

Offer and Order - Looking to 2025 and beyond

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Introduction

For those of us who have been in the industry long enough, there hasn't been a more exciting and transformational time to be part of it. The retail transformation toward Offers and Orders is taking off as airlines chart their own paths to more meaningful and value-generating travel experiences.

PROS is fortunate to be part of this journey for small, medium and large carriers. And we see the common trend underpinning this widespread effort: the aspiration toward commercial autonomy and retail freedom.

There is a shared understanding and agreement that the industry must evolve from legacy practices and closed retail ecosystems. Doing what we've been doing as an industry in the past will not get us to where we need to be tomorrow.

To achieve a world of Offers and Orders centred around the customer, airlines have a long journey ahead. At PROS, we are confident that there is value not only in the end state, but also along the path as airlines progress toward retail transformation. Endless revenue opportunities await to be unlocked through Al-powered offer optimisation, airline-led offer creation and retailing, and dynamic offer marketing.

The value path starts with owning the next generation of Offer.

Surain Adyanthaya, President, Travel, PROS October 2024

Offer and Order: Looking to 2025 and beyond.

The industry has advanced with Offers and Orders, with many airlines working towards a future-state design – **what can we expect next year?**

This paper, written by Travel in Motion, serves as a reflection on the status quo of the airline industry's transition to Offers and Orders, as well as an outlook into 2025 and beyond. A lot of work has gone into Offers and Orders in the industry. On one hand, IATA and the Modern Airline Retail consortium have invested days, weeks and months of effort in defining the path and uncovering the risks and challenges. At the same time, any vendor in the commercial space of an airline has invested considerable resources in designing and developing solutions. We know from personal experience that there are many airlines embarking on Offers and Orders – some in concept phases while others are designing their transition path and discussing the with vendors. Others still are working to develop the actual solutions with the aim to learn from these early product developments and build on that experience.

For the outlook, we outline our view on where the industry maturity currently is (see our maturity scale on page 6), as well as what we anticipate will be the focus of the coming year in section 2. We assume the focus for many airlines will remain on generating value through Offer, learning about Order and taking first steps. We do not believe that there will be as much attention on Service Delivery and Order Accounting in 2025 – rightly or wrongly. However, our outlook for beyond 2025 sees a strong focus on those two topics and a hardening of Offers and Orders.

We were lucky enough to get a number of interviews and opinions on this topic, not only from our sponsor, PROS, but also from Air Europa, United Airlines and the Lufthansa Group. We would like to thank them for their participation and valuable insights.

Should you be new to the airline industry, or new to Offers and Orders, this paper is most likely not for you. At least, not yet. It does not aim to explain the basics of Offers and Orders and assumes the reader has at least some level of knowledge of the concepts and recent industry discussions and events.

Travel in Motion would like to thank PROS for the generous sponsorship, without which the effort of research, writing, publishing and all other activities to complete this paper would not be possible.

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Research and writing by
Jason Balluck, Mona Kristensen, Daniel Friedli **Travel in Motion AG**Published in October 2024

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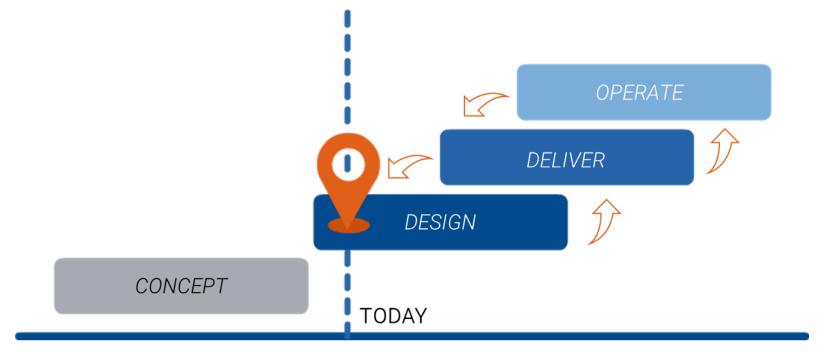




1. Where are you going, Offers and Orders?

What started as a seed of thought in 2012 at the IATA Think Tank has grown into a plant with strong roots, albeit one that is still quite a way from being in full bloom. Like a Baobab tree – these slow growers can take up to 20 years to bear fruit – it is, however, resilient and can get through the worst of times. We are, of course, referring to Offers and Orders.

Looking at the Baobab tree analogy, what started in 2012 as the idea of having a "single order" in concept grew to ONE Order and now has been developed towards the Offers and Orders initiatives – with the aim by several airlines and IATA to have reached a level of maturity by 2030 – that is an 18-year span to "full bloom."





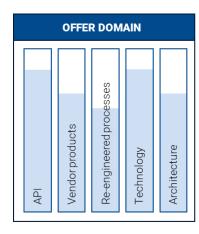
Of the four stages of a transformation — concept, design, deliver and operate — the Offer and Order Transformation can move from concept to design.

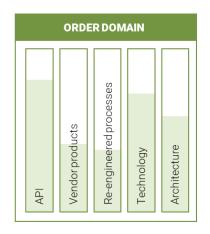
Looking at the more recent activities and the current state of the industry, Travel in Motion (TiM) already stated in early 2024 that the industry is out of the concept phase and has entered the design phase. While in some areas the design is well advanced, there are areas which still require considerable work. If, for the sake of this paper, we simplify Offers and Orders into four core components according to the often-used acronym OOSD (Offer, Order, Settle, Deliver), we can clearly see the maturity differences.

