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The “lift-off” of the aviation industry

How can we accelerate the transformation of airlines in the post-COVID world?

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Introduction and objectives

This study was conducted in the period from the last quarter of 2021 to the beginning of 2022 in order to gain a deeper insight into how to accelerate the recovery from the crisis caused by COVID-19 in the European air transport industry. The objectives were to analyse the position of the industry and to offer our vision of the roadmap that would make it possible to reinvent the industry, with an view to airlines being able to build the competitive advantages of the future. In the study we discuss three cornerstones of the transformation that, based on our analyses, will be key for the industry in this decade:

1. The promotion of a more sustainable air transport model that will improve efficiency
2. The adaptation of business models to the needs of the post-COVID traveller
3. The establishment of a financial management strategy with a transformational long-term vision

The publication of this study coincided with the recent attack on Ukraine by Russia and its significant geopolitical and economic impacts. Due to the significant uncertainty surrounding the evolution of the conflict, its implications have not been quantified in the demand or economic position analyses of the airlines addressed in the study, but we consider that the situation undoubtedly heightens the challenges facing the industry and places greater importance on the prospects for it that we are presenting in the study.

In this regard, the study's conclusions are based on a post-crisis recovery scenario and, accordingly, the need to expedite the recovery takes on greater importance and becomes increasingly urgent for airlines and Spanish and European institutions. The revival of the industry is a vital and strategic linchpin of Spanish, European and global economic recovery, and is key to laying the foundations for rebuilding the Spanish economy in particular, as well as to contributing to the well-being of citizens and the competitiveness of our companies.

Executive summary

The global pandemic has caused an unprecedented impact on the air transport industry, with global traffic reductions of up to 80%-87%¹ in the second quarter of 2020 and revenue reductions for the principal European airlines of ~60% in that year. Air traffic in Europe in the third quarter of 2021 showed signs of recovery, thanks to the progress made in vaccinations and the easing of restrictions. However, the omicron variant put the brakes on this dynamic and, as a result, the total number of flights in 2021 was 44% lower than in 2019².

Although the forecasts prior to the war in Ukraine indicated that global air traffic would recover in 2023 or 2024, we continue to face uncertainty concerning the nature of the recovery and the future of the industry.

The rate of recovery from the pandemic will differ on the basis of the traveller segment concerned; in this regard, according to our estimates, 8%-18% of corporate trips will be replaced by on-line alternatives.

Airlines must face up to transformational challenges that have been accelerated by the pandemic, such as the demand for a new integrated, multimodal and digital experience by the traveller and an extremely complex financial situation that could perdure beyond this decade if action is not taken. This complex financial situation could be exacerbated, if this is at all possible, by the effects of the recent war that has recently broken out in Ukraine. All of the foregoing must be set in a context of a growing ambitiousness in sustainability policies, which will require airlines to speed up the transformation of their fleets and operations. These challenges pose questions regarding the airline transformation roadmap: what aspects of the travelling experience must inevitably be transformed in order to adapt it to the post-COVID traveller? What decarbonisation stance could airlines adopt based on technology availability?

When are airlines likely to witness a reversal of their complex financial situation and what key levers should they activate in a post-COVID environment? What new businesses will be key to reinventing the air transport industry and ultimately triggering its recovery?

This point of view is based on an analysis of the main impacts of the pandemic on the demand for air transport and its prospects for recovery, and examines in greater depth the challenges facing airlines if they are to position themselves in the future of the industry. We have set out our perspective of the industry and of the transformation processes that airlines must undergo in order to build a competitive edge for the future.

1. IATA, “Air Passenger Market Analysis”, International Air Transport Association, June 2021
2. Eurocontrol, “Daily Traffic Variation”, Eurocontrol, January 2022

The progressive “lift-off” of air traffic places the timeline for the recovery of the industry at between 2023 and 2024

The global pandemic has had an impact without parallel in the last 50 years for the airline industry and has generated extreme uncertainty about its future. Airlines must face up to this situation by assessing the impact of the extraordinary losses they have suffered, the changing restrictions and regulations and the acceleration of the transformation of consumer behaviour and preferences.

Forecasts point towards a recovery of global air traffic by 2023 or 2024 and that the situation in the short term will be strongly tied to the impact of new COVID-19 variants that could trigger mobility restrictions and also to how events relating to the recent conflict that has just broken out in Ukraine unfold. Mass vaccination in developed countries and the summer season in the northern hemisphere marked the path towards recovery in Europe in 2021; in August 2021 70% of the flights that took off in the same month of 2019 were operated. This positive trend was truncated in November 2021 by the appearance of the omicron variant, which brought about new restrictions and limitations on international transit, cancellations of meetings and corporate events, curbs on mobility and selective lockdowns.

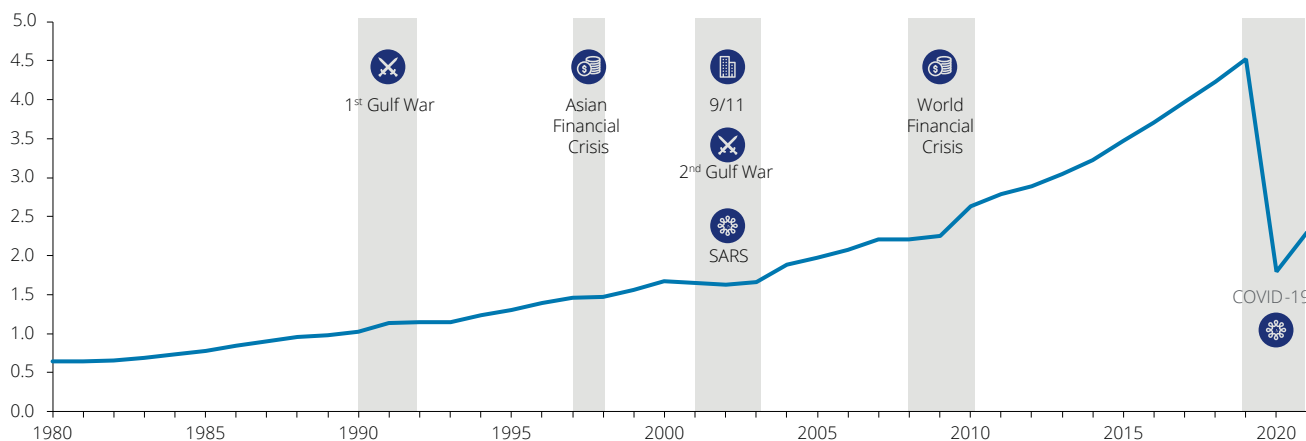
Moreover, the recovery will depend on factors that go beyond strictly health-related issues, such as the recent military conflict between Russia and Ukraine and the effects it may have on the global economy, world financial markets and consumer goods industry supply chains. Conflicts of this nature can affect key mobility sectors and reduce consumer confidence, further damaging air traffic and, consequently, shackle the recovery of the industry.

Global pandemic that had an unprecedented impact on air traffic and on the operations of airlines

The crisis and impacts caused by COVID-19 in the air transport industry are unprecedented; the effects of the 9/11 attacks in 2001 or the financial crisis of 2008 cannot be compared with those of 2020 (see figure 1). Global demand measured in RPKs³ fell by 66%⁴ due to the pandemic, and in the case of international flights the drop was even greater, 76%, the most significant reduction in the history of aviation.

Signs of recovery in the European market emerged in the third quarter of 2021, coinciding with the summer campaign and

Figure 1: Number of global passengers per year
(Billions of passengers)



Source: IATA, Deloitte analysis

3. RPK: Revenue Passenger Kilometre

4. IATA, “2020 worst year in history for air travel demand”, International Air Transport Association, 3 February 2021

driven by vaccinations and the reduction of mobility restrictions for travellers. European domestic demand fell by only 29% in August with respect to 2019 levels⁵, which represented an improvement on the most optimistic forecasts that Eurocontrol had initially made at the beginning of the summer. Globally, domestic demand fell by 32% overall in August 2021 compared to 2019⁶, which represented an even more pronounced decrease than in July 2021, when the drop was 16% with respect to the same month in 2019.

Until the end of 2021 the industry was affected by fluctuations in the spread of the virus and the concomitant mobility restrictions. However, the rate of vaccinations and their availability generated enough confidence to ensure that air traffic levels continued to rise. More than 70% of the population had been vaccinated in the most advanced countries by December 2021, and the levels were particularly high in the European Union, especially in Spain, Italy and France, and in China, Canada and Japan. By the end of 2021 the number of European flights had reached 56% of those operated in 2019, around 6% above the base forecast made in June 2021⁷.

The industry was badly hit by the omicron variant at the beginning of 2022. The appearance of this variant led many countries to tighten restrictions and make it compulsory for consumers to present a vaccination certificate in their daily activities.

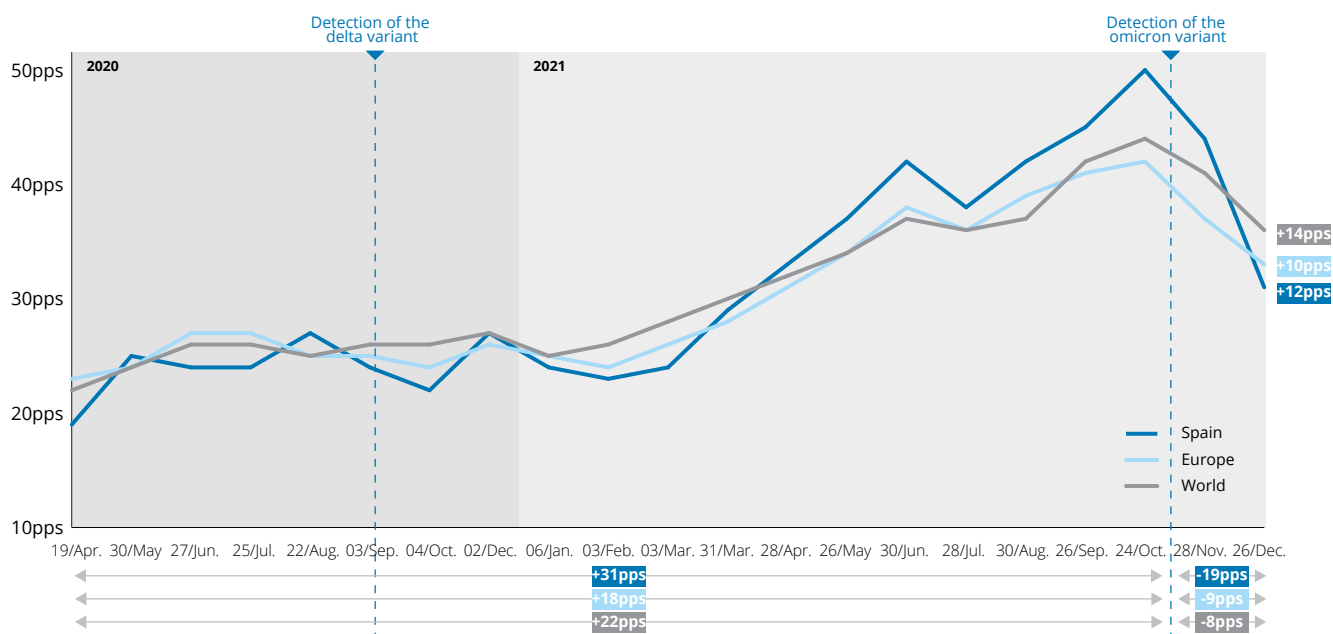
Some countries made vaccination requirements more stringent, especially in the European Union, even making vaccination mandatory or applying sanctions for people who had not been vaccinated, such as in Austria or France.

