

NDC

2021 AND THE PATH TO
INDUSTRIALIZATION





WHAT YOU CAN EXPECT

FOREWORD	3
1 WHERE WE ARE TODAY: 2021 - THE YEAR OF SCALING	4
A. Airlines are beginning to differentiate with NDC	5
B. Travel sellers are going live with NDC across the world	7
C. The technology is advancing rapidly	9
2 THE PRACTICAL BARRIERS TO REACHING 'CRITICAL MASS'	11
A. Standardization remains a priority	12
B. Mid- and back-office system transformation	13
C. Commercial alignment across the industry	14
D. Preparing airline systems	15
E. Cultural change is an ongoing process	16
3 CONCLUDING THOUGHTS: THE TIME IS NOW	17
A. NDC and the opportunities ahead	18
B. Collaboration is the key to NDC success	19
C. Shared industry next steps	20
4 CONTRIBUTORS	21

FOREWORD



ANGEL GALLEGO

Executive Vice President,
Travel Distribution, Amadeus

The last few years have seen steady progress on NDC. However, progress hasn't always been linear. For some time, it appeared that the NDC vision would prove difficult to turn into reality due to the complexity of the technology standardization and commercial considerations impacting so many different actors.

However, in the last 18 months, despite the pandemic, momentum around NDC hasn't stalled. In fact, the widely shared vision to improve travel retailing, to focus more on traveler needs and simplify processes has driven much progress.

I am optimistic that 2021 will be seen as a pivotal year in the deployment of NDC. I am encouraged by the fact that we are working with more than 30 airlines on the IT side and with more than 17 airlines for the distribution of their content via NDC through the Amadeus Travel Platform. Approximately 80% of these distribution airline partners have achieved IATA Level 4 certification, and our NDC airline partners together represent nearly 25% of global passengers numbers in 2019, showcasing the commitment and global adoption of NDC worldwide. Additionally, over 2,500 travel agencies across 50 markets can already book this airline content via NDC through our solutions. And our goal is to make NDC-sourced content available to all Amadeus travel sellers around the world in the course of this year. A bold and ambitious goal, but one which we firmly believe is achievable.

Modern consumers have the same expectations of travel companies as they do of brands such as Amazon, Netflix, Spotify and the likes. This means that we as an industry need to improve how we deliver our products and services, across all channels. We need to be more responsive to today's traveler, we need to innovate in product development particularly with respect to new safe travel options, and we need to shift our mindset if we are to unlock new sources of value to the traveler.

NDC offers new possibilities for the retailing of travel services. It offers the potential for the travel industry not just to meet the needs of the modern digital consumer, but to anticipate their future needs and ensure that the travel sector leads the way in retailing.

I'm excited by the potential for NDC to combine with IATA's ONE Order initiative in the medium term to help airlines and travel companies conceive, retail and deliver end-to-end travel services in an even more efficient way. This future promises a greatly improved traveler experience, and the creation of additional value, which can be shared across different types of travel companies that collaborate to deliver such end-to-end services.

In this paper, driven by insights from airlines, travel sellers and corporations, as well as our own Amadeus experts, we provide an overview of where we are today as an industry in terms of NDC readiness, shed light on some of the barriers that still exist to reach full industrialization, and show what modern travel retailing looks like. I hope you enjoy the read.

1

WHERE WE ARE TODAY: 2021 THE YEAR OF SCALING

It's been eight years since IATA published its 'future of airline distribution' whitepaper outlining a vision for the future shape of the distribution ecosystem in an NDC world. And of course, NDC discussions and planning were ongoing well before this. It has taken a long time for the industry to put the NDC groundwork in place but we shouldn't forget how much progress has been made during this time.

Now, in 2021, there's every reason to be excited about NDC making a tangible impact in the near future. Airlines are beginning to offer new differentiated product bundles and price points, increasingly based on richer contextual information; travel sellers across the world are now beginning to make live NDC bookings with tools that provide easier access to airline offers; and technology partners like Amadeus are offering scalable solutions that will contribute to the industrialization of NDC, incorporating important features like post-booking servicing. And yes, commercial discussions are progressing across the industry, too.

As Yanik Hoyles, Director Distribution at IATA explains, NDC has significant momentum: *"Despite the crisis NDC is accelerating rapidly. Even during 2020, airlines asked IATA not to slow down on NDC because it has become a key strategic capability and will support recovery. We've seen NDC certifications rise by 23% in the past 18 months as evermore players commit to the new modern standard. The big technology partners like Amadeus have made it clear NDC is a strategic priority and that's critical to the on-going success of the initiative. Going forwards, airline retailing enabled by NDC will be a key contributor to airline profitability."*



The foundations of NDC have now been laid and that opens the door to a whole new world of modern online retailing in the travel industry."

LUDO VERHEGEN
Amadeus

A AIRLINES ARE BEGINNING TO INNOVATE WITH NDC

While still modest in overall terms, live NDC bookings are being made today. Airlines are already beginning to innovate with fare bundles that deliver the products travelers want while removing steps from the booking and expense processes. In part, these more sophisticated airline offers are made possible by the richer and more contextual information airlines can now access during the shopping session.