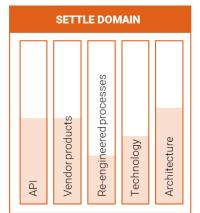
Offer has been propelled by the airlines' ambitions to move to dynamic offers, the maturity and sophistication of revenue management, the increased offering and sales of ancillaries and, last but not least, the proliferation of NDC in the past years combined with the shift to direct distribution.

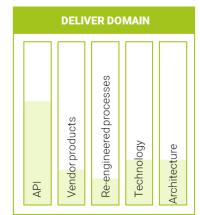
Order, on the back of NDC and the solution providers which provide their Offer and Order Management System (OOMS) on top of a PSS, has matured as well. Furthermore, the data structure and many data interchange processes within Order have been defined by the industry.

The Settle area has progressed considerably over the past two years, with several vendors not only having certified the required messages, but also through "proof of concept" type implementations with OOMS vendors and airlines. There are, however, still quite some areas which require further design. Finally, the Delivery aspect of the overall OOSD initiative is still in early stages. That is not to say that there has been no activity. At an industry level, airlines, ground handlers and DCS providers have had several discussions and workshops. This work is ongoing and will likely require some time still to be ready to build and implement.









TiM OOSD domain maturity assessment as of Q3'2024 @ TiM/2024

Airlines are making progress. Many have begun to tackle the design stage and IATA is providing support to help airlines resolve common issues.

If this is such a long and complex programme with incomplete standards and systems not yet fully designed, one could ask why even engage on such a long and arduous change programme. There are papers which talk about the benefits of Airline Retailing¹⁾ as a concept as well as Offers and Order²⁾ more specifically.

These value drivers have already motivated several airlines to start their move towards Offers and Orders. The Lufthansa Group has publicly talked about their process and progress towards Offers and Orders, with a goal of implementing and being off PSS by 2030. In October 2023 at the IATA World Passenger Symposium, Air France-KLM announced a EUR500m investment in this massive digital transformation programme, and further stated that they are in an extensive process of vendor evaluation to support their future-state architecture. Finnair, Saudia and British Airways have committed to Amadeus' non-legacy PSS product, Nevio. Sabre has announced the launch of Mosaic,

their move towards a modular Offer and Order environment. At the same time, the non-PSS vendors across the board, from Offer to Order to Settle to Deliver, companies such as PROS, Lufthansa Systems, OpenJaw, Accelya, Datalex, IBS, ink, Res2, Maureva and many others (apologies for those we didn't call out – this is not an exhaustive list) are engaged with individual airlines, with IATA and with each other to develop towards Offers and Orders. Finally, from our own experience, we can say that there has never been a time when we have been more busy developing concepts and transition designs with airlines all over the world, of all sizes.

When asked "What might Air Europa's journey with Offers and Orders look like?" Raquel Portillo Escrich of Air Europa responded:

Air Europa's journey with Offers and Orders is still in its early stages. However, after the first year of NDC implementation, we are now more confident and focused on building a robust NDC network with various IT providers, travel agencies and different NDC connections.

CAirEuropa

Recognising that the industry model is evolving, we identified the main benefits of the Offers and Orders model such as personalised offers, dynamic pricing, ancillary bundling, improved relationships with travel agencies and an increase in direct sales share.

This foresight got us started on this journey even before we could benefit from all its features.

We began our journey with confidence but soon realised the need for continuous learning and strategic adjustments to our roadmap. Early on, we diversified the options available to our partners by adding new IT providers and exploring different connection options through NDC aggregators.

By focusing on these areas, Air Europa aims to enhance its competitive edge, improve customer loyalty and drive growth in the highly competitive airline industry.

¹⁾ McKinsey "Where is the Value in Airline Retailing?"

²⁾ IATA Modern Airline Retailing Business Case

2. A focus on 2025 and beyond.

TiM has worked with several airlines on going beyond the "Concept" phase into Design and Delivery. Some of those airlines will have an Offer and Order Management System in the not-too-distant future. There is a level of concreteness around what capabilities those systems will have to meet the airline's needs. The focus in 2025 is on how to achieve modern technology, in a modular way and how will an airline transition towards it.

As our process has proven valuable, and in the context of industry collaboration, we are sharing the basic steps we use in developing the transition designs. Following the steps below leads to a solid understanding from which a business case can be developed. Beyond that, all the steps below will help define the scope of each component and help identify where business processes may / could / should change. This, in turn, will help the airline in their conversations with vendors to understand and define the requirements of the future solutions, the level of modularity and control an airline may want and help drive the procurement process.



ALIGNMENT

As customers use technology to interact with airlines, it is vital for both business and tech teams to understand capabilities and customer desires so that they may understand the opportunity technology presents.



VISION

Airlines first need to answer the basics for themselves by developing a clear and executive-approved vision of what they wish to commercially and operationally offer their customers in the future and why.



TARGET STATE

With a vision agreed, there is an organisational design and technology ecosystem to define that will best deliver it.



STARTING POINT

Understand the current solutions, interfaces and system dependencies. Analyse functional gaps, partnerships and contracts, and where their organisation is today.



