ONE Record background

The launch of the e-freight program has set the foundation for the digitalization of the Air Cargo industry and has enabled the start of the digital transformation of the industry, in particular with the adoption of the e-Air Waybill (e-AWB) now representing more than 60% of shipments.

However, the e-freight program relies on a messaging model based on Electronic Data Interchange (EDI) technology: it consists of electronic data being forwarded from/to air cargo participants throughout the complex supply chain via Cargo IMP or Cargo XML messages with low control on the ownership of the data. Consequently, the industry is now facing data quality issue (e.g. duplication, accuracy, inconsistency), which is one of the major issues that prevent the full digitization of the industry. Paper documents are still being considered as the source of “truth” and tend to be used over electronic data. With the growth in airfreight, the opportunities of the e-commerce and the digital transformation of the society, the need for efficient data exchange between airlines and their supply chain partners is becoming more urgent than before.

Since the development of EDI systems, more efficient web-based data exchange technologies have emerged that allow for direct data access to 3rd party systems. These are not currently widely used in the air cargo industry that still has a strong dependency on legacy messaging technologies. These web technologies are referred to as API, short for Application Programming Interface.

With the need for increased data connectivity between airfreight systems, IT vendors are increasingly deploying new platforms using this API technology but in absence of common standards, these platforms require airlines and their logistics partners to adapt to different API implementations with each new platform.

To avoid a situation where airlines will face with increasing integration costs of such platforms, there is a need for the industry to develop API standards that will facilitate transparent connectivity between all such systems.

ONE Record vision

The ultimate vision is an end-to-end digital logistics and transport supply chain where data is easily and transparently exchanged in a digital ecosystem of air cargo stakeholders, communities and data platforms.

Key enablers of this vision are:

- **Data**: provide the air cargo industry with a standard data semantic structure and a defined data ownership
- **Access**: share the data through an Internet of Logistics using existing web protocols such as Internet Protocol (IP) and Hypertext Transfer Protocol (HTTP) and relying on standard Application Programming Interface (API)
The new ONE Record standard

ONE Record is a proposed standard for sharing data and providing a view of a single virtual shipment record. This standard is about data structures (the data that we exchange) and accessibility (how we connect with systems through an API) and such a standard will facilitate the emergence of digital cargo where logistics and transport providers can easily interact over an internet of logistics.

Development of the standard

The development of ONE Record started in November 2017 in Amsterdam (NL) where IATA invited more than 40 participants from around the world. During this transformational event, the participants all agreed on the need for pragmatism and speed and the importance of developing data sharing standards and explored the business needs and IT opportunities from a data-centric perspective.

Following this industry meeting and its promising outcome, the Cargo Operations and Technology Board (COTB) endorsed the establishment of the ONE Record Task Force (ORTF) with a kick-off meeting in June 2018. The objectives of ORTF are to provide the air cargo industry with a standard for data sharing based on web Application Programming Interfaces (APIs) along with the ONE Record data model and a data sharing security model.

- **Data model**: the ONE Record data model is a data-centric model (as opposed to the document-centric model used in messaging), is designed to be ready for future developments such as piece level operations, interactive cargo whilst supporting the current business processes.

- **API specifications**: the ONE Record API is a standard web API that allows servers to publish logistics objects and provide access to these to third party users and machines. The specification describes the specific API exchange protocol and the associated data security.

The data model and the API specifications are available here: https://github.com/IATA-Cargo/ONE-Record

IATA Hackathon

In September 2018, IATA held its first Air Cargo Hackathon in Geneva (CH), a round-the-clock coding experience for professional developers that provided an opportunity for developers to come and play with the concept and the APIs of ONE Record and to build original and innovative applications, demonstrating the potential and power of ONE Record.

It was also provided an opportunity for IATA to perform a full-scale test of the ONE Record standard draft and get feedback from the industry to enhance the model ONE Record development.

The next edition of the Air Cargo Hackathon will be held in Madrid (Spain) on June 22nd/23rd 2019.

Focus for 2019

Based on the set of standards developed by the ONE Record Task Force, IATA and the industry are now ready to launch the much anticipated ONE Record pilot projects.
ONE Record pilots will be the focus of the IATA Digital Cargo team and the ORTF for 2019 as the feedback from the industry is critical to validate and/or improve the model. Six pilot projects will be monitored in 2019.

In parallel, the industry will work to do incremental additions to the ONE Record data model and features to include areas of air cargo distribution, interactive cargo, e-DGD among others.

In addition, IATA will continue its strong engagement with Cargo Community Systems, IT providers and start-ups as these partners are key to speed up the adoption of the ONE Record standard.