> ## " EDI messaging today is the core pillar of our business strategy and planning.
> Senior Manager, Product, Services and Technology, Swiss World Cargo

At the printing of this guide, over 100 posts and 80 airlines exchange CARDIT and RESDIT EDI messages, with more than 50% using the latest message versions. In contrast, more than 100 posts are technically capable but are not sending CARDIT, while more than 60 airlines are transporting mail but not sending EDI. Those who have invested in post-airline EDI can confirm the benefits gained.

EDI CARDIT/RESDIT and Mail scanning has provided Qantas Airways with the ability to improve the overall process in handling mail. EDI's key feature is visibility and greatly improved tracking of mail bags. **The investment to have an EDI system in place has been more than justified.**
Manager Global Airmail, Qantas

The increased use of EDI makes the process transparent for both origin and destination post as well as the carrier - especially for transit routes. With EDI, we have a dialogue with carriers based on facts. Together posts and carriers can use the EDI to monitor the process, identify problems and carry out improvement action plans.
Head of International Operations, Post Nord Danmark

EDI is not just about going green and being environmentally friendly. It makes data available for usage, transmission and analysis in an easy and cost efficient manner. The data can then be used for planning, reporting, analysis, quality monitoring, accounting and to design seamless processes. EDI messaging today is the core pillar of our business strategy and planning.
Senior Manager, Product, Services and Technology, Swiss World Cargo

EDI is a game changer for the postal industry, providing paperless exchanges, simplifying accounting, and increasing efficiencies in routing, inventory control and visibility. Ultimately, EDI helps drive down operational costs and increase posts/customers' satisfaction.
Global Manager, Postal Affairs, Delta Airlines

Not only does EDI messaging help us significantly improve transparency of our airmail movements and enable us to discover and address performance issues.
It also offers the opportunity to give additional tracking information to our e-commerce customers and recipients.
Senior Expert Network Development, Deutsche Post DHL Group

IN THEIR OWN WORDS...

EDI is not only a tool used to build a virtual network between postal operators and extend it to air carriers. It has now become a critical asset to meet the increasing security requirements and confirm the security status of postal flows along the supply chain.
Supply Chain Manager, Le Groupe La Poste

and additional documents. This includes the specifications of CARDIT and RESDIT messages for exchanges between posts and airlines. The UPU also publishes guides, such as a Transport Guide containing business guidance on the supply chain, and a Transport Framework Agreement (TFA). The UPU Postal Technology Centre (PTC) provides technical expertise and IT solutions to help postal operators manage mail and exchange the relevant EDI messages.

Some key steps to enable postal operators to enhance their post-airline EDI capabilities include:

- Subscribing to the UPU messaging standards publication;
- Using the associated UPU code lists available on the UPU website;
- Using the Transport Guide to apply the general guidelines for optimised transport to air;
- Using the Transport Framework Agreement as a guideline for the contracts to be signed between posts and airlines.

For further information and assistance, please contact the UPU: standards@upu.int / transport@upu.int

IPC

International Post Corporation (IPC) is the postal industry's partner company that provides leadership by driving service quality, interoperability, and delivering business-critical intelligence. IPC provides technological and cooperative solutions that enable member and non-member postal operators, as well as their business partners, to grow by implementing improved processes.

Since 2006, IPC has led the Future of Mail by Air (FoMbA) initiative, where participating posts and airlines promote the expansion of EDI, jointly define industry best practices, and develop and pilot operational solutions and systems.

The outcomes of the different FoMbA activities are reflected in the Standard Operating and Messaging Procedures (SOMP) document that thoroughly describes the best practices to be adopted by posts and airlines in order to fully optimise their business processes.

IPC solutions that support the airmail industry include:

- Integrated Forecasting Allocation and Booking Solution (IFABS): IFABS is an end-to-end solution designed to assist posts and airlines in airmail transport planning. IFABS includes modules to forecast transport capacity needs, optimise transport plans, build allotment templates, and facilitate booking into the allotment
- Mail Registration Device (MRD): Allows for the quick and simple registration of mail handovers between posts and airlines at postal facilities situated in airports
- FoMbA dashboard and other reporting tools: Several dashboards and operational reports have been developed by IPC for posts, airlines and other parties to closely monitor the compliance level of their EDI messaging and the quality of their processes.