GUIDING PRINCIPLES

There must be clear guiding principles on topics such as architecture, governance, prioritisation of functionality, etc. Conscious veering off course, especially as the result of a new learning, is to be welcomed.



TRANSFORMATION PLANS

Create a multi-step transformation plan, ensuring each phase provides business value or cost benefits. Nearterm phases are to be detailed while mid to long-term phases should allow for change and new requirements.

2.1 Direction with technology.

Airlines are steering towards a future where they have greater autonomy over their IT systems, data and customer interactions, driven by cloud-native technologies and self-service models. This strategy is designed to reduce costs, increase revenue and ensure that airlines remain competitive in an increasingly digital and customer-centric market. The following are key observations that TiM has made over the past two to three years in the context of the reasons to change with a technology focus.

Control and access to data

Airlines are increasingly prioritising the ability to control and access their data independently. This shift aims to reduce reliance on third-party systems, such as Global Distribution Systems (GDS), and to enable more direct management of customer interactions, pricing and sales channels. By harnessing their data more effectively, airlines can tailor offerings, improve customer experiences and drive revenue growth.

Cloud-native architecture

The move to cloud-native systems is a critical component of this strategy. Cloud-native architectures provide the scalability, flexibility, and cost-efficiency needed to modernise airline IT infrastructures. These systems support rapid innovation, allowing airlines to deploy new features and services more quickly, respond to market demands in real-time and reduce operational costs by utilising modern, scalable technology.

Self-service and automation

There is a strong emphasis on enhancing self-service capabilities and automation. Airlines are looking to empower customers with more control over their bookings, changes and services through self-service portals. This not only enhances customer satisfaction but also drives down operational costs by reducing the need for manual intervention. Additionally, airlines are investing in automation to streamline operations, minimise errors and improve efficiency across their IT systems.

Revenue enhancement

Airlines are leveraging advanced data analytics and tools driven by artificial intelligence (AI) to optimise revenue management. By gaining deeper insights into customer behaviour and preferences, airlines can implement dynamic pricing models that maximise revenue per passenger. Additionally, modern systems enable better personalisation of offers, upselling and cross-selling opportunities, further driving revenue growth. The ability to directly access and control data allows airlines to create more tailored marketing campaigns and loyalty programs, increasing customer retention and lifetime value.

Cost reduction

On the cost side, the adoption of modern, cloudnative systems significantly reduces the need for expensive, on-premise infrastructure and the associated maintenance costs. Cloud-based solutions offer a pay-as-you-go model, which aligns costs more closely with actual usage and demand, helping airlines manage expenses more effectively. Furthermore, by automating various operational processes, airlines can reduce labour costs and minimise human errors, leading to greater overall efficiency.

Modern, cost-effective systems

Modern IT architectures, particularly those built on microservices and application programming interfaces (APIs), enable airlines to replace outdated, monolithic systems with more agile and cost-effective solutions. These systems can be scaled up or down based on real-time demand, reducing unnecessary overhead. Additionally, by breaking down silos and ensuring better integration across all components of the airline's operations, these modern systems help in streamlining workflows, reducing redundancy and ultimately lowering operational costs.

In essence, by investing in modern IT systems, airlines are not only positioning themselves to capture more revenue through smarter data-driven strategies but also significantly driving down costs through greater efficiency and scalability. This dual approach is crucial for maintaining profitability and competitiveness in the evolving aviation industry.

Microservices and APIs

The transition to a microservice architecture and the extensive use of APIs is a major technological trend in the airline industry. Microservices break down complex applications into smaller, independent services that can be developed, deployed and scaled independently. This modular approach enables airlines to innovate more quickly, reduce development cycles and integrate new functionality with minimal disruption. APIs further facilitate seamless integration between different systems and platforms, allowing airlines to connect with external partners such as travel agencies and payment providers, or even other transportation or service providers to enhance the overall customer experience.





Cybersecurity and compliance

As airlines digitise more of their distribution and operations and move to cloud-based systems, the importance of robust cybersecurity measures has never been greater. Airlines are investing in advanced security technologies to protect against cyber threats, ensure data privacy and comply with increasingly stringent regulations. This includes implementing encryption, multi-factor authentication and continuous monitoring systems to safeguard sensitive data and maintain the trust of customers and stakeholders.

Overall, the technology strategy for airlines is focused on leveraging cloud-native infrastructure, microservices, APIs, AI and enhanced cybersecurity to build a more flexible, efficient and customercentric IT environment. This technological foundation is critical for supporting the industry's broader goals of revenue growth, cost reduction and improved operational agility as they move towards 2025 and beyond.

Artificial intelligence and machine learning

Al and machine learning technologies are playing a critical role in transforming airline distribution and commercial strategies. These technologies are being used to analyse vast amounts of data, predict customer behaviour, optimise pricing and improve operational efficiency. Al-driven chatbots and virtual assistants are increasingly being deployed to handle customer inquiries and provide personalised service, reducing the burden on human staff. Additionally, machine learning algorithms are helping airlines better forecast demand, manage inventory and optimise routes, leading to more efficient and cost-effective operations.