American Airlines, for example, is an NDC pioneer. The carrier decided it will connect with its travel seller partners however they wish, be that directly, through aggregators or other technology partners.

“We know corporate travelers tend to need WiFi and that pretty much every company is happy to fund it. The corporation also likely wins if its senior managers have speedy boarding and a premium cabin seat so they can be more productive. With NDC our corporate customers will be able to work with us to help define their experience with American.”

NEIL GEURIN
American Airlines

For American Airlines, NDC means it can work with its large corporate customers to design bespoke product offers that cater to subsets of employees at those companies, e.g., special packages for senior managers of a corporation.

As Neil Geurin, Managing Director of Digital Customer Experience and Distribution Strategy for American Airlines describes, it's all about delivering what travelers want, more simply: *“we know corporate travelers tend to need WiFi and that pretty much every company is happy to fund it. The corporation also likely wins if its senior managers have speedy boarding and a premium cabin seat so they can be more productive. With NDC our corporate customers will be able to work with us to help define their experience with American.”*

Offering the right packages makes life easier for corporate travelers and their employers, too. *“If I travel regularly, the last thing I want is to take out my credit card on the plane to buy WiFi. Back at headquarters, they'd prefer not to have additional services to account for as part of the expense process. If we can match corporate travelers to the right bundles then the experience can be improved,”* explained Geurin.

1. WHERE WE ARE TODAY: 2021 THE YEAR OF SCALING

A AIRLINES ARE BEGINNING TO INNOVATE WITH NDC

This vision took a major step towards reality at scale with the renewal and expansion of American Airlines' contract with Amadeus in February this year. NDC-enabled travel sellers using the Amadeus Travel Platform can now book an American Main Plus offer, which includes a Main Cabin Extra or Preferred Seat along with an extra free checked bag and Group 5 boarding privileges on any American operated flight.

On the other side of the world, Qantas has made significant progress towards presenting more tailored offers through its travel seller partners. The airline can now recognize frequent flyers that book via NDC-enabled travel sellers at the tier level and is able to present customized deals made up of such things as price, points rewards, ancillary options and bundles. In the future, the airline plans to enable payment with a combination of cash and miles via NDC for frequent travelers and it's already possible for every traveler to carbon offset if they wish.

At Qantas, it isn't just about delivering new content and offers, innovation in the NDC shopping and servicing experience itself is critical to driving adoption. As Nathan Smeulders, Senior Distribution Manager describes: *"We're absolutely committed to working collaboratively with travel sellers on NDC. We've put in the hard yards to ensure travel sellers have a shopping and servicing experience that is superior to the traditional EDIFACT world."*

Travel sellers booking Qantas offers via NDC now have access to seamless shopping, re-booking, re-issuing and refund processes as part of an end-to-end flow. While this remains a work in progress, the airline has invested heavily in bringing the servicing capabilities up to standard. *"We recognized our seller partner challenges around servicing early on and we've gone all out to make sure we're meeting their needs,"* added Smeulders.

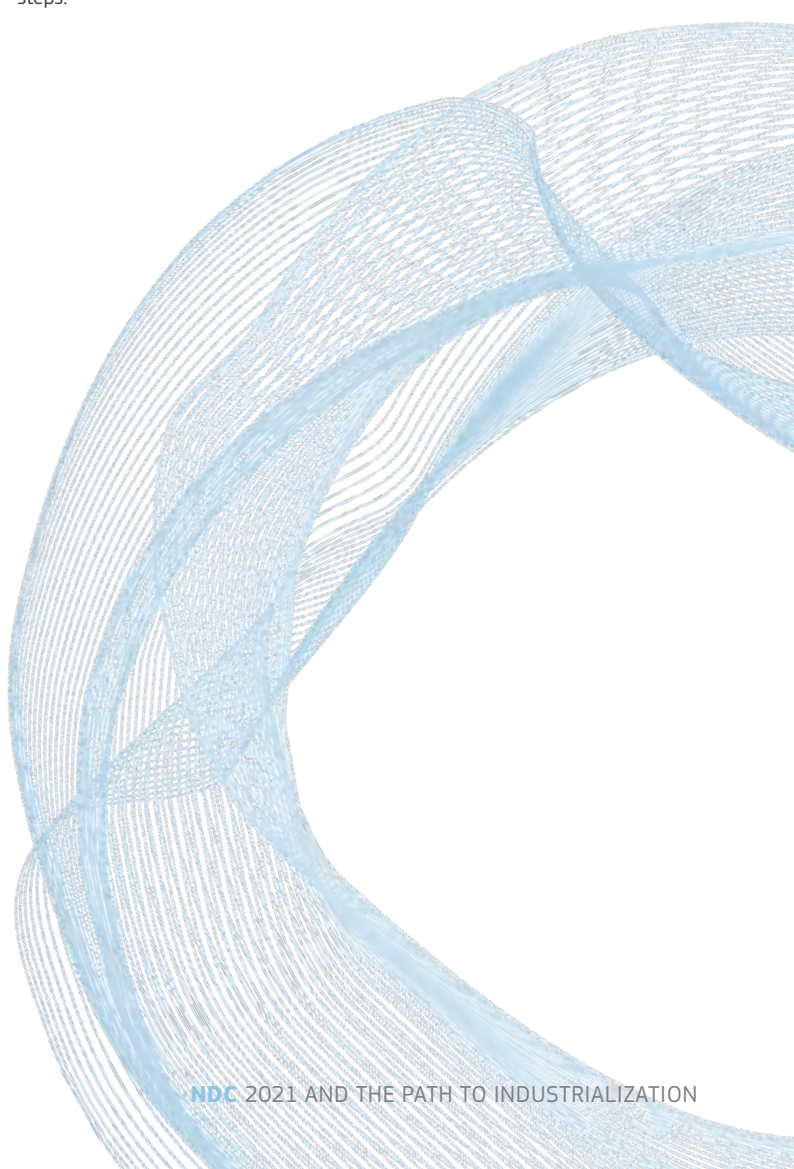
British Airways has introduced additional price points using NDC with small increments between fares within booking classes. The move increases price points from the standard 26 to more than 73 on its short haul routes in Euro Traveller and Club Europe business offers. For travel sellers looking to source the optimum deals for corporate or leisure customers, NDC now delivers new levels of price flexibility.

