IATA Cargo-XML Manual and Toolkit 3rd Edition](#).

Message conversion from one standard to another is highly dependent on character set, data field length and occurrence, message semantics and structure and data types. [Figure 3](#) below, depicts the high level view of conversion between Cargo-IMP and Cargo-XML Messages.

High Level View of Cargo-IMP to Cargo-XML Conversion

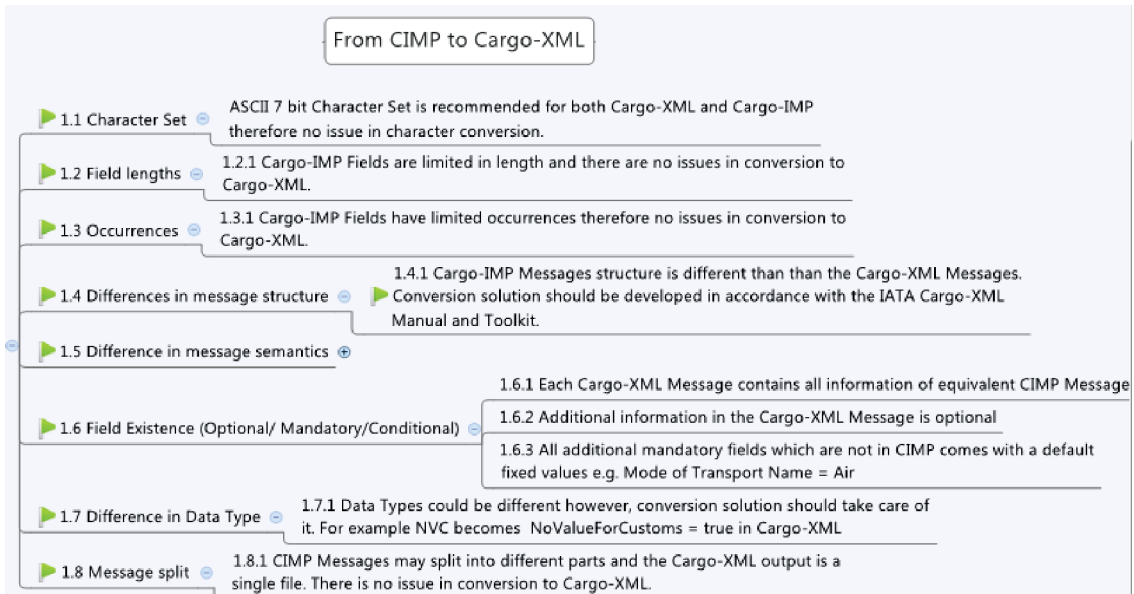


Figure 3:

