

Global Airline Industry Almanac

A spotlight on 2017
and key trends for the year ahead



Methodology

For this report, Amadeus undertook primary and secondary research in association with Connections Events, Jacobs Media Group, Fire on the Hill, T2RL and various industry experts. The report is a summary of events that took place in the airline industry during 2017, which does not reflect the opinions of Amadeus or the partner organisations, unless directly quoted in the report.

Our approach

Conducting interviews and gathering insights from Amadeus industry reports, Amadeus and industry executives, third-party sources and other prominent air travel research in 2017. We thank all of the participants, most of whom are quoted throughout the report.

About Connections Connections is part of Jacobs Media Group, Europe's largest B2B multimedia publisher and events organiser for senior decision-makers in the travel industry. To find out more, visit weareconnections.com.

About Fire on the Hill Fire on the Hill is a London-based corporate communications agency specialising in complex issues management and thought leadership communications. The team specialises in the travel, aviation and technology industries, working with large enterprises and innovative start-ups.

About T2RL Travel Technology Research Ltd, trading as T2RL, is an independent research and consulting company that specialises in the marketplace for airline IT systems. Based on data gathered and analysed since the year 2000, it has defined and tracked classifications of airlines and their IT providers. T2RL's classification of airline business models is unique and is based on whether or not an airline has 10 key attributes: codeshare, interline, GDS distribution, connecting services, international services, long-haul flights, multiple aircrafts, multiple classes of service, multiple fares available at one time and ticket issuance. T2RL calculates a score for each airline based on these attributes and then classifies them as follows: airlines scoring 0-3 are considered Low-cost carriers; between 4-7 are considered Hybrid carriers; and between 8-10 are considered Network carriers. To find out more, visit t2rl.com.

The information contained in this Almanac has been assembled from many sources, and while reasonable care has been taken to ensure that the information in this document is accurate, Amadeus assumes no responsibility for any inaccuracies or errors that may be contained herein.

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Foreword



2017 was a successful year for our industry. Many airlines have seen more-robust balance sheets, driven by the strong and growing demand for air travel across the globe despite the loss of some long-established airlines.

Whether your focus was the introduction of a new business model or industry-wide standards, this was a busy year with significant change for airlines. That is why we felt it particularly important to invest in this retrospective view of just some of the key events and trends of 2017. New technology, business models and partnership approaches are taking root, and we hope this report supports the industry in its drive to improve both business and technical development during 2018 as we continue to innovate and digitally transform our industry together.

When I reflect on 2017, I am reminded just how competitive the operating environment remains for all carriers. It is in this competitive context that many airlines have flourished, finding the time and resources to dedicate to the ultimate customer for us all, the traveller.

Our continued investment in innovation is focused on delivering robust solutions that support our airline customers to overcome many of these complex challenges across all channels to market. When we consider that technologies such as cloud computing and big data analytics are already maturing, we must continue to look ahead to new innovations in areas such as artificial intelligence and blockchain.

At Amadeus, we recognise the ongoing pace of change in the industry and we are dedicated to delivering technology that supports all our airline customers to grow and improve their businesses.

I look forward to working with you in the year ahead, in support of your chosen business strategy.

*Julia Sattel,
Senior Vice President, Airlines, Amadeus*

Executive summary



Objective of this Almanac:
To provide a reference source for key developments in the airline industry in 2017 to help the industry innovate further during 2018

The scope of the topics covered within this Almanac is extensive. This summary offers a selection of key trends and developments outlined herein.

- Industry profitability rose across the board:
 - North American airlines' total net profit of \$15.6 billion
 - European airlines generated \$9.8 billion
 - Asian airlines generated \$8.3 billion
 - Latin American airlines generated \$700 million
 - Middle East Airlines generated \$300 million
- Ancillary services continued to drive profitability with sales worth \$82 billion in 2017, an increase of 22% on 2016
- Several network carriers launched ultra-low cost fares in response to competition from LCCs
- Low-cost long-haul flights became a growing reality in 2017 for established airlines such as Norwegian, as well as new players such as IAG's Level entering the market
- 'Bleisure' trips rose with the number of leisure trips that also include a business component increasing to 17% in 2017, up from 11% in 2012
- NDC adoption accelerated with 33 airlines now 'live', as exemplified by Finnair's project enabling bookings to be made directly within the Skyscanner platform
- Digital transformation rose in prominence with key airline innovation focused on digital touchpoints, customer acquisition, merchandising, payments, data analytics and the use of chatbots
- Greater technology-enabled collaboration occurred at the airport with the introduction of Airport Collaborative Decision Making systems and preparations for IATA and ACI's 'NEXTT' initiative that will see new experiences delivered by airport stakeholders using artificial intelligence and data sharing
- 2017 saw increased use of APIs to connect airline systems simply and provide access to developers.
- Airlines continued to pursue innovative and unconventional new partnerships, for example Jet Airways integrated Uber into its own app allowing passengers easier onward journeys
- 2017 underscored the fact that regional nuance persists with distinct operating environments, opportunities and challenges for airlines based on the markets they serve.

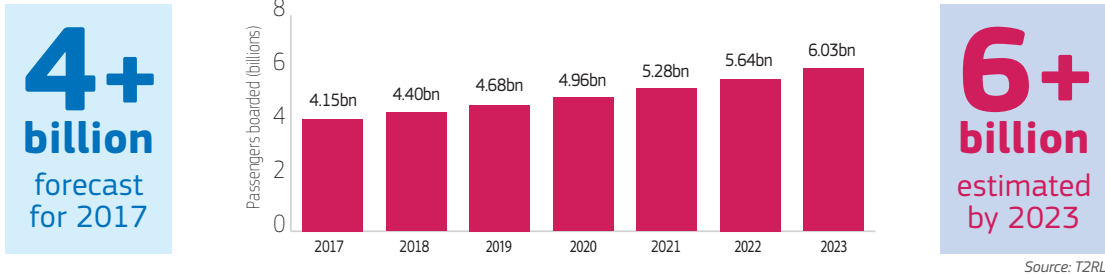


“ In light of the increasing speed of technological change, airlines are experimenting with initiatives such as NDC and ONE Order, which are key aspects of digital transformation across the aviation ecosystem. These initiatives will enable airlines to deliver value by simplifying shop-order-pay processes and accelerating their retailing strategies. In parallel, we are evolving the way we design, build and take our solutions to market to enable a successful transformation for the airlines' travel ecosystem

*Fabrizio Calcabrini,
Vice President, Airlines Solutions, Amadeus*

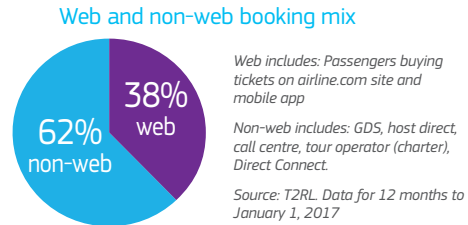
The global airline industry in numbers

Global passengers boarded (PBs) growth forecast 2017-23

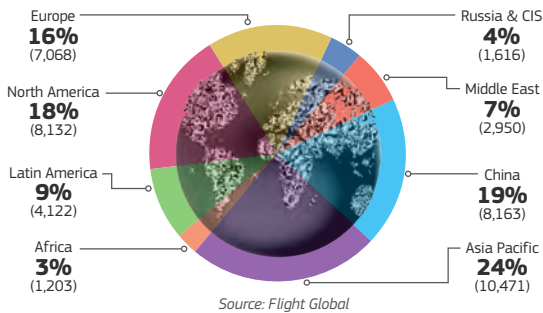


Based on the latest available data from T2RL, overall passengers boarded are forecast to have topped four billion last year and are predicted to reach six billion in 2023 (see table at foot of page for breakdown). These numbers represent growth of about 6% a year as the competitive nature of the industry maintains low fares.

The bookings split between web and non-web channels has remained relatively constant compared to the previous year.



Global aircraft deliveries forecast, 2017-36



Flight Global's 2017-36 Flight Fleet Forecast analysis demonstrates the anticipated rebalancing of the global aviation industry in the coming years. The global commercial aircraft fleet is expected to increase by 81% to 51,200 aircraft, with forecast annual traffic growth of 4.7% in the passenger sector over the next 20 years. The Asia Pacific region has become the leader in fleet growth and is expected to generate 43% of deliveries of new aircraft capacity, including 19% for China alone. In comparison, North America and Europe deliveries combined are expected to account for just 34%. Middle East, Latin America and Africa are forecast to remain relatively consistent.

PBs by business model

T2RL forecasts a healthy growth for all airline models to 2023, but low-cost carriers are tipped to grow at the fastest rate at 11.8% a year, followed by hybrid carriers at 8.7%. The introduction of new aircraft that support low-cost flights on mid and long-haul routes is ushering in new low-cost entrants.

What has surprised many is the pace at which network airlines have introduced their own branded offers in this market. Competition in the low-cost long-haul market will be one to watch in 2018. Data also shows the significant contribution Asia is making to global growth and just how mature the low-cost carrier segment has become in Europe.

* Franchise carriers operate under flight numbers of other airlines (widely used in the US). Charter carriers sell over 90% of capacity as whole-aircraft or large-allocation (widely used in Europe). Charter/Scheduled carriers sell between 35% and 90%. Not Operating carriers have permanently gone out of business. Suspended carriers have stopped operations temporarily.

— More on T2RL's unique classification of these and also Network, Hybrid and Low-cost models, page 2

	NETWORK CARRIER	HYBRID CARRIER	LOW-COST CARRIER	FRANCHISE CARRIER*	CHARTER/ SCHEDULED*	CHARTER CARRIER*	NOT OPERATING/ SUSPENDED*	GRAND TOTAL
Europe	545,554	77,412	226,057	64,789	71,964	21,421	40,078	1,047,275
Middle East	178,169	29,441	5,209	0	11,308	0,969	0,040	225,136
Africa	42,161	19,665	7,997	2,925	5,420	0,900	0,870	79,939
Asia Pacific	798,716	287,364	99,051	143,274	16,861	4,289	12,419	1,361,975
North America	459,018	273,111	16,607	150,679	9,196	2,362	5,493	916,464
Latin Am & C'bean	147,540	56,988	18,660	31,218	8,613	1,511	1,463	265,992
Total	2,171,158	743,981	373,581	392,885	123,362	31,453	60,363	3,896,782

Volumes recorded yearly using sources such as civil aviation administrations, airport authorities, and other aviation and travel industry sources. 20% of traffic is recorded from airlines' published results, 17% is from primary sources: airlines and vendors. Source: T2RL

BUSINESS MODEL	2017	2018	2019	2020	2021	2022	2023
Network carrier	2,291,376	2,398,726	2,523,249	2,645,509	2,780,753	2,926,310	3,082,754
Hybrid carrier	847,713	918,024	996,004	1,058,125	1,147,360	1,246,832	1,356,893
Low-cost carrier	420,485	468,694	523,013	581,699	650,176	727,578	815,456
Franchise carrier*	412,018	431,504	447,114	476,941	503,521	532,433	563,932
Charter/scheduled carrier*	140,823	145,127	149,500	153,922	158,366	162,898	167,545
Charter carrier*	34,997	36,293	36,249	38,444	39,401	40,340	41,258
Total	4,147,411	4,398,369	4,675,129	4,954,641	5,279,578	5,636,392	6,027,839

Projections are calculated based on factors including business model, historical trends, country-specific forecasts, known takeovers/mergers, fleet orders and expansion plans. Source: T2RL

Airline alliances and partnership models

Questions may have been raised about the long-term sustainability of the airline alliances, but SkyTeam, Oneworld and Star Alliance showed their willingness to evolve via joint ventures and LCC offerings

In 2017, Star Alliance celebrated its 20th anniversary. In those two decades, the branded airline groupings have become pivotal to passengers and airlines, with members of the three global alliances together now sharing more than 75% of air travel spend.

However, in recent years, the restructuring of airline activities has caused some to doubt the long-term sustainability and relevance of these models. Looking back on the year, it's clear that the main alliances are amenable to change, focusing their strategies in three areas: joint ventures, helping airlines manage the customer service impact of unbundling the airline product, and growing membership, chiefly in the LCC area.

Star Alliance

Star Alliance's strategy is to expand connectivity through member carriers launching new routes, as well as expanding network reach through the addition of local and regional airlines through its Connecting Partner model.

Star's strategic focus has also shifted from network expansion to providing customers with seamless journeys enabled with digital technologies.

"Our strategy is to develop digital capabilities centrally, which can then be used by our member carriers to enhance their own products," said Jeffrey Goh, who took over as CEO of Star Alliance in January 2017. "This is so that they can offer extended care to their regular customers even when they are travelling elsewhere on the network."

Oneworld


With low-cost operators accounting for an ever-growing share of global traffic, Oneworld is also dipping its toe into the pond of joint ventures, as well as evaluating steps to boost its presence in Asia, including India and China.

Oneworld's CEO, Rob Gurney, certainly sounds open to forming new opportunities to cooperate: "The marketplace is becoming increasingly segmented," he said, earlier last year.


"So we need to consider how we develop alliance propositions that are relevant, attractive and compelling to all these increasing segments. Global alliances need to innovate and adapt if they are to remain relevant. As Oneworld looks to the future, we need to ensure we offer a customer-value proposition relevant


Airline alliance membership

Listed by Passengers Boarded (PBs); affiliate members' traffic included in parent airline PBs
Source: T2RL. Data for 12 months to January 1, 2017

	PBs (millions)
American Airlines	198.193
British Airways	44.370
Cathay Pacific	34.323
LATAM Brazil	33.790
Japan Airlines	32.475
LATAM Chile	30.670
Air Berlin*	30.421
Qatar Airways	30.000
Qantas	28.164
Iberia	22.598
Malaysia Airlines/MasWings	15.200
S7 / Globus	13.146
Finnair	10.900
SriLankan Airlines	4.328
Royal Jordanian	3.050
Comair	2.461
Niki**	2.158
Openskies	0.133
Total	536.380

*Ceased operations on October 27, 2017
**Ceased operations on December 13, 2017

	PBs (millions)
Delta Air Lines	183.126
China Southern Airlines	111.723
China Eastern Airlines	101.742
Air France-KLM	80.163
Saudia	30.104
Aeroflot	28.978
Korean Air	26.941
Garuda Indonesia	23.920
Alitalia/Cityliner	23.106
Vietnam Airlines	20.600
Aeromexico	19.582
China Airlines	14.716
Aerolineas Argentinas	11.200
Air Europa	10.732
Kenya Airways	4.230
Middle East Airlines	2.700
Tarom	2.410
Mandarin Airlines	2.276
Czech Airlines	2.234
Total	700.483

	PBs (millions)
United Airlines	142.814
Air China	91.551
Turkish Airlines/Anadolu Jet	62.759
Lufthansa/Cityline	62.418
All Nippon Airways	51.613
Air Canada	44.849
SAS	28.092
Avianca/TACA	25.008
Air India	19.772
Asiana Airlines	19.310
Singapore Airlines	18.904
Thai Airways International	18.173
Swiss	16.518
Air New Zealand	15.489
Aegean/Olympic Air	12.463
TAP Air Portugal	11.724
Juneyao Airlines	11.622
Austrian Airlines	11.385
EVA Airways	11.244
South African Airways	9.721
Avianca Brazil	9.211
Egyptair	8.660
Copa Airlines	8.508
Brussels Airlines	7.737
Ethiopian Airlines	7.600
LOT Polish Airlines	5.500
Copa Colombia	1.955
Croatia Airlines	1.940
Adria Airways	1.450
Alliance Air	0.570
Nordica Airlines	0.365
Total	738.925

for the 21st century with simplicity of execution and delivery. For our existing member airlines, our priority is on identifying how we can add more value.”

SkyTeam

SkyTeam is implementing a similar strategy to improve the customer experience, with improved technology at the heart of its offering.

Perry Cantarutti, SkyTeam’s Chief Executive, said: “It’s a challenge for 20 technology systems to be integrated in a way that meets customer expectations about how they want to travel, with the ability to book and make changes, choose seats and more across multiple carriers. Then add in that customers want to do all these things from their mobile phone and you get a sense of the challenge.”

Alliances, then, are becoming wise to the fact that as customers increasingly expect a seamless, personalised and consistent experience, they also expect to have their status recognised at each part of the journey; and innovative technology solutions enable this.

Low-cost carriers

In 2017, the more mature nature of LCCs in many regions of the world led to greater moves towards cooperation with network airlines. We are beginning to see more LCCs providing a ‘feeder’ service for network airline long-haul routes, as well as more cooperation among the point-to-point LCCs in certain circumstances.