For Katy Cardwell, Head of Distribution at British Airways, this is a key way that NDC capabilities can help the industry to rebuild: *"Travel sellers need to offer the best deals and widest range of options to travelers. Additional price points are a great example of what's possible with NDC today. I believe this type of innovation will play an important role in advancing travel retailing, helping our industry to more precisely deliver the right offer, at the right price, for our customers."*

Supporting more intelligent and appealing ancillary sales is also front of mind for Cardwell, which she believes could drive significant additional value for British Airways, its travel seller partners and its customers: *"We're seeing that customers are around 100 times more likely to add an ancillary service when the booking is completed via NDC. That's vital revenue for British Airways and a great chance for our partners to ensure that travelers can access the product they want during the booking process. I think it's a win, win, win."*

The airline is committed to rolling out its NDC offers and new pricing strategy as widely as possible and that led to a landmark agreement with Amadeus, announced in February this year. The partnership sees all airlines of the International Airlines Group (IAG), including British Airways, Iberia, Aer Lingus and Vueling make their NDC content available to travel sellers and corporations through the Amadeus Travel Platform and via Amadeus' NDC-enabled solutions. The move broadens access to NDC offers for the industry, while ensuring IAG airlines can scale new retail innovations.

While there is increasing excitement across the industry about advanced retailing techniques that help to convert more customers by offering new compelling airline content, which ultimately delivers an improved experience for travelers, it remains the very beginning of this journey. Most travel sellers and corporations that contributed to this report cited full access to today's existing content, greater clarity on each airline's strategy and a period of experimentation as important initial steps.



B TRAVEL SELLERS ARE GOING LIVE WITH NDC ACROSS THE WORLD

NDC represents change not just for airlines but for every company in the distribution ecosystem, including travel sellers and the technology providers that serve them. Amadeus has been working in close collaboration with travel sellers across the world to ensure they can access, book and service any type of content through the Amadeus Travel Platform. 2021 marks a significant milestone on this journey.

As of September 2021, more than 2,500 travel sellers across 50 different markets are NDC ready with Amadeus. However, the real prize will be achieved before the end of the year when all Amadeus travel agency and corporate customers will be enabled to access content via NDC on a global basis.

Ludo Verheggen, Director Air Distribution Growth at Amadeus, sees 2021 as the year that NDC scales: *“The foundations of NDC have now been laid and that opens the door to a whole new world of possibilities for modern digital retailing in the travel industry. We’re fully committed to accelerating this vision in the shortest possible time, with innovative solutions that ensure NDC works for all stakeholders across the industry.”*

For Verheggen, the combination of more specific information about the traveler, the speed of offer creation and richer content promise to deliver better experiences for travelers and improved business outcomes for travel sellers. *“When airlines know the traveler’s destination, the length of their trip and if they’re traveling in a group or alone then they can respond with much better offers in real-time. With travel sellers accessing richer information about those offers you can imagine an agent flipping the screen around and consulting with the customer about their options using pictures, graphics and detailed descriptions. That’s a step-change for travel retailing and it should increase the size of the pie for all participants in the industry.”*

“We’re fully committed to accelerating the vision of enhanced travel retailing in the shortest possible time, with innovative solutions that ensure NDC works for all stakeholders across the industry.”