2.2 Drive to modularity.

In 2024, many of the airlines that TiM has collaborated with are enthusiastic about adopting modularity in their IT systems. Modularity allows airlines to tailor their technology architecture to specific needs and offers the flexibility to swap out individual modules without disrupting the entire ecosystem or undergoing extensive migration projects common with traditional Passenger Service Systems (PSS).

The concept of modular platforms

The idea of a platform where airlines can plug in modules is not new. Many airlines have built their own platforms connecting various systems like shopping engines, merchandising tools, loyalty programs and customer relationship management. What is new is that the industry aims to industrialise and scale this approach in offer and order management. Rather than a few airlines building their own platforms, existing airline IT vendors are now providing platform-as-a-service (PaaS) offerings that can integrate with various modules.

Potential conflicts and vendor flexibility

Procuring a platform from an existing vendor can present conflicts, as vendors will naturally promote their own products. Without careful contracting, airlines might lose strategic flexibility to integrate preferred vendors compared to the flexibility obtained when building their own platforms. However, vendors like Sabre and Amadeus have expressed willingness to integrate products from other vendors, signalling a technical openness to multi-vendor platforms.

Travel in Motion's focus in 2025

TiM is helping airlines navigate beyond technical willingness, emphasising the importance of commercial and contractual aspects of such platforms. Airlines seek platforms that offer the advantages of buying: like the cost-effectiveness of leveraging developments across multiple customers and maintenance by experienced organisations, while retaining flexibility to integrate chosen vendors and extend functionality according to their strategies. They also expect modern technological practices, such as the ability to implement software changes rapidly through advanced development methods.

Jason Balluck, Senior Airline Retail Consultant, Travel in Motion

Technical feasibility

Advancements in microservices, APIs and cloud computing make modularity technically feasible. These technologies enable airlines to decouple their systems into independently developed, deployed and scaled components. This modular approach allows for quicker updates, integration of new features and tailoring of IT infrastructure without the constraints of monolithic legacy systems, resulting in greater agility and a more responsive IT ecosystem.

Commercial feasibility

Commercially, airlines can select the best solutions for each function by procuring modules from different vendors, enhancing an airline's power when it comes to vendor pricing and terms. This approach reduces the need to compromise on capabilities. Additionally, airlines can spread investments over time, adding modules as needed instead of making substantial upfront investments in monolithic systems.

Risks

Modular systems can introduce integration complexities, especially with multiple vendors and platforms. Ensuring consistent performance and security across a fragmented IT landscape is challenging. The initial investment to transition from legacy systems can be substantial, and benefits may not materialise if implementation is not effectively managed. Airlines must weigh up these factors to ensure modularity enhances their commercial autonomy.

Modularity - the way forward

Modularity is critical for ensuring that the airline technology stack remains adaptable and future-proof, preventing full commercial dependence on any single monolithic system. It empowers airlines to switch vendors and deploy new solutions as their strategies shift and technologies advance. When carriers have the freedom to choose the best solutions without extensive migration and integration challenges, it fosters a dynamic and competitive technology landscape, ripe with innovation and vendor collaboration.

One of the foundations of a modular architecture is the concept of channel independence, where distribution channels like NDC or the airline.com internet booking engine (IBE) can be powered by solutions from any vendor, aligned to the airline's own commercial strategy. When these channels are confined to a closed ecosystem on top of the PSS, this restricts airlines' ability to deploy the right technology for their commercial needs and reduces the incentive for vendors to innovate.

Furthermore, true modularity goes beyond simply integrating solutions from multiple sources. It is defined by seamless integration, strong governance models, unified SLAs and comprehensive observability across the entire ecosystem. This ensures that airlines maintain control and agility without the complexity of managing multiple vendor relationships and monitoring disparate systems. This holistic approach enables airlines to create a flexible, scalable technology stack that can evolve alongside changing market demands.

Christopher Allison, Director, Product Management, Offer & Order, PROS



Benefits of building in-house modules

Beyond vendor selection, airlines can benefit from developing some modules in-house and integrating them into their ecosystems. Building technology can be advantageous when airlines have specific needs or seek competitive advantages. This is particularly true in offer management, where proprietary pricing and product determination methods can be developed, as well as in order management and enhancing the digital customer experience. Proprietary processes, like superior disruption recovery systems, can significantly differentiate an airline in the market.

Finding the right level of modularity

TiM's consulting experience indicates that, while airlines can procure numerous small modules, they are often better served by acquiring specific groups of modules or components. The "Goldilocks principle" applies: each airline must find a modularity level that is "just right." Too many vendors can complicate procurement and operations, while too few may limit technological advantages and competitive edge. Adopting too many vendors prematurely may lead to operational challenges.

Airlines should reference IATA's Procurement Considerations from its Modern Airline Retailing Consortium and establish principles regarding vendor collaboration and support for customisations. They should expect the benefits of procuring a platform (like access to existing integrations, for example) while retaining the ability to enhance their ecosystems.

Implications for vendors

Many airline IT vendors are releasing platforms capable of offer and order management and serving as central hubs that connect various modules. Airlines purchasing such platforms will find vendors have integrated their own modules and, in some cases, formed partnerships with others (e.g., OpenJaw's OOMS with Lufthansa Systems' financial accounting software). To honour airlines' desire for choice, vendors must be willing to integrate competitors' products, including those overlapping with their offerings.