Progressive upturn in confidence and change in consumer behaviour against a backdrop of extreme uncertainty

Confidence in travelling by plane improved progressively from the start of the pandemic until the appearance of the omicron variant, increasing by 22 percentage points in the period from April 2020 to October 2021 worldwide⁸ and by 18 percentage points in the case of Europe⁹ (see figure 2). This meant that the percentage of consumers who were confident enough to fly had doubled. However, omicron led to an across-the-board decrease of 8 percentage points in the period from October 2021 to the end of the year. That meant that confidence in air travel had risen by 14 percentage points since the start of the pandemic, to 36 percentage points of consumers who expressed that they were willing to choose a plane for their journeys by the end of 2021. The figures in Spain mirror those of the rest of the world and Europe, and those of the summer of 2021 were particularly impressive, with the percentage up by 31 percentage points in October 2021 with respect to those when the pandemic first emerged.

Travellers in the leisure segment are gradually recovering their willingness to fly, adapting to the new situation. The willingness of travellers to travel by plane for leisure in the next three months has

Figure 2: Consumer trust in air travel
(pps of consumers who feel safe to travel by plane)



Source: Deloitte “State of the Consumer Tracker” tool (the graph shows the data from each survey conducted)

5. Eurocontrol: European Organisation for the Safety of Air Navigation
 6. IATA, “Press release: governments’ response to Delta variant slams august domestic traffic demand”, International Air Transport Association, 30 September 2021
 7. Eurocontrol, “Updated Eurocontrol Traffic Scenarios for 2021”, Eurocontrol, June 2021
 8. World data from the weighted average of 23 countries, including: Australia, Belgium, Brazil, Canada, China, Denmark, France, Germany, India, Ireland, Italy, Japan, Mexico, Netherlands, Norway, Poland, South Korea, South Africa, Spain, United Kingdom, United States, Sweden, Switzerland
 9. European data from the weighted average of 8 countries, including: Germany, Spain, France, Ireland, Italy, Netherlands, Poland, United Kingdom

increased by 7 percentage points since the start of the pandemic (see figure 3), reflecting a gradual recovery of their willingness to fly. In the case of domestic flights, this willingness is between 2 percentage points and 6 percentage points higher than in the case of international flights, although the trend is on the up in both cases.

Our opinion is that there are factors that will contribute to improving confidence in air transport and accelerating the recovery of the industry, such as the lower risk of COVID-19 transmission on planes and household savings in the months of greatest impact of the pandemic. The transmission risk when traveling by plane is lower than in other places such as shopping centres, public transportation or even airports¹⁰. This is due mainly to the air filters that constantly renew the air in the cabin, and to other factors, such as the direction in which the seats are facing, which serves as a physical barrier to the flow of air between passengers. Furthermore, the increase in the household savings rate with respect to 2019 should continue to drive the recovery in demand for trips linked to tourism and leisure activities, including those made by air.

The net savings rate in the eurozone stood at 7% at the end of 2019, increased to 14% at the end of 2020 and ended 2021 at 11%¹¹. Other noteworthy countries in terms of their net savings rate in 2020 were the United States, Australia and Canada (all

over 14%). Nonetheless, this percentage dropped in 2021 with respect to 2020, reflecting the greater sense of security and confidence in the post-pandemic recovery and the reactivation of economic activity.

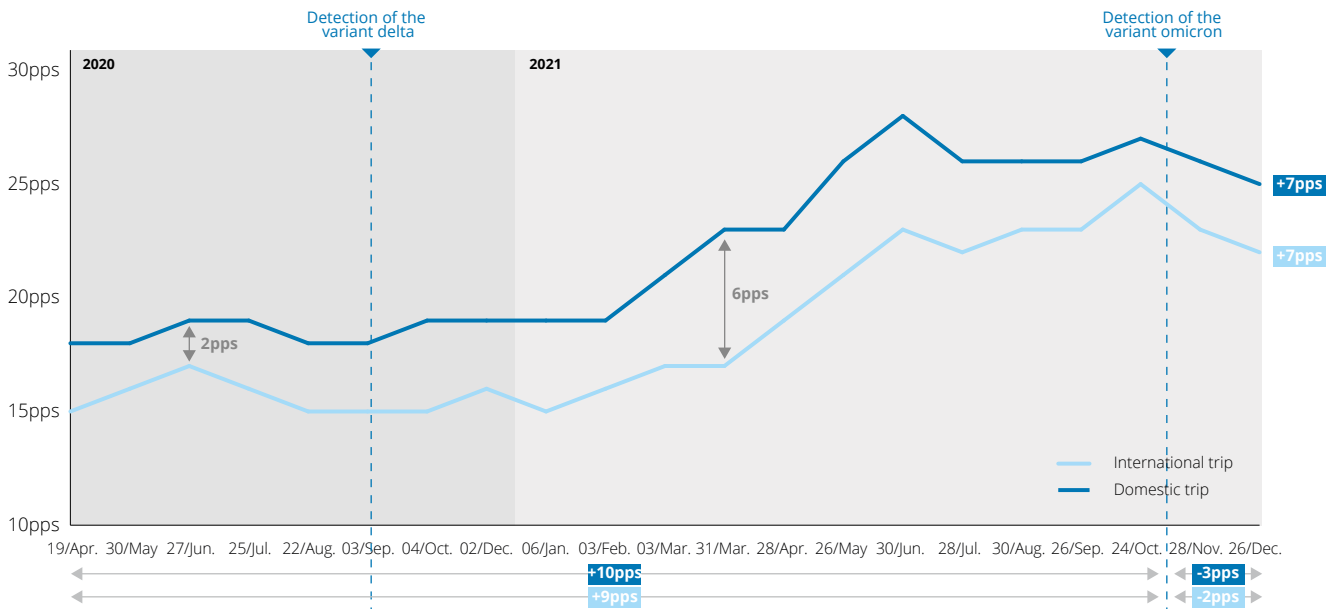
In any case, right now this improvement is on standby, pending more information on how events unfold in the ongoing conflict in Ukraine, the impact of which on air traffic are still in the realms of the unknown and the outcome of which will depend on the length of the war and on the turns that the conflict might take, in a context of extreme uncertainty and risk.

Recovery expected between 2023 and 2024, with a high risk of not recuperating up to around 20% of business traffic

The European domestic markets will be key in the recovery of the industry in the area, since we estimate that short-haul routes will recover faster than long-haul routes. Eight out of ten European flights in August 2021 were domestic and reached levels of 74% compared to 2019¹², a positive difference of up to 19% compared to international flights in the same month of that year.

Our opinion is that travellers will use planes again for nearby and short-haul destinations due to the lower perception of the possibilities of infection and the reduced impact of restrictions between countries, as well as the progressive recovery of

Figure 3: Willingness to travel by plane for leisure purposes
(pps of consumers who will travel for leisure purposes in the next 3 months)



Source: Deloitte “State of the Consumer Tracker” tool (the graph shows the data from each survey conducted).

10. IATA, “Statement on recent comments regarding COVID-19 risks during air travel”, International Air Transport Association, 22 December 2021
 11. Source: OECD
 12. EUROCONTROL, “Data Snapshot #16 on a recovery with wide variations”, Eurocontrol, September 2021

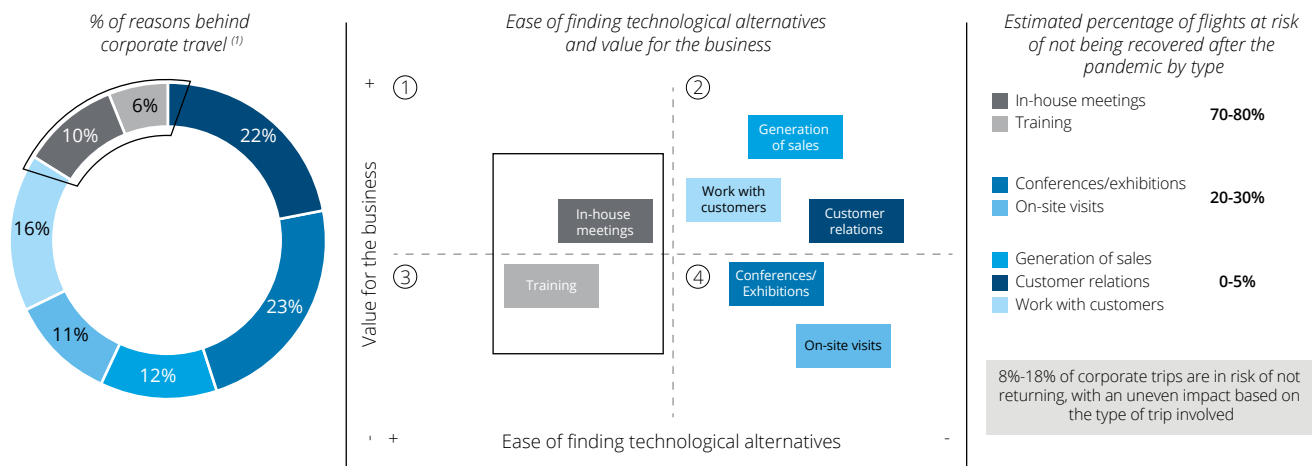
confidence in air transport. The evolution of flights of this nature will be leveraged on the recovery of the leisure and tourism segments, including visits to family and friends, which will be boosted by additional factors driving recovery, such as the savings people have made during the pandemic.

The prospects for the recovery of the corporate travel segment are somewhat less favourable than those for tourism and leisure. The corporate travel segment has fallen by between 30% and 40% in the three months after each wave of the pandemic according to our analysis, and between 8% and 18% of business trips will not return once the health crisis has been overcome (see figure 4). This is because of the lower barriers to be overcome when it comes to replacing corporate travel with virtual alternatives and saving costs for companies, which poses a risk for the recovery of this segment. In addition, the evolution of this segment suggests that trips for in-house meetings and training activities may continue to be replaced by online alternatives.

The recovery to pre-pandemic levels is expected to arrive at some time between 2023 and 2024. In the case of Spain, air traffic figures from the 2021/2022 winter season are expected to be close to those witnessed in the same period of 2019¹³, in line with the trend that emerged in the second and third quarters of 2021 (albeit conditional upon restrictions and new variants).