Many of the traditional airline alliances have explored the possibility of incorporating LCC partners, particularly in key domestic markets such as Brazil,

China and India where the alliances are seeking greater coverage. A good example is Juneyao Airlines, which offers domestic routes in China and which joined Star Alliance’s ‘LCC platform’.

LCCs themselves are also establishing cooperative groups such as the Value Alliance* and U-FLY Alliance**, which are seeing Asian LCCs cooperate, primarily in response to the success of Air Asia in the region. So far, the LCC alliances appear more focused on joint marketing than the more fully-fledged integration seen from the network airline alliances.

*Value Alliance includes Asia Pacific airlines: Cebu Pacific, Jeju Air, Nok Air, NokScoot, Scoot, Tigerair Australia, Vanilla Air and Cebgo. It is the world’s second low-cost carrier alliance after the U-FLY Alliance.

**U-FLY Alliance includes founding members HK Express, Lucky Air, Urumqi Air, and West Air (all four being affiliated with the HNA Group) and Eastar Jet.

Top low-cost carriers

	PBs (millions)
Ryanair	116.800
EasyJet	73.100
Wizz Air	22.783
Spring Airlines	14.228
Allegiant	11.128
Go Air	8.178
West Air	7.220
Jet2	6.721
Viva Aerobus	6.021
Chengdu Airlines	5.347
T’way Air	4.824
Eastar Jet	4.604
Tigerair	4.392
Okay Airways	4.387
Pobeda	4.286
Kunming Airlines	3.948
Blue Air	3.590
Viva Colombia	3.466
Volotea	3.400
Sky Airline	3.222
Peach	3.207
Air India Express	3.190
Mango	3.000
China Express Airlines	2.999
Hebei Airlines	2.567
Total PBs of top 25 LCCs	326.610
Global PBs carried on LCCs	373.581

Source: T2RL Data for 12 months to January 1, 2017.
Note: Some industry-standard LCCs (eg Southwest) are considered Hybrids by T2RL. More on T2RL, page 2



Improving industry collaboration

New standards, regulation and technology remain key focuses for the industry, with Amadeus working closely with the aviation sector to drive positive change

2017 was busy for industry initiatives in the aviation sector. Major programmes such as IATA's NDC and ONE Order standards moved forward at pace as the industry moved to industrialisation, with 33 carriers now 'Live' with NDC. Amadeus' support for new industry standards was demonstrated by its NDC certification as an Aggregator and its IATA ONE Order pilot project with British Airways, the results of which should be available in 2018.

During 2017 Amadeus worked with a number of airlines to deliver NDC projects, including Finnair's direct NDC link to Skyscanner and others which are ongoing. In addition, Amadeus continues to play an active role in several industry working groups focused on Distribution Industry Standards, Passenger Disruption, Simplifying the Business and Transparency in Payments.

2017 also saw the publication of the European Parliament's 'Aviation Strategy'



report, prepared by Pavel Telicka MEP. The report encouraged the sector to continue to take a lead in the technology adoption process, while ensuring fair competition, interoperability of systems, neutrality, and transparency of access to clear and concise information for all users.

It is clear the principles of choice, transparency and neutrality will remain in focus to ensure consumers continue to enjoy the full benefits of air travel.

Managing the impact of carbon emissions in the travel industry has been a key priority for airlines during 2017. Alongside a raft of moves at individual airlines, the International Civil Aviation Organization's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) will be an important part of the industry's target to cut aviation's carbon footprint to half of 2005 levels by 2050. The industry is asking for government regulation in this area and so far 72 governments have signed-up to CORSIA.

The UN is also supporting broad action on climate change through its 'Climate Neutral Now' pledge, which sees businesses including Amadeus commit to measuring and mitigating their carbon footprint.



Airlines' key initiatives

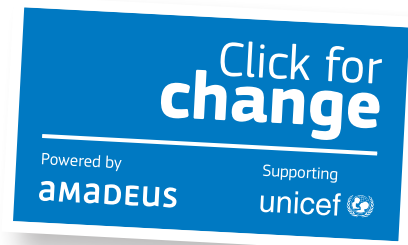
IATA and Amadeus co-hosted an exclusive Executive Summit at IATA's World Passenger Symposium event in October 2017. The Exclusive Summit, attended by 80 participants, focused on understanding airlines' key initiatives. The top 5 were:

- Open API Architecture
- Mobile as a channel
- Data sharing
- Artificial Intelligence and Automation
- Future interline and Codeshare

Charitable partnerships

In 2017, Avianca joined the airlines that support UNICEF through the Amadeus 'Click for Change' programme, which to date has raised close to \$3 million through travellers' micro-donations.

The funds go toward the charity's continued drive to protect the world's most vulnerable children. Through an Amadeus online donation tool integrated into participating airline

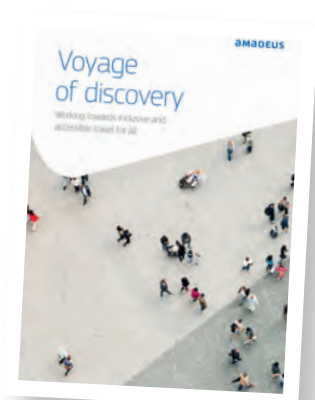


websites, travellers can quickly and simply make micro-donations.

Accessible travel

With more than two billion people around the world living with accessibility needs due to disability or age, Amadeus has asked how it can ensure its services are accessible for all. A report commissioned by Amadeus, 'Voyage of discovery: Working towards inclusive and accessible travel for all', found that the overall travel experience is rated at just 6.2 out of 10 for accessibility.

Greater industry collaboration, universal standards, consistent information sources and more-effective communication are recommended focus areas for making travel more accessible in the future.



bit.ly/Amadeusaccessible

Leaders' perspectives



“NDC will play a transformational role in helping airlines to meet customer demands for a more personalised air travel product. Meeting this demand, airlines are offering fare families and a growing number of ancillaries. Now passengers want to compare the value of these propositions across airlines – just as they do when shopping for other consumer goods. NDC is enabling this possibility through the development of a modern, XML-based data transmission standard for communications between airlines and travel agents

Alexandre de Juniac, Director General, IATA

“2017 will probably prove to have been the sweetest spot the airline business has had. It was one of the most profitable, while at the same time global traffic growth reached all-time high levels, mainly caused by low oil prices combined with a general level of economic growth. At a geopolitical level, uncertainty had been expected to dominate the economic agenda. This now appears likely to move to the fore in 2018.

Also bubbling towards the surface in 2017, distribution changes will become more central to 2018 developments, as new entrants, including online collectors of granular consumer data, start to show their power and blockchain-driven transactions alter the way we think about doing business



Peter Harbison, Executive Chairman, CAPA



“Technology is driving many changes but it is important to remember that the core fundamentals of our industry don't change. Travellers and travel buyers still want choice when searching and buying travel, while airlines and travel sellers need market access and visibility to compete effectively. Technology is key to connecting travellers and airlines efficiently, but the human touch is still crucial in

delivering personalised experiences. Amadeus is engaging with the whole travel industry ecosystem to ensure that technology improves the total travel experience for travellers, and so that airlines and travel sellers can market, sell, and deliver better and more personalised services to their customers. Amadeus will continue to play a leading role in ensuring that our technology innovation and industry leadership contributes to the sustainable growth of our industry

Svend Leirvaag, Vice President Industry Affairs, Amadeus

'Amadeus believes the industry is ready for New Distribution Capability Level 3'

“We think that there is plenty of potential for NDC to enable advanced retailing across our industry. The maturity and stability of the standard has evolved significantly; there is a critical mass of airlines making serious investments, and engagement from the travel agency community means NDC is in a very different place to a few years ago and we can start focusing on industrialisation of the standard.

“Based on thorough engagement with all players it seems clear to us the industry is ready to go for NDC Level 3 (Offer and Order Management), a future-proofed option. All players


appear aware of the significant time and investment needed to make Level 3 a reality. To mitigate disruption we believe the industry needs to commit on several points:

- Using IATA NDC version 18 as the base for industrialisation, while we commit to evolving with the standard.
- True adherence to the IATA NDC Standard and IATA Implementation Guidelines. This means for each use case, one implementation approach.
- Enabling agency needed features for more complex NDC use cases

- Ensure that we keep performance centre stage for NDC, such as response times. The industry cannot afford to degrade the performance achieved today with the existing infrastructure.

“If the industry gets this right, then NDC will accelerate and deliver economies of scale and ROI that all players are looking for. We will work closely with IATA and our airline and agency customers to make NDC a win-win for the whole travel industry where we all stand to benefit.”

Gianni Pisanello, Vice President, NDC-X Program, Amadeus

A high-angle, wide shot of a winding asphalt road that curves through rolling green hills. The sun is low on the horizon, creating a warm, golden glow across the sky and the landscape. The clouds are scattered and catch the light of the setting sun. The road is bordered by a simple wooden fence. In the distance, more hills and a few small buildings are visible under the vast sky.

“Travelling – it leaves
you speechless,
then turns you
into a storyteller”

Ibn Battuta

Regional aviation overviews

The sector as a whole, particularly in the US and Asia Pacific, landed bigger profits than had been predicted, despite political uncertainty in some regions

2017 was a positive year for the global aviation industry as passenger numbers, profitability and aircraft orders all trended upwards. Despite headwinds related to the uncertain political landscape in many nations, the industry grew significantly, driven by strong passenger demand, with airlines around the world ending 2017 with bigger profits than predicted.

Across all regions, low-cost carriers have continued to impact airline operations, particularly in Europe, where full-service carriers continued to introduce seat-only fares and charges for ancillary services. The big change in 2017, though, was the introduction of the low-cost model to mid and long-haul routes.

In the Middle East, a diplomatic crisis and a ban on electronic devices created formidable disruptions, but passenger travel growth continued to rise, thanks partly to the liberalisation of the regulatory environment. Whether giving travellers premium experiences or making the most from the region as a hub between Asia and Europe, airlines in the region continue to be some of the most successful in the industry.

In 2017, the Asia Pacific region enjoyed particularly strong growth, despite concerns about a looming infrastructure crisis. Partly because of the region's economic development, Asia is forecast to be the biggest travel market in the world, growing at 5.7% annually.

But it was North America that demonstrated the best performance in 2017, despite geopolitical, environmental and security disruptions.

Latin American airlines faced a tough environment. But with the opening of the skies in Argentina, the region is primed for passenger growth, especially as LATAM and Avianca expand their fleets in smaller countries and low-cost carriers enter the market.



Although trends are discernible across the regions, it's clear that the needs, behaviours and preferences of travellers differ considerably across all geographic and demographic lines. Research from Amadeus, entitled 'The Journey of Me Insights' (*see page 26*), demonstrates that no two travellers are the same; their journeys are innately personal. And in a world where travellers expect increasingly tailored customer service, technology in every region of the global aviation market is reviving the magic of travel by speaking to passengers' needs – shaping their experiences uniquely – at every part of their journey.



Region in focus: Europe including Russia

Despite the collapses of three significant airlines and a host of economic and regulatory pressures, European carriers in 2017 collectively made a net profit of \$9.8 billion

2017 saw European airlines innovate their services for customers and strategies for growth while contending with regulations, price pressures and disruptions. The latter ranged from the ongoing impact of attacks in Egypt and Tunisia to a collapse in demand for flights to Turkey, as well as a fall in sterling following the Brexit vote, which drove up the cost of jet fuel for British carriers.

Uncertainty surrounding Brexit led some to predict higher air fares and grounded flights. Leaked European Commission documents suggested that if Britain leaves the single market, UK-owned airlines would automatically lose existing flying rights in the EU's liberalised aviation market.

Reaction to this speculation was cautious, with easyJet and some other UK carriers already establishing European offshoots to minimise potential disruption after Brexit. Furthermore, European carriers such as Lufthansa and Air France commented on the potential to benefit from Brexit talks to the detriment of budget carrier competitors based in the UK.

Regulation and policy disputes figured highly. In September, Airlines for Europe (A4E), a lobbying group for the continent's five largest aviation groups, called on European policymakers to help improve reliability of air navigation services, to minimise the impact of air traffic control strikes and to abolish aviation taxes. Meanwhile, airlines were preparing to comply with the EU's incoming General Data Protection Regulation. Taking effect from May 2018, it aims to prioritise and strengthen the privacy rights of EU citizens.

The establishment of new airlines, including low-cost carriers, was a trend that continued in 2017. LCCs such as Norwegian

Air Shuttle and Wow Air have been disruptive, with established carriers responding by establishing budget subsidiaries or lowering fares. In November, IAG announced plans to expand its new low-cost long-haul airline, Level, and said it expected the airline to be profitable in 2017 (*Case study, opposite*).

Pressures resulting from excessive capacity triggered the collapses of Air Berlin, Monarch and Alitalia – though the Italian government kept the latter flying – leading observers to predict either more closures or consolidation. However, it was clear that European airlines benefited from a recovery in home markets.

In Russia, the Irkut MC-21 was launched in May. It was the country's first large new model of aircraft of the post-Soviet era and offered increased options for the nation's carriers. However, despite this development, aviation commentators pointed to the unstable financial position of Russia's airline industry.

In Turkey, a more positive picture emerged. With the impending completion of a new airport (the world's largest), Istanbul is reviving its historical reputation as a leading travel hub. Aiming to maximise the potential of the new airport's four terminals and six runways, Turkish Airlines was considering the potential purchase of Airbus A380s. As the airline recovered from a wave of terror attacks in 2016 that caused tourist numbers to drop significantly, it began looking beyond security concerns to find optimism in the new routes it offers to African destinations, as well as investing in airports.

Overall, compared with other global regions, European airlines generated the second-most revenue in 2017 and made \$9.8 billion in net profits.

Top 20 airlines in Europe by PBs*

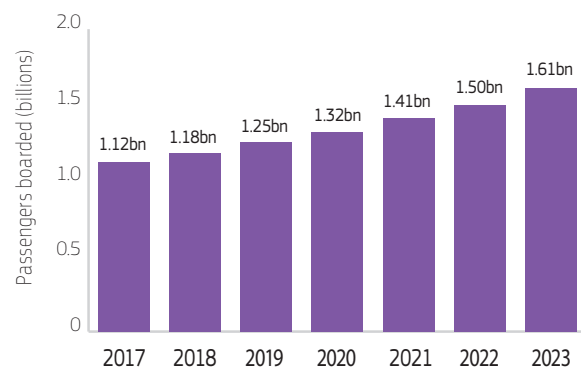
	Business model	PBs (millions)
Ryanair	Low-cost carrier	116.800
Air France-KLM	Network airline	80.163
EasyJet	Low-cost carrier	73.100
Turkish Airlines	Network airline	62.759
Lufthansa	Network airline	62.418
British Airways	Network airline	44.370
Air Berlin	Not operating**	30.421
Norwegian Air Shuttle	Network airline	29.301
Aeroflot	Network airline	28.978
SAS	Network airline	28.092
Pegasus	Hybrid carrier	24.140
Alitalia	Network airline	23.106
Wizz Air	Low-cost carrier	22.783
Iberia	Network airline	22.598
Vueling	Hybrid carrier	22.590
Eurowings	Network airline	18.430
Swiss	Network airline	16.518
Transavia Airlines	Hybrid carrier	13.279
S7	Network airline	13.146
Aegean Aviation	Network airline	12.463

* Passengers boarded (franchise carrier traffic included in parent airline PBs)

**Was Network Airline before ceasing operations on October 27, 2017

Source: T2RL. Data for 12 months to January 1, 2017

2017-23 Forecast: Total PBs for Europe-based airlines



'Cut barriers to flying to boost tourism'



"Last year, more than one billion people travelled by air in Europe. Flying has never been safer and cheaper, and is a big push for European tourism, which accounts for some 10% of Europe's GDP and jobs. A prospering travel industry creates a lot of new jobs. Airlines for Europe supports the

European Commission's top priority of boosting jobs, growth and investment. But many more jobs could be created if EU policymakers would help us stop air travel disruption and abolish national aviation taxes. Clearly, getting rid of air travel barriers and lowering cost will lead to more travel, more investment, more trade and ultimately more jobs and growth. In particular, those regions highly dependent on tourism revenue which are affected by youth unemployment – in southern Europe, for instance – could benefit from lowering the cost of flying, which would boost tourism and overall economic activity."

*Thomas Reynaert,
Managing Director, Airlines for Europe*

'Collaboration is key objective'



"We are seeing major changes in the industry in Europe. The way it's evolving is bringing continual challenges: we see the LCCs moving into medium-long haul; NDC evolving to

be industrialised, with airlines making serious investments in this area; airline consolidations and more. Within this scenario our main objective is to foster collaboration in the industry, supporting our customers to achieve their strategy, going together with them with the traveller as our common thread."