Under FoMbA's leadership:

- The number of post-airline pairs exchanging EDI has quadrupled since 2006
- EDI standards have been updated to comply with the newest industry requirements for the carriage of mail
- The number of consignments travelling under Paper Free conditions (with no paper delivery bill) continues to grow and has long passed the 80% mark among FoMbA participants.

FoMbA is open to all posts and airlines willing to make a difference within the industry and to benefit from optimised, EDI-based processes.

Learn how to be part of it: fomba@ipc.be

ABOUT THIS PUBLICATION

This brochure is a joint publication of the Universal Postal Union, the International Air Transport Association, and the International Post Corporation, with sponsorship from several EDI solution providers. References are given below to assist parties interested in participating or increasing their participation in international postal-related EDI.

COLLABORATION...

- **UPU Standards Board and UPU Transport Group:** participants include IPC and IATA, these groups examine EDI messaging standards for mail and matters relating to all modes of mail transportation
- **IPC Future of Mail by Air Initiative:** Senior Executive Group FoMbA sets overall policy and direction, FoMbA Task Force provides industry-wide guidelines on best practice and sets up action groups to focus on specific processes and solutions. Participants in all activities include multiple airlines and postal operators as well as UPU and IATA
- Other activities carried out by these organisations, convened to address specific business issues.

PRODUCERS

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UN Specialized Agency for International Postal Services
www.upu.int | info@upu.int

IATA — International Air Transport Association
www.iata.org
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The Natural Partner for the Postal Industry
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E-COMMERCE SECURITY 🔍 VISIBILITY PAPER-FREE 📶
CUSTOMER SERVICE ACCOUNTABILITY DELIVERY CONFIRMATION RELIABILITY

EDI THE KEY TO POST-AIRLINE SUPPLY CHAIN INTEGRATION

The rapid evolution of e-commerce is driving the sustained growth of cross-border postal traffic. E-commerce customers demand consistent visibility and a reliable service. To succeed in such a competitive environment, posts and airlines must expand and optimise the use of Electronic Data Interchange (EDI).

Adopt latest standards, upgrade technology, and implement best practices to achieve efficiencies, fulfill regulatory requirements, and increase revenues.

UPU UNIVERSAL POSTAL UNION   **IATA**   **International Post Corporation**

MAIL AND EDI, A NATURAL PARTNERSHIP

The international airmail industry is comprised of many different stakeholders: postal operators, airlines, ground handlers, border authorities, industry organisations, and suppliers, among others. Several industry groups and international bodies are combining efforts to promote the correct use of Electronic Data Interchange (EDI) in order to overcome the challenges faced by the industry in terms of customer expectations and regulatory requirements.

IATA, UPU, and IPC are setting high quality standards and establishing industry-wide business rules for the optimisation of EDI-based airmail processes.

In this section you will find the key aspects of some of these activities and the necessary information to be a part of them.

IATA

The International Air Transport Association (IATA) is the global trade association for airlines, representing some 265 airlines or 83% of total air traffic. IATA supports many areas of aviation activity and helps formulate industry policy on critical aviation issues. IATA's mission is to represent, lead, and serve the airline industry. IATA hosts a number of programmes in Passenger, Baggage, Flight Operation and Cargo activities and effectively collaborates with international organisations such as the Universal Postal Union (UPU), International Post Corporation (IPC), World Customs Organisation (WCO), World Trade Organisation (WTO) and national authorities to ensure a safe and efficient supply chain.

IATA's EDI vision is to build and implement an end-to-end paperless process in the air cargo supply chain through a secured, robust and cost-effective data exchange. To manage this vision, IATA has stopped producing new editions of its Cargo-IMP Manual and is now only maintaining and developing Cargo-XML standards published in its IATA Cargo-XML Manual and Toolkit.

This air cargo industry migration to modern IATA Cargo-XML standards aims at achieving the following:

- Facilitating end-to-end Cargo and Mail Business Processes (e-Cargo)
- Fulfilling Customs Requirements for Advance Cargo and Mail Information Filing
- Complying with Security Regulations e.g. electronic Consignment Security Declaration (e-CSD) etc.

XML is the preferred choice for developing international standards and IATA believes that Cargo-XML standards, which are multi-modal and cross-border, will play a pivotal role in the seamless exchange of information between posts and carriers.

IATA's Air Mail Board (AMB) is the main instance where airmail experts from the carrier industry discuss all matters dealing with the movement of mail by air.