LUDO VERHEGEN
Amadeus

1. WHERE WE ARE TODAY: 2021 THE YEAR OF SCALING B TRAVEL SELLERS ARE GOING LIVE WITH NDC ACROSS THE WORLD

One of the travel sellers already working with the Amadeus Travel Platform is Flight Centre Travel Group, an early pioneer with NDC. Nicola Ping, Air Content and Distribution Manager at Flight Centre, agrees that 2021 is shaping up as a pivotal year for the new standard: *"I think we can finally say that NDC is approaching readiness for some of the travel sellers that engaged early. We're an Amadeus partner and they now have agreements with virtually all the large airlines in our key markets. When you combine that with technical enhancements to servicing capabilities for NDC bookings then this year we expect to ramp up live bookings significantly."*

Key to unlocking live bookings at Flight Centre has been tackling the servicing capabilities within NDC. For Ping, this has been addressed very recently, representing a breakthrough: *"In the past year massive progress has been made with servicing capabilities by airlines, IATA and technology partners. It's now possible to cancel, rebook and to see if a flight has been disrupted – we can very nearly do everything we did with EDIFACT and that's critical for the service we provide to our corporate customers in particular."*

Thinking about this in practice, the ability for real-time notification of disruptions from the airline via NDC is a significant step forward. For example, if a flight is cancelled or delayed, the travel seller could either rebook, refund the flight (based on offer conditions), or offer a voucher to passengers instantly, based on their preference. All of this can help avoid long lines at the airport customer service desk and prevent traveler stress and frustration. There's no doubt this technical advance removes significant complexity and a historic barrier to widespread NDC adoption.

For Laila Ben Salah, VP Industry Relations & Air at Travix servicing really matters, but achieving broader differentiation through innovation is the wider objective: *"We've always been a leader in concepts like fare families, up-selling and cross-selling. NDC is an innovation playground and we're open to working with our partners on pilots to deliver a differentiated experience to our travelers."*

Travix is a driver customer for the Amadeus' NDC [X] program since its inception. Recently, it has been working with Air France-KLM and Amadeus to further expand its range of NDC content and will begin live NDC bookings of this particular carrier from Q3 2021.

"The objective at Travix is to achieve a full NDC end-to-end shopping and servicing capability, incorporating content and offers from a wider number of airlines before the end of the year. Our focus now is bringing more airlines on board, adding capabilities like ancillary services and full post-sales servicing. NDC is a journey, not a destination, but we expect to have achieved this before the end of 2021," added Ben Salah.

For corporations like Allianz, NDC could contribute to rebuilding a better industry following the COVID-19 pandemic. *"Rich content, on-demand information and servicing capabilities are vital and COVID-19 has really highlighted this. We do need to learn from the pandemic. For example, being able to pay an airline when the flight departs helps to overcome problems with refunds of unused tickets. NDC might help to streamline the payment process and that would be a huge benefit for us,"* commented Claudia Adams, Travel Manager at Allianz.

For Adams, the corporate travel world needs the injection of innovation that NDC represents. *"In any area of business, you need to grow, you need to evolve, and you need to accept a certain degree of disruption to innovate. Our online booking tools from Amadeus have started us on this journey, but we want to go further together – with servicing being a key focus."*

Erik Magnuson, VP Product Management Mobility and Payments at CWT agrees that servicing is a critical success factor for NDC: *"While progress has been made on NDC servicing capabilities, there remains work to do. As a trusted Travel Management Company (TMC) we take duty of care extremely seriously. We need timely data that transfers from the booking into downstream systems so we can locate every traveler, at any moment in time. This is an area that's still being worked out at the NDC protocol level, as well as by technology companies."*

Several travel seller and corporate travel manager contributors to this report made similar observations: that for the next phase of NDC and to really scale, there is the need to offer the complete package – valuable content, plus airline technical readiness, plus servicing capabilities, plus full downstream integration. It's only when the end traveler has all four for every trip they plan that NDC's full value will be understood.

Charlie Sullivan, Head of Product, Air Distribution at CWT summed up the situation succinctly: *"Right now NDC is appealing to and having success with the innovators and early adopters; however, real acceleration will happen once we collectively broaden the appeal of NDC enabled content to the early majority which will require a collective approach to address the performance, scalability and capability requirements."*

C THE TECHNOLOGY IS ADVANCING RAPIDLY

“The Amadeus Travel Platform is great for consultants. It’s graphical, intuitive and as easy to use as any desktop productivity tool. We should be able to train a new consultant to begin selling differentiated airline offers in a matter of hours. It doesn’t matter if the content is sourced from NDC or EDIFACT, it’s the same shopping experience,”

NIALL WHITE
House of Travel

Most commentators agreed that technology is no longer the primary barrier to NDC adoption. Thanks to the Amadeus Travel Platform, it’s now possible for travel sellers and buyers to consume NDC and EDIFACT content, alongside LCC content delivered via APIs, in a single application with NDC delivering an improved booking experience. For example, it takes a single click to add an airline ancillary to a booking using a graphical user interface, compared to around five cryptic commands. Similarly, now that servicing capabilities have matured, a booking can be cancelled, voided or refunded with a single click rather than multiple commands. It’s clear there will be a period of adjustment for experienced travel consultants that are used to cryptic interfaces, but ultimately productivity should increase in the medium term.