Figure 4: Key issues for understanding the evolution of corporate travel during the pandemic



(1) Data extracted from the Deloitte survey conducted using the “State of the Consumer Tracker” tool

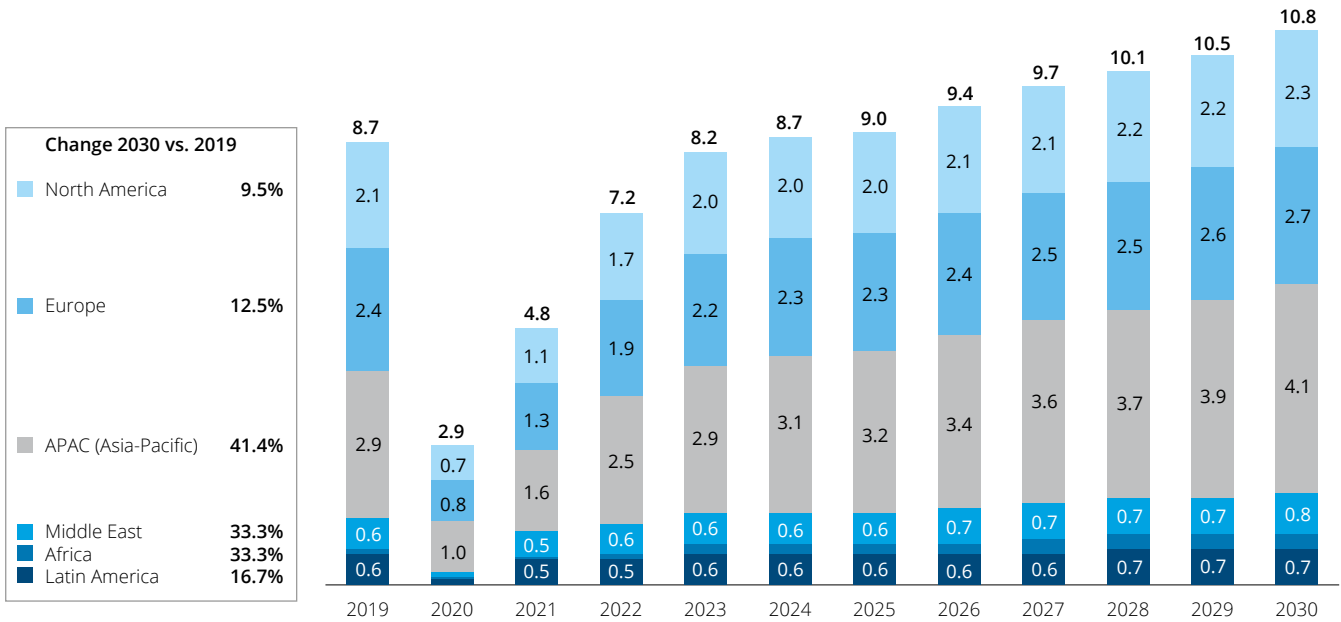
Source: Deloitte analysis

13. ALA, “El sector vuelve al nivel prepandemia en invierno” (“The industry returns to pre-pandemic levels in winter”), Asociación Líneas Aéreas (Spanish Airlines Association), 22 October 2021

Other markets could reach pre-pandemic traffic levels in 2022¹⁴, such as the United States, South America or Asia, above all in their largest domestic markets such as China or Japan. On the flip side of the coin are those regions that are highly dependent on long-haul flights whose recovery in terms of air traffic will not occur until 2024¹⁵, such as Africa and the Middle East.

As indicated previously, all these recovery scenarios may differ significantly depending on the evolution of the events surrounding the recent war that has just broken out in Ukraine and whose consequences may greatly change the future performance of the industry in the various geographical markets.

Figure 5: Projected global passenger air traffic in 2030
(Billions of RPKs)



Source: Deloitte analysis (“The future of airlines – Winning the recovery”, June 2021 study)

14. M. Szmigiera, “Impact of the coronavirus pandemic on the global economy”, Statista, 23 November 2021
 15. IATA, “Growth and change in passenger journeys by region”, International Air Transport Association, 2020

The challenges lying in the path of the “lift-off” of airlines stem from the growing ambitiousness of sustainability policies, the demand for new experiences on the part of post-COVID travellers and their highly deteriorated financial situation

The challenges facing airlines have been greatly magnified by the pandemic and include the transformation of the experience demanded by the post-COVID travellers or the development of digitalisation. Similarly, the financial situation of airlines has also been aggravated by the pandemic, as well as by the need to find a balance between financial recovery and medium-term transformation investment needs. In parallel, the European Union is continuing to demonstrate a growing ambitiousness in relation to sustainability, meaning that airlines are having to rethink their strategy in the face of decarbonisation objectives.

These challenges depend on external factors, and their evolution may be altered by the appearance of new uncertainties such as the recent conflict between Russia and Ukraine that has just erupted in Europe and that threatens to destabilise the world economy and, therefore, commercial aviation. In any case, the potential impact of new COVID-19 variants, the speed of change in consumer behaviour and the complex financial situation are accelerating the need for transformation.

Decarbonisation as an imperative for the industry due to the growing ambitiousness of sustainability policies

Ambitious European Union and United Nations emissions reduction targets

The air transport industry has been one of the sectors that has grown the most in terms of greenhouse gas (GHG) emissions and if no action is taken, international aviation emissions are expected to be triple 2015 levels by 2050¹⁶. At European level, and according to the same source, air transport is responsible for 3.8% of global CO₂ emissions. The absence of specific measures, together with current growth forecasts, paint an unsustainable scenario for 2050.

The European Union has recently established its aim to achieve a 2030 net emissions reduction target of 55% below 1990 levels, as set out in the 2030 Climate Target Plan¹⁷ and the European Climate Law¹⁸. To make it easier for all sectors to contribute to this goal, the European Commission has established the *Fit for 55* legislative package.

16. [OACI, “Environmental trends in aviation to 2050”, International Civil Aviation Organization, 2019](#)

17. [European Commission, “2030 Climate Target Plan”, European Commission, 14 July 2021](#)

18. [European Commission, “European Climate Law”, European Commission, 9 July 2021](#)

Although there is currently no specific regulation setting the limits or restrictions on emissions from the air transport industry, it is important for the industry move forward and rethink its strategy in the face of decarbonisation objectives. With this mission in mind, the “*Destination 2050 – A Route to Net Zero European Aviation*”¹⁹ initiative has been unveiled, led by five European aviation associations; *Airports Council International Europe* (ACI EUROPE), *AeroSpace and Defense Industries Association of Europe* (ASD Europe), *Airlines for Europe* (A4E), *Civil Air Navigation Services Organization* (CANSO) and *European Regions Airline Association* (ERA). The aim of this initiative is to make net zero CO₂ emissions happen by 2050 for all flights within and departing the EU, UK and the *European Free Trade Association* (EFTA²⁰).

Impact of regulatory initiatives to promote the reduction of emissions in the industry

The EU ETS system and the CORSIA plan are the key regulatory mechanisms for the airline industry to reduce or limit polluting emissions through offsetting systems. These mechanisms are based on emission offsetting systems that are becoming increasingly restrictive, requiring airlines to progressively plan and develop the necessary investments in fleets or in transforming their operations. Also noteworthy is the existence of the Single European Sky initiative to promote the decongestion and efficient management of airspace, which will also contribute to reducing emissions in the industry.

It is a challenge for airlines to become a facilitator for public bodies to apply the European EU ETS²¹ initiative and the international CORSIA²² initiative in a coordinated and efficient manner, without resulting in a loss of competitiveness for airlines operating in the European area. The Emissions Trading System²³ (EU ETS) came into being in 2008 and reached airlines in 2012, with the aim of reducing GHG emissions in the European Union, Iceland, Liechtenstein and Norway. Working on the “*cap-and-trade*” principle, each year the European Union sets a cap on the emission allowances that companies must achieve for every tonne of CO₂, or other equivalent greenhouse gases, N₂O and perfluorocarbons. Thus, companies can receive, buy in an auction or trade these allowances, providing an incentive for companies to pollute less.

The climate objectives for 2030 and the Fit for 55 legislative package are targeting an annual 4.2% reduction in the total number of emissions allowances as compared with the current level of 2.2%. Another international offsetting initiative is the *Carbon Offsetting and Reduction Scheme for International Aviation*²⁴ (CORSIA). This plan was devised by ICAO, a Specialized Agency of the UN and comprises three implementation phases. The first two are voluntary and, therefore, it will not be until the third phase in 2027 when implementation will be compulsory. The main target is to stabilise CO₂ emissions at 2019 levels, requiring airlines to acquire and cancel emissions units from the global carbon market.

The Single European Sky initiative aims to optimise airspace management by designing more efficient routes and reducing delays and flight times, and is particularly important vis-à-vis a gradual exit from the pandemic. In this regard, ALA²⁵ is warning that even without having reached pre-pandemic levels of air traffic in Europe, delays are already being observed as a result of inefficient airspace management. For instance, the increase in ATFM²⁶ delays was already having an adverse impact on airline punctuality before the pandemic and will continue to hinder the recovery of the industry. This initiative will also improve airport congestion, increasing the efficiency of ground operations and the punctuality of take-offs and landings.

Growing social awareness of the environmental impact of air transport

1 in 3 consumers stopped buying certain brands due to a lack of ethical and environmental values²⁷. Consumer concerns have changed over time and are currently focused on worries regarding sustainability and the environment, demonstrating that this is not all just about public regulation. The conclusions of that study regarding sustainability and the reduction of emissions in transport indicate that 39% of those surveyed have confirmed a reduction in their air travel and 19% have opted for low-emissions means of transport in their daily lives or for other alternatives that are more sustainable from the energy standpoint, such as car sharing.

19. [Destination 2050: A route to net zero European aviation](#)

20. EFTA: European Free Trade Association

21. EU ETS: EU Emissions Trading System

22. CORSIA: Carbon Offsetting and Reduction Scheme for International Aviation

23. [European Commission, “EU Emissions Trading System \(ETS\)”, European Commission, July 2021](#)

24. [IATA, “CORSIA Fact Sheet”, International Air Transport Association, October 2021](#)

25. ALA: Spanish Airlines Association

26. ATFM: Air Traffic Flow Management - difference between the last take-off time requested by the air operator and the take-off slot

27. [Deloitte, “Sustainability & Consumer Behaviour”, Deloitte Insights, March 2021](#)

The regulatory measures that are starting to be applied mean that sustainability is a key aspect for the “lift-off” of the industry

An emissions reduction pathway should be defined that contributes to meeting the European Union’s targets for 2030 and 2050. Based on the foregoing, governments and institutions could establish measures to promote the transfer of air passengers to other means of transport that generate less pollution, such as high-speed rail instead of very short-haul flights.

Measures of this nature are already being implemented in European countries such as Austria and France. The flag carrier Austrian Airlines received aid from the Austrian Government to offset the impact of the pandemic on the condition, among other ecological requirements, that it eliminated journeys that could be made by train in less than three hours, although for the time being only the Vienna-Salzburg route is affected. The Austrian Air Transport Levy (ATL) has also been established, which is applied to passengers departing from one of the six principal Austrian airports. The rate is EUR 12 for flights of more than 350 km and EUR 30 for short-haul flights (less than 350 km). In parallel, in France a law has been drafted that will come into force in 2022 to prohibit domestic flights that can be replaced by rail journeys of less than two and a half hours. In the case of Spain, the government is reflecting on, and debating, similar measures, since, among other things, Spain has the most extensive high-speed rail network in Europe and the second largest in the world, behind China.

The implementation of such measures in Spain should be accompanied by a careful study of their impacts and externalities. For example, it would be necessary to analyse potential additional investments in infrastructure for the transfer of passengers to rail, which would not be possible in the short term. In this regard, a report of the Spanish Official School of Aeronautical Engineers (COIAE)²⁸ warns that, with current traffic levels, the Madrid-Barcelona high-speed line will need 40 years to offset the emissions associated with its construction. Moreover, taking into account the environmental impact on the region and the barrier effect, the same source estimates that the damage is much greater in the case of the rail network than in that of airports. Furthermore, the construction of airports generates fewer emissions than that of long-distance railway lines and, moreover, airports have the added benefit of being able to serve multiple routes.

The application of any measure aimed at reducing air passenger traffic must be carefully analysed, given that it could lead to an irreversible economic impact for the industry that has suffered the worst economic consequences due to the pandemic, and entail an excessively high abatement cost. It is absolutely essential to understand that, with the infrastructure currently available, the high-speed train is the main potential substitute for air travel only on routes of up to 500 km. Trips of this nature account for around 25% of European flights and represent only 3.8% of GHG emissions from the aviation industry²⁹.