TiM believes that vendors should proactively forge partnerships, demonstrating commitment to a collaborative ecosystem. Each OOMS should provide options for integrating other vendors' modules, as airlines will demand this flexibility.

This leads to vendors having to be prepared not only to provide configurable modules and platforms, but also to undertake bespoke integration efforts, delivering comprehensive platforms tailored to airlines' needs.

2.3 Transition approaches.

Airlines entering the design phase of transitioning to Offers and Orders in 2025 face the challenge of sequencing this move and determining how to phase out their passenger service systems. A common question is whether to implement "offers" first or "orders" first. From our perspective, both should be pursued simultaneously. While certain offer capabilities, such as new ancillary products and dynamically adjusted pricing have been introduced without integrating orders in the past, it is generally inadvisable to continue adding features without planning for migration to orders.

Our extensive work with airlines indicates a preference for a phased approach that delivers immediate value while simultaneously implementing long-term architectural changes toward the new offer and order paradigms. Commercial and IT teams are increasingly aligned in the belief that value must be delivered throughout the transition process.

In planning their transition, airlines must consider key factors like the contractual end dates of existing PSS software, which often dictate the timeline and distribution contract renewal dates that impact the ability to leverage new offer capabilities. Therefore, an airline's transition is not solely a technological endeavour; it requires aligning overall vision and business strategy and coordinating plans across technology, organisation and contractual agreements.



Several airlines have expressed a desire to first reap revenue benefits from "offers" and cost-saving and customer experience improvements from "orders." However, many recognise that to significantly reduce the burden of current business processes, a renewal of accounting practices is necessary. Business processes and organisational change are significant areas of focus for 2025 and beyond. With the help of TiM, airlines are re-evaluating their business processes to avoid re-introducing past complexities and workarounds, which could limit the agility of new platforms and potential customer benefits. For example, airlines are questioning the necessity of processing exchanges as done in the past and considering the impact of removing booking classes on downstream systems. Ensuring that new platforms meet today's needs in the simplest way requires substantial effort. While industry initiatives like IATA's Modern Airline Retailing Consortium provide some solutions, and vendors will contribute ideas, much of the work must be tailored by each airline individually. This is uncharted territory, as airlines have traditionally relied on working through standard-setting bodies like IATA and ATPCO to design processes. The flexibility of new standards now allows airlines to create their own pricing, product and service experiences, necessitating internal strategic planning.

Owning the next generation of Offer

PROS is a firm supporter of the value-driven approach toward the retail transformation. Our partnerships with airlines are showcasing that value creation can be realised every step of the way, supporting various business strategies.

To unlock value down the path toward Offer Management, a core requirement is for airlines to gain ownership and autonomy in three key offer areas:

- Offer Optimisation is the ability for airlines to advance their revenue management and tailor the right product mix to every customer at a revenue-optimal price. Carriers need to identify the use cases and capabilities needed to drive more meaningful retailing with dynamic offers by optimising their products, pricing, or both. Core approaches in offer optimisation are understanding price sensitivity and customer willingness-to-pay to better forecast demand, dynamic (continuous) pricing outside of pre-filed fares and class codes, and dynamic ancillary pricing based on segmentation and market context. Any of these strategies can drive between 1% and 6% revenue uplift while getting an airline closer to modern retail practices.
- Offer Creation and Retailing is the ability for airlines to liberate their distribution and respond directly in realtime to a shopping request for any airline direct channel (website, NDC, or other). The challenge is that shopping volumes and look-to-book ratios are expected to increase and get more dynamic as the industry progresses toward Offers and Orders. Accuracy, scalability and channel control are the value drivers for airline-led offer creation and retailing today, helping airlines achieve up to double-digit reduction of distribution cost while delivering more relevant offers.
- Last but not least is Offer Marketing and the ability to effectively broadcast and present the airline's dynamic offers across marketing channels. With third-party travel players like online travel agencies (OTAs) and metasearch engines (MSEs) growing their marketing investment, airlines need to effectively steer customer acquisition strategies to increase conversion and stay top of mind for travelers across touchpoints such as email, social media, display ads and more.

Justin Jander, Senior Director, Product Management, PROS

Organisational change is another critical topic under consideration, often divided into two key phases. The primary focus for 2025 is assembling the right team to drive the transition to offers and orders. TiM advises against assigning this monumental task as a side job to a few employees — a common but ineffective industry practice. It's crucial to dedicate knowledgeable industry professionals to lead this significant transformation that will impact future generations of the airline's technology operations.

Simultaneously, there is value in bringing in fresh perspectives from individuals experienced in other industries that have undergone significant transformations, such as telecommunications, banking and insurance. These new minds can challenge existing processes and contribute innovative ideas, ensuring that the airline does not merely replicate old practices but instead evolves to meet modern demands effectively.

Portfolio Management: Bridging the gap between Offer & Order

Offers are only as good as the products they contain. At PROS, we are focused on a critical module that airlines need in order to achieve full commercial autonomy and ensure they have full control over their products and stock on any sales or distribution channel. PROS Portfolio Management is made up of three vital components: a Product Catalogue, a Stock Keeper and a Supplier Automation module, with the latter being the enabler of scale for third-party relationships between airlines and their suppliers.