“The Amadeus Travel Platform is ready today, it brings all content together no matter how it is sourced into an intuitive shopping, booking and servicing flow. This helps airlines to represent their offer in an optimal way that supports their unique business strategies. NDC represents an upgrade for everyone and is key for the future of our industry”, says Javier Laforgue, Executive Vice President, Airlines Distribution at Amadeus.

1. WHERE WE ARE TODAY: 2021 THE YEAR OF SCALING C TECHNOLOGY IS ADVANCING RAPIDLY

By the end of 2021, every Amadeus-connected travel seller should be able to access NDC and EDIFACT content through a single search query, with a simplified end-to-end booking flow, using the Amadeus NDC-enabled solution of their choice. All solutions are backed by the Amadeus Travel Platform which not only brings all airline content together in the one place, but also other types of travel content such as hotel, rail, car, insurance and more. Agents can access the content they need to shop and compare easily, with the ability to change, cancel and rebook airline NDC offers. More than 2,500 travel sellers are already doing this today. Just six months ago, this was only a handful.

Airline use of NDC is also advancing and there is a rapidly increasing supply of airline NDC content available through companies like Amadeus. Amadeus has announced collaboration with airlines across the globe to bring their NDC-sourced content in the Amadeus Travel Platform including Air Canada, Air France-KLM, Aer Lingus, American Airlines, Cathay Pacific, British Airways, Iberia, Finnair, Japan Airlines, Kenya Airways, LOT Polish Airlines, Qantas, Qatar Airways, Singapore Airlines, Vueling and United Airlines. These partnerships provide travel sellers with comprehensive content to best serve travelers.

This combination of content and fully functioning and integrated NDC technology is beginning to lead to network effects.

Travel sellers and corporations recognize that NDC is increasingly critical to securing the best travel experience. Global Travel Management Volkswagen Group explains: *"Today we face the situation of fragmented content and it's critical that our employees have access to the fullest range of fares and options. Bringing NDC online means we can access the best possible pricing, we avoid airline surcharges and travelers can choose new types of airline bundles."*



“Headway has been made on the technical barriers, but the major blocker right now is the commercial alignment.”

NICOLA PING
Flight Centre

2

THE PRACTICAL BARRIERS TO REACHING ‘CRITICAL MASS’

Although NDC has progressed significantly over the last few years, it's clear that there will be a multi-year period of transition as both the traditional and newer distribution methods co-exist. If we, as an industry, are to accelerate our journey through the industrialization phase and towards 'critical mass', it's helpful to understand and discuss the barriers that remain.

A STANDARDIZATION REMAINS A PRIORITY

While NDC itself is a “standard”, it is still being applied by airlines in subtly different ways and, from speaking to stakeholders across the travel value chain, there is a growing desire for airlines to focus on a single version or interpretation of the NDC standard to limit downstream complexity.

“Nobody benefits from having to harmonize classes of service, terminal information or even telephone number formats because different interpretations of NDC are being pursued. What really matters is retailing a premium offer by showing how great the business class flat-bed looks and clearly explaining the benefits of different fare families. Greater alignment on version 21.3 will help everyone to focus on what matters – driving additional margin.”

MARK RIDLEY
Amadeus

Overall, while it is expected that version 21.3 of the standard - that will be released later this year - is the one that the industry can unite around and overcome most of the technical challenges, there are still seeing different interpretations of the NDC standard in the ecosystem.

Travel sellers, TMCs and corporations have all told us that they are faced with divergent and fragmented flows, different functionalities and content from one airline provider to another, which complicates their day-to-day workload and becomes a barrier to adoption. For example, selling ancillaries more efficiently through NDC is one of its ultimate goals, but currently there is no common way for airlines to categorize and describe their non-seat inventory to sellers. Two standards exist in the market – one from IATA and another one from ATPCO – but several NDC APIs do not rely on any of them and have their own categories.

To improve the application of the standard, Amadeus is working hand-in-hand with its customers and IATA to make proposals for more simplified and consistent ways to standardize messages in different use cases. The focus of this work, done in collaboration with partners, is to deliver the best possible outcome for all industry participants.

B MID- AND BACK-OFFICE SYSTEM TRANSFORMATION

For corporations, being able to obtain timely and highly accurate data about each booking is critical for reporting and having an efficient travel program. In an NDC context, this information still needs to flow through the travel seller mid- and back-office systems, before finally reaching the corporation's own accounting systems.

Today, the vast majority of TMCs and travel sellers are hard at work transforming their mid- and back-office systems so the richness and accuracy of this data is improved in an NDC environment.