28. COIAE, “Estudio de la efectividad medioambiental de medidas restrictivas a los vuelos domésticos en España” (“Study of the environmental effectiveness of restrictive measures for domestic flights in Spain”, Spanish Official School of Aeronautical Engineers July 2021

29. Eurocontrol, “Plane and train: getting balance right”, Eurocontrol, June 2021

Demand for an integrated, multimodal and digital experience by the post-COVID traveller

The growing demand for the integration of services by consumers and the acceleration of the digitalisation of society, together with the changes in consumer behaviour caused by the pandemic, have brought with them the need to offer a new experience to post-COVID travellers. 51% of travellers are willing to share their information with hotels and car hire companies to facilitate their journeys³⁰. In addition, 32% of travellers book their transport to and/or from the airport when they buy their plane tickets.

These changes create an opportunity for airlines to differentiate themselves with a multimodal and integrated experience, developed with technology platforms that facilitate new secure ecosystems without any risk to passenger privacy.

Creation of the appropriate alliances to offer a multimodal and integrated service

The challenge facing airlines is to offer a multimodal service that integrates solutions to the traveller’s needs throughout their travel journey (see figure 6). Airlines are already present in some of the eight key stages, but they have not managed to generate the ecosystem that would facilitate this integrated traveller experience.

Figure 6: Traveller experience throughout their travel journey



1. Inspire	2. Book	3. Prepare	4. Travel	5. Stay	6. Do	7. Get help	8. Evaluate
1.1 Decision to travel Inspiration through the internet, social media, TV, advertisements, friends, blogs, etc. 1.2 Comparison of alternatives Metasearch engines, opinion pages, special offer pages, etc.	2.1 Booking channel Travel agencies, OTAs, direct booking 2.2 Travel booking Transport, accommodation, experiences	3.1 Preparation of the trip Insurance, currency exchange, vaccination, etc. 3.2 Search for experiences Activities, itineraries 3.3 Purchase of necessary items Visas, SIM cards, travel equipment, etc. 3.4 Preparation of luggage	4.1 Accessibility from the point of departure Route to the station or airport 4.2 Pre-travel services Facilities at the airport and station, ground services, etc. 4.3 Travel Plane, train, bus, cruise, ferry 4.4 Transport to final destination Bus, car hire 4.5 Last mile Taxi, car rental with driver, metro, tram	5. Stay Hotels, hostels, resorts, apartments, Airbnb, campsites, etc.	6. Do Excursions, rental of premises, cultural events, gastronomy, nature, sports, relaxation, shopping	7. Getting help Emergencies, safety, information points	8.1 Last point of contact Duty-free, souvenirs 8.2 Review and recommendation 8.3 Sharing of the trip with friends

Source: Deloitte analysis (Monitor Deloitte study, “Future of travel”)

30. IATA, “Global Passenger Survey”, International Air Transport Association, 2021

The traditional business model of airlines does not allow for the development of a comprehensive offer of information and services, from making decisions about the trip based on an expected experience to sharing it on social networks at the end of the trip. In addition, airlines do not provide a comprehensive offer of mobility services in the “travel” stage, since they focus on airports and the plane journey; services prior to the airport or after the transfer to the final destination are not usually offered by airlines. For instance, we have not identified any airline in Spain that has agreements with taxi or car rental with driver services. However, airlines are highly integrated in the “inspire” stage, in which the traveller captures information and makes decisions about their trip (metasearch engines, travel blogs, special offer pages), with recurrent investments in marketing and discounts through commercial agreements, for example, with travel agencies and tour operators, insurance providers and car hire firms.

This concept of intermodality has already been developed in other areas of mobility. At the urban level, the concept of “mobility as a service” or *MaaS* integrates various types of transport into a single on-demand service. Services of this nature, developed and supported through technological applications, integrate the citizen’s travel journey into a single ecosystem, from the planning of the trip and including travel booking management, ticketing and the payment gateway. Additionally, large transport operators are offering an intermodal experience through digital platforms that integrate mobility and accommodation services, through alliances with other providers integrated into this ecosystem. Airlines do not currently offer an integrated multimodal service with a “seamless” experience, but rather users are redirected to other providers’ offices or websites.

Accelerating digitalisation to enable the ecosystem and pre-empt passenger changes

We are immersed in a transition towards new relationship models between companies and customers, where the best positioned airlines will be those prove themselves capable of pre-empting changes in behaviour and the new experiences demanded by travellers. 73% of passengers are interested in using biometric information instead of passports and boarding cards inside the airport and 36% already used this technology in 2021 with high levels of customer satisfaction³¹. In addition, 83% of passengers demand accurate baggage reclaim information.

To be able to “win” in this digital transition process, the construction of analytical capabilities for the capture, treatment and analysis of data in real time throughout all the stages of the travel journey is a decisive factor. These data are generated in the processes involved in consulting information, booking services, passing through airport terminals, connecting passengers, etc., and the most effective way to measure and analyse them is through digital infrastructure. It is a challenge for airlines to understand how to use data to accelerate this process, making the appropriate investments in the digitalisation of the customer experience.

This growing use of, and dependence on, digital tools has increased vulnerability and the risks to which the traveller is exposed. 56% of passengers are concerned about potential data breaches, 52% feel they are unaware of who their information is shared with, and 51% are unaware of how their data is managed and stored³¹. These concerns are understandable if we look at the fact that the biggest target in the sector for cybercriminals were airlines, which suffered up to 775 cyberattacks in 2020, 61% of the total³². The main types of cyberattack include information theft, credit card or loyalty programme fraud, phishing, and false billing. Beyond the economic impact that this may have, maintaining consumer confidence is very important for airlines, especially at a time when the consumer is becoming increasingly aware of its value and for this reason it is essential to guarantee the protection and security of traveller information.

Extreme financial complexity that will not be mitigated until the second half of the decade

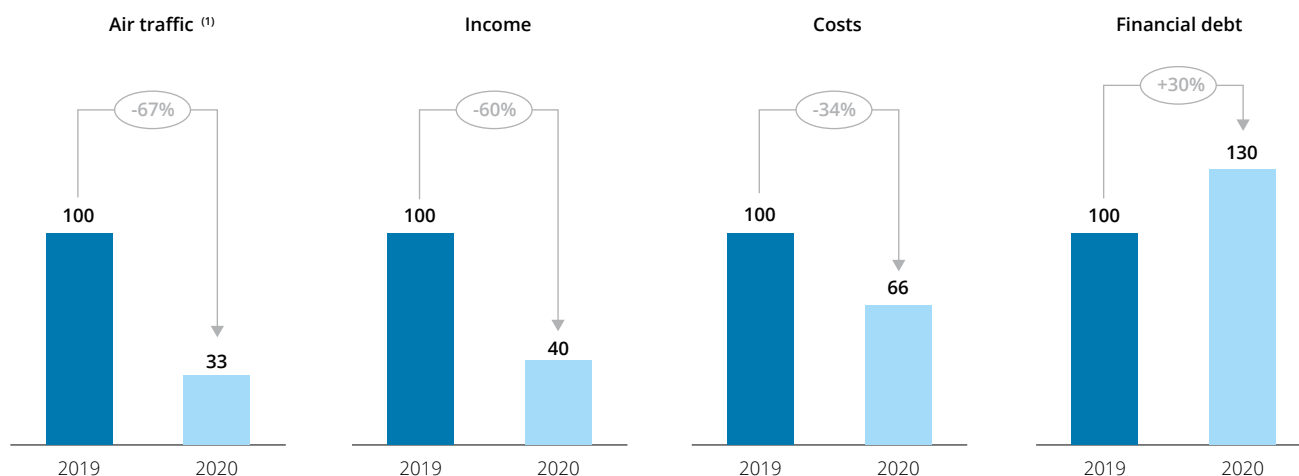
The pandemic has had serious repercussions for, and adverse effects on, the operations and finances of the commercial aviation industry. In 2020 industry revenue decreased by more than 60% (see figure 7). This impact has been especially pronounced at companies that at the beginning of 2020 already had high levels of debt or inflexible cost structures.



31. IATA, “Global Passenger Survey”, International Air Transport Association, 2021

32. Eurocontrol, “Eurocontrol EATM-CERT Services: think paper #12”, Eurocontrol, 5 July 2021

Figure 7: Principal indicators of the European air transport industry in 2019 and 2020
(Base 100: 2019)



(1) Air traffic measured in RPKs (see figure 5)

Source: IATA, Eurocontrol, financial statements of the airlines, Deloitte analysis

Lockdowns and border closures forced airlines to have a significant number of their aircraft grounded for much of 2020, directly impacting their operating results. As their ability to generate income in the usual way has been drastically reduced, companies in the industry have had to resort to other methods of guaranteeing their liquidity; cost reduction plans, advance collections, payment delays, new financing lines (bond issues, capital increases, ICO loans), among others.

National and European governments have responded with public aid programs to mitigate the impact of the pandemic. On 3 July 2020, the Government of Spain approved Royal Decree-Law 25/2020 as a package of urgent measures to support economic reactivation and employment. One of the measures entailed the creation of the Strategic Company Solvency Support Fund, managed through Sociedad Estatal de Participaciones Industriales (SEPI). The purpose of this Fund was to provide temporary public support to strengthen the business solvency of non-financial companies affected by the COVID-19 pandemic³³.

Net losses of up to EUR 23,000 million and an increase in debt of almost EUR 17,000 million at the five largest airline groups in 2020

We analysed the financial performance of the five largest airline groups in terms of passengers with a European parent, which together carried more than 600 million people in 2019 and which account for approximately half of all intra-European flights.

Their 2020 statements of profit or loss reflect net losses of close to EUR 23,000 million, following on from a net profit of more than EUR 4,000 million in 2019. The revenue of these airlines dropped by more than 60% in 2020 with respect to 2019, while the cost reduction plans facilitated savings of a little over 35%. This was due to the limited capacity of these airlines to adjust both their assets and their cost structure to the impact of the pandemic and the extreme volatility of demand.

In relation to balance sheets, equity dropped by more than 80% in 2020 with respect to the previous year, due mainly to the losses of EUR 23,000 million. Additionally, cash management to guarantee adequate liquidity levels represented an unprecedented challenge for the industry. The main consequence of all the foregoing was an increase in long-term debt levels, estimated at almost EUR 17,000 million in 2020.

IATA estimated global losses in 2021 that were 62% lower than those incurred in 2020, together with a greater reduction of up to 78% for 2022 with respect to 2020. In any case, the recovery will not occur at the same rate all over the world and factors such as flight distance or load factor will be decisive in the financial performance of airlines. The European market has both factors in its favour, since domestic flights are particularly important and have a load factor³⁴ that is higher than the world average.

