From vision to transition

The way from traditional airline distribution
to digital retailing with ONE Order

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Introduction

NDC (New Distribution Capability) became, since its start in 2012, a necessity for airline distribution. Although, the NDC concept is nowadays broadly understood, acknowledged, and mainly used as a very efficient distribution API for ancillaries, it didn't change airline distribution as much as it should have. While airlines still tried re-thinking their processes to use NDC more effectively, ONE Order was introduced by IATA in 2016. ONE Order connected the newly gained distribution possibilities to the backend processes, but it didn't solve the challenge airlines face while transitioning to be a retailer.

In the 3rd edition of IATA's "NDC Solution White paper" issued by Sia partners, the main reason behind this, as identified by IT providers, is that airlines have no clear view of how to transition without interrupting their current working system. Also, it seems that IT providers have difficulty in providing airlines a clear view on how they can be a real differentiator.

Insights

- **Back to square one:**
  Simplification.

- **Halfway through:**
  Visions, compromise, overcome gaps.

- **The last mile:**
  It can be done.

Executive Summary

ONE Order's core intention is to help gain back control over your product by enabling you to be the master of your offers, revenue, services and, most importantly, customers. Standards are established to be able to bring the most fitting offer at the right time to the right customer, and to account for sales.

Today, airlines want to continue with travel agents to get their flights books and be available on business travel platforms. Many solutions are available to ease the travel agents' search for the best offers. However, ONE Order is yet to be a full success among the travel agencies. The major culprits here are the Global Distribution System (GDS), and the current accounting processes .

To keep up with ONE Order standards, IATA has left the beaten path of airline distribution to adjust it to the 21st century expectation of the customers. That imposes airlines with the challenge of questioning every part of the distribution system stack, their ways of distribution, and many processes beyond.

Problem Statement

Starting from scratch is easier said than done if you have thousands of customers relying on you every day. The Passenger Service System (PSS) holds all master data, from inventory and seat maps over reservations and special services to the use of tickets and accounting criteria. The PSS is a fully integrated system which has been working smoothly and reliably for decades and is connecting to interline and codeshare partners.

Integrating e-commerce layers, dynamic pricing modules and Customer Relationship Management (CRM) systems while leaving everything else as is, seems a workable way, and this is how airline system architectures are built (integration layers are piled on top of one another over the PSS). This kind of integration enables you to have more control over the offers and improves the time to market without the need to change all backend processes. However, there are limitations as the offers still have to fit within the parameters of the Passenger Name Record (PNR) and the fares still have to be filed with the Airline Tariff Publishing Company (ATPCO) to enable the dynamic pricing to work its magic.

Removing the 'data heart' of an airline means that other systems have to take over. If the PNR is removed, the Order has to be the 'master of truth' and there are no e-tickets and Electronic Miscellaneous Document (EMD). Without an e-ticket and the EMD, there is no source for accounting and DCS systems have to be adjusted. Selling interline connections without having a traditional PSS and GDS setup in place seems almost impossible.

Other systems like revenue management or scheduling not only have to integrate to the new Order Management System (OMS), but they also have to be enhanced with new functionalities so that they support the full potential of ONE Order. The passenger accounting system has to acknowledge the orders, account for the order items correctly provide the correct amounts for each order item, and process delivery responses. For reconciliation, the passenger accounting system has to report its own as well as third party sales, taxes, refunds and services to the general ledger system with an indicator whether the ticket or service was used or not.

Without a doubt, it is technically possible to transform to a 'ONE Order airline', but the organization needs to adapt to this change well. As most processes change in such a scenario, almost every department is involved. The staff needs to learn about the intention of implementing ONE Order and adapt to the new way of thinking.

Solution

Back to square one

Starting from scratch is not always possible. The challenge is to think of a concept, and how you would want to design it from scratch. Transformation is the process of challenging existing systems and it is also a process of simplification. Simplification not only applies to processes, it's also true for the system architecture.

The fact is, you need three systems to be able to sell a simple flight.

1.   **Revenue Management System (RMS)**

2.   **Order Management System (OMS)**

3.   **Front end**

In addition, you need a connected payment provider to collect the money and a general ledger to account for it all.
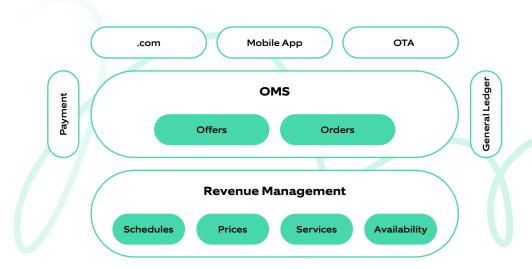

Figure 1: High-level distribution diagram

This seem a little bit too visionary – and it might be.

Lately, the RMS has upped its game by refining and changing calculation models to be more independent from historical data and extending to services and seats. Even AI models are used to find the perfect price for every part.

In the simplification model, the OMS would have to cover the full range of a reservation system. For an offer creation it should be a given, but the fact is, many OMS rely on data provided by other sources. One may ask, does the OMS have to evolve to the new PSS?