It develops and maintains standards, guidelines and procedures related to the carriage of air mail and gives the carriers the opportunity to define a common approach regarding airmail related issues. The AMB typically meets twice a year.

For any questions regarding the AMB and its activities please contact: majeresa@iata.org

UPU

The Universal Postal Union (UPU) is a specialised agency of the United Nations founded in 1874. With 192 member countries, this intergovernmental organisation's mission is to stimulate the lasting development of efficient and accessible universal postal services of quality in order to facilitate communication internationally. It is the primary forum for cooperation between postal sector players.

The organisation fulfils an advisory, mediating and liaison role, and provides technical assistance where needed. It sets the rules for international mail exchanges and makes recommendations to stimulate growth in mail, parcels and financial services volumes and improve quality of service for customers. The UPU's Standards Board (SB) develops technical standards and EDI message specifications to facilitate the exchange of information electronically between posts.

It also coordinates UPU standardisation initiatives with those of other international standardisation bodies, and works closely with designated postal operators, their partners and many international organisations to this end. As part of its standardisation activities, the UPU updates and maintains the relevant standards documents, the related code lists where data are found to properly populate message data elements,

WE WORK IN CLOSE

IATA, UPU, and IPC work in close cooperation to assist all involved stakeholders to expand and improve the use of EDI.

Examples of cooperation include bilateral and multilateral groups and initiatives such as:

- **IATA World Cargo Symposium:** mail and e-commerce track presented at this annual event in cooperation with IPC
- **IATA-UPU Contact Committee:** coordinates information exchanges and actions relating to implementation of the IATA UPU memorandum of understanding

POST-AIRLINE SUPPLY CHAIN END-TO-END PROCESS INTEGRATION THROUGH EDI

Electronic Data Interchange (EDI) interconnects posts and airlines, enabling the creation of an integrated end-to-end network that delivers an enhanced level of customer service through a managed supply chain. The illustration shows the processing and handling sequence for cross-border shipments. For an e-commerce item, the e-shopper places an order and the e-shopper hands the item over to the origin post. The post inducts the item into its domestic network where it passes through several handling, sortation, and transport processes. At the origin Office of Exchange (OE), the item is nested to (placed in/assigned to) a receptacle for international despatch to the destination OE. The receptacle is then usually nested to a Unit Load Device (ULD) for air transport. At the point of destination, the receptacle is unloaded from the ULD and handed over to the destination post. The receptacle is opened and the item is retrieved and cleared through customs. The destination post then inducts into their domestic network for processing and final delivery to the e-shopper.

Each of the different handoffs summarised above and detailed in the illustration is supported by data capture methods such as barcode scanning, computerised entries, and RFID. The different supply chain partners use the data to generate and exchange the applicable EDI messages in compliance with agreed standards and business rules.

The following section provides an overview of the different categories of EDI messages. It introduces procedures that posts and airlines need to implement to operate a global network and comply with security and customs regulations while meeting market expectations.
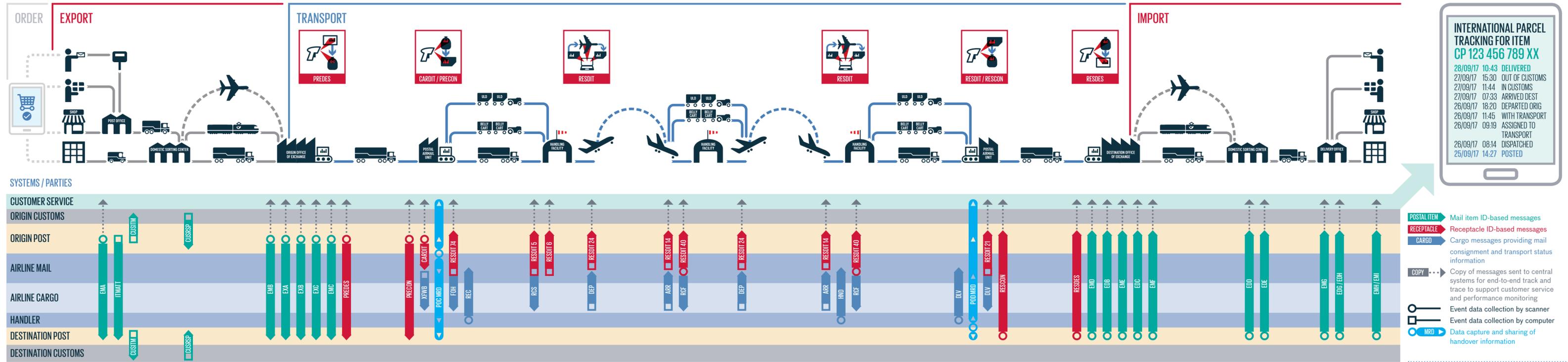
Key IATA Standard cargo-XML messages