*Manuel Midon,
Managing Director, Northern and
Western Europe, Airlines, Amadeus*

Case study: IAG launches low-cost carrier Level

IAG responded to the growing competition presented by low-cost carriers in the region in 2017 by launching Level, its low-cost long-haul airline, which it expected to be profitable in the same year. The new venture launched in Barcelona, flying two Airbus A330 aircraft fitted with 293 economy and 21 premium economy seats. Inflight technology is available to all passengers but there is a charge for high-speed internet. Backed by one of the world's largest airline groups, the new carrier has been followed with interest by the industry.



Paris has been chosen as a second base for the long-haul, low-cost brand. Continuing a trend that sees the budget airline model expand into long-distance flights, Level currently serves Los Angeles, Oakland, Buenos Aires and Punta Cana, and is aiming to establish a fleet of 30 aircraft by 2020.

Case study: KLM extends social media reach

In September, Dutch carrier KLM became the world's first airline to use WhatsApp, the instant messaging service. The carrier said the move underlined its position as an aviation pioneer. Forming the next step in the carrier's social media strategy, the introduction of the WhatsApp Business Platform enables KLM to better reach its customers, adding volume to the number of queries that agents process and the ability to answer questions immediately. With a social media team of over 250 people, the airline receives more than 15,000 queries or comments in a week. As well as answering questions, WhatsApp provides KLM's customers with booking confirmations, flight status updates and boarding passes.



'Opportunities to digitalise beyond customer-facing functions'

The traditional airline business models in Europe are more and more segmented along long-haul, Continental Europe, leisure and low cost to achieve critical mass and overcome insolvency. Airlines are responding by restructuring their traditional business approach and newly mapped business units along the segments and speeding up their digital journey. Europe's tier one airlines are quite mature in digitalising



customer-facing functions, and are starting to explore opportunities to digitalise operations and services to enhance the traveller's experience. Thus airlines are in the process of defining an overarching strategy regarding digital and we partner with them to help build this all-important roadmap.

*Guido Haarmann,
Managing Director, Central
Europe, Airlines, Amadeus*

Region in focus: Middle East & Africa

Carriers in the Middle East grappled with US security issues in 2017 but their long-term prospects remain undimmed, while Ethiopian Airlines continues to forge stronger ties with China

The Middle East was beset by challenges in 2017. Low oil revenues led to a slowdown in capacity growth, while restrictions on electronic devices on US-bound flights caused airlines to suffer a fall in bookings. Although the ban was subsequently lifted, analysts were concerned that it would reduce the number of people visiting the US from the Middle East. These anxieties only deepened when the US sought to restrict inbound travel for citizens of six predominantly Muslim countries.

However, with the growth of mega-hubs in the Gulf, fleet and airport modernisation, and lower oil prices driving lower airfares, confidence in the Middle East and North African air transport market remains strong. Gulf airports are forecast to handle 450 million passengers by 2020.

Qatar Airways broadened its global reach in 2017 by becoming the third-largest shareholder in Cathay Pacific, giving it the potential to boost its global influence and traffic through its Doha hub. And mirroring a trend observed in other regions, the year saw low-cost carriers in the region operating on long-haul routes. In September, Norwegian Air started selling Dubai-Amsterdam return flights, undercutting Emirates' flights for the same route by 1,300 UAE dirhams (about \$350).

In Africa, the picture was less encouraging, with airlines in that market incurring losses of up to \$800 million, owing to regional

conflict and the impact of low commodity prices. However, with the opening of major new airports there is optimism that the sub-Saharan market will grow to 300 million passengers by 2035.

In 2017, Ethiopian Airlines increased its weekly direct flights to China to 34 with the introduction of a thrice-weekly service to Chengdu. With a modern fleet of 94 aircraft, the carrier is expanding rapidly and is tipped to make \$1 billion annual profit by 2025. At the core of its strategy is a push to make the most of its location on the trade lane between China and Brazil. As an African carrier with significant capacity, Ethiopian supports China's Belt and Road Initiative (BRI).

A further sign of the bond between Africa and China came with Ethiopian's second Boeing 787-9 aircraft making its maiden commercial flight to Beijing in 2017. The airline now plans to increase its flights to Los Angeles and New York Newark.

Airlines in the Middle East remain among the most successful in the industry. Aided by a high governmental drive to encourage tourism, and a continuing liberalisation of the Arab air transport regulatory environment, airlines in the region are forecast to see net profits improve to \$600 million in 2018, up from \$300 million in 2017.

Top 10 airlines in the Middle East by PBs*

	Business model	PBs (millions)
Emirates	Network airline	55.000
Saudia	Network airline	30.104
Qatar Airways	Network airline	30.000
Etihad	Network airline	18.500
FlyDubai	Hybrid carrier	10.467
Egyptair	Network airline	8.660
Air Arabia	Hybrid carrier	8.460
Oman Air	Network airline	7.700
Flynas	Hybrid carrier	6.300
Gulf Air	Network airline	6.000

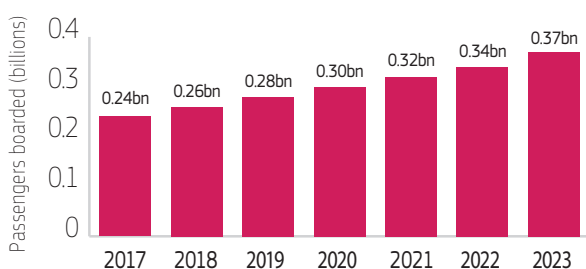
* Passengers boarded (franchise carrier traffic included in parent airline PBs)
Source: T2RL. Data for 12 months to January 1, 2017

Top 10 airlines in Africa by PBs*

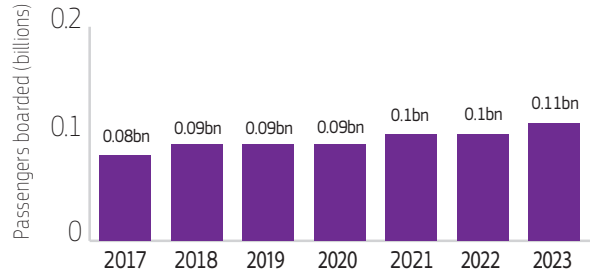
	Business model	PBs (millions)
South African Airways	Network airline	9.721
Ethiopian Airlines	Network airline	7.600
Royal Air Maroc	Network airline	6.000
Air Algerie	Network airline	5.600
Kenya Airways	Network airline	4.230
Mango	Low-cost carrier	3.000
Tunisair	Network airline	2.992
Kulula	Hybrid carrier	2.968
Arik Air	Hybrid carrier	2.793
Comair (South Africa)	Hybrid carrier	2.461

* Passengers boarded (franchise carrier traffic included in parent airline PBs)
Source: T2RL. Data for 12 months to January 1, 2017

2017-23 Forecast: Total PBs for Middle East-based airlines



2017-23 Forecast: Total PBs for Africa-based airlines



'Arab market remains resilient'



"Passenger traffic in the Arab air transport market has grown from three million passengers in 1965 to around 301 million in 2017. Those numbers emphasise the resilience and sustainability of the Arab air transport market's growth, and that the market is still far from reaching the point of mature growth."

*Abdul Wahab Teffaha,
Secretary General, AACO*

'African aviation transformed'



"Remarkable transformation through the launch of the Single African Air Transport Market (SAATM) by 23 African states will enhance connectivity, stimulate

demand, improve the competitiveness of the African airline industry, and make air travel more accessible."

*Abdérahmane Berthé,
Secretary General, AFRAA*

'Innovative focus can help fulfil airlines' visions'



"With the further movement of air transport's centre of gravity from west to east, the potential for growth in the Middle East and Africa (MEA) aviation market is one of the best of any global region. It is expected that the total market size for the region will expand to 917 million passengers by 2036. However, there are challenges, as in every region, and carriers have to compete to differentiate their services. Innovation will continue to reshape the air transport industry and will be key to managing the continued growth in passenger traffic across this emerging and very diverse region. As a major technology and business partner to the travel industry in MEA, we are excited to focus on innovation and technology to best support the aviation community and its growth, and to deliver continued value. The Amadeus MEA team is committed to a continual drive for technological efficiencies, supporting airlines' visions for the future and to support our customers in delivering a unique personalised traveller experience at every stage of the journey."

*Maher Koubaa, Vice President, Head of
Airline Group, Middle East and Africa, Amadeus*

Case study: Lebanese carrier praises 'Altéa' revenue tool

As Middle East Airlines boosts its revenues and competes harder, the Lebanon-based carrier has been fuelling its business growth and maximising its network potential with Amadeus' Altéa Segment Revenue Management tool. The carrier's key financial indicators have been outstanding. Over the last year, this tailored technology solution has

enabled the airline to improve its load factor while simultaneously securing unit yield. Adib Charif, head of IT at Middle East Airlines, said: "Throughout our time working with Amadeus, the company has demonstrated not only reliability and quality support but also robust, stable and flexible solutions that have been imperative in supporting our business strategies."

Case study: Saudi low-cost carrier Flyadeal takes off

The competitive landscape in the region continued to evolve in 2017 with the establishment of Saudi Arabia's new low-fare airline, Flyadeal, which carried its 100,000th customer in November,



barely two months after beginning operations on Saudi Arabia's National Day. Based in Jeddah, Saudi Arabia's newest carrier operates three Airbus A320s on a solely domestic network, flying a combined 28 hours and 40 minutes per day. With a huge domestic market of 30 million people, Flyadeal anticipates significant expansion, promising international flying by the second half of 2018 – a move that the Gulf's big airlines will doubtless be watching closely.

Case study: Etihad simplifies payments



During 2017, Etihad integrated Apple Pay into its list of payment options as a means of attracting travellers and making it easier for them to purchase additional services. Customers can buy tickets, upgrades and other onboard services by selecting Apple Pay from the airline's mobile app. The payment option also carries the ability to fill out all user information automatically through the passenger's Touch ID function on mobile devices. The move by Etihad follows a distinct focus from airlines to enable friction-free payment options for travellers on the move, at the airport and during flight.

Region in focus: Asia Pacific

The outlook remains hugely promising for airlines in the region, despite concerns about capacity constraints at some airports and a slowdown in the rate of growth of the Chinese economy

Several major hubs in the Asia Pacific region operated beyond planned capacity in 2017, prompting airline leaders to voice concerns about the scope for their airlines to grow in the face of such constraints. Some leaders called on Asian governments to avert a regional infrastructure crisis by coordinating investments in airports such as those in Bangkok, Manila and Jakarta.

Despite such concerns, the Asia Pacific region is one of the biggest aviation markets in the world and continued to expand through 2017. This was due largely to regional economic growth, market liberalisation, new technology, enhanced aircraft and the success of the low-cost carrier (LCC) model, which airlines are now extending to long-haul routes.

The Asian market is home to four of the world's top five international low-cost mega-hubs, and these continued investing in expansion to meet increasing demand. Growth in key markets such as China and India has led some analysts to forecast that Asian GDP and passenger traffic will drive an estimated need for 16,050 new aircraft valued at \$2.5 trillion over the next 20 years.

Competition in the region is fierce on all fronts as carriers seek to tap into the enormous growth of new middle class travellers. The region's network carriers face stiff competition from LCCs on point-to-point travel between cities in South, East and South-East Asia, while the major Gulf airlines are also now challenging Asian carriers on premium hub and spoke international routes as a core part of their growth strategy. Chinese airlines are also becoming far more active on international routes, adding further competition for the region's established players.

Despite a slowdown in China's economic growth in 2017, the country is planning 66 new airports and its airlines continued to prosper, with passenger traffic expansion outperforming the country's GDP, and major carriers expanding their routes into central Asia, Europe, North America and the South Pacific as part of the Belt and Road Initiative.

To the frustration of some airline executives, progress has been slow implementing the Seamless Asian Sky Initiative, which aims to standardise the rules governing Air Traffic Management (ATM) across the region. However, there were signs of movement in 2017 towards a more cohesive regional ATM structure with Japan Airlines' migration to a new Passenger Service System from Amadeus to strengthen cooperation with other airlines and make connections smoother.

One development that has had a transformative influence has been the LCC model. Bookings on these carriers between 2015 and 2020 are forecast to grow twice as fast as full-service carriers.

In June 2017, Scoot, the low-cost long-haul airline owned by Singapore Airlines, launched direct flights to Athens. To what extent other Asia Pacific airlines will venture outside the region remains to be seen, but if the LCCs begin to add long-haul routes with new-generation aircraft, it seems likely that they could grow revenues by offering inflight connectivity, for example broadband and e-commerce. This in turn could lead to further rapid growth in the long-haul low-cost sector.

Overall, airlines in the Asia Pacific region are forecast to see profits of \$9 billion in 2018, up from \$8.3 billion in 2017.

Although growth will be mixed, Chinese and Asian economies will account for a significant share of growth in global aviation markets for the foreseeable future. With one hundred million people becoming air travellers each year in Asia, the future looks hugely promising for the region.

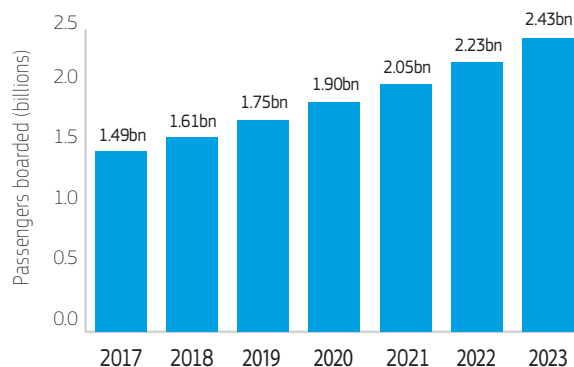
– Six airlines from the APAC region appeared in the Skytrax 2017 World Airline Awards Top 10 – see page 7 for further details

Top 20 airlines in Asia Pacific by PBs*

	Business model	PBs (millions)
China Southern Airlines	Network airline	111.723
China Eastern	Network airline	101.742
Air China	Network airline	91.551
Air Asia	Hybrid carrier	61.283
All Nippon Airways	Network airline	51.613
Hainan Airlines	Network airline	47.023
IndiGo	Hybrid carrier	41.062
Cathay Pacific	Network airline	34.323
Japan Airlines	Network airline	32.475
Lion Airlines	Hybrid carrier	32.409
Qantas	Network airline	28.164
Korean Air	Network airline	26.941
Jet Airways	Network airline	26.783
Virgin Australia	Network airline	24.204
Garuda Indonesia	Network airline	23.920
Sichuan Airlines	Network airline	23.012
Vietnam Airlines	Network airline	20.600
Air India	Network airline	19.772
Asiana Airlines	Network airline	19.310
Cebu Pacific	Network airline	19.100

* Passengers boarded (franchise carrier traffic included in parent airline PBs)
Source: TZRL. Data for 12 months to January 1, 2017

2017-23 Forecast: Total PBs for Asia Pacific-based airlines



'Changi's Jewel has real sparkle'



"The most significant change last year was the launch of the 'Jewel' at Singapore Changi Airport. This is the airport terminal of the future, where there is barely any human interaction. Check-in, baggage drop, immigration, VAT refund, security and boarding are all managed by machines. And all this in a beautiful environment. What a dream if all airports can be like this in the future. The most-efficient airport in the world! The expectation for 2017 was growth all over Asia and, boy, did we achieve this! Tourism arrivals continue to grow at a phenomenal rate and are expected to continue for at least another decade and beyond."

*Mario Hardy, Chief Executive Officer,
Pacific Asia Travel Association*

'Innovation makes Asia Pacific the region to be in'



"The Asia Pacific growth story continues on an upward trajectory. Home to three of the top five fastest-growing passenger markets – China, India and Indonesia – this is truly the region to be in. But the potential is not without its challenges. Infrastructure constraints could hinder growth if not addressed by all stakeholders, and competition continues to put downward pressure on profit. On the flip side, I see a deep hunger for innovation in this region. In my conversations with airlines here, digital transformation, merchandising and disruption management have been top of the agenda. Many are embarking on turnaround transformation initiatives, driven by a real will to address competition but above all to improve the customer experience. Indeed, I would argue that the impetus to achieve that is greater here, as the Asian market expects and demands the high service levels that Asian airlines have come to be known for. To do that will require reinvention, and our mission at Amadeus is to support our airline customers at every step of this transformation journey, through technology and collaboration."

*Cyril Tetaz, Head of Commercial,
Asia Pacific, Airlines, Amadeus*

Case study: 'Altéa NRM helps SIA deliver pax revenue growth'

As part of its three-year transformation plan to become nimbler in its operations, Singapore Airlines is future-proofing its revenue management capabilities via a new next-generation system from Amadeus, which it adopted in 2017. Drawing on data from multiple sources, the Amadeus Altéa Network Revenue Management (NRM) system is designed to provide faster, more accurate recommendations on the best price and packaging of airline offers. According to the airline's Chief



Executive Officer, Goh Choon Phong, the system is already achieving results and helping to deliver passenger revenue growth within months of implementation.