Yes and No.

Yes, as the OMS providers have to ramp up to be able to apply basic things. For example, the base data in the reservation system, minimum connecting times to be able to build connections, the possibilities to create, manage and assign seat maps, provision for business partner data bases, the departure control system (DCS)communication handling, provision for data required by governmental bodies, provision of sending confirmations to customers and provision of a change notification distribution hub for travel agencies, just to name a few.

But, the OMS does not have an inventory nor does a DCS. It is widely known that an inventory is needed to have information about flight availability and fares, but it is all in the RMS. An inventory is a copy of RMS data that needs to be synced. An inventory system and the RMS are in permanent communication to update each other and have a nightly overall sync to ensure that everything is aligned, whoever the master is in a discrepancy scenario. The inventory system is also in permanent communication with the GDS (to send changes made to a flights availability by the RMS) and responds when a booking is made. It also gives information about the new availability back to the RMS. Keeping simplification in mind and that every system should be used to its best extent, the availability and fares should be taken directly from the source system.

Halfway through

Combining the vision with some reality, the 'new world' needs to get along with the 'old world' for a while. That is not only because the OMSs are not there where they need to be by now, but also there is still working standards missing for interline sales and travel agency accounting. Both have been addressed by IATA and have had Proof of Concept (PoC) studies and pilots done.

For the interline part, although the pilots have been between airlines hosted on Amadeus Altèa and Navitaire, the thought of concept not fulfilling all commercial needs is the bigger showstopper as both sides need to have the technical prerequisites in place to make it happen in reality.

For the travel agent payment, Settlement with Orders (SwOs) was successfully implemented by British Airways and Click Travel (now Travel Perk). This implementation proves the functionality of the concept but the adoption of SwO is still very low due to many factors, one being the passenger accounting systems handling a mix of ticketed bookings and orders. In my opinion, SwO will gain more popularity, and the hassles that travel agents face will be resolved, when One Order Offers can be displayed in the GDSs along with non-One Order flight offers.

Another big challenge is the DCS systems. The ones provided by the PSS system providers deliver their full functionality only when used within the suites. Although independent DCS systems are available, and many offer integrations with webservices and online updates to the OMS, many traditional data elements are still required. This is also due to the requirements airports have towards the DCS suppliers and airlines. Many airlines show that it can all be overcome but either required data is filled with dummy values or the customer experience is limited.

Next steps

When your business vision is clear taking the above factors into consideration, the traditional airline PSS and an OMS will have to work in parallel until the remaining hurdles are overcome. This always raises the question of which one is the leading system. Allowing the PSS to be the leading system limits transformation to a certain extent but keeps integrated processes fully intact. Making the OMS the leading system embraces the transition but requires changing the ways of working.

But a transition is not only about changing dataflows and making system work. The transition should also be understood, supported, and embraced by the employees. Keeping employees well informed and listening to their ideas and concerns can create a wave of enthusiasm for the upcoming changes.

It's crucial that the transformation is supported and understood by the crew. It's also equally important to select the right system providers. Both sides need to understand each other's visions, timelines, and ensure that all systems are used to their best extent and do what they have been developed for. If a new provider is introduced, the matching partner shall share your vision, understand your business, and work with your current PSS provider on the transformation.

The last mile

Having weighed all pros and cons for transformation, and with the right partners in place, it is time to actually go for it. The transformation has to be as agile as retailing is.

Donate a test environment to the new setup. This will give the best overview of where the gaps are. When the first tests are successful, a proven approach is to inject live data and compare results.

When the results are satisfying, take one part live in the new system stack. This can be one route, a region, any sensible part of the flight offers. Invite registered customers or frequent flyers to the new booking experience. When customers are happy and the processes are working well, the range of flights or customers can be extended.

Transformation, the grade of transformation, and the speed of transformation always has to make sense for your business. Be honest to yourself, keep on questioning everything and compare it to your vision. Choose systems which fit your airline in size, scalability, and functionality. Listen to the concerns, ideas, and experiences of your business units during every step of the transformation process. Remember that the employees are an important factor for a successful transformation. They are the daily success factors and require training to understand the new way of thinking, the big picture, the strategy, and their new responsibilities throughout the process, not just in the beginning.

Conclusion

Many, including large alliance airlines, started their transformation journey just a few years back. Smaller airlines started with purely One Order based setup, achieved solutions for travel agencies and even GDS distribution. The travel industry came back strong and renewed, leaving complicated times behind.

No matter in which phase of transition you are, you need an ambitious (but not unrealistic) vision. You need to choose an architecture that adapts to the stages of your transformation and makes sense for your business. It requires thinking out of the box to achieve milestones. This entire process, for sure, needs commitment from everyone involved.

Author bio

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We have a broad and long-standing international customer base, primarily in Europe and North America. This includes many global blue-chip companies, leading independent software vendors (ISVs), other market and industry leaders, and public sector clients.

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