The Basic Guide to ONE Order
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**Disclaimer**

The information contained in this strategy paper is subject to regular review in the light of changing business needs of the industry, government requirements and regulations. The tasks and timelines in this paper are based on current best knowledge of the industry and activities by involved entities. The focus of the initiative is to enhance innovation across the industry to produce cost savings, efficiencies and consumer benefits. The information contained herein is based on publicly available information, and data based on aggregated and anonymized industry surveys.

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Introduction

As part of IATA’s Industry Priorities set by the association’s Board of Governors, two major programs have been brought to life over the past years; the New Distribution Capability (NDC) and ONE Order. ONE Order will support substantial change in airlines processes related to servicing, delivering and financially fulfilling orders. Orders is a new term for the airline industry coined with the arrival of NDC, and refers to the superset of data contained in today’s Passenger Name Record (PNR), Electronic Ticket (ETKT) and Electronic Miscellaneous Document (EMD).

NDC and ONE Order aim to support the airlines and the ecosystem of partners in their digital transformation. NDC aims to enhance distribution, while ONE Order has the objective to simplify distribution in the future. It will considerably enhance the ability to service customers, thus allowing airlines to improve customer experience.

This Basic Guide to ONE Order has been published to provide a basic understanding of ONE Order. It will outline the reasons for doing ONE Order as well as how airlines might transition to a ONE Order environment in the future, taking into account the challenges that go with this type of transformation program.

The guide is not an in-depth and detailed guide or case study for any airline – it merely skims the surface of ONE Order. The aim is to give those which are not familiar with the ONE Order program or its objectives a good understanding of why the industry is undertaking such a large-scale and challenging program.

The industry’s Vision for the Digital Airline for airline distribution and finance is about enhancing and simplifying distribution and the related processes while making the transactions quicker, safer and less costly. IATA aims to have defined standards, processes and governance which allow airlines to distribute their offerings and manage the offers, orders, delivery as well as payment, accounting and settlement of the products and services as efficiently and as automated as possible. Processes and the underlying architecture should allow for a high grade of customer orientation, simplification and automation of processes to drive efficiency and agility to adapt, efficient and automated billing and settlement processes as well as real-time and synchronous information exchanges between parties involved in the sales and fulfillment of an order.
What is ONE Order

ONE Order is a data communication standard to support the vision of simplified and enhanced airline distribution. It is a natural extension to the New Distribution Capabilities (NDC) concept. ONE Order eliminates the current booking, ticketing and miscellaneous document records and combines the content of those into a single retail and customer focused order. The main usage of ONE Order is in product and service delivery and fulfillment. All entities involved in travel and fulfillment, from the customer to the third-party service providers, will access the single record to get the required insight and make necessary updates to any given trip.

The ONE Order vision is to move towards a single customer order record, modernizing airline retailing, delivery and accounting. The vision is articulated around three core principles.

**Combined, single travel record**

**Reengineering the travel commerce processes**

**Efficient billing and real-time synchronisation of relevant information between all parties**
Why ONE Order

The primary objectives of the ONE Order initiative are to simplify the business processes around current bookings, servicing, fulfilment and financial processes and to allow for a simpler, flexible and adaptable system architecture to cater for future change.

ONE Order is the natural evolution of NDC, it is the next logical step in the industry’s digital transformation. Within the framework of the IATA ONE Order program, the airline’s will find support to:

• Expand the benefits of the NDC program by the provision of message standards which will facilitate the order delivery and accounting processes;
• Enhance the order structure defined by the NDC order to cater for delivery and accounting processes and remove the dependency on the ETKT and EMD for the storage of the relevant data;
• Define the principles of ownership, management and control of the order elements between entities;
• Define the principles which manage and monitor the order statuses (delivery and accounting) of individual services, regardless of the channel and the distribution methodology the order was created from.

All of this will benefit the airlines by providing a framework to transition to a retail-focused airline with streamlined and simplified delivery and settlement processes.

Airlines

• Are restricted to paper processes in a digital world.
• Lack a unified view of the customer details and journey interactions.
• Are limited in what, and how, they sell and fulfil products and services.

Technology and Innovation

• New entrants face challenges due to the specialized market place for solutions.
• Airlines have a duplication of cost and processes of PSS and e-commerce.
• Airlines are hampered in innovation due to legacy processes and systems.