IATA's Business Reference Architecture provides the airline industry with a standardised framework for their business capabilities as they strategically plan and engineer their Modern Airline Retailing transformation. PROS Portfolio Management caters to the needs of the Product Management, Stock Keeping and Contract Management domains and provides production proven capabilities in these areas.

At PROS, we have already witnessed the success of the Portfolio Management approach in other industries: we deploy this technology with some of the biggest retailers in the world, enabling them to sell highly configurable products with agility and a faster time to market, leading to a vastly more powerful selling experience. As we apply this expertise in the airline industry, we see the tremendous potential for airlines to better define their products, articulate their value to other distribution and airline partners and excel commercially.

Christopher Allison, Director, Product Management, Offer & Order, PROS

LUFTHANSA GROUP

When asked "What are some of the challenges Lufthansa Group has faced in implementing offer management on top of the legacy PSS?" Héléna Teixeria, Head of Offer Portfolio and Pricing solutions responded:

Currently, airline offers are in the hands of each distribution channel. As a result, any change or innovation we at LHG aim to implement requires substantial effort and cost across multiple channels.

To dynamically calculate certain offer components, real-time inventory data is essential within the offer system itself, not just within the PSS.

Another important consideration is that legacy processes, particularly those related to fulfilment and servicing, significantly affect innovation in the offer space. Even the best offer is ineffective if it can't be fulfilled or serviced, leading to a need for substantial process re-engineering.

In the legacy system, many product components are highly interdependent, restricting the flexibility to commercialise ancillary services. For instance, seats and inventory must be perfectly



aligned (one seat equals one inventory unit), which complicates the commercialisation of multiple seat-related products. Similarly, fare flexibility, which is bundled into fare rules rather than being a standalone, easily commercialised product.

Finally, training and adoption present challenges. There is a significant learning curve around understanding the concept of Offer Management and how it differs from the traditional PSS, as well as its benefits. This challenge applies across all levels within the company, potentially slowing down the adoption of new systems and highlighting the importance of strong change management.

3. And afterwards?

As stated in the introduction, both Settle and Deliver are not yet at the maturity of Offer and Order. They are being worked on by airlines, the IATA consortium and vendors alike, and the process for moving to design in both areas should be similar..

First it is essential to collect the requirements of the airlines, and the expectations and inputs from the involved parties and stakeholders, these being accounting system providers, DCS providers and ground handlers. Once the requirements have been collected, a review of the current processes, systems, interfaces and data is required – what shall be carried forward, what should be reengineered (and hopefully simplified) and which processes or interfaces are no longer required. At that stage, typically the system providers will do some work related to system design while the airlines and business users (e.g., ground handlers) will refine the processes. All of this allows the industry to start identifying if new standards are needed, or existing ones require modification. This would conclude the design stage at an industry level and allow airlines and other stakeholders to start their specific and more detailed design.



3.1 Settle – the renewal of the accounting flows and processes

Settle, or the future of (revenue) accounting, is quite advanced in terms of design. As a matter of fact, there are first airlines working on proof-of-concept type implementations with vendors today, for example to account for orders directly where no EMD has been issued for an ancillary service. In the IATA Airline Retailing Maturity (ARM) index, 12 companies hold valid certifications for all or a subset of the Settle capabilities.

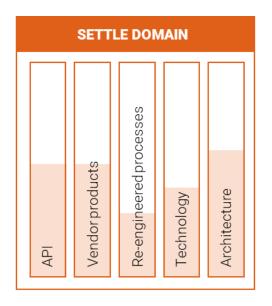
While the APIs exist, early PoCs TiM has worked on with various airlines and vendors have shown that they are not likely to meet all the needs of the airlines and may require some changes prior to production use at scale.

There are several vendor products well prepared, and at least one of the major vendors has shown they are well prepared to implement with airlines. However, again the use at scale will be the final proof.

There are several unresolved business process reengineering challenges, of which we will highlight three here

- Removal of tickets airlines need courage and many changes to processes to remove tickets – and understand the consequences thereof. One could say it should be easy, LCCs have been operating without tickets for decades. However, so many processes today rely on tickets in the full-service airline world that this is a major step. This hesitation to remove tickets has led to accounting system providers largely only being able to simulate the processes based fully on the order.
- Settlement between airlines and with agencies –
 IATA's Billing and Settlement Plan (BSP) is based
 on the concept of tickets. Without tickets there
 still needs to be a cost effective and efficient
 method to transfer funds between airlines and
 agencies. IATA is working on this with a
 programme known as Settlement with Orders
 (SwO).IATA defines SwO as "a framework for the
 settlement of orders between partners. It consists
 of a lean XML data exchange standard following a
 process agreed by the industry. Based on a sales

agreement and commitment to pay between two parties, the funds clearing can be initiated by a simple request for clearance with minimal data. The partners are informed about the settlement process results based on the same data exchange."



• Where does proration fit - in the future state, or rather in the (potentially almost endless?) interim state, airlines implementing interline with offers and orders will require some form of calculating the Settlement Value. This can be likened to the calculation of the proration amount today, only that currently this is done in revenue accounting based on agreements such as the Multilateral Interline Traffic Agreement (MITA), the Multilateral Prorate Agreements (MPA) or Special Prorate Agreements (SPA). These basically define the percentage of revenue each party in the agreement will receive. However, with the introduction of the Settlement Value concept, airlines will need to calculate their share of the overall revenue in advance based on the information received in the offer request from the retailing airline. The new agreement - the Standard Retailer Supplier Interline Agreement (SRSIA) is well defined, however the actual calculation methodology for the Settlement Value that an airline applies will most likely be a task for revenue management in a world of dynamic and continuous pricing.