High Level View of Cargo-XML to Cargo-IMP Conversion

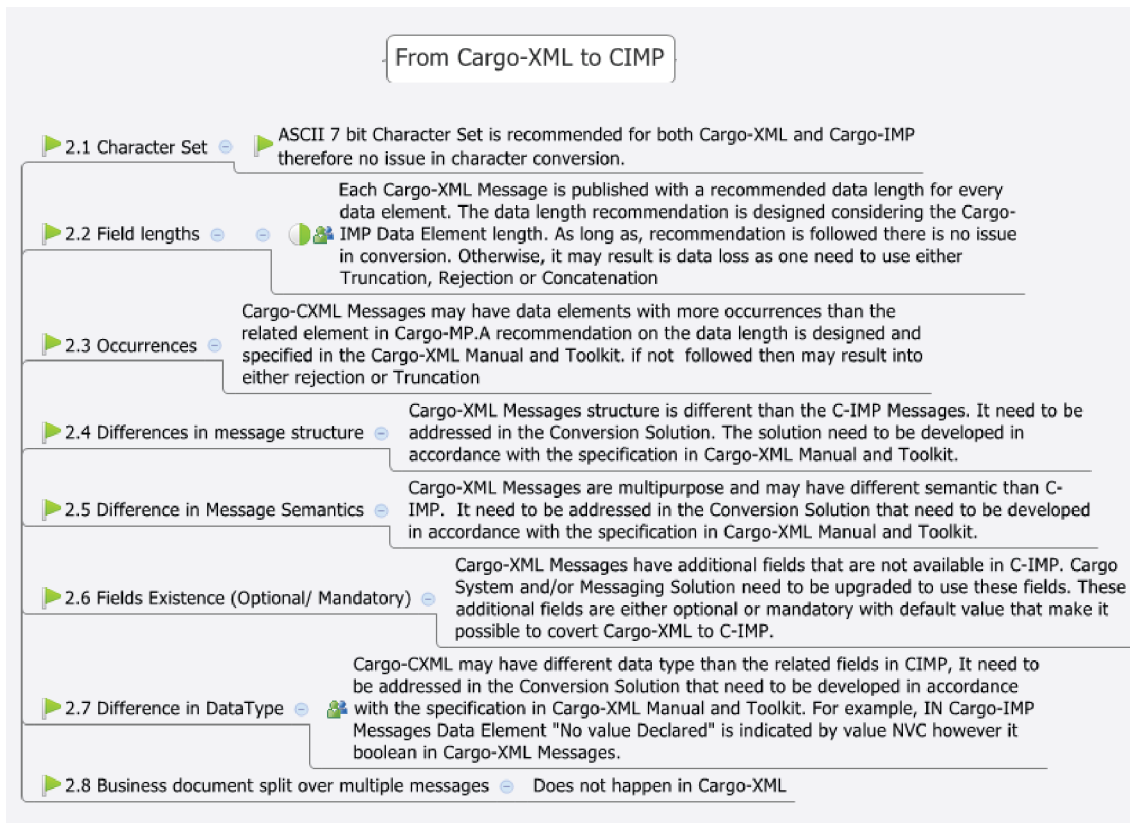


Figure 4: Cargo-XML to Cargo-IMP Conversion

To facilitate the conversion, each Cargo-XML message contains references to its equivalent Cargo-IMP Message(s) and each data element in the Cargo-XML message is mapped to its equivalent data element in the corresponding Cargo-IMP message. Where necessary, business rules are defined to support the conversion between the two standards. A harmonized character set is the key to converting from one format to another. In order to harmonize the characters sets of Cargo-IMP and Cargo-XML, the IATA CSC has agreed to upgrade the Cargo-IMP character to ASCII 7 bit and simultaneously the Cargo-XML character set has been downgraded to ASCII 7 bit from UTF-8. Air Cargo stakeholders, at present doesn't see the need to for extended character set for Cargo-XML Message.

6. Role of stakeholders

a. Airlines, Freight Forwarders and Ground Handlers

As of June 2015, large airlines including Delta, Air Canada, Cathay Pacific, and IAG Cargo have already implemented Cargo-XML, however, the scope of their Cargo-XML exchanges is limited due to the small number of freight forwarders capable of sending and receiving Cargo-XML messages. The two large freight forwarders who have implemented Cargo-XML are DHL Global Forwarding (DGF) and Kuehne Nagel (K+N). Adoption of Cargo-XML is increasing with airlines such as Emirates, and LAN Cargo currently in the process of implementing Cargo-XML as are freight forwarders such as Panalpina.

Ground handlers are the key component of air cargo supply chain but the large GHAs have yet to embrace Cargo-XML. The only example available to date is ALHA Airport Services, a GHA based in Italy, who have developed the Cargo-XML solution.

b. Customs and Advance Cargo Information Initiative

Customs administrations and the IT Solution Providers are playing a pivotal role in the electronic air cargo supply chain. In June 2005 the [World Customs Organization \(WCO\)](#) Council adopted the Standards to Secure and Facilitate Global Trade (SAFE Framework) that would act as a deterrent to international terrorism, secure revenue collections and promote trade facilitation worldwide. In order to meet the WCO Safe Framework of standards, Customs Administrations around the world have devised Advance Cargo Information (ACI) initiatives such as US-AMS and EU-ICS. These ACI initiatives were historically based on the Cargo-IMP standards or customs administrations were using their own messaging standards. Since the customs administrations are unable to support the Cargo-IMP messages directly from the industry members who were mandated to provide advanced information, IT service providers were acting as a bridge between the air cargo stakeholders filing ACI and the customs administrations.

As air cargo industry is moving away from Cargo-IMP in favor of Cargo-XML, customs administrations are also looking forward to tighten the security measures. Customs administrations are moving from pre-departure information to pre-loading information and new programs such as US-ACAS and EU-PRECISE are coming into existence.

i. ACAS Pilot–K+N Example

Kuehne + Nagel (K+N) implemented Cargo-XML for exchanging of the House Waybill information for US bound shipments with the US CBP. K+N's solution transmits IATA XML House Waybill messages (XFZB) directly from K+N's enterprise system to US CBP without manual intervention thereby optimizing data quality. It also transmits the CBP response messages back to K+N. K+N participates in the ACAS dual filing project to detect high risk Shipments and customs clearance problems as early as possible in the supply chain process.

Customs administrations are much keener in implementing their ACI based on the IATA Cargo-XML Messages than any other air cargo stakeholder. Some customs administrations have even implemented the IATA Cargo-XML Messages.

ii. Argentine Customs Example

Argentine Customs (known as **Administración Federal de Ingresos Públicos - AFIP**) has recently implemented an ACI initiative based around the Cargo-XML messages XML Air Waybill Message (XFWB), XML House Waybill Message (XFZB), XML House Checklist (XFHL) and XML Flight Manifest (XFFM). In addition to Argentina, US-Customs and Border Protection (CBP) have announced plans for implementing IATA Cargo-XML in their new ACE system that will be used for ACI. Some other customs administrations are in process of implementing IATA Cargo-XML as the preferred format to provide them with ACI.