According to Lenny Hornsby, Travel & Travel Technology Manager at Deloitte, this should be a key focus area. *"We need to improve the quality of data used for accounting. For example, during the COVID-19 pandemic, a large number of refunds for cancelled flights needed to be managed by most companies. Unfortunately, TMCs didn't all supply information on unused tickets, so lots of manual work was needed to ensure proof of tickets qualified for refunds could be supplied."*

Until the eagerly anticipated introduction of IATA's ONE Order standard in the coming years, each service that a corporation books with an airline through NDC will continue to be administered using its own 'document number'. So even an ancillary service like lounge access is identified and accounted for with its own number.

Hornsby sees the shift to a single order, including all associated services, as a transformational change that will help companies better understand, organize and analyze its travel spend. *"In my view, NDC is really a step on the way to ONE Order, the combination of the two changes promise drastic simplification. In that future, companies are not required to keep track of multiple document numbers via the TMC partners, instead we can work with a single invoice for each booking. It will introduce simplification in understanding travel spend."*

In the meantime, as the ONE Order transformation continues, Amadeus is already working actively with more than 100 mid- and back office system providers around the world to ensure they are ready for NDC. Our approach to NDC limits disruption for the mid- and back office because it still creates a PNR and it maintains the consistency in the message format these systems are accustomed to. By limiting change in this area of the ecosystem we will accelerate NDC adoption at scale.

"We need to improve the quality of data used for accounting. For example, during the COVID-19 pandemic, a large number of refunds for cancelled flights needed to be managed by most companies. Unfortunately, TMCs didn't all supply information on unused tickets, so lots of manual work was needed to ensure proof of tickets qualified for refunds could be supplied"

LEONARD HORNSBY
Deloitte

C COMMERCIAL ALIGNMENT ACROSS THE INDUSTRY

“Headway has been made on the technical barriers, but the major blocker right now is the commercial alignment that is needed to move beyond simply talking about being technically ready. Reaching an agreement on NDC is a bilateral process with each airline, so it's now absorbing a lot of time and effort from stakeholders across the value chain.”

NICOLA PING
Flight Centre

Another major stumbling block to progress centers on the commercial models to support this new world of travel retailing, which has for some time now been the 'elephant in the room' when speaking about NDC and distribution more broadly.

As Ping points out, “IATA’s NDC initiative does not prescribe a commercial model, which means that alignment often boils down to a case-by-case, bilateral negotiation. It has also meant that some airlines have attached controversial commercial elements to their NDC strategies, such as levying surcharges. Every player is wary of the economic implications of NDC and it is understandably a delicate topic for all.”

In addition, some travel sellers highlighted that NDC is not a 'one size fits all' switch to a new system; it's far more complicated than that. Individual airlines have different distribution strategies based on their relative strength within a given market and each airline has its own objectives with NDC. For some, the primary goal may be on merchandising and revenue uplift while others are focused on gaining greater control over the distribution of their product. Objectives can also vary for the different markets a single airline serves.

Niall White, Director at House of Travel, a travel seller offering traditional retail, corporate services and an online travel agency in New Zealand, summed up the situation: “We now have all the Lego bricks in place, but the industry isn't yet sure exactly what to build. We are sure NDC is the future and we want to be ready for when the switch happens.”

Adding to this are the logistics of reaching alignment across the industry. For NDC to be viable, there need to be commercial agreements between airlines and technology partners; airlines and travel sellers / corporations; technology partners and travel sellers / corporations. Given that there are thousands of stakeholders across this industry, a huge number of commercial agreements need to be concluded to set the terms for NDC bookings.

D PREPARING AIRLINE SYSTEMS

This report has cited NDC technology change primarily through the lens of aggregation and the ongoing upgrades happening within the distribution chain, but it is important to acknowledge that airline systems also need to evolve.

Carriers need to move to an 'offer and order' capability and mindset with a new generation of systems that allow for the creation of flexible and customized offers, made available through multiple channels and multiple NDC aggregators. This is part of the wider digital transformation of the industry that sees the ONE Order standard move airlines beyond tickets and document numbers towards a single, modern, shopping basket approach to retailing and fulfilment. The promise of this change cannot be underestimated but it will require airlines to restructure departments and underlying systems.

One of the impacts of NDC for airlines will be a marked increase in transactional traffic. In the current model a distribution partner like Amadeus absorbs around 95% of this traffic as it builds the offers for airlines based on fixed fares and dynamic airline inventory. In the NDC model, all these queries will flow directly to the airline's own system, which will need to be robust enough to respond to extremely high volumes of searches performed by the distribution players like Online Travel Agencies (OTAs).

"Airlines will need to be ready for this very new and competitive landscape, as they enter further into the retailing space. This means upgrading revenue management systems based on historical yields and bookings to new offer management systems based on customer centricity and dynamic pricing. Old PNRs and tickets will give way to comprehensive orders; it's an exciting future but it requires investment on the part of airlines."

MARK RIDLEY
Amadeus

Work is actively progressing to support airlines to handle the significant look-to-book ratios and performance demands that will come as NDC scales. For example, Amadeus is working on technology that can better manage requests originating from OTAs so that they only reach airlines serving the route in question when there is suitable availability. It is also expected that new techniques and technologies will need to be co-created to help mitigate the huge number of search requests hitting the airlines' system, whilst ensuring carriers retain control over their offers.