Case study: Qantas flies Perth-London in 17 hours

Qantas announced a new 17-hour service that will reduce the journey time for passengers flying from Perth to London by as much as three hours. According to the airline, which is hoping to increase its market share, advance bookings on the route – the longest-ever, between Australia's west coast and London – have been higher than expected. The new direct route begins in March 2018 and may well change some passenger habits on Australia's west coast. Commentators will be observing closely to see whether the route heralds more long-distance links between Australia and Europe.



Case study: Cathay Pacific invests in business class

Faced with growing competition in the region, Hong Kong's flagship airline, Cathay Pacific, is following the likes of



Qatar Airways and Singapore Airlines by heavily upgrading the deluxe benefits for its business-class travellers. To keep up with travellers' ever-heightening expectations for quality and innovative amenities such as fine dining and fully reclining seats, Cathay Pacific announced in 2017 that it was investing in better sleeping facilities for premium seats, higher-quality meals and inflight internet connections. The airline believes this will enable it to justify higher prices and to keep its business-class offering competitive as well as profitable.

Further reading

– IATA: Strong Airline Profitability Continues in 2018
bit.ly/IATA2018

Region in focus: North America

Airlines delivered aggregate net profit of \$15.6 billion in 2017, the most of any region, which was driven by new routes, fares, technology and regulatory reform

For the North American airline industry, 2017 was a case study in how airlines should respond to, and manage, colossal disruption.

Hurricanes Harvey, Irma and Maria ripped through the region in August and September, together leading to the cancellation of more than 10,000 US flights. Carriers had to cope not only with lost revenue but also substantial reaccommodation costs.

Geopolitical and security factors also impacted heavily. In March, an abrupt ban on electronic devices on flights from 10 Middle Eastern and North African airports to the US generated significant disruption, while President Trump's controversial ban on travellers from predominately Muslim countries was deemed by commentators to be a protectionist approach that could have a negative effect on future travel demand to and from the US.

Inevitably, further questions about security at tourist destinations emerged in October following a mass shooting in Las Vegas.

A further unknown continues to surround the outcome of the long-running dispute over the US Open Skies agreements with the UAE and Qatar. However, American Airlines, Delta and United Airlines, which have pointed to government subsidies often being

made available to airlines in the Middle East, appear confident the US administration is sensitive to their position.

Taking account of these challenges, in 2017 the airline industry across the US and Canada impressively weathered the storm, often harnessing the power of modern technology to improve customer service and achieve success. Airlines in North America generated the strongest financial performance of any region in 2017, with aggregate net profits of \$15.6 billion.

Emerging trends in other markets were also apparent here, with major airlines introducing basic economy fees to compete with low-cost carriers.

And in a further step towards consolidation, Alaska Airlines announced it would drop the name and logo of Virgin America in the interests of consistency and efficiency.

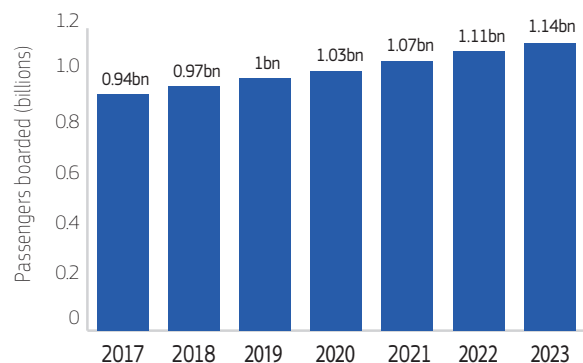
Going into 2018, the future for this market looks impressively healthy. Airlines are instigating positive new internal reforms and policies to improve performance. More routes are opening. There is greater employment. And airlines' net profits in the region are forecast to rise by almost \$1 billion to \$16.4 billion.

Top 20 airlines in North America by PBs*

	Business model	PBs (millions)
American Airlines	Network airline	198.193
Delta Air Lines	Network airline	183.126
Southwest Airlines	Hybrid carrier	151.740
United Airlines	Network airline	142.814
Air Canada	Network airline	44.849
JetBlue	Hybrid carrier	38.412
Alaska Airlines	Network airline	34.155
WestJet	Hybrid carrier	22.000
Spirit	Hybrid carrier	21.582
Frontier	Hybrid carrier	14.936
Allegiant	Low-cost carrier	11.128
Hawaiian Airlines	Network airline	11.051
Virgin America	Hybrid carrier	8.073
Air Wisconsin	Hybrid carrier	5.396
Air Transat	Charter/scheduled airline	4.313
Sun Country	Hybrid carrier	2.759
Porter	Hybrid carrier	2.500
Sunwing	Low-cost carrier	2.000
Air Inuit	Hybrid carrier	1.500
Wasaya	Charter/scheduled airline	1.126

* Passengers boarded (franchise carrier traffic included in parent airline PBs)
Source: T2RL. Data for 12 months to January 1, 2017

2017-23 Forecast: Total PBs for North America-based airlines



Source: T2RL

'Smarter regulation clears airlines for take-off'

"In 2017, the US airline industry could be proud of our continued efforts to improve the customer experience while setting new records in operational performance. The fierce competition between carriers ensures lower fares and more choices for customers. Carriers are also investing in resources in mobile technology, ensuring that our distribution strategy provides even more personalised service options. A key development has been Secretary Chao's [US Secretary of Transportation] leadership in ushering in structural regulation reform that focuses on jobs and economic growth, while recognising that airlines, like all other businesses, deserve the freedom to determine our third-party partners and how best to market, display and sell our products. We continue to believe that dictating airlines' distribution and commercial practices will not benefit the flying public. The Administration's smarter approach to modern regulation will ensure our industry will continue to be an indispensable driver of jobs, better positioned to compete in a global marketplace."

*Nicholas E. Calio,
President & CEO, Airlines for America*

'Flexible solutions support carriers' objectives'

"In 2017, airlines in North America continued their journey to offer a seamless, personalised experience to their ever-connected customers. The region is home to some of the most innovative airlines in the world, which have continued to introduce new products and services to enhance the passenger experience and optimise their revenue. New fare classes such as Basic Economy and Premium Economy were introduced to allow full-service carriers to provide options to their travellers while better competing with LCCs. The North American airlines have generated strong financial results, representing more than half of the global industry's profit in the past three years, and are expected to continue to grow. However, rising cost pressures continue to be a challenge and a priority. Amadeus is working side-by-side with our customers to offer flexible, innovative solutions that allow airlines in North America to achieve their business objectives and deliver on their long-term strategy."

*Elena Avila, Executive Vice President,
Head of Airlines for the Americas, Amadeus*

Case study: Southwest upgrades systems

Southwest Airlines, whose stock is forecast to grow in 2018, migrated its domestic flights to Amadeus' Altéa Passenger Service System in 2017.

Having combined multiple reservation system capabilities onto one common platform, Southwest expects its systems upgrades to generate about \$500 million in incremental annual earnings before interest and taxes by 2020, through added functionality and operational capabilities, such as optimised flight schedules,



improved connection times and automated rebookings.

Case study: Air Canada champions artificial intelligence

Advancements in technology continue to transform customer service experiences in the airline industry, particularly during the booking process



and at times of disruption, when volumes increase. Air Canada is just one of the airlines championing the merits of artificial intelligence and conversational commerce, aiming to have more-personalised and agile interactions with its customers on the web, mobile or via voice assistant.

As Alexa, Amazon's cloud-based, voice-activated digital assistant, goes live in Canada, the airline is launching an innovative product, Alexa Skills, to provide customers with flight details, travel documents, flight times and a host of other useful information.

Case study: Delta and JetBlue ease boarding path

Traditional airline processes at the airport have remained a constraining factor. But in 2017 Delta introduced facial recognition biometric scanning to replace boarding passes on some international departures at Atlanta and JFK. A custom-made camera takes photos and securely transmits them directly to US Customs and Border Protection (CBP) authorities for cross-checking against visa, immigration and passport databases. Delta has also pioneered a biometric boarding pass at Ronald Reagan Washington National Airport that allows SkyMiles members with CLEAR memberships to use fingerprint identification when boarding aircraft and/or entering the Delta Sky Club. JetBlue also innovated with biometrics in 2017, having collaborated with the CBP to enable facial recognition technology to verify customers travelling between Boston and Aruba, easing the boarding process for customers while enhancing efficiency in the process. The days of paper boarding passes may be numbered.

Further reading

— UPI: 'Airline industry profits soar 11 percent in 2017' bit.ly/UPlaviation2017

Region in focus: Latin America & Caribbean

The growth of low-cost carriers was the biggest trend of 2017, forcing legacy carriers to respond, while hurricanes ravaged services and profits in the Caribbean

Latin American airlines faced a tough environment in 2017, due to weak home markets and currencies, and harsh storms.

In the first nine months, the number of available seats on airlines from the Caribbean region increased by about 4% year-on-year, but that growth halted in October when Caribbean storms forced airports to close and cost airlines millions.

Airlines from the region were forced to cancel thousands of flights due to extreme weather. But Caribbean carriers and governments vowed to move forward in the spirit of collaboration and optimism, declaring the region “open for business”.

Although Latin America’s low-cost carrier expansion has been slower than in other regions, this is changing as some LCCs expand into new territory, building connectivity for domestic, intra-region and long-haul services.

It remains to be seen how leading network carriers such as Avianca and LATAM – each fighting for supremacy in Brazil – will respond; for example, through new mergers or stripping their fares to compete directly. However, commentators have noted that only with greater liberalisation will LCCs make a meaningful difference.

Meanwhile, LATAM and Avianca are expanding their fleets in new markets. What is certain is that new aircraft in the fleets of long-haul airlines across Latin America are enabling them to open new markets.

The Airbus A350, for example, is now used by LATAM Airlines out of Brazil, and by Air Caraïbes from France to the Caribbean. And during the summer of 2017, the Boeing 787 Dreamliner was flying from Latin America on more than 90 routes, with the largest operations from ‘local’ airline hubs, permitting point-to-point services, while some airlines used the aircraft to add long-haul spokes to their hub operations.

Despite infrastructure hurdles, regulatory challenges and taxes on international air travel, Latin American trade has been improving since 2016.

And with the Brazilian economy rebounding in 2017, the opening of airspace in Argentina, as well as increasing leisure traffic driven by low-cost airlines, there is every reason to be optimistic about the region’s prospects.

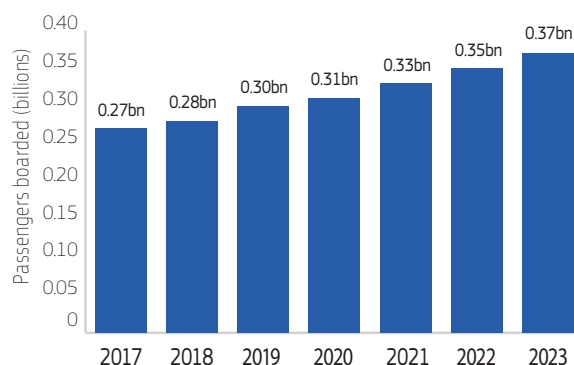
Airlines in Latin America are forecast to generate a \$900 million net profit in 2018, up from \$700 million in 2017.

Top 20 airlines in Latin America & Caribbean by PBs*

	Business model	PBs (millions)
LATAM Brazil	Network airline	33.790
Gol	Hybrid carrier	32.124
LATAM Airlines (Chile)	Network airline	30.670
Avianca	Network airline	25.008
Azul	Network airline	19.899
Aeromexico	Network airline	19.582
Volaris	Hybrid carrier	15.005
Aerolineas Argentinas	Network airline	11.200
Interjet	Network airline	11.121
Avianca (Brazil)	Network airline	9.211
Copa Airlines	Network airline	8.508
Viva Aerobus	Low-cost carrier	6.021
Viva Colombia	Low-cost carrier	3.466
Sky Airline	Low-cost carrier	3.222
Boliviana de Aviacion	Hybrid carrier	2.571
Caribbean Airlines	Network airline	2.270
TAME	Charter/scheduled airline	2.117
Laser	Charter/scheduled airline	2.000
Copa Colombia	Network airline	1.955
Air Caraïbes	Network airline	1.425

* Passengers boarded (franchise carrier traffic included in parent airline PBs)
Source: T2RL. Data for 12 months to January 1, 2017

2017-23 Forecast: Total PBs for Latin America and Caribbean-based airlines



Source: T2RL

‘Aviation fuels growth in Latin America’



“Aviation is a vital engine connecting people and commerce with communities throughout the Latin American and Caribbean region and beyond, growing social and economic development for all. The air transport industry directly and indirectly stimulates tourism, trade and commerce throughout the region and farther afield. The region is doing well and continuing to grow, and we are well on our way to doubling the region’s traffic over the next 10 years. Joint collaboration – in alignment with ICAO standards – among all stakeholders is key to ensure effective and efficient industry growth where all partners support the initiatives to have a safe, efficient, affordable and growing industry. The shared benefits will positively impact the economies and communities we serve.”

Luis Felipe de Oliveira, Executive Director, ALTA

‘We have the tools to help all airlines’



“2017 was an interesting year for the airlines in Latin America. The growth of the LCCs was probably the most significant trend in the region. The incursion of airlines like Wingo, Andes Lineas Aereas, JetSMART and Viva Air Peru, and the consolidation of others like SKY, Volaris and Interjet, have significantly changed the landscape in the region. Thanks to our wide portfolio of solutions, including Altéa and New Skies, we have been able to support all the airlines, regardless of their strategy and business models, and we’re poised to continue contributing to their growth and innovation. 2018 promises to be a positive year with the air openness in Argentina, moderated recovery in Brazil and passenger demand estimated to continue to grow fast in the entire region. Amadeus has the solutions, people and commitment to enable this upward trend.”

Vicky Huertas, Commercial Vice President, Latin America and the Caribbean, Airlines, Amadeus

Case study: Avianca enhances customer centricity

In 2017, Colombia-based carrier Avianca, together with its subsidiaries, was voted best major airline in Latin America by TripAdvisor users. Demonstrating its commitment to meeting evolving customer needs, Avianca has enhanced its customer-centric strategy by using Amadeus Customer Experience Management capabilities to manage its data. The system enables Avianca to deliver a personalised experience at every passenger touchpoint, offering personalised welcome messages



from frontline staff and preferential treatment to passengers travelling for special occasions.

Case study: Aeromexico seals deal with Delta

In a further sign of consolidation in the Latin American market, 2017 saw the completion of a joint venture between Aeromexico and Delta – a deal that took US regulators about two years and nine months to approve. The Joint Cooperation Agreement allows Delta and Aeromexico to offer more choices and improved service as a result of a larger network, with more frequencies and destinations along with more non-stop flights. Today, Delta and Aeromexico operate an average of 1,000 trans-border flights a week. This is expected to grow over time; most recently the two companies launched a non-stop service between Guadalajara and Salt Lake City.



Case study: LATAM launches no-frills fare category

In response to increased demand from the region’s leisure passengers, as well as competition from low-cost



carriers such as Gol and Azul, LATAM rolled out a new, no-frills fare category in 2017, which enabled it to charge for ancillary services like food and beverage, and checked bags. In a move that will likely prompt comparisons with American Airlines’ ‘Basic Economy’ seat, the airline hopes to capture more price-sensitive leisure passengers. However, the airline stated that it would not become a low-cost carrier and would retain its focus on its business clients.

Further reading

– IATA: Strong Airline Profitability Continues in 2018 bit.ly/IATA2018

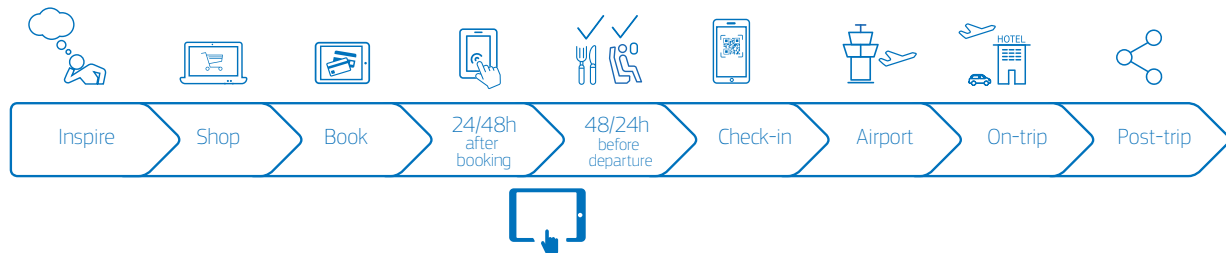


“First impressions are important, but the last impression we leave with the customer will leave the most lasting impression”

Shep Hyken

The airline traveller

There are typically nine stages in an air passenger's journey cycle, from booking and checking-in to travelling and post-trip. The airlines that best cater for their customers' changing needs at every stage will be the ones most able to identify upselling opportunities and to deliver customer satisfaction



The journey every air travel customer takes can be broken down into nine distinct stages. As the traveller moves through this journey cycle, their mindset alters, as do their emotions and the components that are most valuable to them. Many in the airline industry are building merchandising and servicing strategies that cater to unique traveller needs at each of these journey stages (see graphic, above).