33. SEPI, “Strategic Company Solvency Support Fund”, Sociedad Estatal de Participaciones Industriales, 3 July 20201

34. Load factor: percentage occupation of an aircraft’s capacity

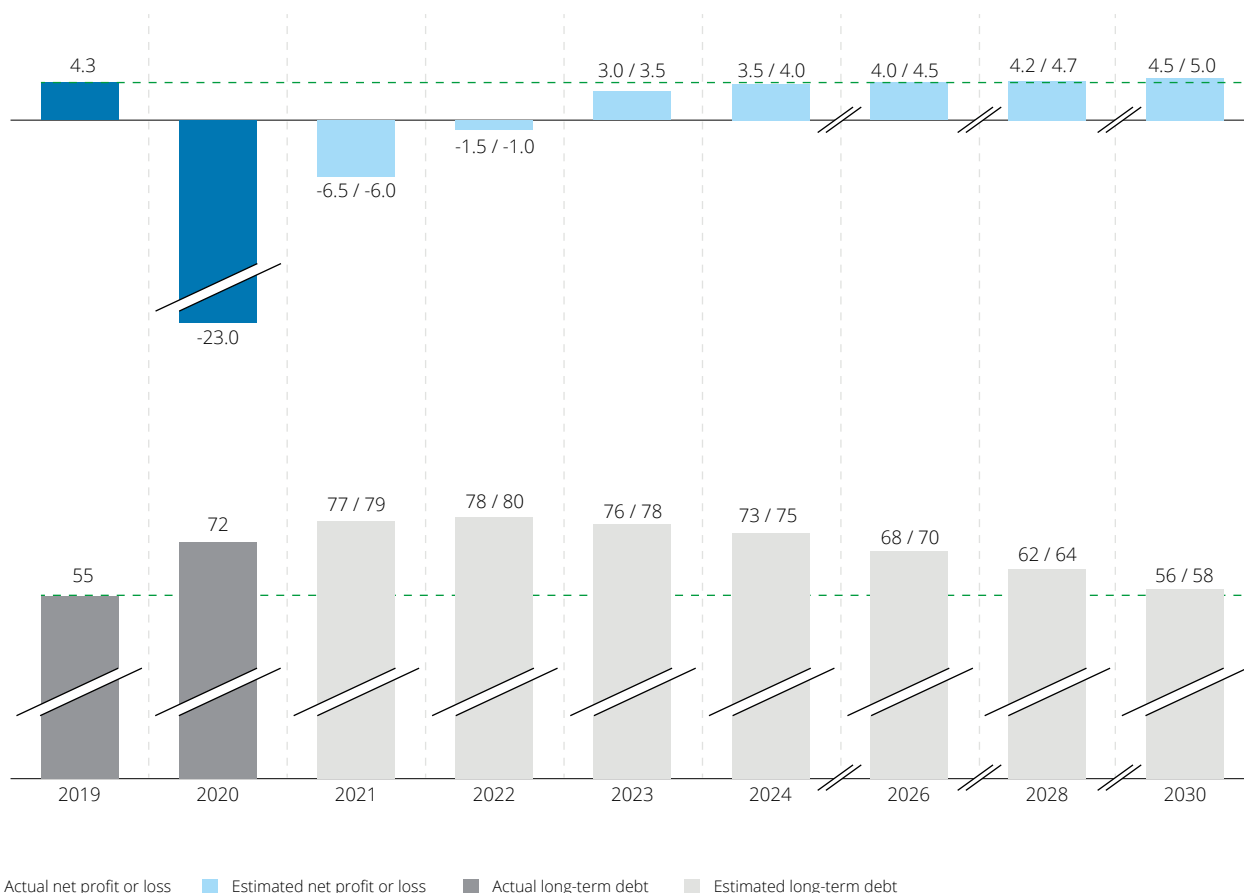
Pre-pandemic financial results estimated for 2026 onwards

As the global forecast for passenger air traffic shows (see figure 5), the recovery in demand measured in RPKs will arrive at world level between 2023 and 2024. In addition, the challenges facing the aviation industry mean that it is at a key point in its transformation process and that it is essential to balance financial recovery with investment needs, mainly in sustainability and digitalisation.

The recovery of the operating margin is closely linked to the recovery of air traffic, along with other factors, such as the pricing strategy and cost structure of airlines. 60%-70% of an airline's costs are variable, and airlines have mechanisms to adjust them to demand and address volatility. The recovery in the case of fixed costs will take place in the long term, with periods of low activity being offset against others of high activity for the airlines.

Taking into account IATA estimates regarding the evolution of annual losses (-62% in 2021 and -78% in 2022, with respect to 2020), and considering the profits of the large European groups of around EUR 4,000 million reflected in their financial statements for 2019, we estimate that profits will start to be reported once again in 2023 (see figure 8). However, it will not be until 2026 when the pre-pandemic levels of operating profits will be attained. All this, of course, has been simulated in the current environment of uncertainty concerning the pandemic and economic recovery. If this is the case, we are faced with a scenario in which, if measures are not taken, the achievement of pre-pandemic debt levels will not be witnessed until after 2030, and such measures must be combined with corporate investment plans to guarantee competitiveness through digital and sustainability transformation processes.

Figure 8: Projected⁽¹⁾ net profit or loss and long-term debt up to 2030 for the Top 5 European airlines
(Billions of euros)



(1) Estimate based on projections of RPKs, revenue and costs of the selected airlines. The estimate shown does not take into account the potential impact of strategic or financial decisions of a structural nature, such as business diversification, company mergers or public aid

Source: IATA, financial statements of the airlines, Deloitte analysis

Airlines must take the lead in fleet efficiency and in offering a uniquely different experience, with a transformational financial strategy with a long-term vision

Our vision of the roadmap for the transformation of the air transport business for this decade is based on three cornerstones:

- Leadership of the transition to decarbonised air transport and its harnessing as a key lever for efficiency improvements
- Creation of strategic alliances and integration new technologies that transform the post-COVID traveller experience and optimise operations
- Definition of a financial strategy focused on ensuring viability and on transforming the business to create the competitive advantages of the future

The leadership of the transition by the airlines must be based on the emissions reduction levers that are already mature: more efficient aircraft models (NEO), use of SAF fuels and the

implementation of the Single European Sky. Based on our analyses, the reduction that could be achieved in unit emissions (measured in terms of grammes of CO₂ per RPK) would create a gap of 22% with respect to the global target of the European Union of reducing total emissions by 55% by 2030, but this could become a key tool for improving efficiency. The decarbonisation of commercial aviation by 2050 requires players to continue to commit to new emissions reduction technologies, such as hydrogen-powered aircraft, and cooperation between all the players in the industry, as well as with other adjacent industries, and with the support and encouragement of public bodies.


Transformation to achieve the integrated, multimodal and digital experience that the post-COVID traveller requires changes in key elements of the business model. Airlines must transform their vision of the passenger towards that of travellers who access all the services and information they need for their trips through the airlines themselves.

Figure 9: Challenges facing the air transport industry and keys to post-pandemic recovery

The challenges facing the air transport industry that were magnified during the pandemic...


 The **growing ambitiousness of the European Union's sustainability policies** makes it necessary to reassess its strategy vis-à-vis decarbonisation objectives


 The impact of the **pandemic and the continuous acceleration of the digitalisation** of society make it necessary to offer the **new post-covid traveller an integrated, multimodal and digital experience**

 The **extremely delicate financial situation** of airlines, aggravated by the pandemic, is complicated by the need to find a **balance between financial recovery and the needs for investment in transformation** in the medium term



...indicate what the keys to business transformation are

Promotion of the transition towards decarbonised air transport, as a key lever for improving fleet and operating efficiency 

Strategic alliances that allow them to increase the services integrated in the **Travel Journey**, and **new technologies** to improve the traveller experience and optimise operations 

Financial management strategy focused on optimisation and the search for new sources of revenue to provide them with the resources required to reinvent the business 

To do this, airlines must create the right alliances with players from other segments and/or industries that make it possible to integrate these services and develop the technological platforms that make it possible to offer this new experience throughout the traveller’s travel journey.

In addition, airlines must integrate new tools into these platforms, for example biometric technology or the Internet of Things, that will enhance their operations.

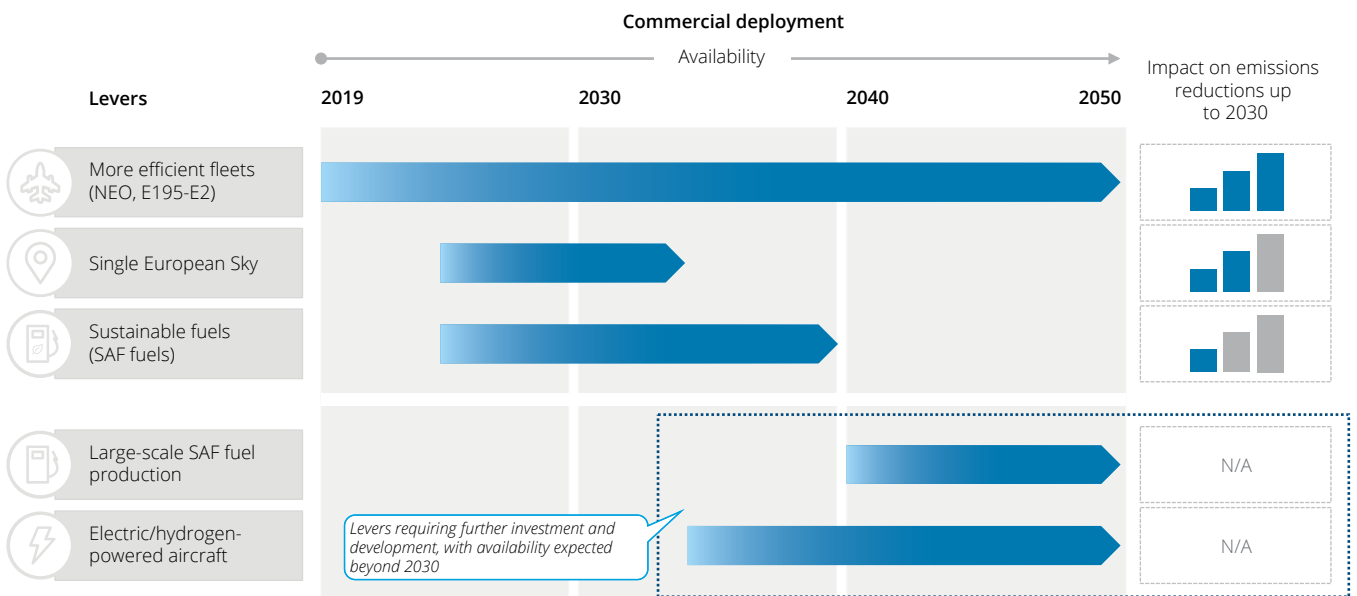
The recovery must be supported by a financial management strategy that ensures that airlines guarantee their viability and financial stability but at the same time integrates a long-term transformational vision. The European Recovery Fund can help facilitate the necessary investments in sustainability and digitalisation. This mechanism will include measures aimed at improving air traffic management, developing more sustainable and digital operations, as well as modernising and evolving the fleet. Moreover, airlines must continue to make their cost model more flexible and exercise strict financial control. The strategy must drive airlines to re-invent their business model to increase revenue through new pricing models, as well as through operations in new businesses, segments or niche markets – such as maintenance centres of excellence–, and to capture the demand flights taken for educational or healthcare reasons.

Promote the transition towards a more efficient and sustainable air transport industry

As things stand, the European Union’s emissions reduction targets in the period up to 2030 do not set targets for the air transport industry. However, it is key that airlines assume a leadership role in decarbonisation with the technologies available to it (see figure 10) in order to contribute to achieving the European Union’s targets and mitigate the risk of more demanding policies or regulations being introduced that could hinder their recovery.

The decarbonisation technologies that have already reached maturity should allow airlines to assume greater leadership in this decade, including the new NEO aircraft models, the use of SAF fuel or the Single European Sky initiative. The objective of the European Union for 2050 is climate neutrality and, as a result, the industry will have to depend on technologies that are currently at the development phase. Although electric or hydrogen-powered aircraft technology are only at the fledgling stage of development and the large-scale production of SAF fuel has not yet arrived, the investments being made and initiatives being introduced for their development indicate a promising future for their availability beyond 2030.