XFWB Airway Bill data (available to airlines prior to tender of "ready for carriage" consignments)
XFFR Booking request message
XFFA Booking confirmation message
MLD Mail Label Data (to transfer receptacle ID information in the airline environment enabling airlines to report a particular mail status event)
XFSU Status Update (unsolicited update providing the latest status attained for a consignment)

Mail Status Events (within MLD)

DLV Delivered to office of destination
HND Received from a flight or delivered to a flight
REC Received from post office at origin

Cargo Status Events (within XFSU)

RCS Consignment received from the shipper and accepted as "ready for carriage" by airline at origin
DEP Consignment departed on a flight
ARR Flight Arrival at an airport
RCF Consignment received from a flight or "flying truck"
DLV Consignment delivered to the consignee or its agent

International Parcel Tracking for Item
CP 123 456 789 XX

28/09/17 10:43	DELIVERED
27/09/17 15:30	OUT OF CUSTOMS
27/09/17 11:44	IN CUSTOMS
27/09/17 07:33	ARRIVED DEST
26/09/17 18:20	DEPARTED ORIG
26/09/17 11:45	WITH TRANSPORT
26/09/17 09:19	ASSIGNED TO TRANSPORT
26/09/17 08:14	DISPATCHED
25/09/17 14:27	POSTED

Disclaimer
This brochure illustrates the processes and EDI messaging supporting the acceptance, transport, and delivery of international mail. As these are constantly being reviewed and improved, please be aware that not all enhancements can be featured within this guide. For example, not included are allotment planning, space allocation, and post-airline accounts settlement messages, for which it is foreseen that standards will be drafted in the near future. Also, the cargo messages presented are provided only as examples and are not the only way information is exchanged between handler, cargo, and mail systems. They are shown here to illustrate how an existing cargo system could be leveraged to support messaging for mail.

ORDER | **EXPORT** | **TRANSPORT** | **IMPORT**

PREDES | CARDIT / PRECON | RESDIT | RESDIT | RESDIT / RESCON | RESDES

SYSTEMS / PARTIES

CUSTOMER SERVICE
ORIGIN CUSTOMS
ORIGIN POST
AIRLINE MAIL
AIRLINE CARGO
HANDLER
DESTINATION POST
DESTINATION CUSTOMS

Legend:
- POSTAL ITEM → Mail item ID-based messages
- RECEPTACLE → Receptacle ID-based messages
- CARGO → Cargo messages providing mail consignment and transport status information
- COPY --- → Copy of messages sent to central systems for end-to-end track and trace to support customer service and performance monitoring
- ■ Event data collection by scanner
- □ Event data collection by computer
- MRD → Data capture and sharing of handover information

The EDI messages described below are exchanged between the stakeholders involved in mail transportation by air. Please refer to the pipeline chart herein to identify the parties exchanging the different messages.

CUSTOMER – POST EDI

Different types of customers provide posts with non-standard electronic data used for label generation, acceptance, invoicing, customs declaration, and customer service purposes.

POST – POST EDI

EMSEVT: EMS item EVenT; EMSEVT item tracking messages (originally developed in support of the EMS product but now used for all classes, e.g. parcels and registered mail) are exchanged between the origin and destination posts and provide tracking information about identified (barcoded) mail items, from the point of acceptance through to final delivery to the addressee. The EMSEVT V3 message covers 25 tracking events (key ones listed below) and up to 50 item attributes per event.