Each journey begins with the inspiration stage, when travellers weigh up their travel options before making a decision; this phase is critical for airlines to excite those travellers that are not 100% brand loyal. It is followed by the shopping stage, when customers discover their travel options, with many seeking intuitive search functions with personalisation. This is followed by the booking stage, which should be straightforward.

48 and 24 hours before departure, travellers tend to be in 'planning mode' and are more likely to purchase last-minute add-ons to make their trip more seamless. This is an important stage for airlines, with products such as speedy boarding, extra legroom and lounge access all capable of driving significant revenue, when matched appropriately with traveller needs.

During their journey to the airport and to check-in, travellers are focused on the journey ahead, although they may still be open to immediate support and offers at the right time from their travel providers such as ground transport, fast-track airport security or parking (and mobile technology has made this possible.) At the airport, travellers tend to seek either efficiency or enhanced experiences, or a combination.

Once they have arrived at their destination (on-trip), they are open to targeted, carefully-timed improvements related to the destination: imagine a family travelling to Paris being offered special rates for Disneyland, or a student traveller to New York being presented with concert booking options. And finally, when they have arrived back home (post-trip), there's an opportunity to build relationships with travellers further by gathering comments and insights that can help to fulfil their future travel needs.



If a couple travelled for a honeymoon, can we help to make their anniversary special in 12 months' time?

Traveller Tribes

Adding a layer of complexity to this journey cycle is the fact that no two travellers are the same. Travellers fall into different 'Traveller Tribes' (see page 24), or profiles, based on their purchasing behaviours and motivations for travel.

For example, a business traveller with a singular purpose for their trip may be less susceptible at the inspiration stage than a traveller seeking cultural enlightenment from their travel. Similarly, it is likely that a luxury traveller will be more open to upgrading their cabin class than a traveller on their gap year.

In 2017, there was plenty of evidence of airlines paying closer attention to their travellers' emotional states and psychographic needs at each stage of their journey, with steps taken to make things more seamless.

But there is still a way to go. As well as a better understanding of what travellers need at each stage of their journey, the air travel industry needs to help connect the dots. What all today's travellers share is a craving for real-time assistance, for simplification in a world of information overload, and for intuitive services that anticipate their needs before they are even aware of them.

The good news is that airlines are on the right track, with 2017 seeing a ream of industry innovations to deliver on increasingly unique traveller needs.

Understanding your customers

As an Amadeus report identifies six types of traveller who will be flying in 2030, airlines court the passengers of today with social media campaigns, inflight Wi-Fi and a softer approach to overbooking

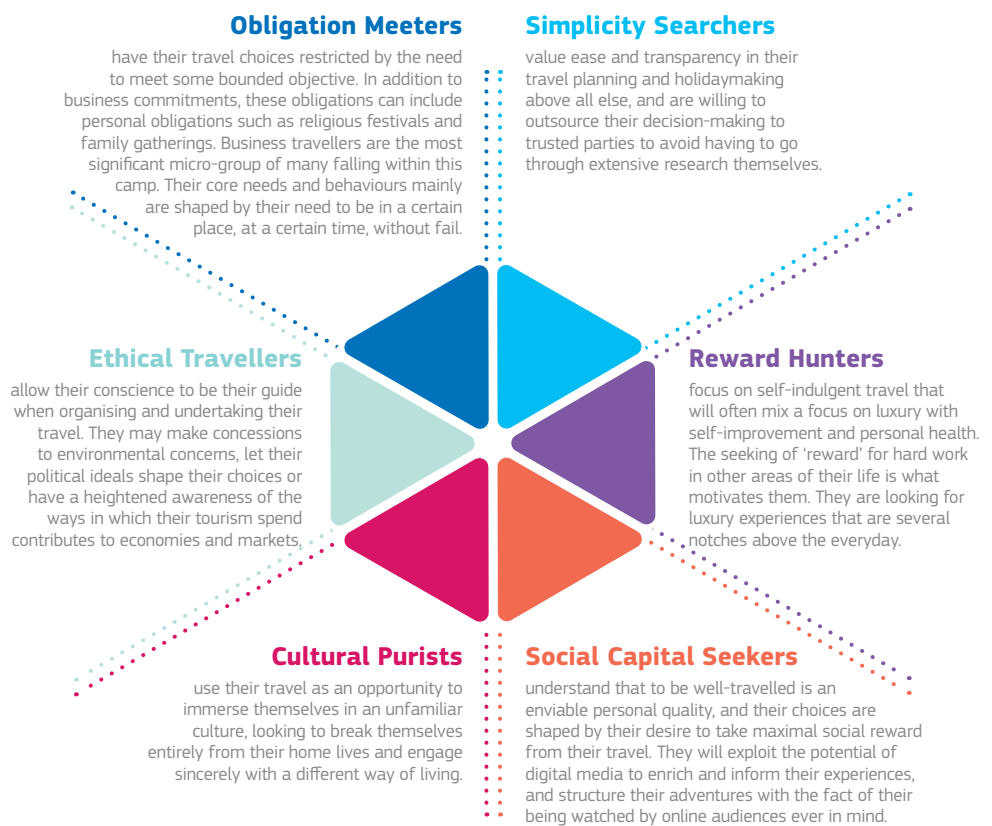
A recent Amadeus report, 'Future Traveller Tribes 2030: Understanding Tomorrow's Traveller', identified six 'Traveller Tribes' that will shape global travel in 2030: Simplicity Searchers; Reward Hunters; Social Capital Seekers; Cultural Purists; Ethical Travellers; and Obligation Meeters.

Rather than segment customers in a static way by age, gender or cabin class, Traveller Tribes are distinguished by their purchasing behaviours and motivations.

As airlines and other travel providers enter the age of data abundance, this nuanced psychographic approach to segmentation offers new opportunities for brands seeking to understand and remain relevant in today's changing consumer landscape.

In 2017, the air travel industry continued to hone its ability to spot behavioural trends among travellers, enabling a greater understanding of how to serve them as they move from their home to their seat on the plane.

Future Traveller Tribes 2030: The six types of customer



Of course, there is no one-size-fits-all approach to serving passengers, and profiling customers does not give you

the full picture of them as an individual. Nonetheless, understanding general trends in behaviour is essential if

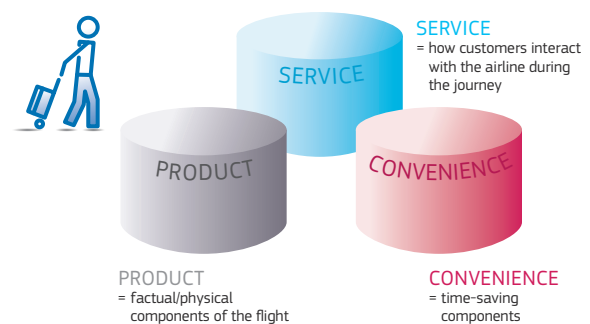
airlines are to evolve their offering in the right direction.

 amadeus.com/tribes2030

The Fourth Industrial Revolution

We have entered the Fourth Industrial Revolution – an era of constant connectivity and artificially intelligent workforces – where there has never before been such a major opportunity to be closer to and understand our customers. In 2017, we witnessed some key macro trends – such as even more reliance on social media, and the importance of empathy for brand affinity – but also looked to how we can improve our understanding of customers on a micro level, harnessing technology where possible to achieve this.

The saying goes that everybody has a price. But to have a price, everybody has to have a value. For airline customers, this is the sweet spot where they feel the balance between product, service and convenience is achieved. Each time a customer searches for a flight, they bring their individual values to the search. By applying the paradigm to different types of travel personas, we can create a clear picture of how to upsell something of



For each traveller, the balance between product, service and convenience will shift, affecting the overall price that they are willing to pay for a flight.

value to them. The more a traveller values one or more of these components, the greater the opportunity for airlines to market intuitively so the customer purchases something of value to them.

 amadeus.com/Airline-Digital-Transformation

“Price is what you pay. Value is what you get”

Warren Buffett



@Inspiration

Social media for inspiration

More than eight out of 10 (84%) millennials and 73% of non-millennials are likely to plan a trip based on someone else's holiday photos or social media updates, according to a study by digital agency Blitz.

What's more, millennials – people born between about 1980 and 1995 – are pretty much as likely to seek travel recommendations from Facebook (15%) and Instagram (13%) as they are via word of mouth (16%).

In 2017, airlines continued to harness the potential of social media sites. For example, British Airways launched its #BAMagic campaign, where it gave customers special surprises and filmed them, sharing the emotional moments via its social media sites.

Airlines showed more engagement with Instagram than ever before, including American Airlines, which created a series of videos highlighting its staff. Other carriers experimented with Snapchat: Lufthansa debuted its Lufthansa Crew Stories, while Delta held a scavenger hunt in Los Angeles.

@Airport

Pitfall of overbooking

During 2017, the issue of overbooking came to the fore and attracted significant media attention. In response, some airlines decided that passengers shouldn't be removed once on board (unless there is a safety issue) and also to offer financial compensation to those who voluntarily give up their seat.

In November, the US Department of Transportation reported the lowest overbooking rate since it started keeping track in 1995. Regulators are examining associated issues; for example, the Civil Aviation Authority in the UK began an examination of airline 'rerouting' practices in 2017. As part of that process it is considering whether airlines reroute passengers on competitor flights readily enough in circumstances of overbooking.



@On board

Importance of connectivity

Demand for inflight Wi-Fi has reached an all-time high, with 60% of survey respondents regarding it as a 'necessity' rather than a 'luxury'.

And 45% said they would rather pay for Wi-Fi than use free onboard entertainment, according to the 2017 annual global Inflight Connectivity Survey by telecomms company Inmarsat, which surveyed 9,000 customers from 18 countries.

In addition, 77% of passengers said they would pay for inflight connectivity on short-haul leisure flights – up from 64% in 2016. Those happiest to pay were passengers aged 25-34, parents travelling with children, and passengers travelling in Asia Pacific and the US, the poll found.

In September, Virgin Atlantic became the first airline in Europe to offer free inflight Wi-Fi. It also now offers it on flights operated by partner carrier Delta. American low-cost carrier JetBlue introduced free Wi-Fi across all of its flights at the start of 2017.

Customising the travel experience

From bleisure travellers to super-commuters and from baby boomers to millennials, the airlines that understand today's customer trends will be best-placed to know how to serve them



The 'Asia Pacific traveller' doesn't exist. The preferences, behaviours and demands of travellers vary enormously from one country to another. The industry must come to grips with this. Stereotyping the 'Asia Pacific traveller' will get you nowhere, and the one-size-fits-all approach is a thing of the past"

Albert Pozo, President, Amadeus Asia Pacific



Baby boomers

Those aged 53-71 still spend the most on travel

In 2017, the travel industry turned its attention to the significant spending power of the baby boomer generation (those born between 1946 and 1964).

Despite all the talk of millennials' jet-setting ways, several studies last year indicated that baby boomers were still spending far more on travel than their younger counterparts. For example, a report from Loughborough

University in the UK found that the consumption of holidays by younger people had remained flat since 2000, whereas the strongest growth had been recorded by the 55-64 demographic, who enjoyed more leisure trips than any other age group.

Perhaps unsurprisingly, baby boomers were found to be dominating the luxury travel sector.

Regional view

Asia Pacific travellers – what they want and need

In 2017, the 'Amadeus Journey of Me Insights' report explored what Asia Pacific travellers want.

Spanning 14 markets, this was the most comprehensive research on Asia Pacific travellers to date, taking a multi-faceted look at how and when travellers plan and book trips, how and why they want to stay connected while travelling, and what new technologies they would be most interested in.

A key emphasis throughout the report was that there are many types of customer across Asia, and there is no consistent profile for the 'Asia Pacific traveller'. For example, while 84% of Singaporean travellers think it's important to find service staff at the destination that speak a language they understand, only 4% of Hong Kong travellers think the same.

Nonetheless, some key patterns emerged. For example, when it comes to privacy versus personalisation, 64% of Asia Pacific travellers said they would be willing to share personal data for more relevant offers and personalised experiences, with Indonesians being the most open (80%). Japanese travellers, however, showed a preference for privacy, with 69% indicating they were not open to sharing their data.

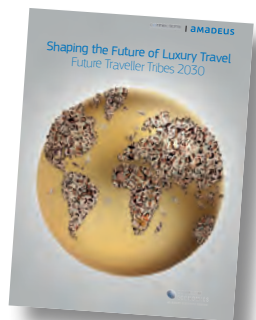
Luxury travellers

Reaching a new level

The Amadeus report, 'Shaping the Future of Luxury Travel: Future Traveller Tribes 2030', focuses on the behaviours of three traveller tribes: Reward Hunters, Simplicity Searchers and Obligation Meeters (see page 24).

The paper further segmented these three groups into Luxury Traveller Tribes.

Amadeus ran a quiz for readers of *The Telegraph* to discover what percentage of readers fell into which tribes. The results were: Always Luxury (4%) where money is no object; Special Occasion (20%) where luxury is a treat; Bluxury (31%) travellers with a business objective; Cash-rich, Time-poor (24%) where time is a luxury;



Strictly Opulent (18%) where seeking the most glamorous experiences is key; and Independent and Affluent (3%) solo travellers with little or no ties. In summary, the paper explores how luxury travel is evolving to become curated, real-time and experience-led.

In 2017, several airlines enhanced the experience for their most-affluent customers. These included Emirates, which showcased its new first-class suite, and Singapore Airlines, with its new Suites on its A380 aircraft. All in all, smaller first-class cabins mean more privacy and more personalised service.

 amadeus.com/luxurytravel

 amadeus.com/journey-of-me

Emerging trends

Super-commuting

The trend for long-distance journeys to the office

This rise in business travellers who live in one country and work in another – coined “extreme commuters” – is attributed to higher housing costs in major cities and recent global economic crises, which have caused people to seek a more affordable way of living. In cases where travelling a longer distance becomes more affordable than living in the same city as their employer, these travellers are choosing the option of super-commuting.

According to reports in 2015, intra-country commuting was tipped to rise by 50% in the ensuing five years, a trend with huge implications for the air travel industry. Airlines have the potential to offer annual fares, in the same way that rail travel companies offer their commuters who travel on the same route repeatedly. At the same time, disruption management will become even more crucial as more people take to the skies to perform their work duties.

Bleisure

Continued blurring between business and leisure

According to a report by *Travel Weekly US* in September 2017, the percentage of leisure trips that have a business component had risen to 17%, up from 11% in 2012 and 14% in 2015. This increase was attributed to a drop in average air fares and to the fact that a Saturday night stay can reduce the cost for the traveller’s company.

Jeff Kim, Account Manager for Marketing and Alliances at Asiana Airlines, agreed that “bleisure travel

has steadily been on the rise over the past couple of years”. He added that generational shifts drove its popularity.

“As young people today try to achieve the most they can as early as they can, they seem to see full vacations during their young adulthood as luxuries they cannot afford,” Kim said. “Bleisure travel allows them the best of both worlds, permitting them to find their own balance between work fulfilment and personal edification.”