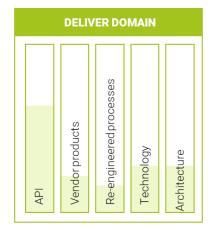
3.2 Delivery – rethinking the customer interactions for travel

The Delivery space, or what is referred to as Service Delivery by some, Delivery Management by others, focuses largely on the new airport and travel-related customer processes. There is an aspiration that the processes integrate processes new technologies to simplify customer identification such as IATA's One ID3). The aim of that programme, according to IATA, is to "streamline passenger journey with advance sharing of information and a contactless process at the airport based on biometric-enabled identification". That includes automating and digitising the admissibility of travellers on one hand while enabling contactless travel for the traveller on the other.

Service Delivery is without doubt the least advanced of the four domains of this Offer and Order transformation. However, it is important to state that it has not been forgotten. At an industry level, there is a lot of activity among airlines and ground handlers. Indeed, airlines that we have been engaged with have included this in the scope of their discovery projects and in the design phase. For one airline, TiM recently completed a "Future of DCS"

study to explore when and how a transition to the new model could be realistic, and which pre-planning activities are necessary, along with the state of the vendor landscape in this area.

Industry-standard APIs have long been in existence for communicating Orders to Delivery systems. They were developed in the mid-to-late 2010s by IATA, its airline members and strategic partners. Vendor products, on the other hand, remain at a low maturity level. Many airlines acknowledge this is not an area they would innovate in first, rather maintaining a transition state for the foreseeable future whereby today's DCS becomes Order compatible.





³⁾ https://www.iata.org/en/programs/passenger/one-id/

In envisioning the future of airport operations, we see airlines aiming to revolutionise the passenger experience by leveraging advanced technologies and streamlining processes to minimise the need for manual staff intervention. The vision should be to create a seamless, largely automated journey that allows passengers to manage their entire travel experience independently.

A core component of this transformation involves optimising passenger processing through real-time data and eliminating redundant DCS records. This streamlined approach not only enhances operational efficiency but also ensures consistency and accuracy across various touchpoints, thereby improving the overall passenger experience.

Integral to this vision is the adoption of biometric and digital ID technologies. By fully integrating these capabilities into the airline's systems, the airport experience becomes more fluid and efficient. Passengers will utilise digital identification for travel, reducing the need for manual document checks and

expediting the process. This shift aligns with the goal of enabling passengers to handle their own journey, including seat selection, API entry and bag identification through intuitive digital interfaces that are orchestrated and controlled within the airline ecosystem.

To achieve this, the airline will focus on several key areas:

- Off-Airport processing: Verification and confirmation of passengers' eligibility to travel will be conducted before arriving at the airport. This reassures passengers that their documents are in order and reduces error-prone manual processes at the airport. Passengers will have an overview of the products they are entitled to and will be able to add additional services at any time.
- Baggage: With many processes that currently require a 'check-in' being completed ahead of time, it will also enable baggage to be handed over outside the airport. Advanced digital identification of bags will allow for options such as home pickup and other drop-off points without the need for printers at all touchpoints.

- Customer service: While a fully unmanned airport is not feasible, roaming agents can assist passengers who encounter issues. Additionally, a centralised support hub can be established to handle more complex processing where self-service solutions cannot meet passenger needs, using various communication channels, including chatbots and social media platforms.
- Disruption management: Automated systems will manage disruptions by predicting potential overbooking situations and offering proactive solutions. Enhanced automation and communication tools will address service disruptions more effectively, reducing passenger dissatisfaction and operational burdens.
- Training and simplicity: Training will be streamlined to emphasise essential customer interaction skills and specific airline procedures. The central support team will receive comprehensive training to handle complex cases, ensuring high-quality service. Simplifying processes will be prioritised to maintain consistency and efficiency across airports.

To summarise the Service Delivery, or modernised Departure Control topics, it is safe to say that there will not be success without collaboration between airlines, airports, ground handlers, system providers, technology and device providers, governments and other stakeholders.

Enhancing the customer experience overall will require collaboration and investment from all stakeholders involved in the customer journey. Cooperation, open communication and a focus on the benefits for all IT providers, airports, ground handlers and other relevant service providers are crucial to ensuring a successful transition.

The foundation of offers and orders will facilitate a shift to leverage real-time data from capabilities built only once in all solutions, thereby eliminating inconsistencies in passenger handling. By enabling airline capabilities through APIs, all features that an airline wishes to offer its passengers will be available at any desired touchpoint.



4. Call to action - Let's move together, foster collaboration and enable change!

Where does all of what we outline above leave us as an industry? In a very exciting place.

The industry is progressing, and leading airlines are aiming to be off-PSS by 2028 to 2030. Without a doubt, many airlines will not be off PSS by then, but they can begin their transition on what will be a multi-year journey.