Figure 10: Emissions reduction levers up to 2050, based on their availability⁽¹⁾



(1) The availability takes into account the degree of complexity involved in development and the need for investment

Source: leading industry manufacturers, European Commission, Deloitte analysis

Include more sustainable and efficient aircraft models in the fleet

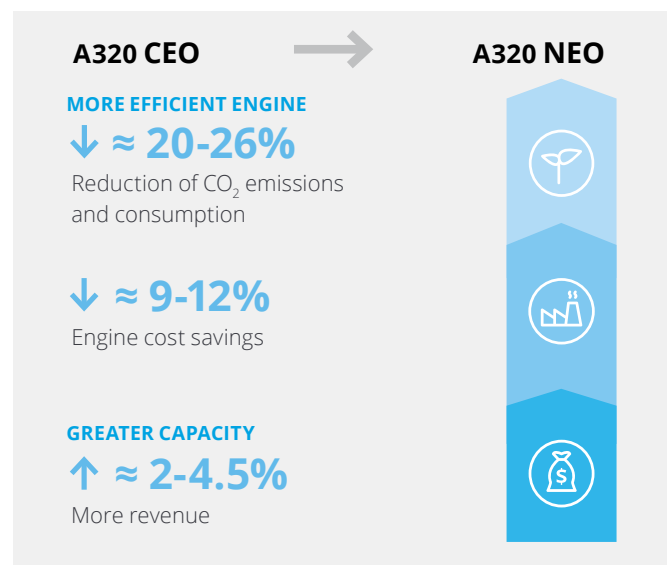
The roadmap for European airlines is already promoting the transition towards a more sustainable and efficient fleet model, with a focus on the incorporation of NEO³⁵ models. The trend towards the replacement CEO³⁶ models with NEOs is due to the latter’s greater capacity and lower consumption, which results in greater efficiency.

The NEO aircraft models manufactured by Airbus³⁷ make it possible to reduce fuel consumption and CO₂ emissions by around 20%-26% (see figure 11). Other manufacturers such as Embraer are also committed to more sustainable fleets such as the E195-E2 model, which emits about 35%-40% less CO₂ than the previous version³⁸.

Mass adoption of SAF fuels in the medium and long term
SAF³⁹ or Sustainable Aviation Fuel can be mixed in a proportion of up to 50%⁴⁰ with traditional fuels without the need to make changes to the aircraft, engine or infrastructure. This type of fuel has a significant potential for reducing emissions in the aviation industry and, in the future, modifications to aircraft are expected to increase this proportion to 100% of the fuel used. The adoption of this fuel reduces CO₂ emissions by up to 80% with respect to current fossil fuels.

Through the European Green Deal, the European Commission has introduced initiatives for the transport industry such as *ReFuelEU Aviation*. The Green Deal includes a draft regulation⁴¹, presented in July 2021, aimed at accelerating the use of SAF fuels in aviation, setting as a target minimum shares of sustainable aviation fuels (SAF) supplied of 2% in 2025, 5% in 2030 and 63% in 2050.

Figure 11: Benefits of the transformation of the fleet of aircraft to sustainable models



Source: Deloitte analysis



35. NEO: New Engine Option

36. CEO: Current Engine Option

37. Airbus, “Technical Specifications: Airbus A320neo”, Airbus

38. ICCT, “CO₂ emissions from commercial aviation”, The International Council on Clean Transportation, October 2020

39. SAF: Sustainable Aviation Fuel

40. IATA, “Fact Sheet 2 Sustainable Aviation Fuel: Technical Certification”, International Air Transport Association

41. European Commission, “Proposal for a regulation on ensuring a level playing field for sustainable air transport”, European Commission, 14 July 2021

In 2019 sustainable aviation fuel (SAF) accounted for less than 1% of airlines’ total fuel consumption⁴². One of the key challenges facing the industry is the need to expand and improve the capacity for SAF production, commercialisation and distribution. At the current point in time, SAF prices range from twice to seven times those of fossil fuels and production is at an insufficient level to ensure large-scale supply, all of which hinders the transition of airline companies to this sustainable fuel.

Although the required production technology is available (see figure 12), there are limitations to the industry’s ability to ramp up the use of SAF in order to reach more ambitious emission reduction goals. In order to reduce these limitations, it is of fundamental importance that policies be established that favour the production and large-scale use of SAF, and this will require the close cooperation of industries and international organisations. In this connection, the International Air Transport Association (IATA) has created the “Fly Net Zero”⁴³ programme, which is the commitment of airlines to become climate neutral by 2050. This programme highlights the importance of SAF as a key measure for reducing emissions and, in a potential scenario for hitting the 2050 target, it attributes 65% of the required reduction in emissions to the use of SAF. Achieving such a reduction would mean attaining an annual production level of 449 billion litres of sustainable aviation fuel, as compared with the 100 million litres that are currently produced.

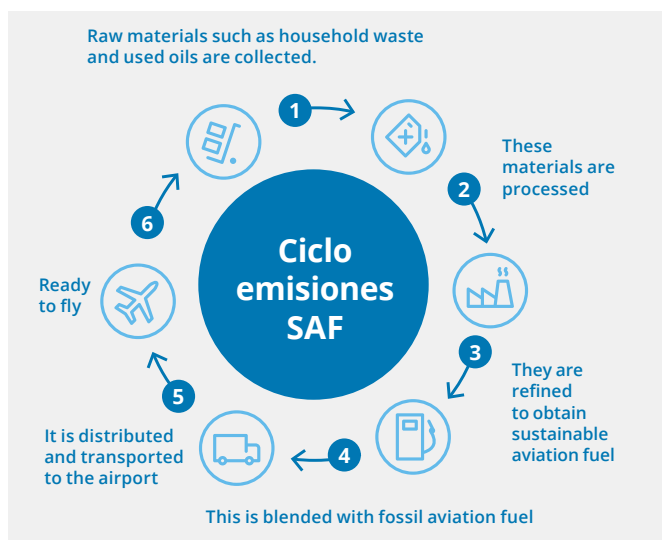
Airspace decongestion through the Single European Sky

The Single European Sky (SES) initiative aims to improve the performance of air traffic management (ATM) and air navigation services (ANS) through the integration of European airspace, both between Member States and in terms of civil and military usage.

“Functional airspace blocks” or FABs will be created to structure airspace based on air traffic flows instead of the current division by national boundaries; the FABs will be managed centrally by a “network manager” - a task currently performed by Eurocontrol. Furthermore, the Single European Sky ATM Research (SESAR) project will be in charge of developing the technological and industrial dimensions of the initiative.

The Single European Sky initiative will result in reduced flight times, due to more direct routes and fewer delays, as well as lower costs and a lesser environmental impact. Among its numerous benefits, compared with 2004, the SES (upon completion between 2030 and 2035) could triple airspace capacity, halve the costs of ATM, improve safety tenfold and reduce the environmental impact of aviation by 10%⁴⁴.

Figure 12: SAF cycle



Source: Deloitte analysis



42. Robert Boyd, “Why SAF is the future of aviation”, International Air Transport Association, 13 October 2020

43. IATA, “Our Commitment to Fly Net Zero by 2050”, International Air Transport Association, October 2021

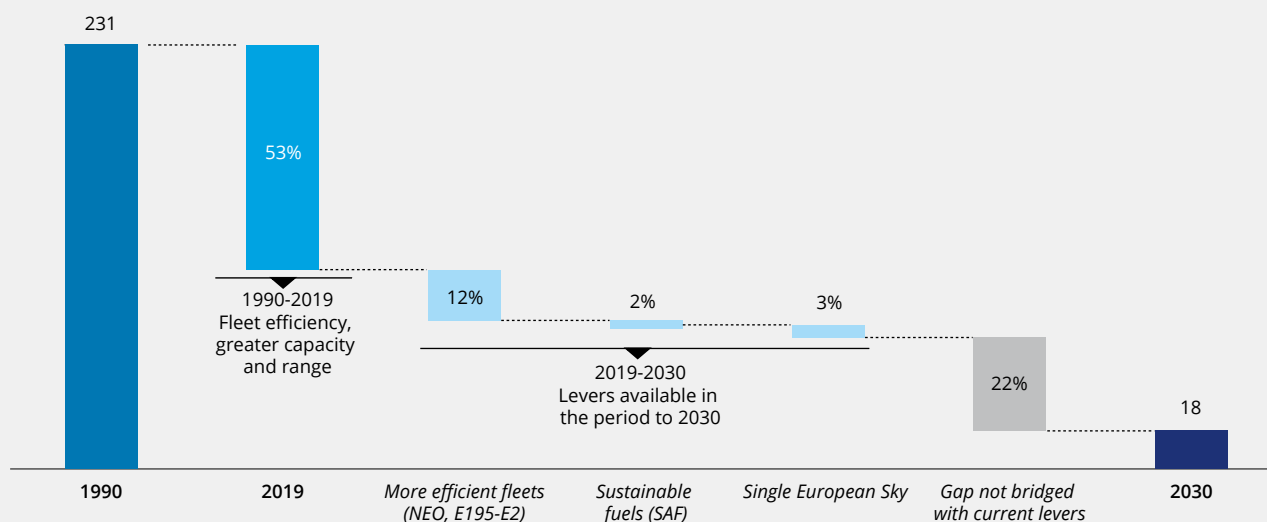
44. European Parliament, “Air transport: Single European Sky”, European Parliament, May 2021

Will these levers make it possible to reach the European Union’s target of reducing total emissions to 55% below 1990 levels by 2030?

We have modelled the mature decarbonisation levers for the 2030 time horizon in order to analyse the feasibility of a typical European airline meeting the European Union’s emission reduction target. Our findings point to a 22% gap in the reduction of unit emissions (measured unitarily in grams of CO₂ per RPK), which the available levers will not be able to bridge by the year 2030 (see figure 13). In 1990 the average unit emissions of a typical European airline stood at 231 grams of CO₂ per RPK. In order to meet the target set by the European Union, and taking into consideration the increase in activity generated since 1990 and projected until 2030, airlines would have to reach unit emissions of around 18 grams of CO₂ per RPK.

Figure 13: Levers of a typical European airline for reducing its unit emissions and achieving the European Commission's 2030 targets

(Grams of CO₂ per RPK)



Source: leading industry manufacturers, European Commission, Deloitte analysis

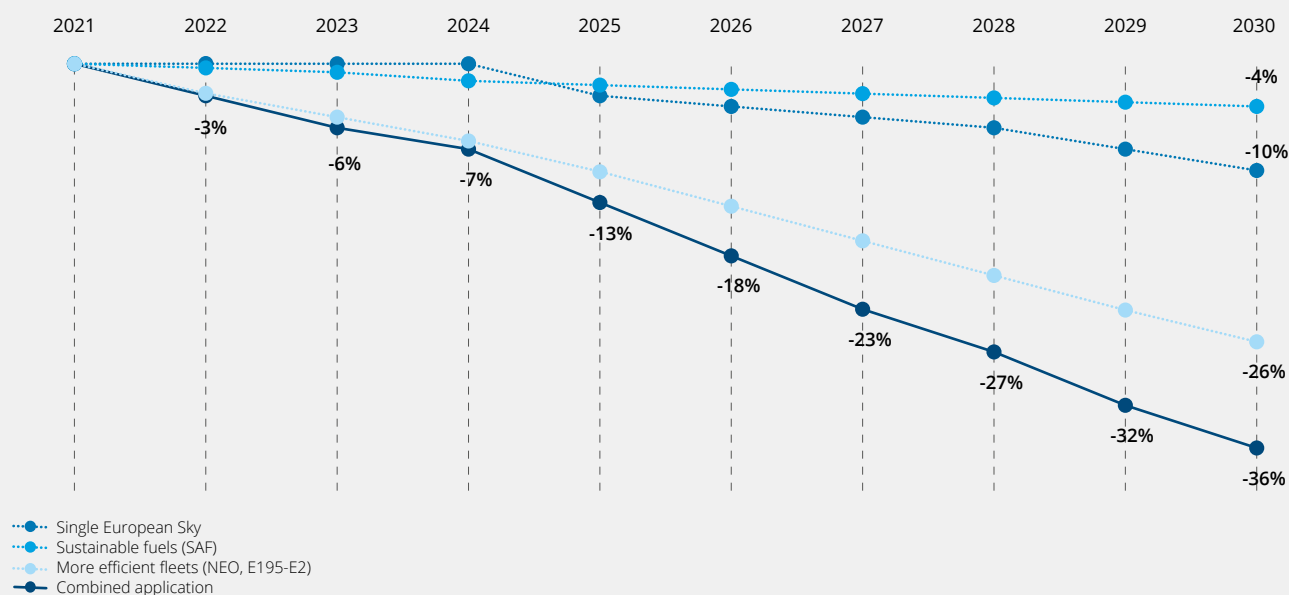
From 1990 to 2019, 53% of the total reduction required in unit emissions by 2030 was achieved. The growth experienced by air transport prompted an increase in passenger traffic and in the number of flights, giving rise to higher industry emissions in absolute terms, although these were favourably offset by significant technological advances (higher-capacity aircraft, more efficient engines, longer-range aircraft, etc.).