Speak our language. Don’t forget about me after the trip. And value my opinion, because we millennials share a lot of content online. We take selfies, we share our experiences

Aurélie Krau, Associate, Festive Road

Millennials

Driving demand for constant, more efficient communication

The behavioural trends of millennials continued to steer air travel industry developments in 2017, and these will benefit all travellers, regardless of age. Here, Aurélie Krau, Associate at Festive Road, the travel and meetings engagement agency, and herself a millennial traveller, articulates what millennials are looking for from airlines:

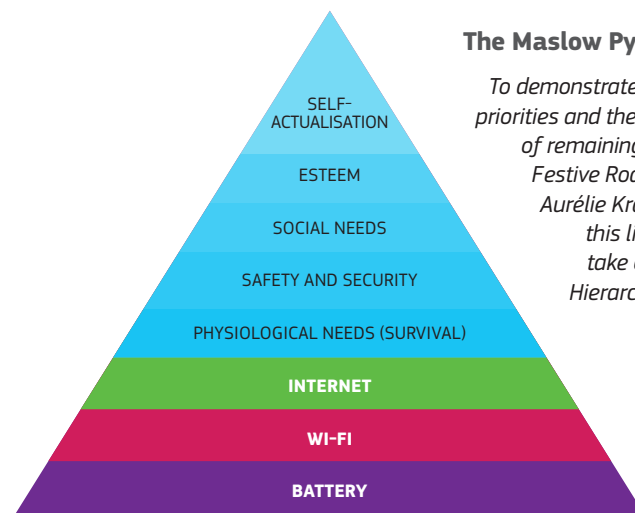
- › **Make my life easier:** Give me some information when I arrive at the airport. If I have a layover of several hours, get in touch with me and send me an offer for lounge access, for example.
- › **Recognise me, keep in touch with me, create touchpoints:** Don’t forget about me after the trip. And value my opinion, because we millennials share our experiences online. During or after my trip, if I tag the airlines, it could be

something as simple as a ‘like’ on my Instagram or Facebook post. Say ‘Have a good flight’ and ask ‘How did we do?’

- › **Stop sending emails:** We don’t really read them. Just send us a smartphone notification. Speak our language – a simple thumbs-up,

The Maslow Pyramid 2.0

To demonstrate Millennials’ priorities and the importance of remaining connected, Festive Road Associate Aurélie Krau produced this light-hearted take on Maslow’s Hierarchy of Needs



thumbs-down or star rating are likely to result in a better engagement.

- › **We’ll answer** because it’s instant, it’s easy and we have smartphones in our hands all the time. And gamify it, so that we find value in providing feedback.

Shopping: from prospects to customers

Travellers' demands for an ever-more seamless booking experience saw airlines and distribution systems collaborate to devise a host of technology-led solutions

Moves in the industry underlined the fact that today's travellers are more demanding than ever: they expect the same personalised and seamless experience when shopping for travel as they get when they use any other retailer. That means being able to shop where and when they want – across all channels and devices. No blips, no bumps, no service inconsistencies.

Airlines in 2017 pursued a variety of strategies to market and sell their products in ways that secured revenue, profitability and differentiation. It is clear that an omni-channel approach, which seeks to present the airline's product in the optimal way to the traveller, wherever they shop, has been the goal for many. Advances in customer inspiration and acquisition, NDC-enabled connections and advances in merchandising were all high on airlines' agendas in 2017, as was strong cross-industry investment focus on airline digital touchpoints and digital experience.

Customer acquisition evolves

Acquisition was a key focus as airlines sought to bolster their ability to acquire customers through multiple channels. Closer integration with metasearch partners, the growing influence of social media giants, new content agreements with GDS partners and a significant uplift in digital advertising spend were all prominent throughout the year as airlines devised strategies to reach and inspire prospective customers.

The drive to identify the right customer and to bring those leads to airline channels saw airlines, such as Qantas, reveal it invested more than 70% of its marketing budget in digital during 2017. Similarly, 57 content deals between major global airlines and Amadeus were signed throughout the year as airlines continued to recognise the role travel agencies play as one customer acquisition channel, across the wider mix. Full-service carriers such as Air Canada renewed comprehensive distribution deals, and 15 airlines from the Arab Air Carriers' Association (AACO) signed an exclusive



distribution partner agreement with Amadeus. Those agreements were all about ensuring customer acquisition, making airline products as widely available as possible, and giving customers the freedom to shop wherever they chose.

Digital advertising and closer integration with metasearch partners saw a continuous growth. For example, 'meta-booking' – the ability for travellers to complete the entire shopping experience within the metasearch environment – emerged as a very effective means to boost acquisition and conversion, with a better user experience.

Airlines also continued the focus on improving the range and performance of their digital direct touchpoints with the traveller. Delivering fast, easy, personalised traveller experiences with clear, device-friendly, modern designs remains critical to airlines' success in this channel.

➔ continued on page 30



In the aviation industry, direct booking versus third-party distribution has always been an either/or choice. Those days have come to an end. The time has come to offer a fresh form of direct booking in metasearch

Gareth Williams,
Chief Executive, Skyscanner

Case study: Skyscanner integrates Amadeus Altéa

In January 2017, Skyscanner became the first metasearch to enable the new Amadeus Altéa New Distribution Capability (NDC) solution. This allows travellers to book Finnair flights and ancillaries directly with the airline without leaving the Skyscanner platform.

Stuart Middleton, Commercial Director at Skyscanner, was reported as saying: "We're always looking for new ways to create a more seamless user



experience that ultimately boosts conversion for our partners. We are confident that the latest integration of the Amadeus Altéa NDC will ensure that we stay ahead of the curve and continue to open up new and deeper partnership opportunities with airlines moving forward."

'Embracing new technologies and business models'



"2017 was a big year for the travel industry. We embraced new technologies and new business models into our evolving travel platform. We are certified as a Level 1 NDC aggregator (complementing our Level 3 IT provider certification), and will be at Level 3 in 2018. We also partnered with IAG to give more choice to travel agencies via the private channel. Our aim is to give travel agencies access to more content from different sources and, at the same time, offer airlines the best platform to distribute their products."

Decius Valmorbida, Senior Vice President, Travel Channels, Amadeus

Fliggy helps airlines acquire new customers

"We are an Online Travel Platform (OTP). We bring the customer to the supplier so they can touch base directly. We tell the airlines how to reach their customers.

"We've created a model called Airlines Flagship Store. Because we are part of Alibaba's ecosystem, we not only have the data about a person's travel, we have the data for their whole online persona.

"If we know a customer has bought a bikini, for example, we know they are going to the beach, and I can push relevant products to them.



When someone buys nappies online, we know they have a baby, and then when we have a product that is relevant for a family, we can push that too. This ecosystem can provide such powerful data."

Wells Zheng, Vice President, Fliggy

Case study: 'Voice search quickly gathering momentum'



2017 saw some significant developments in voice search usage in the metasearch arena.

"Voice search is quickly gathering momentum and there is even scope for it to become important far quicker than the changes smartphones brought to the digital marketing sphere," says Tim Butler, founder of Innovation Visual.

"Although voice-first devices, such as Amazon Echo, represent only a small portion of total internet-connected devices, almost all smartphones can undertake voice search using Siri or Google Assistant."

Butler adds: "There are already more than 50 billion voice searches per month on Google, and analysts estimate that there were more than 40 million voice-first devices (devices with just an audio interface but no screen) in use by the end of 2017."

He added that the data suggested there would be at least three times this estimate in use by the end of 2017. However, it's worth noting that in order to become even more widely adopted, voice search technology in general needs to cater to a greater number of languages.

Case study: Air Canada signs for the Altéa Suite and a renewed distribution agreement with Amadeus

"This new agreement with Amadeus marks the evolution of what has been a long, successful and strategic partnership.

"We see the benefits of having a fully integrated IT and distribution strategy which brings the strongest distribution capabilities as well as next-generation airline IT services to our customers worldwide.

"This agreement supports Air Canada's business strategy for delivering a more personalised travel experience to improve customer service across all touchpoints to support and improve the profitability of our international expansion and improving how we sell, distribute and deliver our products and services. It will enable us to better integrate our systems with our codeshare and Star Alliance partners."

Lucie Guillemette, Executive Vice President and CCO, Air Canada



Further reading

- 'Skyscanner to be first metasearch to display and sell with NDC standard' bit.ly/SkyscannerNDC
- Skift: 'Channel shock: The future of travel distribution' bit.ly/SkiftTravel
- Air Canada and Amadeus' announcement: bit.ly/2DfuExS

Shopping: from prospects to customers

→ continued from page 28

Merchandising matures

Airlines' strategies for merchandising a broader range of products and services to travellers, well beyond the core flight, continued to make headlines in 2017. 'Packaging' gained significant attention, with LCCs making noticeable progress in this area. Ryanair progressed with its plan to become the "Amazon of travel" and, in February, the carrier created Ryanair Holidays. This move saw Ryanair integrate with the likes of Google, Facebook, Kayak and Expedia, as well as traditional package providers such as TUI and Thomas Cook, enabling Ryanair Holidays to offer dynamic online leisure packages.

Packaging (or bundling) was also a key trend in the online travel agency (OTA) realm, with a push to create more value from each traveller with each transaction.

The overall contribution of ancillaries to the industry bottom-line was projected by IdeaWorksCompany to reach \$82.2 billion in

2017, an increase of 22% on 2016. Of the 140 airlines that have signed up to Amadeus' Ancillary & Merchandising solutions, 115 are already upselling their ancillary services and branded fares through the global travel agency community.

With a 31% increase of ancillaries sold through Amadeus in 2017, adoption in airline direct channels and the travel agency community grew significantly.

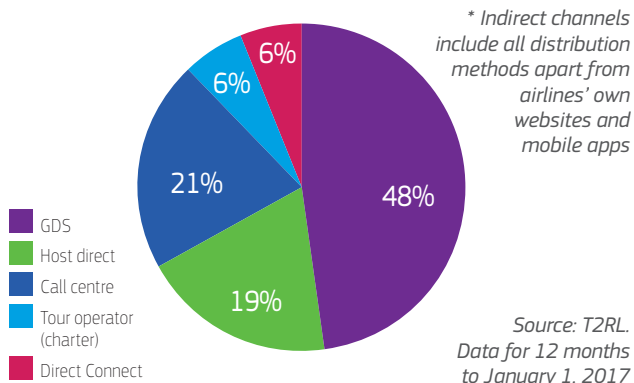
NDC – ready for industrialisation in 2018

2017 saw some examples of experimental connections facilitated using IATA's NDC standard between airlines, travel agents and metasearchers – an example was Finnair's link to Skyscanner. Other projects are ongoing and will be launched in 2018. These implementations push the airline brand out to more third-party channels and facilitate rich merchandising offers, while improving the customer experience and increasing online conversion.

All GDSs pushed ahead with innovation in terms of NDC and Amadeus continued its own evolution by achieving IATA NDC certification as an aggregator in 2017, complementing the level 3 certification as an IT provider achieved in 2016. Amadeus has committed to making NDC work for the industry as a whole and believes that the standard has now reached a level of maturity and stability that can enable the industry to collaboratively adopt and deploy on a global scale.

Amadeus also introduced new digital traffic acquisition solutions and explored other business models, such as the private channel created for International Airlines Group. The private channel allows for innovative business models and new partnership frameworks between an airline and travel agencies, ensuring travellers can continue to shop as usual while airlines and travel agencies experiment with new ways of working together. And, although the private channel provides a pragmatic solution to a specific immediate issue, it is just one part of a much bigger picture as airlines across the board move to create customised retail experiences that inspire customers across all touchpoints, supported by their IT and distribution partners.

SPLIT BETWEEN INDIRECT DISTRIBUTION CHANNELS*



According to T2RL data, GDS distribution continues to represent the largest share of indirect bookings

Case study: Change in distribution strategies

In 2015, the Lufthansa airline group (LHG) was the first large network carrier to announce and implement a surcharged fee for bookings made via the Global Distribution Systems (GDSs).

American Airlines took a different approach in June 2017. Instead of imposing a fee for travel agencies, the airline introduced an incentive to book using any NDC channel (including, potentially the GDS) – a bonus of US\$2 for every flight segment booked.

In November, British Airways and Iberia introduced a new surcharge on all bookings not made via the carriers' NDC connections (although allowing for

travel agencies to consume NDC via the aggregators and GDSs in order to avoid the surcharge). In the same month, Air France-KLM announced it would be adding a surcharge on to GDS bookings from April 2018.

Amadeus' viewpoint

The industry is undoubtedly in a period of experimentation and only time will tell which strategies will succeed. There are many different distribution methods and each airline decides which mix works best for them. Airlines evaluate how to reach the customer and through which channels, and which technology can best help



reach those objectives, and we respect their decision.

One thing is certain, however. Travellers today are looking for consistency, transparency and choice, and as an industry, we can deliver that best by connecting and integrating all players with all content in all channels.

'Package directive heralds changes'



"I think that 2018 will be more of an interesting year for change. With Package Travel Directive changes coming into force in the summer, tightening the rules on what forms a package, it will certainly impact many businesses, including some airline sites that offer ground products as upsells or cross-sells without the appropriate licences! NDC will also create some lack of competitiveness for those companies which are not ready, but that is likely to impact more widely in 2019."

*John Bevan,
Chief Executive of B2B,
dnata Travel*

'We support airlines' digital transformation'



"The travel industry is increasingly competitive and complex, with new standards and directives to guide the way airlines operate. Travellers demand more choice as well as ease and consistency in each and every interaction they have. In 2017, Amadeus saw real, tangible shifts in the way airlines responded to this changing value dynamic. We are proud to have worked with a range of airlines on initiatives such as extending their direct channel reach and performance – via our shopping, NDC, Digital Experience APIs and Touchpoint solutions – and also the provision of richer, cross-channel ancillary and merchandising solutions to serve travellers with the content they seek and value."

*Meg O'Keefe,
Director, Digital Merchandising &
Customer Experience, Airlines, Amadeus*

Case study: The rise of airline packages

Several European airlines have moved to offer package leisure holidays including British Airways, EasyJet, Lufthansa, Sun Express and Swiss, to name just a selection. Eurowings, Lufthansa's budget airline, is aiming to turn its digital presence into a travel platform, complementing its core airline business. Katrin Flöther, head of Customer Experience & Product at Eurowings, says the airline is "targeting 120,000 customers in the third year of operation". EasyJet and easyJet Holidays also came together to promote 250,000 package holidays in partnership for the first time in



December. Integrating additional content was a key trend for 2017 but the industry needs to prepare now to ensure it is ready for the coming European Package Travel Directive that will extend consumer protection responsibilities to airlines that sell ancillaries in July this year.

Case study: LCCs and hybrid carriers see real value in agencies

As the LCC business model matures, some airlines are adding more services, targeting business travellers and pursuing growth beyond ultra-low fares.

This trend has seen an increasing number of LCCs begin to work in partnership with travel agencies to access high fares per passenger and extended reach.

The trend is exemplified by some numbers relating to LCC and hybrid carrier adoption of Amadeus distribution services:

- More than 100 LCC customers
- 80% of total global LCC and hybrid seats available today
- 12 new LCCs and hybrids signed in 2017 (9% growth year on year)



'Garuda implements Amadeus Airline Ancillary Services'

"With Amadeus' solution, we can sell any service through any channel. We can also offer our customers the right products and services at the right time throughout their journey. Plus,



services are always consistent across touchpoints, giving our passengers the ability to customise their purchase and select the ancillary they value the most.

"We've increased our ancillary revenue by giving customers more choice and attention far beyond 'just' the ticket. Today, I am proud to say that Garuda Indonesia has one of the highest ancillary adoption rates in Asia Pacific. We have seen an increase in ancillary revenue of more than 34% in four years."

*Wibawa Prasetyawan,
Vice President, Garuda Indonesia*

Corporate travel and loyalty

Airlines are increasingly adopting innovative and highly personalised booking and expense management processes in order to appeal to business and leisure passengers alike

Changes in the habits of business travellers continued to influence the way that corporate travel was sold in 2017. The industry recognises the user experience these travellers are accustomed to when travelling for leisure and, while travel policies exist to serve a company, steps were made to make things as seamless for the traveller as possible. This included offering highly personalised booking services tailored to tech-savvy travellers that could be better integrated into their modus operandi.

In addition, using next-generation big data technologies, Amadeus' Travel Intelligence solutions continued to power airlines' abilities to extract customer data from multiple sources and make intelligent decisions based on these insights about the corporate clients they serve.

What's more, bleisure continued to grow as a trend in 2017. It is proving particularly popular with millennial business travellers, who see work trips as an opportunity to discover a new part of the world.

Travel programme managers are still seeking solutions to adapt to the rise in bleisure and the issues surrounding it. Insurance liability and duty of care remain grey areas when travellers choose to extend their trip, and technological challenges are presented when travellers make requests to alter their itinerary while on-trip. The volatility of the global political climate and the indiscriminate location of terrorist incidents reinforced the need for companies to demonstrate solid duty of care and traveller tracking capabilities.

“

In 2017 we continued to see the progression of technology in the corporate travel and expense payment space, including digital wallets and virtual card numbers. This has been leveraged by companies, TMCs and OTAs to drive simplicity and efficiency, and to better manage working capital

*Brooke DiNatale,
Vice President of Product
Management, Mastercard*

Innovations to airline loyalty programmes continued to appeal to frequent business travellers. Airlines explored ways to offer the opportunity to exchange points for extra convenience during a journey. Overall, there were moves towards more flexibility, fewer barriers to spending and redeeming, greater integration with retail brands, and more functionality (such as no expiration date of points, and the ability to pool points with other travellers).