The customs administrations moving towards Cargo-XML messages are bringing a new opportunity for IT service providers. Some IT service providers have pro-actively developed a Cargo-IMP to Cargo-XML converter in order for industry to fulfill its customs obligations. Since customs administrations are taking a lead in implementing IATA Cargo-XML for their own ACI initiatives, a vast majority of air cargo stakeholders are using the Cargo-IMP to Cargo-XML conversion solutions from IT service providers. This conversion practice will continue unless, the air cargo stakeholders develop direct Cargo-XML messaging capabilities within their core systems.

c. IT System and Messaging Service Providers

IATA has introduced a new business model for how it offers the Cargo-XML standard to IT system, software and service providers. Any IT service/system/solution provider interested in developing solution or offering products using the IATA Cargo-XML Messages must first license the standard from IATA. Other industry members such as airlines, freight forwarders, ground handlers etc. can directly buy the toolkit from IATA to implement the Cargo-XML Messages.

Air cargo industry is largely dependent on the Cargo System Providers and the Messaging Service Providers for the adoption of Cargo-XML standards.

The air cargo industry is largely dependent on the IT system providers and the messaging service providers for the adoption of Cargo-XML standard. Currently, 30 of the top industry IT system providers and the messaging service providers have licensed the Cargo-XML standard from IATA. Some of these companies have already implemented Cargo-XML

messages in their core cargo systems while others are in process of development. Messaging service providers are now offering additional services such as conversion between Cargo-IMP to Cargo-XML messages, conversion between different Cargo-XML versions etc.

Other companies have also licensed Cargo-XML. Most of these companies are providing solutions for Customs ACI filing or core customs systems.

One of the underlying features of Cargo-XML is that it allows direct connectivity with your messaging partner, however, it is up to the air cargo industry how much they want to benefit from this feature. Over the years, messaging service providers have extended their solutions and services beyond the connectivity and infrastructure.

Air Cargo Messaging Service Providers are offering a number of value added services on top of messaging communication.

Some of the value added services offered by the messaging service providers are:

- **Connectivity between the parties using heterogeneous/homogenous protocols:**
 - Route the Message from one stakeholder to another
 - Ensure Guaranteed delivery
 - Track and Trace
 - Reporting
 - Audit Trail
 - Archiving
- **Message conversion/Translation:**
 - One message to other
 - One version to other
 - One format to other
- **Maintain Repositories:**
 - Participants Information/Profiles
 - Participants Identification/Addresses
 - Participants messages, versions and connectivity details
- **Technology Availability**
- **Manage Security, Authentication, and Compressions etc.**

Many large stakeholders (who have their own messaging infrastructure) route their messages through the IT/messaging service providers because of the value added services offered by these entities.

d. International Organizations

i. World Customs Organizations (WCO)

IATA and WCO are cooperating closely on the development of messaging standards ensuring that the IATA Cargo-XML standards compatible with WCO data model.

The Cargo-XML standard is based on the UN/CEFACT Core Component Library, which makes it multi-modal and cross-border compatible. Cargo-XML is also compatible with the WCO Data Model and the definition of each data element in the Cargo-XML Messages contains a reference to its equivalent Data Element in WCO Data Model.

IATA Cargo-XML standards are based on the UN/CEFACT core components and are compatible with the WCO Data Model.

ii. United Nation (UN)

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD), a part of United Nation (UN) organization and IATA has signed a Memorandum of Understanding (MoU) on the adoption of the Cargo-XML messages in the UNCTAD system called “ASYCUDA World”.

UNCTAD offers this system to customs administrations in the developing countries.



Figure 5: IATA and UNCTAD MoU

7. Tools and Resources from IATA

a. The Cargo-XML Manual and Toolkit

IATA Cargo-XML Manual and Toolkit 3rd Edition (Figure 6) in 2015, containing following features:

- Cargo-XML Messages (specifications and Schema) with example and layout.
- Business and Implementation Rules
- Mapping between specs and schemas
- Conversion Guidelines (Cargo-IMP and Cargo-XML)
- Cargo-IMP 33rd Edition and Mapping between Cargo-IMP and Cargo-XML Messages.
- Data Length Recommendation
- Sample Messages and Layouts
- Cargo-XML Scorecard for CXMLTF
- Auto update feature



Figure 6: Cargo-XML Manual and Toolkit

Cargo-IMP Messages (pdf format) are included in the Cargo-XML Manual and Toolkit. Both Cargo-IMP and Cargo-XML Manual share the common code list. Since Cargo-IMP Manual is now discontinued, therefore, Code Lists will only be updated (as and when required) and published in the Cargo-XML Manual and Toolkit. At any time, the latest Code List (as published in Cargo-XML Manual and Toolkit) will be applicable to both Cargo-IMP and Cargo-XML Messages unless explicitly specified.