E CULTURAL CHANGE IS AN ONGOING PROCESS

It is an important point. NDC is not just technical and sometimes commercial changes, it also requires a total industry mindset and cultural shift. With NDC, travel sellers benefit from a much more dynamic and graphical environment. There's a whole new vernacular that comes with NDC and a completely different set of behaviors that sellers in particular need to apply – they need to start thinking about orders and offers, rather than bookings and PNRs.

From an airline perspective, it requires them to enhance their retailing capabilities. This means redefining their relationship with travel sellers and how they innovate and sell their products using technology to adapt to the new fast-moving age of commerce, where the traveler, not the product, is at the center.

For an industry that has been working in a certain, specific and structured way for the last 30+ years, transitioning isn't going to happen overnight. Even though the technical foundations are falling into place, issues with the cultural aspects will persist. As Qantas has discovered, the shift to NDC requires a huge amount of education and re-education across the industry to ensure that each stakeholder in the value chain understands the what, where, why and how of NDC.

“We spend a lot of time educating our sales teams and people in the business about how NDC works and what it does. Some agencies have an amazing understanding of NDC, but others we find are still really trying to get their heads around it. Over time they'll learn more, but it's vital that we continue to provide a constant flow of information and knowledge to help educate everyone in the travel ecosystem,”

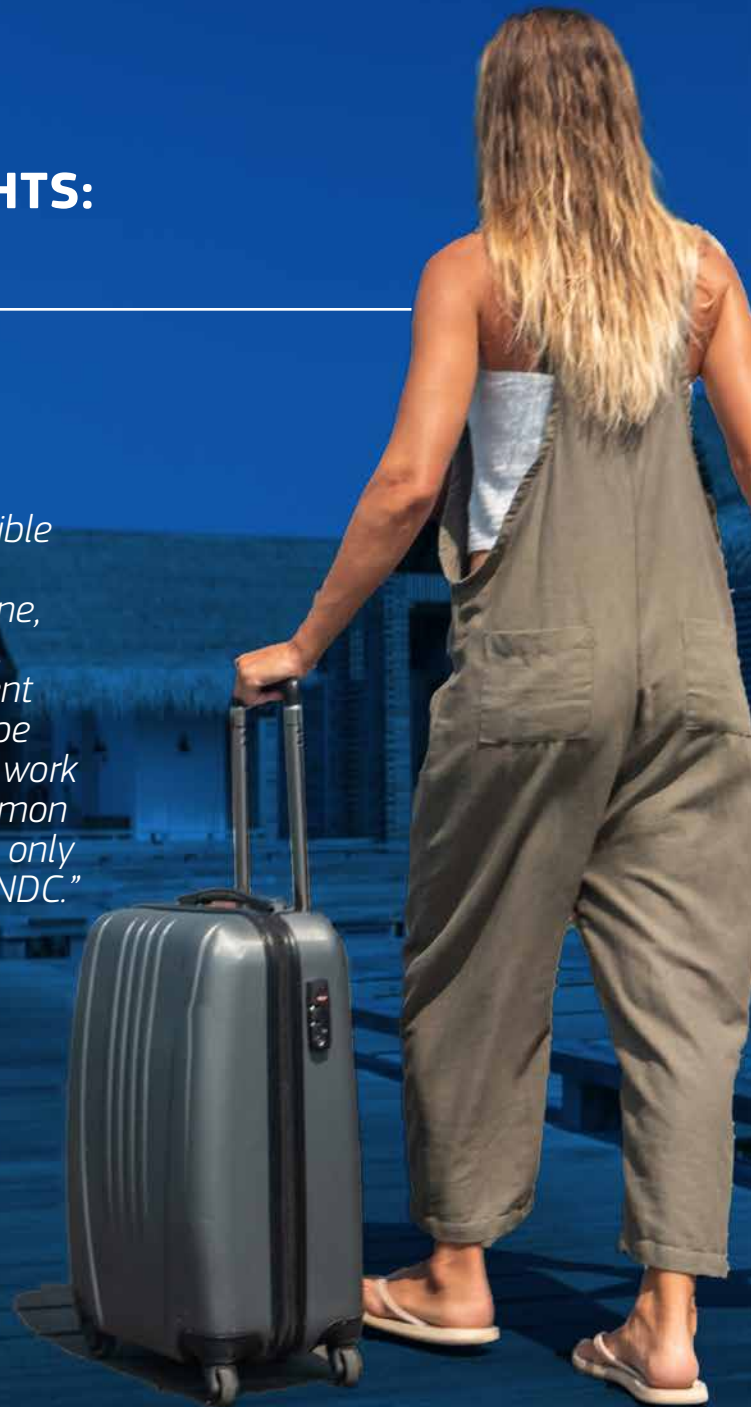
Nathan Smeulders
Qantas

3

CONCLUDING THOUGHTS: THE TIME IS NOW

“Transformational change is impossible without industry-wide collaboration. When we can bring together an airline, a technology provider like Amadeus, a TMC like CWT and a corporate client on a common goal, mountains can be moved. The various players need to work together to collectively reach a common level of interaction and momentum, only then will we reach critical mass for NDC.”