From 2019 to 2030 airlines are expected to be able to achieve an additional unit emission reduction of 17%, assuming that the European market will increase by 12.5% in RPKs (see figure 5). This impact is the result of combining the effect of the growth of the European market with the potential, in absolute emission terms, displayed by the three levers analysed below (see figure 14).

What levers are available to airlines in order to reduce their absolute CO₂ emissions?

We performed the additional exercise of individually considering each of the existing levers for the period to 2030 and analysing what reduction of 2021 emissions it might be possible to achieve in a scenario of no growth for the period to 2030. The renewal of the entire fleet to include Airbus NEO models and the new Embraer E195-E2 model would achieve a 26% reduction in absolute CO₂ emissions by 2030. Acting as a second lever, airlines complying with the European Commission's draft legislation for the obligatory use of a 5% SAF fuel blend by 2030 would obtain an additional 4% reduction in emissions, taking into account that sustainable aviation fuel emits 80% less CO₂ than fossil fuels. In addition, implementation of the Single European Sky initiative would result in a 10% reduction in environmental impact in terms of CO₂ emissions, according to the European Commission. The aggregate impact of the combined application of these three levers over a 2030 time horizon with no growth is to reduce current absolute emission levels by up to 36%. If we apply the above-mentioned expected growth in air transport activity, the combined application of these three levers would result in a 17% reduction in unit emissions (see figure 13).

Figure 14: Reduction of current CO₂ emissions by type of lever
(% reduction of CO₂ emissions)



Source: leading industry manufacturers, European Commission, Deloitte analysis

If we intend to reach the targets set by the European Commission, which to date have not yet been specified for the air transport industry, the development of additional reduction measures through research and investment should be promoted. To this end, the collaboration of all industry players - manufacturers, public agencies, airlines, etc. - will be required.

Technological developments with a view to 2050: electric or hydrogen propulsion

The technologies for electric or hydrogen-powered aircraft and large-scale SAF production will be mature as from 2030 thanks to the investment being made in their development. However, in their present stage of development these technologies have certain limitations with respect to the models currently used in operations, with a reduction in range to as low as 500 km and an increase in flight time of up to 30%, depending on the model in question (see figure 15).

Battery performance is currently the main obstacle preventing the use of electric engines in commercial aviation. Technological progress needs to be made in order to produce batteries that are lighter, have greater durability and are priced at a competitive cost. The greatest advances in the field of aviation batteries are being made in the use of ultralight materials, such as carbon fibre, to manufacture them.

As regards hydrogen-powered aircraft, the manufacturer Airbus announced last year that its first fossil-fuel-free commercial aircraft would come into operation in 2035⁴⁴. Today, hydrogen is obtained mainly from fossil fuels by means of a process that involves the emission of greenhouse gases into the atmosphere. The sustainable option, green hydrogen, is produced using electricity from renewable energy sources, although this currently accounts for less than 0.1% of the total hydrogen obtained for industrial use. Nevertheless, the International Energy Agency states that the increase in renewable energy generation will result in greater availability of green hydrogen, reducing its cost by up to 30% in 2030 and 50% in 2050⁴⁵.

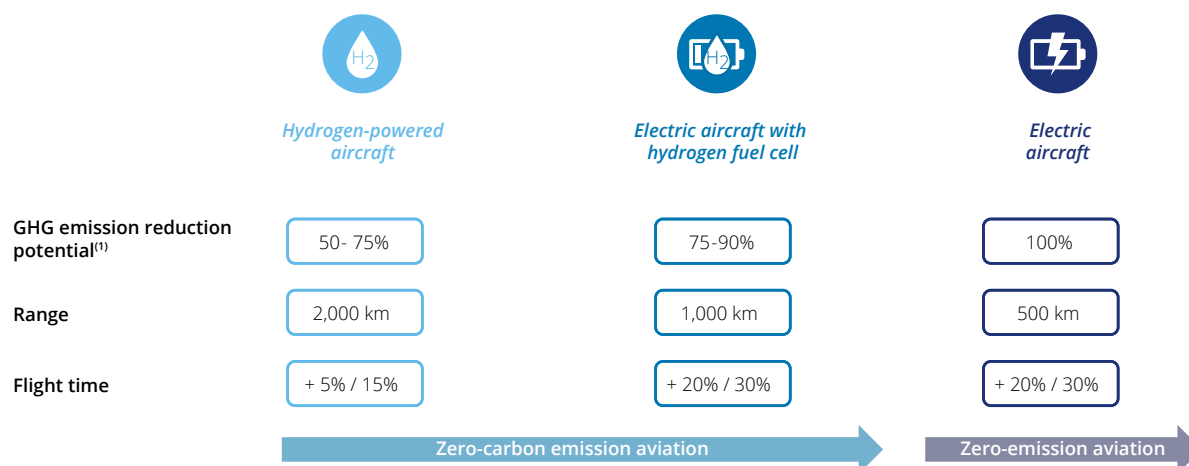
Create a uniquely different experience for the post-COVID traveller

Airlines must create a uniquely different experience in each of the eight stages of the “travel journey” and, to this end, they must transform their vision of the passenger to that of a traveller who accesses all the services they need through the airline itself. Airlines need to create alliances and work together with enterprises from other adjacent industries in order to offer integrated, multimodal services on a single platform, conduct integral data management and digitalise the relationship with the customer, whilst mitigating the risks threatening passenger privacy.

Strategic alliances to offer an integrated multimodal service

Developing a multimodal platform capable of transforming the relationship with the traveller requires airlines to create alliances with players from other segments and/or industries, thus generating the appropriate incentives. These alliances must harness potential synergies and translate them into a uniquely different experience for the traveller and an improved market positioning for the companies involved. To achieve this, the airlines’ key partners should be hotel chains with a large presence in Europe, urban mobility companies, cultural activity agencies, government visa-processing bodies and healthcare centres.

Figure 15: Comparison of the main advantages and disadvantages of potential future aircraft models



(1) GHG: greenhouse gases such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆)

Source: Deloitte analysis (“Europe’s future aviation landscape” study, April 2021)

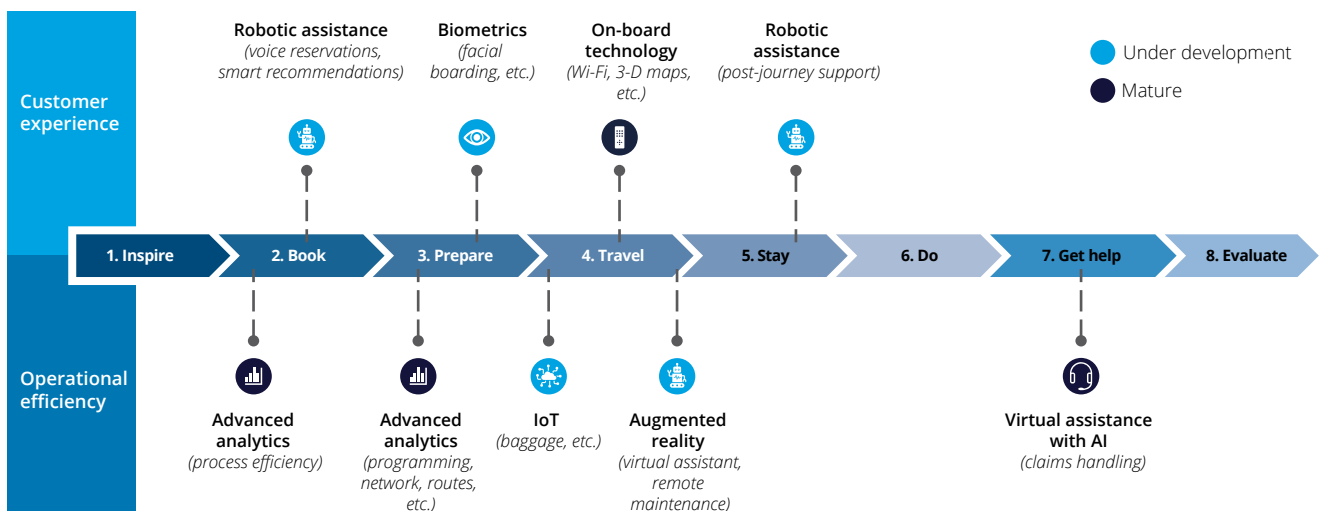
45. Airbus, “Zero-emissions concept aircraft”, Airbus, 21 September 2020

46. Aviation Benefits Beyond Borders, “Efficient technology”, Aviation Benefit Beyond Borders

Following are some examples of the actions and initiatives in which airlines can work together with other industries to maximise the value perceived by travellers (see figure 16):

- Development of a multi-service landside offering.** 32% of travellers book their transport to and/or from the airport at the same time as they purchase their airline tickets, a fact which highlights the significance that Mobility as a Service (MaaS) solutions, and in particular land transport, can have for airline revenue. When travelling with baggage, it is especially important to plan a suitable means of transport to either get to or leave the airport.
- Real-time information.** Mobile solutions or apps which, in an effort to boost transparency and trust, offer travellers constant updates of the status of their connections or of the traffic conditions at their destination, thus facilitating the planning of their journey and the use of multi-mode travel options.
- Single contact platform.** Unifying travel planning –purchasing a flight, reserving a hotel room, searching for activities, etc.– in a single technological solution will provide travellers with a uniquely different experience.
- Adapting the experience.** Just as it is possible to ascertain the behaviour of travellers during the boarding process, airlines can exploit their customers’ preferences concerning land transport, destination locations, interests and hobbies, etc.
- Improvement and development of communication and marketing.** This refers to the need for airlines to integrate and optimise the most effective channels for communicating with their customers, and to bring about an evolution of the traditional loyalty programmes.

Figure 16: Use of digital tools by airlines



Source: Deloitte analysis



Digital tools to optimise processes and the experience of the new traveller

Transforming users’ experience signifies relying upon digital technologies (see figure 16) that improve the relationship with travellers and enhance the efficiency of internal processes in order to ensure an excellent service quality.