EMA	Posting/Collection
EMB	Arrival at outward (origin) office of exchange
EMA	Item presented to export Customs/Security
EXB	Item held by export Customs/Security
EXC	Item returned from export Customs/Security
EMC	Departure from outward office of exchange
EMD	Arrival at inward (destination) office of exchange
EDB	Item presented to import Customs
EME	Item held by import Customs

EDC	Item returned from import Customs
EMF	Departure from inward office of exchange
EDD	Item into sorting centre
EDE	Item out of sorting centre
EMG	Arrival at delivery office
EDG	Item out for physical delivery
EDH	Item arrival at collection point for pick-up (by recipient)
EMH	Attempted/Unsuccessful (physical) delivery
EMI	Final delivery

ITMATT: ITeM ATTribute pre-advice; ITMATT messages are the electronic representation of the customs declaration, equivalent to paper forms CN 22/CN 23/CP 72. An ITMATT message is sent by the origin post to the destination post and includes for each item all information from the paper form. The ITMATT V2 message includes a placeholder for supplementary information to further facilitate the clearance process.

PREDES: PRE-advice of DESpatch; the PREDES message provides information about a despatch, a shipment of mail receptacles (e.g. bags, trays) of the same mail category and class sent from one post to another. PREDES is generated at the origin Office of Exchange and sent to the destination Office of Exchange. It is used to pre-advise the destination post and for post-to-post accounting and settlement. It is the electronic equivalent of the paper Letter Bill CN31 and Parcel Bill CP87, as well as receptacle labels and lists of identified items.

POST – AIRLINE EDI

CARDIT: CARrier/Documents International Transport advice

RESDIT: RESponse to Documents International Transport advice

CARDIT and RESDIT messages are used together. CARDIT represents the post's expectation of the transport service for the consignment of mail receptacles assigned to the airline. RESDIT is the positive acknowledgment to the CARDIT, sent by the airline to the consigning post, reporting the actual status of receptacles in transport.

The list below contains the applicable message function codes in CARDIT:

1	Cancellation	**6**	Confirmation
4	Change	**9**	Original
5	Replace	**47**	Definitive

RESDES: RESponse to DESpatch pre-advice; the RESDES message confirms arrival at the destination Office of Exchange, where it is generated. It is sent to the origin Office of Exchange and provides status about processed receptacles. It also supports accounting processes.

PRECON: PRE-advice of CONsignment; the PRECON message provides information about a consignment, a group of mail receptacles which have been prepared for handover to an airline for transport between the two posts concerned, and is used to pre-advise the destination post, thereby facilitating resource planning for the processing of the incoming mail. It is the electronic equivalent of the copies (sent from the origin post to the destination post) of the paper Delivery Bills CN38 and CN41.

RESCON: RESponse to CONsignment pre-advice; the RESCON message confirms the mail was received from the airline at the destination airmail unit. It provides information regarding the receptacles within the consignment that have been scanned by the destination post at or shortly after handover from the airline or ground handler.

Where it is established by data capturing that receptacles are not physically handed over to the airline to which the consignment was assigned, the post shall send a **Correction** CARDIT. In it, the post will remove the concerned receptacles from the consignment to correct obvious mistakes.

When the post decides to cancel a consignment, e.g. following flight cancellation by the airline, the airline will be informed by using a **Cancellation** CARDIT.

The origin post sends a CARDIT message on consignment closure before physical handover of mail. The CARDIT message provides instructions for the conveyance of the mail as bilaterally agreed with air carriers including latest handover date time at destination and allocated space on the transport specified in it. The CARDIT is the electronic equivalent of the copies (sent from the origin post to the airline) of the paper Delivery Bills CN 38 and CN 41.

CARDIT message functions

Where the post hands receptacles over to the airline before the consignment is closed or where the post wants to inform the airline of the volumes it expects to assign, an **Original** CARDIT should be sent prior to the first handover, with **Update** CARDITs sent as receptacles are added to the consignment. When the post closes the consignment a **Final** CARDIT message is sent, listing all receptacles that make up the consignment.

CARDIT business functions and key data elements

Nesting
Nesting of receptacle IDs to a container ID is based on receptacle level scanning during the process of loading receptacles into loading equipment for handover to airlines and by applying a container journey ID label to the loading equipment. Nesting allows airlines to scan the container journey ID or container ID to capture events at a consolidated level, whilst reporting RESDIT events at a receptacle level. CARDIT specifies for each receptacle the container journey ID and container ID to which it is nested.