Some airlines began by undertaking further education to truly understand what the industry is doing and what is the benefit of Offer and Order to their own airline. Others, convinced this is more of a question of "when", "how" and "with whom" are plotting their transition to Offers and Orders, ably assisted by vendors, IATA and consultancies such as TiM who have specialised in this area. They have a strategy in place designed to meet their unique set of circumstances and goals and can take small steps towards executing that strategy until they reach Offers and Orders and before their PSS contract comes to an end.

If you, like other airlines, are interested in knowing more about how Offers and Orders can help you, or want help with your strategy for getting there, get in touch with TiM and find out how we have helped several airlines make sense of this complex topic in the last few years.

To 2025 and beyond

The journey to modern airline retailing is already underway, even while still being underpinned by a legacy PSS environment. First movers are already reaping the benefits – improved, cost-effective distribution with differentiated content and pricing through NDC, alongside increased revenue from optimised offers through dynamic and continuous prices for both flights and ancillaries.

To all airlines hesitant whether to start now, or where to begin – it is important to define a long-term vision with visibility on your overall transformation strategy. However, it is still possible, and highly recommended, to start small, with tangible steps that add value to your business today. Identify certain use cases, perhaps separate individual markets or channels, and use these as a basis to increase the scope. You can transition slowly, but this allows you to generate value along your transition path, as opposed to getting buy-in for a major transformation program associated with high risk, cost and uncertainty.

A pragmatic value-driven approach will help secure the necessary internal stakeholder support while minimising risk, investments, and accounting for unknowns further down the road. PROS is partnering with airlines of all sizes to help them apply this approach to the transition. Although strategies, priorities, resources and existing commercial and technical realities across these airlines differ, the shared aspiration toward commercial autonomy and retail freedom unites them, helping them realise value today.

We're excited to take more airlines on this journey to owning the next generation of Offer through smaller offer optimisation, creation, and distribution focused steps, and onwards to portfolio management and beyond.

Christopher Allison, Director, Product Management, Offer & Order



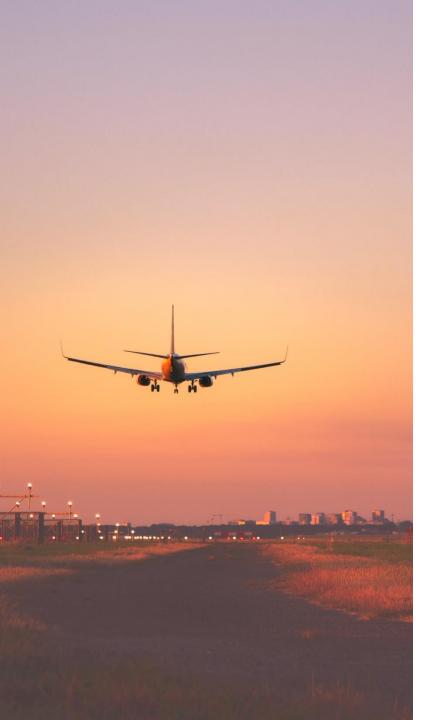
The past two years have strongly focused on foundational work, both for airlines individually and IATA with the consortium from an overall industry perspective. We have been privileged to be involved with both and have seen the progress made. Many will complain about the snail's pace of the industry—I'd refer to the baobab tree analogy in the opening of this paper.

Our industry's processes are complex and have not become simpler in the past years – the opposite is the case. I see a lack of courage by airlines to get rid of legacy processes. I see a lack of innovation and speed by the vendors in developing new solutions. However, the two "problems" I see above require both parties to work together to resolve them. Each alone will not reach the goals of this transformation.

As Travel in Motion, we urge vendors to work together despite the competitive environment. We urge airlines to work together to develop better, more efficient processes. And we urge all of you to work together, have patience and have courage.

Daniel Friedli Managing Director & Partner









Travel in Motion AG is a consulting firm offering advisory services to the travel industry. With expertise and a focus on PSS, digital retail (or offer and order) transformation and consumer retailing, Travel in Motion can help create, outline and articulate strategies for distribution, ecommerce and customer experience, and support the execution thereof.

With many years of experience in the travel industry, we have been working for and with airlines, GDSs and IT vendors. We bring a wealth of knowledge and have previously held roles in software development, project management, product management, airline system migrations, solution architecture, business process modelling, consultina business and business development.

We understand the vendor perspective and the airline needs and have played an important role in the past bridging the gap between the two.

We strive to deliver business value to key stakeholders by aligning business and IT concepts, strategies and solutions

PROS Holdings, Inc. (NYSE: PRO) provides an Al-powered, real-time platform that powers airline commercial autonomy on the path to Offers and Orders by enabling airlines to retail when, how and where they want. Built on industry-leading AI, PROS customer-centric offer management solutions allow airlines to create and dynamically price offers based on customer attributes and shopping context, and deliver those offers across any marketing, sales, and distribution channel.

PROS airline portfolio spans airline offer optimisation, offer creation and retailing, offer marketing, portfolio and order management solutions. With more than three decades of AI expertise, 20+ patented algorithms, a team of 85+ data scientists, and a well-established track record of airline success, PROS supports the industry's transition to modern retailing.

For more information visit www.travelinmotion.ch Contact us at: info@travelinmotion.ch

To learn more, visit PROS.com/Travel. Contact us at PROS.com/Contact.

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Together, we create and bring to life strategies driving travel retail.