Customers

• Are challenged by multiple references and IDs throughout their journey.
• Are limited in which products and services they can purchase depending on the sales channel.
• Have new and heightened expectations, seeking alignment to online retailers.
The Benefits of ONE Order

Six key ONE Order business drivers have been identified. These business drivers were identified and validated by IATA as well as member airlines in workshops, interviews and in-depth discussions related to the future of distribution. These will not only address the industry challenges related to modern product distribution (retailing). They will also contribute to revenue growth, cost savings and improving the overall customer experience.

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**Enhance delivery of end-to-end travel products**
Simplifying airlines of differing business models to interact with each other drives a more cohesive, end-to-end experience for a customer, further improving the overall offering opportunities of airlines. It improve the interaction between airlines and transportation service providers, increasing the scope of the airline offering.

**Sell more through simplified delivery and accounting**
The number and complexity of products brought to market can be increased. This increases revenue and improves the ability to address customer needs. Improve time to market, reducing project costs and enabling earlier revenues.

**Improve customer experience**
The use of a single identifier for all journey-related purchases across all entities improves customer experience. Order systems are (typically) customer centric systems as opposed to transaction centric. Airlines can exploit the richer data at a single source to enhance various customer servicing, information and experience capabilities.

**Enhance data quality and analytics**
Detailed transaction data from offer creation to order management is available. All data is related to a customer or order, thus easy to assign and analyze. Updates to the order can be made by all relevant delivery parties directly. Data quality is greatly improved through the use of structured data message standards and the removal of redundant information.

**Reduce cost of finance operations**
Reduce the cost of financial transactions and related processes and systems by simplifying manual processes related to revenue allocation and disputes. Financial and settlement statuses could be managed directly within the order, removing the need for various copies and transmissions of data to additional systems.

**Reduce cost of commercial systems**
Reduce the cost of commercial systems, related business processes as well as projects. This leads to cost reduction within IT and business. Through standardization and automation as well as the use of modern interface technologies and harmonized data definitions, airlines can reduce the cost to implement new products and interactions with other partners. Further, with the ‘de-specialization’ of the airline terms and processes, airlines will have the opportunity to utilize market-standard retail systems for offer and order management.
Airline Risks and Challenges

Contracts - contractual arrangements with partners which may need to be revisited and potentially revised to reflect sales and delivery responsibilities.

Initial complexity - initially, ONE Order may add complexity to airline operations. Delivery partners and system integration are complex. The integration with environments still operating under current processes, systems and interfaces must be catered for.

Customer expectations - richer and more comprehensive offers potentially raises customer expectations about the role of the airline and who has overall responsibility for delivery. The airline must understand and be comfortable with these implications before making commitments.

Transition and business case - the business case is dependent on the other challenges within the airline and at the industry level being addressed or mitigated to achieve the anticipated benefits. Transition challenges of message-based interactions between entities – airlines, ground handlers, airports, governments, trade partners, suppliers, etc. – cannot be neglected.

Industry Risks and Challenges

Adoption - all delivery partners, including airlines, trade partners as well as other third parties delivering products and services to adopt the ONE Order standard and processes.

Agency interaction - travel agencies and external parties utilise PNRs and ETKTs as identifiers and records within their processes. This leads to an external dependency on the transition and costs of moving to ONE Order for the agencies and the solution providers.

3rd Party Systems - dependency on third party systems to be able to display more complex offers and orders, the richer supporting content as well as being able to interact in real-time with the airline OMS. Further, there may be additional challenges to be addressed as the industry moves to a ticketless world, considering the ticket is considered a contract currently for airlines currently using them as value documents.

Commercial agreements - industry standards and rules for setting up commercial arrangements need to be simplified to make it easier for non-industry partners to be included.

Disruption and service recovery – ensure service delivery and order remain consistent throughout, even with new service delivery partners.
ONE Order Solution Architecture

IATA, through research and work done within various working groups, has established that there are three likely forms of solution architecture for ONE Order environments.