Code lists are common and applicable to both Cargo-IMP and Cargo-XML messages however, the updated code list is only published in the Cargo-XML Manual and Toolkit.

b. The Cargo-XML Message Autocheck

IATA is aware that the development and publishing of the Cargo-XML standard is insufficient to facilitate and lead industry adoption. To assist the industry in its efforts to migrate to Cargo-XML, IATA is offering solutions to assist in the facilitation of Cargo-XML implementation. One of the solutions is the Cargo-XML message validator [Cargo-XML Autocheck](#), which is a portal-based automated solution that will allow the technical experts and/or programmers to validate their Cargo-XML Message with the IATA Standards without a partner.

Cargo-XML Autocheck portal is based on a simple 4 steps procedure to validate a Cargo-XML Message. The procedure is depicted in [Figure 7](#).

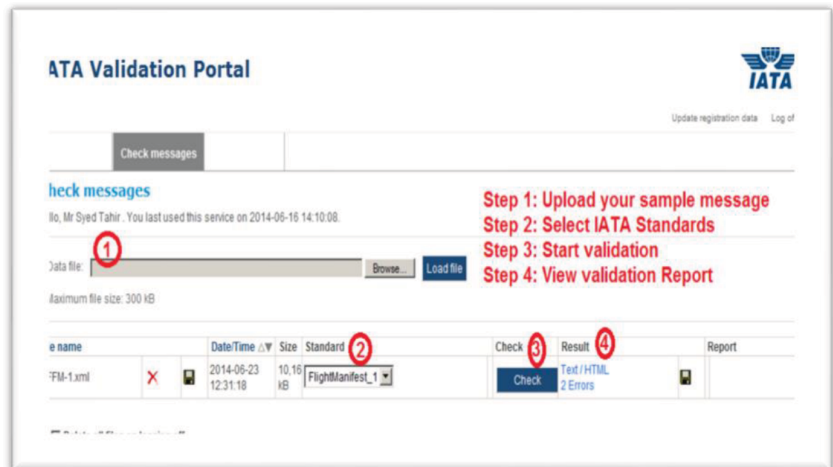


Figure 7: Cargo-XML Autocheck Portal

Cargo-XML Autocheck portal is intended to be used widely at the time of message implementation and testing. The end user can improve the Cargo-XML message solution/refine the system based on the error report generated by the Message Validator. It will ultimately help in improving the message data quality.

Cargo-XML Autocheck portal benefits are listed in [Figure 8](#).

- Powerful online service
- Syntax check validation with business logic checks
- Self-test without partner
- Support during rollout and when connecting additional partners
- Permanent availability (24/7)
- High data quality and integrity
- Test results immediately available
- Fast overview of the error situation

Figure 8: Cargo-XML Autocheck Benefits

c. The Cargo-XML Workshops

In order to raise industry awareness about the Cargo-XML standards, IATA is conducting Cargo-XML Workshops regularly. IATA Cargo-XML Workshops detail could be found on the [IATA website](#).

d. The Cargo-XML Training

IATA has launched a Cargo-XML Training Course. The Training course is offered as in class training (3 days) as well company based training tailored as per individual company requirement. This training is delivered by IATA's instructor and course materials. Further details about the training course are available on the [IATA website](#).

8. Summary

Implementation strategy plays a key role in a successful Cargo-XML implementation. To obtain maximum benefits of the Cargo-XML standards it is vital to have a well-defined, thorough, and robust implementation strategy for Cargo-XML solutions.

During the transition period when both Cargo-IMP and Cargo-XML standards co-exist in the industry, message conversion solutions (between Cargo-IMP and Cargo-XML) serve the purpose to exchange the information between these heterogeneous standards. Conversion solutions, however, may result in the loss of data when downgrading a Cargo-XML message to its equivalent Cargo-IMP message.

Cargo IT Service and Messaging Providers are enablers for the widespread adoption of the Cargo-XML standards.

Due to multimodal and cross-border features of the IATA Cargo-XML standards, Customs authorities are moving towards the new standards.

IATA Cargo-XML standards are published in a user-friendly and interactive way, and tools like "Cargo-XML Autocheck" facilitates the testing of the Cargo-XML solutions. However, additional research needs to be done by IATA to develop new tools for facilitating Cargo-XML implementation.

For any further information please visit www.iata.org/cargo-xml or contact us at Cargoxml@iata.org.