“

The most-sophisticated frequent-flyer programmes already make extensive use of big data and predictive analytics to shape, measure and optimise the customer value proposition

*Evert de Boer,
FFP Investment & Advisory*

'Smart business travel today is traveller-centric'

"In the business travel arena, change is constant, but still, people are what make businesses successful. More than ever the

corporate traveller is now being recognised as a core agent of change. And as such, CIOs and CHROs are considering business travel through the lens of the traveller. Corporations that put people at the centre of their programmes will win in talent attraction and retention, and in employee engagement. With dedicated solutions to enable smarter business travel, Amadeus is well positioned to respond to the needs of corporations and corporate travellers alike."



*Arlene Coyle, Chief Commercial
Officer Corporations, Amadeus*

“

One of the trends that we're focusing on is facilitating partnerships between airline frequent-flyer schemes and those of other industries

*Christopher Barnard,
Co-founder, President
and Director, Points.com*

'Cost management can pay dividends'



"Corporations need to implement a comprehensive framework for travel and expense spend management if they are to achieve maximum return on investment. Using best-practice processes and automated technology, organisations can save money, increase employee satisfaction and provide better duty of care for every mile travelled."

*Dr Alexander Grous,
Lecturer, Department of
Media and Communications,
London School of Economics*

'We support airline loyalty initiatives'



"We have seen a shift in the way that airlines are approaching loyalty. Today, airlines are focusing more on their brand, on how to leverage data and on enhancing the customer experience. Amadeus is uniquely positioned to support new innovative initiatives that empower airline loyalty programmes to deliver on their brand promise to 'Pursue the dream of travelling'."

*Dominic Matthews,
Head of Loyalty Business, Airlines,
Amadeus*

'We are helping airlines harness the power of data'

"As of November 2017, we had 129 airlines engaged with us, which represented a 12% increase on the previous year. Our vision is to help airlines harness the power of data. We are doing this by providing a platform model that frees them to build the next generation of smart applications and processes. To



do this, we co-innovate with airlines using data, analytics and artificial intelligence, crafting new ways of creating value for passengers and airlines."

*Didier Mamma,
Global Head of Commercial
Travel Intelligence, Amadeus*

'At Daimler, we keep business travel simple'

"Sometimes giving people too many options is a bad thing, because it complicates and slows down the process. With the simple three-click process, business travellers are able to focus on the jobs they're paid to do rather than on triple administration. This game-changing approach leads to a whole new travel experience when it comes to business travel. All Daimler travellers will use this process as a global standard rooted in digitalisation, mobility and user-friendliness."

*Bernd Burkhardt,
Head of Global Travel
Management, Daimler*



Case study: Air Canada takes loyalty in-house

In May, Air Canada announced its intention to replace its current loyalty programme with an in-house scheme. The aim is to offer "additional earning and redemption opportunities, more personalised service and a better digital experience for Air Canada customers".

The carrier spun off its Aeroplan



programme over 10 years ago, with the standalone marketing and loyalty analytics company – subsequently renamed Aimia – continuing to provide the programme for Air Canada customers. This agreement expires in 2020, at which point the airline will launch its own scheme.

"The ability to have the loyalty programme in-house, we think will allow us to have a closer relationship with customers and provide them with a more-personalised service that can only come from having the data and control in-house," says Mark Nasr, Air Canada's Vice President, Loyalty and eCommerce.



“The journey, not the destination matters”

T.S. Eliot

Door-to-door travel

Airlines and airports are recognising that it's not just about the flight as they enhance their apps to enable passengers to book cabs, check train times and more throughout their journey

When thinking about air travel, too often the focus is on the passenger's experience during the flight itself. In fact, a traveller's journey lasts from the moment they step out of their front door to when they arrive in their hotel room.

2017 saw the air travel industry show greater recognition of this whole-journey experience, and make encouraging steps to partner with third parties to enhance travellers' journeys at each stage.

There were further moves from airlines to partner with ground transport providers to create a more seamless transfer experience. And airport apps progressed to help customers more effectively; for example, London Gatwick Airport introduced a passenger app offering real-time queue updates at check-in and security, airport navigation via beacon technology, and road and rail travel information.



Case study: Airlines integrate car-hailing apps into their own

In 2017, airlines continued to streamline their customers' door-to-door experience by partnering with mobility providers, incorporating taxi apps into their own mobile applications.

In March, Jet Airways partnered with Uber to offer passengers the option of booking an Uber transfer via the airline's app. The Uber booking feature was added to the app's navigation menu to be used by Jet Airways' customers in the 29 cities where Uber currently operates in India.

Similarly, in October, Singapore Airlines (SIA) partnered with taxi-hailing platform Grab. SIA integrated



Grab's app into its own mobile app for customers in six countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam. These travellers will be able to see the Grab option via the SIA app seven days before their flight, enabling them to book a Grab taxi from their arrival destination.

Case study: Enhanced augmented reality to help travellers translate

2017 saw the refinement of augmented reality translation, aimed at helping travellers navigate unfamiliar destinations. Google expanded the instant visual translation Word Lens feature of its Google Translate app, which allows users to hover their smartphone camera over a word in a foreign language to view a translation in their mother tongue on the device's screen via augmented reality (the app translates more than 100 languages when used online, and more than 50 when used offline).

In January 2017, Google updated Word Lens so that it could translate Japanese, and in September added seven Indian languages to the feature: Bengali, Gujarati, Kannada, Marathi, Tamil, Telugu and Urdu. Also in 2017, Word Lens was boosted by artificial intelligence-powered translation to enhance its speed and accuracy.



Case study: Amadeus teams up with OACIS to ease check-in

Innovation continues to transform the travel experience, gradually eradicating toll-booth mentality. In 2017, Amadeus partnered with Off Airport Checkin Solutions (OACIS) to reinvent the check-in experience by enabling travellers to check in and drop off their bags, for any airline, away from the airport: at a cruise terminal, hotel, train station, or a major conference or event. Utilising Amadeus' Airport Common Use Service (ACUS) cloud technology, OACIS checks in the traveller and their luggage and transports their bags to



the airport. The next time the owner sees their bags is at the destination. The service has been adopted by Virgin Australia, which also piloted it in Sydney for cruise ships and ocean liners.

Airport enhancements

More airports are striving to continually improve the passenger experience through technology by adopting faster check-in and boarding processes and luggage tracking tools

Putting passengers first remains a vital priority for airports as they strive to foster a competitive advantage in the future.

A common concern throughout the aviation industry in 2017 was how to accommodate growth with ever-bigger airports, but it has become clear that important changes in technology and processes are steadily enhancing the airport value proposition and the customer experience.

In support of that objective, two of the sector's leading bodies, the International Air Transport Association (IATA) and Airports Council International (ACI), launched an initiative in October. The 'New Experience in Travel and Technologies' strategy aims to optimise emerging technologies to monitor how passengers, cargo, baggage and aircraft progress through the complete travel journey. Furthermore, during the summer, ACI also released two ASQ quality measurement tools to help airports gauge the customer experience.

In 2017, many airports adopted technology to maximise capacity. The Airport Collaborative Decision Making (ACDM) standards are designed to cut delays by using parking stands, taxiways, runways and airspace more efficiently. Spurred on by the demands of the modern traveller, airports worldwide in 2017 continued to adopt innovative solutions to drive performance and strengthen their value proposition, making the passenger journey increasingly seamless. For example, at Hong Kong International Airport, passengers will soon be able to check in, validate their travel documents, pick their seat, and print bag tags and boarding passes from any of Amadeus' next-generation iCUSS kiosks.

Airports are taking further steps to resolve the problem of lost luggage. From June 2018, IATA's Resolution 753 comes into effect, requiring mandatory tracking at four stages of a checked bag's journey. It seems increasingly



NEXTT [ACI's New Experience in Travel and Technologies initiative] will seek to provide a seamless journey by exploring increased off-site processing options; reducing or even eliminating queues; more efficiently using space and resources through enhanced deployments of artificial intelligence and robotics; and vastly improving data sharing between stakeholders

*Angela Gittens,
Director General, ACI World*

likely that in the future, advanced tracking techniques will be telling us the real-time location of luggage, and even notifying us when it's ready to be collected.

It's clear from looking back on 2017 that the next evolutionary steps in the way passengers interact with airports are already being taken, from self-tagging and self-service solutions, to new technology making airport payments easier for travellers. With technology reducing the burden of passenger processing, security and border control checks, the signs are encouraging that airports worldwide are bracing for growth and that the competition between them will only intensify.

'Our payments solutions help airlines to increase their sales'

"Payment is undergoing fundamental changes throughout the world and 2017 was no exception. We are fast seeing a cashless payments future emerge driven by technology. Against this background, in 2017 Amadeus took a big step forward in driving innovation with our customers to overcome key airline payments challenges. Our

global team of travel payment experts worked together with Lufthansa Group to make airport payments much more convenient, secure and flexible for airlines and travellers alike with Airport Pay. In our relentless effort to help airlines increase their sales and reduce their total cost of payment, we enabled smarter card payments for TUI Fly in our distribution

channel. In 2018, we will only grow this commitment further as we continue to lead payment innovation in the travel space."



*Celia Pereiro,
Head of Travel Payments, Amadeus*

'Airport managers are becoming visionaries'



"Looking back, 2017 has been a year that brought significant developments in the airport IT market, which we at Frost & Sullivan value at \$3.6 billion and growing at 4% annually. Airports understand the need to continue to evolve in their digital journey and are gradually increasing their IT budgets. Most importantly, airport management teams are shifting from being predominantly process-centric to become visionaries. We have seen the employment of new IT teams that sit under the CIO/ CTO with a mandate to anticipate, develop and commercialise digital technologies within their airports. From a technological standpoint, cloud computing is now being embraced by the majority of Tier 1 airports for various processes such as communications, file management, planning and budget, passenger processing and asset management. Furthermore, the discussion about the merits of blockchain picked up and applications are now being developed, aiming to disrupt passenger flow management and data security segments, among others."

Alexander Michael, Director of Consulting, Information and Communication Technologies, Frost & Sullivan

'Check-in reinvented in 2017'



"When I think about 2017, one of the most fundamental changes has been check-in. A crucial, decades-old process is being reinvented by new technology. Off Airport Checkin Solutions service, which enables check-in and secure bag-drop to take place at Sydney cruise terminal, means travellers can enjoy their experience and removes strain at the airport. I'm confident technology will help improve airport capacity in new ways next year with data analytics delivering significant passenger experience improvements."

*John Jarrell,
Head of Airport IT,
Amadeus*



Read more in the Frost & Sullivan White Paper, commissioned by Amadeus: 'Strengthening the Airport Value Proposition': amadeus.com/building-airport-value

Case study: US PreCheck screening system expands

In 2017, the number of US airports allowing expedited screening via the Transportation Security Administration PreCheck programme – known as TSA Pre – increased to 180. The system dramatically eases the requirements of travellers. Passengers travelling with TSA Pre are allowed to keep laptops and liquids in their bags when passing through security and don't have to remove their shoes, belts or jackets. The airports participating in the programme hope it will make their passengers' journeys smoother and faster. In November, it was announced that the number of participating airlines was increasing to 42, with five new carriers – All Nippon Airways, Cathay Pacific, Korean Air, Finnair and Contour Aviation – joining the programme.



Case study: Lufthansa adopts wireless payment solution

Airlines continue to exercise greater control over their payment infrastructure and to create a more seamless experience for travellers to make payments while at the airport.



In June 2017, Lufthansa announced plans to roll out a wireless payment solution from Amadeus. Amadeus Airport Pay can be used by multiple airlines and ground handlers in airports worldwide, and operates independently of the check-in infrastructure. It can be fully integrated in the airline's sales flow, making payments faster, more accurate and automatically accounted for. Passengers who previously had to pay for excess luggage or flight upgrades at separate ticket offices also benefit from greater convenience, flexibility and security.

Irregular operations

Service disruption is inevitable at some stage of the journey but the aviation sector is increasingly adopting measures to mitigate the impact of crises on passengers

It's often easier to remember the more challenging aspects of a calendar year than the positive, and there's no denying that 2017 saw some unfortunate global events, including political upheaval, terrorism and natural disasters. These not only had devastating implications for those on the ground, but also in many cases had knock-on effects that caused disruption for air passengers.

Think of these crises and it's clear that they are not limited to one corner of the world – they can happen anywhere and are a part of life. Incidents such as these have always happened, and they always will.

The same goes for irregular operation incidents that are directly related to air travel – delays, technical faults, strikes and so on. Rather than aiming to avoid crises entirely, the correct action is to handle them in the best way possible.

With more travellers than ever taking to the skies – four billion of them in 2017 –

disruption is more keenly felt due to the mass of people affected. What's more, disruption becomes more publicly known than in the past due to the impulse of travellers to vent their frustrations on social media.

In light of the number of incidents that took place in 2017, the importance of crisis management is growing for the travel industry. This is reflected in the willingness of travel providers to get together and talk openly about the topic.

For example, more than 190 delegates from travel management companies, tourist boards, hotels, airports, tour operators and airlines gathered in London in November 2017 for the second International Travel Crisis Management Summit to share their perspectives and champion best practice. With airline-related disruption, the speed of response can be a differentiator when it comes to salvaging relationships with customers.

All in all, the aviation industry continues to



Disruption for Swiss is very critical, especially the experience that our passengers have when they are disrupted. They have to trust us that we will find a good solution

*Jan-Christian Schraven,
Vice President, Head of Operations
Planning & Steering, SWISS*

recognise the need for honest dialogue, for technologies that predict and react to all kinds of disruption, and for the need to support both partners and competitors to take care of travellers during these events.

The knock-on effects of disruption



'Disruption recovery moves centre stage'



"Disruption hits more and more passengers, year after year, and expectations are growing beyond the day of departure. Airlines now consider disruption recovery as a key element for the ultimate customer experience, and far beyond an issue to handle at the airport. This has evolved from a recurring issue to solve to a strategic and fundamental topic to be part of the airlines' digital transformation."

*Vincent Lacroix,
Head of Disruption Solutions,
Airlines, Amadeus*



Read more in the T2RL-authored White Paper, commissioned by Amadeus, 'Shaping the future of Airline Disruption Management':

amadeus.com/managingdisruption



'Star Alliance effectively manages disruption through dialogue'



STAR ALLIANCE™

"For us to manage disruption at an alliance level, we need to ensure there is an alignment. We facilitate dialogue between our member airlines, where we get them together and allow them to share best practice and common processes.

We also share operational data with them, so that they understand where the main transfer channels are, where you have a certain amount of predictability in terms of disruption – due to weather conditions or being more exposed to air traffic delays. We have this kind of data mining that allows us to predict disruption."

*Christian Draeger,
Director of Customer Experience,
Star Alliance*

Case study: Swiss implements speedy rebooking tool

2017 was a year of some disruption for the aviation industry in Europe, but one carrier, Swiss, sought to address future disruptions directly by becoming the first airline to deploy Amadeus Passenger Recovery. This tailored solution enables the airline to respond rapidly and systematically when flights are cancelled. The tool can rebook flights for up to 100 passengers in as little as two minutes, cutting costly accommodation arrangements, reducing staff workloads, and



therefore costs, as well as moving the customer along on their journey with ease and speed.

In-destination and traveller trends

Travellers' increasing appetite for experiences prompted tour operators, hotel groups and tourist boards to widen their activity offerings both independently and in collaboration

In 2017, the focus on the traveller experience remained strong. We saw airlines, tourist boards and hotels seek ways to enhance their traditional offering by adding elements that exceed travellers' expectations, or that create a more seamless experience throughout their time in a destination.

The two key ways of doing this was via offering tours and activities, and via collaboration with partners. Quick-wins were achieved by identifying moments in a traveller's trip where they could be offered the option of a tour or experience, in some cases using technology to personalise as much as possible. And further collaborations were seen not only between likely partners (airlines and tourist boards) but traditional competitors (hotels and sharing economy businesses).

We're seeing more evidence of "joining the dots", where travel providers are sharing ownership of the traveller at different points in their trip, which is elevating their ability to offer a positive end-to-end experience.

Rethinking traditional tours and packages

Consumers' growing demand for experiences continued in 2017, with travel providers conjuring up creative ways to give travellers unique, memorable experiences beyond the norm, or more relevant to their personal lives.

'Surprise' travel – where travellers book a trip without knowing where they will be travelling until they arrive at the airport – continued as a fledgling trend throughout 2017. In this market, Expedia's Surprise Trips, Pack + Go, Lufthansa Surprise and srprs.me all received media attention.