ERIK MAGNUSON
CWT



A NDC AND THE OPPORTUNITIES AHEAD

NDC represents a key pillar of the airline industry's digital transformation, modernizing the way airlines create and present tailored offers to different traveler segments. It's an exciting time to be involved in airline distribution and there is an opportunity to transform the indirect distribution channel so it is more effective, less complex and better able to deliver on the needs of travelers and the industry today. It's understood there are still some issues to overcome around servicing, integration and lack of standardization to obtain the full benefits of NDC. NDC is a journey, and working together with the industry we will not only overcome these issues but unlock limitless possibilities to improve travel retailing.

At Amadeus, NDC is a highly strategic and exciting stream of work, with dedicated resources, including the necessary investments to drive the standard forward.

To illustrate, this is Amadeus' NDC deployment journey in numbers (as of September 2021):

- 1** 5 airlines live in the Amadeus Travel Platform today; with many more expected in the coming months
- 2** 10 Airlines live with Altéa NDC today; 20 more airlines currently being implemented
- 3** 2,500+ travel sellers live across 50 markets
- 4** NDC-enabled content available for Amadeus travel sellers around the world by the end of 2021
- 5** Working with more than 100 technology partners around the world to help them get NDC ready

B COLLABORATION IS THE KEY TO NDC SUCCESS

Achieving the benefits and overcoming the barriers identified within this report require one trait above all others: collaboration. As long as all stakeholders collaborate together as industry partners and recognize each other's challenges and interests, we can align goals and deliver the expected end-to-end value.

Importantly, there are already practical examples of this happening across the industry. Allianz, for example, has decided to focus on working with partners like Amadeus to address the technical capabilities of NDC before addressing other aspects. Once it has a clear view of how technically it's going to work with partners, it will then revisit other relevant aspects. With a technical solution in place, there is a greater incentive for all parties to align on things like commercials.

Collaboration has also been critical to the success of NDC at Travix. By running pilot projects with airlines and other stakeholders across the industry, its strategy has focused on engagement from the outset of NDC and acting as an advisor to airlines. By being open, Travix is able to collaborate with carriers, providing feedback on which NDC initiatives are working and what they recommend for selling airlines' products most effectively.

This collaborative approach means Travix expects to be a major consumer of NDC content later this year and has ensured that many of its airline partners, when taking decisions on developments or changes, will have heard the voice of an OTA.

C SHARED INDUSTRY NEXT STEPS

Following a series of interviews with experts from airlines, travel sellers and corporations, general consensus emerged on the next steps needed to further accelerate NDC.

GET ONBOARD

Until this point NDC has been in the 'early adopter' phase as interested airlines, travel sellers and corporations have worked to achieve live NDC bookings. As this report has highlighted, the content, technology, understanding and commercial agreements around NDC have now advanced. Over the coming months we, at Amadeus, expect extensive NDC deployment so commitment to NDC is critical as failure to prepare people, processes and technology could see some participants left behind.

Activating NDC for Amadeus travel sellers is straightforward as we facilitate NDC content through the tools they already rely on today, like Amadeus Selling Platform Connect, with the objective to enable access to the widest possible range of content to deliver the best service.

EXPERIMENT

New airline content is coming with new shopping and servicing experiences for travel sellers. Now is the time to ramp up NDC experimentation to understand how digital retailing can improve the travel experience and the bottom line. By trying new offers, analysing

the impact and refining flows and processes, NDC delivers an innovation playground the industry hasn't had before. It is critical to start working with NDC by testing and learning to obtain the maximum benefits from NDC.

KEEP TALKING

There's never been a more important time for our industry to solve problems collaboratively. Airlines need to know what offers travelers want. Travel sellers need to discover what airlines will bring with NDC. Technology partners need to understand and tackle the issues

travel sellers face when delivering for airlines and travelers. It's only through dialogue and partnership that the industry will achieve the maximum benefits from investments in NDC, which are key to the industry's recovery and transformation.

Amadeus believes in the value of collaboration and remains committed to supporting this new exciting era of travel retailing through NDC. As we all continue to navigate COVID-19, NDC provides an opportunity to rebuild travel according to the changing needs of the industry.

2021 marks a significant milestone in the industry's NDC journey and Amadeus, hand-in-hand with its customers and partners, is ready to make it the year that NDC scales.

4

CONTRIBUTORS

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An abstract graphic composed of numerous thin, overlapping blue lines that form a large, irregular, circular shape. The lines are densely packed and create a mesh-like or wireframe effect, resembling a stylized globe or a complex network. The overall color is a vibrant blue.

Learn more about NDC on amadeus.com/ndc

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