Postal Air Waybill (PAWB)
The basic element airline cargo systems manage is the Master Air Waybill (MAWB) number. A MAWB number becomes a Postal Air Waybill (PAWB) number if used to identify a postal consignment in the air cargo system by applying of the special handling code "MAL" for mail. Assigning a PAWB number to a mail consignment makes it possible for airlines to manage mail in the cargo system, e.g. for booking or security declaration purposes and to distinguish mail from cargo consignments. The PAWB number can be communicated in CARDIT and RESDIT to help link airline mail and cargo system functionalities.

Security data elements
The CARDIT message includes a number of data elements that can be used to report consignment security status to applicable stakeholders such as airlines, border agencies and customs authorities.

RESDIT messages usage
Posts and airlines can bilaterally agree on which RESDIT events should be used to report on the different milestones of the mail transportation pipeline. To support paper-free transport and accounting based on Post-Airline EDI the mandatory events are those that help establish irrefutable Proof of transfer of Custody (POC) and Proof of Delivery (POD).

The RESDIT events used for POC are **RECEIVED** (74) and **RETURNED** (82) to confirm which receptacles were taken into receipt by the airline and which receptacles were returned to the post and are not in custody of the airline. For a POD the airline reports the receptacles prepared for delivery to the destination post using the event **DELIVERED** (21).

The RESDIT events used for transport status commonly required are **UPLIFTED** (24), confirmation that the transport has departed; **TRANSPORT LEG COMPLETED** (14), confirmation that the transport has arrived at destination; and **MAIL ARRIVED** (40), confirmation that the mail has arrived at the handling facility in a given airport.

Examples of other recommended events are:

ASSIGNED (6) which is used by the airline to confirm receptacles are assigned to the scheduled flight (load plan).

The event **HANDOVER DELIVERED** (42) is used by an airline to report transfer of possession of receptacles to the next airline that will confirm possession by using **HANDOVER RECEIVED** (43). This applies to the case of a transfer from one contracted airline to another contracted airline.

The list below displays the most commonly used RESDIT events:

1	Transport arrived	**40**	Mail arrived
5	Accepted	**42**	Handover delivered
6	Assigned to load plan	**43**	Handover received
14	Transport leg completed	**57**	Not loaded
21	Delivered	**59**	Off loaded
23	Mail at destination	**74**	Received
24	Uplift	**82**	Returned

The full list of RESDIT event codes that could be used are listed in UPU code list tOO, Consignment event codes.

RESDIT business functions

RESDIT without CARDIT
RESDIT is designed to respond on receptacles pre-advised by CARDIT. In case a CARDIT is not received a RESDIT without CARDIT message can be issued. A substitute consignment ID will be used by the airline to report events back to the post. The post should subsequently send a CARDIT message with actual consignment ID upon receipt of a RESDIT without CARDIT.

Use of Mail Registration Device (MRD) to report handover events
In the airports where an MRD is installed, it can be used to capture the moment where the transfer of custody between the post and the airline takes place. The information gathered from the use of the MRD can also be used as source to generate RESDIT 74 (with date time stamp from use of POC MRD) and RESDIT 21 (with data from use of POD MRD). The MRD allows for a simple ULD-level registration while providing critical and reliable handover information at receptacle level to all the stakeholders involved in the handover process.

RESDIT business functions

AIRLINE – CUSTOMS EDI
Airlines exchange cargo declaration information with relevant customs authorities and border agencies by using (combinations of) existing cargo messages such as XFFM/XFWB/XFZB in the IATA Cargo XML standard in line with the recommended practice by the World Customs Organisation (WCO).

AIRLINE – AIRLINE/HANDLER EDI
There are many standard Cargo messages that could be used to create a link between the airline mail and cargo systems and to transfer information handler-to-airline or airline-to-airline to support RESDIT event messaging.

POST – CUSTOMS EDI

CUSITM: CUStoms ITeM pre-advice to customs; CUSITM messages are sent from the post receiving an item to the local customs authority, to provide customs with pre-advice regarding the item including item sender, addressee, contents, postage paid and declared value. CUSITM may be generated from ITMATT. The CUSITM information allows the customs authority to decide whether the item must be held for security inspection or assessment of duties and taxes.

CUSRSP: CUStoms ReSPonse message; CUSRSP messages are sent from a Customs authority to a post in response to a CUSITM pre-advice message, to advise the post whether an item can be released for onwards processing or must be retained at the Office of Exchange for security inspection or assessment of duties and taxes. The message may also indicate the duties to be paid.

EDI GUIDE
UPU IATA IPC