Following a 24% growth in solo bookings in 2017, Intrepid Travel launched its For Solo Travellers tours in August, with itineraries for solo-only travellers in Morocco, Mexico, Bali, Peru, India and Vietnam.

And UK-based boutique tour operator Luxury Travel Advisors launched its 'Star in Your Own Wildlife Documentary' offering – where a five-person film crew follows travellers on expeditions in the Arctic, Brazil, South Africa or Canada, then host a private screening of their very own documentary when they return home.

Sharing economy and hospitality industry see further collaboration

Hotels are increasingly finding inventive ways to collaborate with sharing economy providers rather than compete against them. They included AC by Marriott Hotel Birmingham, which offers Deliveroo menus in its restaurant, and InterContinental Hotels Group and Hilton, which both have partnerships with



Uber. Starwood also had a partnership with Uber, allowing members of its Starwood Preferred Guest loyalty scheme to earn points when spending money on Uber trips, but the tie-up ended in December 2017.

"In 2017, the sharing economy and hotel industries saw further collaboration," says Dan Layton, head of business development at Veeva, a home rental business with more than 1,200 three to five-star properties in "safe and affluent" areas of London and Paris. Speaking at the Connections Luxury event in Ireland, he added: "We saw One Fine Stay acquired by the Accor Group in 2016, and we've seen our investment from Wyndham. So rather than the two industries jarring against one another, I think they're going to mix and collaborate further as time goes on."

‘Singapore tie-up boosts arrivals’



“This partnership between our airport, national carrier and national tourism body is a powerful one that has helped to boost Singapore’s tourism growth in the recent years.

The renewal of this partnership reflects our confidence that we can continue to cooperate fruitfully to better serve our visitors and drive tourism outcomes.”

*Lionel Yeo, Chief Executive,
Singapore Tourism Board*

‘Switzerland handpicks experience suppliers’



“To move from the buzzword ‘experiential travel’ to a true and unique experience for visitors, Switzerland Tourism initiated a project called MySwiss Experience. By sourcing small and medium-sized suppliers, we collected more than 700 handpicked experiences. Our visitors will be able to interact with locals and get the

opportunity to enjoy a very personalised experience, ranging from assembling their very own watch to having a yoga lesson on a mountain top at sunrise. And we made it very easy and convenient: by visiting myswitzerland.com/myswissexperience, a visitor can pick and choose the experience according to interest, time, budget, weather, number of travellers and more.”

Urs Eberhard, Vice President, Head of Markets, Switzerland Tourism

Case study: Singapore’s Changi Airport, national carrier and tourist board collaborate on joint marketing

In April 2017, Changi Airport Group, Singapore Airlines and Singapore Tourism Board began an ongoing joint marketing partnership to promote inbound travel.

The three parties jointly invested \$33.75 million to promote Singapore as an attractive stopover and twinning destination to travellers across the globe, building on the efforts already made to promote this message to specific long-haul markets (such as the US and Europe). Another focus of the partnership is to attract MICE (Meetings, Incentives, Conventions and Exhibitions) visitors.

The partnership will also “refresh” the Free Singapore Tour, which provides transfer passengers with a free taste



of Singapore’s offerings. The tour will be expanded to include more authentic experiences curated based on travellers’ interests – such as a food-themed tour. The Free Singapore Tour was well-received and, as this Almanac went to press, was rated as one of the top 20 tours in TripAdvisor’s list of ‘Top Tours in Singapore’.

Case study: Ecuador partners with Amadeus to profile its tourists

In August 2017, Ecuador’s Ministry of Tourism and Amadeus signed an agreement to intelligently promote tourism to the country in new markets, and to brand the country more attractively to consumers. The aim was to promote Ecuador to travellers from the inspiration stage through to when they were travelling.

“Our two main strengths are being able to map all searches from the world related to destinations,” said Gabriela D’Onofrio, CEO at Amadeus in Ecuador. “From the information on the Amadeus GDS, we have the capacity to know how many people are searching Ecuador, any Ecuadorian city, or even Ecuador’s competitors. The second strength is reservations, [so we can] know a consumer’s purchase intention in advance.”

The alliance will enable the Ecuador Ministry of Tourism to learn about travellers’ habits, what they want to buy and where they want to go, in order to create intelligent promotions that are relevant throughout the traveller’s time in Ecuador.



Case study: Airbnb rapidly expands its experience offering

2017 was the first full year of operation for Airbnb’s Trips feature, which allows users to book immersive experiences, such as city tours, recommendations and meet-ups with locals.



According to the sharing economy giant, the popularity of its experience-based offering has outperformed its expectations. “Since launching Trips, we’ve watched Experiences grow even faster than our Homes business did in the early days,” reads a blogpost on Airbnb.com from September. “Compared to guests using Homes in the first year, we’re seeing more than 13 times the number of guests using Experiences, and we’ve more than tripled the number of Experiences offered since January.”



“The only way to predict the future is to have power to shape the future”

Eric Hoffer

IT in transition

Cloud computing, APIs and open-source software were among the trends in airline IT last year, as was an increasing shift towards collaboration on development projects

Airline IT is going through a transitional phase as the industry increases investment on the back of stronger balance sheets and recognises that technology is a means to differentiate. A particular feature of 2017 was an increased focus on cloud services.

The growth of cloud computing has been driven by some specific trends. The technological revolution of the internet, and the change in consumer habits that it has brought, have resulted in an ever-increasing 'look-to-book' ratio – the number of search requests performed before a flight is booked. The increasing pre-eminence of metasearch engines and OTAs is accelerating this growth.

This has created different challenges both for airlines and for travel agencies. Firstly, the accuracy of the information delivered to the traveller: since cache-based systems were used, real-time information was not always provided to those performing the search. Secondly, airlines could not apply their revenue management systems and logic to the search requests from those metasearch engines.

There are also some broader IT trends that have been embraced by the airline industry. The selective and appropriate use of open-source software to deliver highly secure and functional software rapidly means the industry can bring new ideas and innovations to market more quickly than ever before. At Amadeus the passion for open-source is evident. In addition to building on code others have made open, such as Google's Kubernetes framework for cloud computing, Amadeus too has contributed source-code back to the community.

The way IT systems are developed is also shifting. 2017 was a pivotal year for the adoption of an agile software development methodology that is replacing the traditional 'waterfall' or linear process for writing code. Agile sees cross-functional teams collaborate to bring products to market much more quickly; for example, a developer

“2017's major technology achievement was the completion of our transition to open systems; we have now closed the mainframe chapter. This accomplishment has unlocked many opportunities, notably the ability to fully leverage cloud, big data and AI technologies. We are ready to enable and power our customers' digital transformation. Opening our environment to our customers, their partners or third parties is at the heart of our strategy. This is the lever for the flexibility and agility our customers demand to maximise time to market of new system features.



*Christophe Bousquet,
Senior Vice President, Airlines R&D, Amadeus*

might focus on one application area but if they need to make a change to middleware, they are free to do so. Amadeus has embraced this change and says it is already paying dividends in terms of the speed at which it can deliver new innovation.

Similarly 2017 saw the continued rise of the API, or Application Programming Interface. In recognition that opening access to data can enhance innovation, a raft of airlines and technology partners have provided API links to the developer community.

Case study: Finnair eases web shopping with Amadeus API

Finnair recently partnered with Amadeus to develop its digital experience using an API.

“We want to make the shopping experience more intuitive and enjoyable for our customers,” says Jaron Millner, Vice President of Direct Business at Finnair.

“The Amadeus Digital API gives us the flexibility we have been looking for, and allows us to develop the booking

experience together with our customers to find the booking and shopping flow that works best for them.”

Amadeus' innovative REST/JSON Digital API empowers Finnair with enhanced retailing capabilities to deliver booking experiences according to customer requirements, without the need to follow the common airline booking sequence.

Shopping carts and sessions will now remain open for several months, meaning



that travellers can start shopping for flights at m.finnair.com, close their session anytime, and pick up where they left off to finish their booking.

Innovation drives change in travel

Chatbots really found their voice in 2017, while the year also saw the rebirth of augmented and virtual reality, advances in API booking functionality and even a blockchain-based tool to track luggage

The past year has ushered in some game-changing startups and advances in technology that are set to transform the world of air travel for passengers and stakeholders alike.

One startup, Flyoff, explored the potential for customers to bid for unused seats to maximise the value of all inventory, while another, IPowerMe, enabled airlines to send deals to passengers based on the value the airline assigns to each customer. Other startups, such as Flyr, leveraged artificial intelligence (AI) to understand patterns in flight prices and make predictions.

2017 saw chatbots become normalised and fully integrated into customer service channels in many industries, notably becoming part of airlines' new service offering. More airlines have begun to offer chat-based services, which allow customers to plan and book flights via instant messaging. Finnair launched Finn, last September. The multi-language bot enables passengers to book flights, check their flight status and find out information about the airline, all via Facebook Messenger.

Last year saw airlines make big moves to facilitate third-party collaboration which opened the door to a wide range of technical change. In February, Lufthansa Group integrated a booking function into its API (application programming interface), which third parties can access to sell seats, and earn a commission in the process. By the end of the year, inventory from Lufthansa, Austrian Airlines, Eurowings and Swiss were all being sold in this way. Reinhard Lanegger, Head of the Lufthansa Open API project, said: "In 2017 we will be focused in developing the transactional API, and we want to be able to sell ancillaries via the API as well."

Augmented reality (AR) and virtual reality (VR) have been generating hype for some time but have yet to be widely adopted in travel. However, with the launch of the iPhone X in November, which uses the technology, this is likely to change

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2017 was an exciting year which saw the launch of the Amadeus Innovation Programme. This programme takes a strategic approach to innovation, fostering real change and supporting startups that help deliver this. It is underpinned by six key themes, which help us guide our focus and investments, in order to build solutions that can offer real benefits to our customers and passengers in the future

Katherine Grass, Head of Innovation and Ventures, Amadeus

as app developers explore more ways to use it. In August 2017, at the #NDCHack event, tech startup AppInTheAir developed an AR flight-search function called ARVis, which allows consumers to compare flights and even compare the size of cabin baggage and legroom on offer.

These initiatives, along with younger technologies such as blockchain, drove change in air travel during 2017 and are set to continue making an impact in the future.

Case study: Navitaire unveils world's first VR travel search and booking experience

"We live in a 3D world, why shouldn't we shop for travel that way?" This was the idea that inspired Justin Wilde, a user experience developer at Navitaire, an Amadeus company, to develop a concept that would allow travellers to complete an entire travel booking all in VR. Four months later, Wilde's VR experience was ready for its first booking.

In the VR booking experience, the traveller goes through the entire booking experience, from purchasing a flight right through to payment. For example, to select a destination, they spin a globe and pick a country or city;



when selecting the flight, they can walk through the plane cabin to find a seat; and when booking a rental car, they can hop in and try different cars.

"I see a future in which the internet will be a 3D experience, and everyone will have their own portable 3D headsets," says Wilde.

Case study: Amadeus Ventures invests in Avuxi

Travel sellers, particularly new players such as Airbnb, have for some time focused on how to sell an experience, not just a travel product. 2017 saw a rise in startups aiming to help the industry sell a destination and experience to consumers, by providing them with more content at the time of search. Amadeus Ventures invested in Avuxi, the startup company that aims to rank the popularity of every place on Earth. This aims to help travellers during the decision-making process. As they search for flights or hotels, Avuxi shows user-generated content and information on the same page to aid booking choice.

'Airlines must improve the UX'



"One of my biggest pain points is the fragmentation of my customer journey. There is an overload of information during the shopping process, but once I'm booked, my experience gets very inconsistent.

Airlines also need to be user-experience obsessed: think mobile, think on-the-go services and a seamless user experience across desktop, mobile and tablet as well as web, chat and app. In 2018 I'd like airlines to focus on making the user-experience pleasurable and engaging."

*Aurélie Krau,
Associate, Festive Road,
and millennial travel expert*

'Innovations hit the mainstream'



"2017 saw many exciting innovations graduate from design labs to mainstream applications, and yet we will likely remember it as the year when the truly breakthrough advances in travel technology just got started. We are only now beginning to

harness the power of mobility and cloud computing, even as artificial intelligence, blockchain and mixed realities are poised to dramatically reshape the way airlines deliver highly personalised and contextual experiences across the travel spectrum."

*Rashesh Jethi,
Head of Innovation
for Airlines, Amadeus*

'Accenture Alliance brings together strengths of both partners'

"Under the wings of our Alliance with Accenture, we launched our joint Innovation Centre in Dublin. It's our Alliance's global flagship, the hub to our many innovation spokes worldwide, where we are building forward-looking, innovative offerings and capabilities, always with a laser focus on the airline industry. Here we draw together the existing Amadeus



and Accenture portfolio and expertise and deploy each party's strengths, creating value for our clients through applying a structured methodology, resulting in rapid prototyping that allows immediate market validation and feasibility of an innovation."

*Andrea Marazzi,
Head of Accenture Strategic Alliance,
Amadeus*



Case study: Blockchain tool eases bag tracing

Blockchain technology received a lot of attention and investment during 2017. There are many potential applications for the technology within the travel industry that can be explored. Amadeus has developed an internal prototype, Blockchain Bag Tracer, that uses the decentralised ledger technology to allow for secure and reliable bag-tracing.

The solution facilitates the exchange of information between airlines, airports and passengers. Amadeus believes Blockchain Bag Tracer has the potential to solve one of the most frustrating parts of the passenger's journey, as well as making things easier for the different stakeholders involved in air travel, who may currently struggle to share all the information needed to keep track of the exact location of bags.

Case study: Icelandair pioneers chatbot interaction

Many travel brands now aim to communicate with their customers in a more natural, conversational way, to build strong and loyal relationships in sector where there is high competition. Icelandair was one of the first airline brands to create a chatbot which allows users to search for and book a flight through a text-based messenger-style service.

Rather than having to rely on the options provided in drop-down menus, users can enter the information themselves, giving them more flexibility and control. It also keeps the



conversation in a thread so that they can later review their purchase and search information with ease.

If you want to go fast, go
alone; if you want to
go far, go together

Proverb



Conclusion

Whether reflecting on conversations I've had with industry colleagues, events I've attended or stories I've read, there was one constant in 2017: change



The airline industry is witnessing continued growth having served approximately four billion passengers in 2017, with T2RL predicting annual growth of around 6% over the coming years. This forecast sees the industry serving five billion passengers in 2020.

At the same time, the industry is seeing an evolution of its business and operating model, with all the changes that brings in areas as diverse as labour relations and product merchandising. As we move into 2018 I firmly believe airlines will become 'data-centric organisations' with real opportunities to serve customers more effectively while improving the bottom line.

As our 'The Journey of Me Insights' report demonstrated, no two travellers are the same; their journeys are innately personal, and travellers expect increasingly tailored service. In this context, the ability of new technologies to aggregate customer data, combined with a constantly connected consumer base, provides incredible potential. It augments our ability as an industry to get closer to airline customers and understand their values, while the growing sophistication of machine-learning technologies means we will be better able to anticipate their future behaviour.

Brands that are concerned about the relevance of their product to their consumers need to take note. Brand loyalty is still there to be gained but the terrain has changed. An omni-channel approach is essential for demonstrating brand consistency – from an airline's website through to the face-to-face service of its crew – to loyal customers.

At the same time, to secure loyalty from new digital customers, airlines need to meet these customers 'where they're at'. An active, flexible, and real-time approach to

shaping offers will grab the attention of new consumers, and build brand affinity. As ever, it's about achieving a balance.

On the sales side, I believe 2018 will bring changes which continue the evolution seen over the past few years. The way the industry sees the product it sells has been changing and airlines will be making considerable efforts to act more like retailers. Personalisation and customisation of the shopping experience will be more commonplace in 2018.

We also expect the way airlines distribute their products to continue evolving as carriers seek to service passengers at every stage in their journey based on an understanding of the product, service and convenience combination that individual passenger values. This approach will support upselling and merchandising, with IATA's NDC standard acting as an enabler of this change.

At Amadeus, we have worked in partnership with the industry through many technology evolutions. This year we were joined by many airline partners as we sought to bring airline leaders together at the Amadeus Airline Executive Summit in June and again at the Executive Summit during the IATA WPS in October to define options for the industry's continued development, collaboratively.

Today we are focused on regionalising much of our own company to be closer to our airline customers. In addition, we are focused on bringing together our investments in airline IT, distribution and travel intelligence with the sole purpose of helping our customers deliver on their business objectives. I look forward to engaging with you throughout 2018 in support of your chosen business strategy.

*David Doctor,
Vice President, Strategy and
Marketing, Airlines, Amadeus*

Find out more

For further information, visit
amadeus.com/airlines-almanac2017
or speak to your Amadeus Account Manager today.

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