ENCAPSULATE

In the ‘Encapsulate’ architecture, the current PNR, ETKT and EMD records will be maintained during the transition state. A wrapper, or meta-record, will encapsulate these records and expose them as an order. The order management database will be built over time and extended with additional data as the information is transitioned from the current records into the OMS, transforming the PSS reservation components into a complete Order Management System.

Traditional messages which require PNR, ETKT and EMD data will be used unchanged. For order messages, the meta-record will have the ability to concatenate all required data from the various records into a single order message as required.

ON-TOP

In the ‘On-Top’ architecture model, an order record is defined in the order management environment which is outside of the PSS. It is the main source of all customer travel-related data within the airline environment. Initially, the order will create legacy records in a third party system, for example a traditional PSS where required. The on-top systems will often be systems which the current airline ecommerce vendors offer to the market today, as these typically already have the concept of “Super PNRs”. Furthermore, they are currently a booking source only for certain channels and in most cases do not manage other complexities and a multitude of airline order management processes.

The messaging to traditional systems could be done based on the traditional records in the PSS or via the order management system using message transformation. Changes to the traditional records must be synchronised with the order and vice-versa at all times.

PURE OMS

This architecture will utilise a standard, off-the-shelf Order Management System and foresees a very modular system environment. It does not rely on traditional PSS components or functions. It assumes that there is an Offer Management System in place which manages the products, their availability, prices and inventory. Fulfilment of all products and services can be done via the OMS. These systems could be from large Enterprise Resource Planning (ERP) and Order Management System (OMS) providers or from smaller ERP and ecommerce solution vendors which have a complete Order Management System. It may be the case that these systems are, to an extent, already a combination of offer and order management thus to a certain degree already a full digital retailing platform, albeit lacking airline industry specific processes.
One Order Implementation Paths

Iata, through research and work done within various working groups, has established that there are multiple transition paths to move from the current PSS record-based environment to the future order management environment. While these are three possibilities, each one will present a multitude of variations for the actual transition. It is up to the airlines to determine which architecture and transition option best suits their transformation plans.

Staged
The “Staged” transition path focuses on a gradual build-up of both the order management environment and capabilities, where the maturity of the order management environment increases in usage over time. There are various stages of transition and the increased usage may be by channel, product, function or partner system. At each stage the level of functionality and the responsibility which the order management environment assumes increases.

Benefits: The main benefits to the staged transition path are risk management and business continuity.

Risks: The greatest risk to the staged transition path are the duration of the transition, and thus the transition-related cost control and program management.

Shadow
The shadow approach differs from the staged approach as a full Order Management System is implemented from the start of the transition. The OMS holds copies of all bookings in the form of orders, and can serve this data to multiple channels for read-only purposes. This approach leads to redundant data, however also allows the OMS to provide orders to service delivery providers, financial systems and to a data analytics environment.

Benefits: The benefits to the shadow transition approach are that the Order Management System and the complete order data are available at a very early stage of the overall migration, allowing a degree of flexibility in the further migration path.

Risks: The main risks in the shadow migration are the initial product definition and cost, which may be higher than a transition method which spreads the cost over a longer period of time. Further, the demarcation of which system shall serve which purpose and supplier will initially be a challenge if not well defined.

Big Bang
The “Big Bang” transition will initiate a single point-in-time switch from a systems and data perspective. Due to the fact that there will be many partner systems still utilising the traditional airline IT systems, message and data transformation will play a key role for communication and business continuity.

Benefits: The main benefit of the big bang is the short duration, and typically if executed correctly, with the lowest overall cost. Furthermore, all advantages of One Order and the usage of an OMS will be available at the same time.

Risks: The risk of a big bang migration is similar to the risks in an airline PSS migration. The big bang will be a challenge for many network airlines interacting with other airlines for codeshare and interline, especially in the early days of One Order where the number of airlines using an OMS will be very small.
Challenges Transitioning to ONE Order

Airlines will implement ONE Order in different ways. The business drivers, benefits and strategic considerations will vary, as will the involved IT vendors. This will result in various ways airlines can realise the benefits, varying paths to create added value and, potentially, varying end-states of an implementation. It will be up to each airline to define the best transition plan based on their business strategy, the alignment with other projects as well as the identified risks. Some of the risks and challenges in the transition to ONE Order are outlined below.

Co-existence of messaging and processes
The airline industry is highly interconnected with legacy teletype and EDIFACT messaging closely linked to many reservations, ticketing and airport processes. During transition, it will be necessary to maintain a number of PNR and ETKT related processes, such as exchange in disruption and airport ETKT control.

Data migration and integration
A ONE Order implementation will require the ability to switch from the current data model built around PNRs, ETKTs and EMDs to the new data model built around orders. The booking to order migration in particular will be a significant challenge, especially as the booking data structure has limitations and constraints that make data mapping and data conversion and substitution complex and potentially error prone.

Interline interactions
Related to the above, during the transition, interline between airlines using current and new processes will be an additional challenge, with airlines needing to interpret and convert Type A and B messages to Type X and the new APIs.

Business continuity
Transitioning to ONE Order will have an impact on airline operations, including reservations, ticketing, customer servicing and revenue accounting areas. Reservations and customer service will need to work with orders rather than PNRs, ETKTs and EMDs, and the accounting and finance departments will need to work with orders rather than ETKTs, or both for the transition period. As transition plans are designed, the goal for the implementation of ONE Order is to have no interruptions to daily operations. To manage the impacts of ONE Order on business continuity, airlines will need to consider:

- User adoption, skills and training requirements need to be part of an on-going change management and communication plan around the move to ONE Order
- Process reengineering - for airlines to benefit fully from ONE Order, associated systems and processes will need to be renewed
- Organisational structure - impacts from process streamlining in reservations management, revenue accounting and finance should be considered up front.

Additional challenges which have been identified:

- ONE Order is a new concept for the industry and will take time to build momentum. This will impact transition strategies in the early stages as skills and knowledge about ONE Order will be scarce.
- Cost control for transition – due to the long timelines of the transition, there is a risk of uncontrolled cost, scope creep and no effective cost management.
- Process reengineering required to implement ONE Order is incomplete or existing processes mapped without being enhanced.
- Achieving timely business benefits – due to long implementation timelines, benefits will appear with completed phases or at the end of the project only.
- The airline IT vendor community may be slow to adopt ONE Order, or may only partially implement the strategic intent of ONE Order.
- Increase in complexity in the short/medium term as old and new processes need to run in parallel.
- Internal adoption of ONE Order processes and systems.
The IATA ONE Order Program Strategy is built upon a foundation of **standards** and four pillars: **communication**, **collaboration**, **adoption** and **transition**. Each of the pillars has a clear set of objectives and tasks. The foundation along with the pillars will allow airlines, vendors and IATA to design, build and implement a variety of industry solutions.

**STANDARDS**
The ONE Order message schemas and Resolution 797 are the foundation of the program. The objective is to ensure a robust industry standard is in place accompanied by appropriate documentation.

**COMMUNICATION**
Ensure the industry is aware of the ONE Order Program status, bringing together the various entities and stakeholders in the travel value chain as well as communicating to the industry what airlines, vendors and other partners are doing in terms of ONE Order.

**COLLABORATION**
Expand the reach of the ONE Order program beyond airlines. Focus on collaborating with industry partners such as IT vendors, service delivery providers, travel agencies and accounting service providers. Drive innovation and support new entrants.

**ADOPTION**
Support the industry stakeholders in understanding ONE Order, and supporting the adoption of ONE Order in the industry. This will be measurable through the number of industry stakeholders ONE Order capable and certified.

**TRANSITION**
Support airlines and vendors in planning and executing the transition to ONE Order. Focus on both the interim period in which ONE Order and traditional processes work together as well as for airlines working fully aligned to the ONE Order end state.

Based upon the objectives defined in the pillars, a roadmap for completion of the program was devised. IATA will regularly communicate and update the program status to the industry. The foundation and each pillar have various tasks, some which are interdependent on other pillars.

With a number of airlines using ONE Order by the end of 2020, IATA will have reached the program objectives.

Beyond 2021, the stage will be set for the move towards mass rollout, for which the strategy has still to be defined by the industry.

**ONE Order - the program roadmap**

- **Supported by the IATA Board of Governors**
  - Phase 1: Standard development (messaging)
  - Phase 2: Industry capability & adoption

  ![ONE Order Roadmap Diagram]
For questions pertaining to the IATA ONE Order Program, please contact oneorder@iata.org.