The transformation of customer experience and the improvements in operating efficiency must take place across all the stages of the “travel journey” and involve the use of the best technologies available. The stages of the “travel journey” on which airline companies should focus their transformation efforts are as follows:



Stage 2. Book

Airline companies must invest in technological solutions, such as robotic assistance, that make it possible to customise booking processes and provide smart recommendations in keeping with the traveller’s profile. These tools should allow data analysis in order to generate efficiencies in the pricing model, thus maximising the benefits in the ticket purchasing process.



Stage 3. Prepare

Airlines need to incorporate suitable tools to enable them to adopt an agile, flexible process model in the event of unforeseen changes in demand—a particularly relevant aspect in times of high uncertainty such as that experienced during the pandemic or the period of uncertainty that has just arisen as a result of the recent conflict between Russia and Ukraine. Artificial intelligence, PowerBI and OBI allow airlines to conduct an ongoing analysis based on real-time data collection that can be used to improve all areas of planning (routes, finances, fleet, crew, etc.). Developing such flexible, dynamic and interconnected technologies enables airline management to make decisions in an agile manner based on numerical and objective criteria, providing tangible benefits for the airline’s operations. In order to harness the full potential of these tools, it is necessary to ensure the integration and data traceability of the various technological solutions and to have a human team capable of designing technical specifications in line with the needs of the business.



Stage 4. Travel

Technological solutions, such as robotic assistance and biometric technology, will enable airlines to offer travellers an enhanced experience through rapid passenger identification, reduced transit time, improved efficiency in boarding processes and a reduction in direct interpersonal contact during the whole process. Internet of Things (IoT) technology will bring other improvements for airlines, such as the use of electronic tags for baggage traceability, greater transparency regarding flight status, and optimum coordination in queue management. In addition, airlines have at their disposal certain easy-to-implement initiatives, such as Wi-Fi connections, multimedia content, 3-D maps and augmented reality, with which they can create a positive impact on the traveller’s experience.



Using digital technologies in the relationship with customers entails the need to mitigate the risks concerning customer data security and privacy. Faced with this growing risk, airlines must consider two resilience scenarios in order to navigate future shocks⁴⁷. On the one hand, they must take into consideration both the physical operational risks for the business and the risks arising from or caused by cyber threats. On the other hand, they must adopt a governance mindset and practices that will enable them to rapidly respond to any cyber event, in the same way as they respond to aeronautical incidents. Engaging cyber experts is essential if airlines are to prevent cyber attacks from occurring.

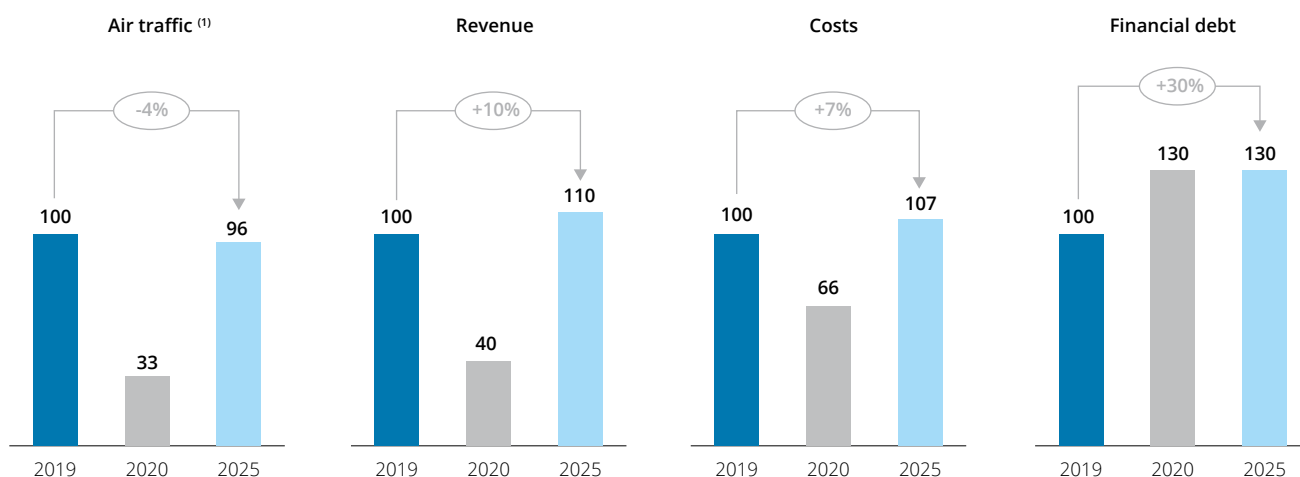
47. WE Forum, “Pathways Towards a Cyber Resilient Aviation Industry”, World Economic Forum, April 2021

Define a financial management strategy with a long-term transformational vision

The pandemic has had an extreme impact on the financial position of European airlines, as a result of both the all-time record fall in revenue (60%) and the losses recorded in 2020 and 2021, which necessarily prompted an increase in the airlines’ debt. During the pandemic, airlines adopted a stringent cash-protection strategy that was based mainly on cost control, the search for external funding, public aid and capital increases. However, the challenges facing airlines today mean that significant investments must be made in fleet, in creating alliances and in technology in order to satisfy the increasingly ambitious sustainability and post-COVID traveller experience transformation policies. Meeting these challenges and building the competitive advantages for the future requires airlines to construct a financial management strategy with a long-term transformational vision (see figure 17).



Figure 17: Principal indicators of the European air transport industry in the period to 2025
(Base 100: 2019)



(1) Air traffic measured in RPKs (see figure 5)

Source: IATA, Eurocontrol, financial statements of the airlines, Deloitte analysis

The financial management strategy must be founded on a strict control of manageable cost items, using suitable digitalisation and efficiency drivers to contain expenses and offset increases in items such as fuel. Furthermore, airlines must re-invent their business model to increase revenue through new pricing models, as well as through operations in new businesses, segments or niche markets –such as maintenance centres of excellence–, and to capture the demand from new travellers flying for educational or healthcare reasons. These measures will enable airlines to shore up their viability and provide them with the resources they need to invest in the transformation roadmap.

Airlines can rely on the additional measures that governments are making available to them. For its part, the European Union has launched the European recovery funds, in the form of the Next Generation EU instrument, in order to boost recovery in the short term and address the necessary structural reforms in each industry with a view to increasing resilience and sustainability in the medium and long term. The key pillars of these funds are precisely sustainability and digitalisation, which are two of the major transformational challenges facing the air transport industry.

Step up the control over manageable costs in order to meet debt repayments and investment requirements

We analysed the evolution of an airline’s cost structure in the period to 2025 in order to determine the foundations on which airlines should build their financial management strategy (see figure 18). The strategy thus defined has to be able to increase control over the costs that will fluctuate the most in the future, mainly operating costs (-4 pp), fleet (+2 pp) and fuel (+2 pp). However, it is essential to draw a distinction between the costs that can be managed by the airline itself and the costs that are determined by external factors such as the price of fuel, taxes, airport charges and foreign currency exchange rates.

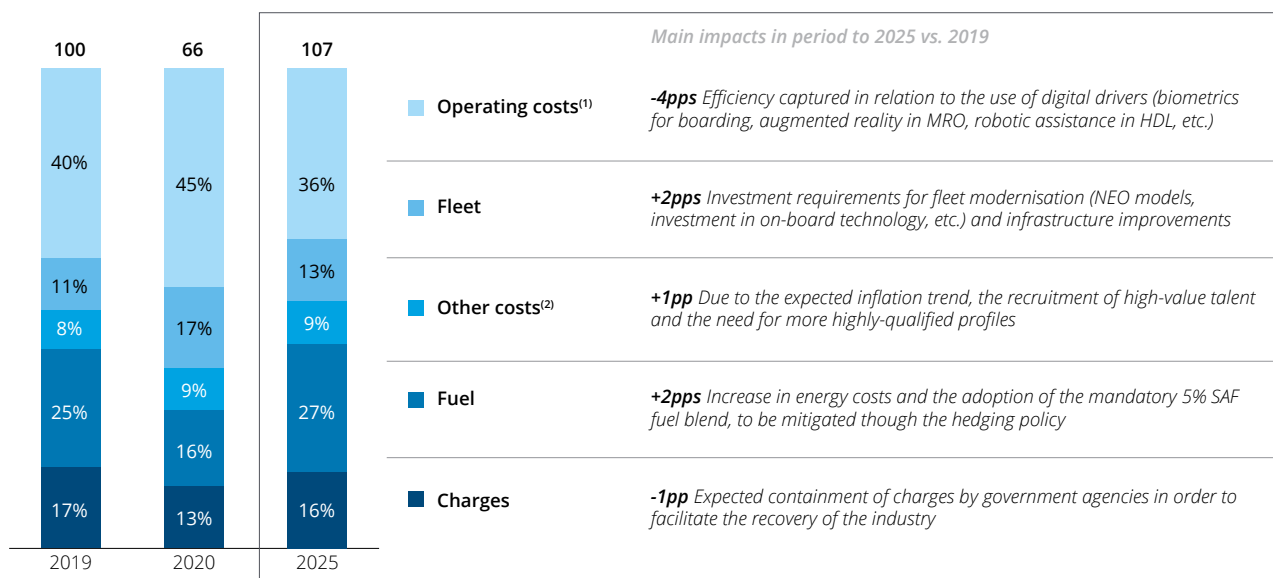
The cost items that can be managed by the airlines themselves represent around 60% of total expenses, depending on the type of airline and its business model. The most representative of these costs are operating costs (*handling*, maintenance, crew), followed by fleet and staff costs.

- **Costes operativos:** management of operating costs during the pandemic focused on the rescheduling of maintenance events for the idle fleet and the application of furlough-type arrangements (Record of Temporary Employment Regulation) or changes to collective agreements so as to retain only indispensable flight personnel. In the future, airlines need to generate efficiencies by implementing biometric technology

to shorten the times associated with the boarding process and to reduce the use of passenger boarding bridges, in addition to applying the IoT to improve baggage tracking and lower the cost of handling services. In the maintenance area, the adoption of augmented reality will help maintenance firm technicians to carry out their processes more efficiently.

- **Fleet:** transforming fleet costs is an extremely complex issue, and during the pandemic it obliged airlines to renegotiate their contracts with manufacturers, bring forward the redelivery dates in the case of lease arrangements, and postpone the introduction of new assets, as a result of aircraft being out of service because they were forced to remain grounded. It may prove to be difficult to contain fleet cost increases in the period to 2025, since airlines need to ensure the necessary investments are made to enable them to transition towards a more sustainable industry. This will require measures to modernise and digitalise their current fleets (new technologies, improvements in efficiency and customer comfort), and the addition of increasingly sustainable models to those fleets (NEO, E195-E2). From 2030 onwards, the progress of the market in the development of new models will prompt airlines to replace their current fleets with electric or hydrogen-powered models, thus further increasing the need for investment.

Figure 18: Evolution of the cost structure of a typical European airline in the period to 2025
(% of costs; base value 100: 2019)



(1) Operating costs include handling, maintenance, crew and training costs
(2) Other costs include general services, office staff and commercial costs

Source: Eurocontrol, IATA, industry sources, Deloitte analysis

- **Other operating costs:** Guaranteeing staff cost containment in the period to 2025 without resorting to measures such as furlough-type arrangements (Record of Temporary Employment Regulation) and against a backdrop of soaring inflation will force airlines to roll out plans to boost workforce productivity, in particular that of flight crew personnel, and to operate with performance-linked variable incentive schemes.

As regards the cost items that cannot be directly managed by the airlines (40% of total costs, depending on the type of company concerned), it is of utmost importance that airlines define a plan to mitigate future cost fluctuations. April 2020 saw the most dramatic fall in the price of fuel in the last seven years (per *Platts Jet Fuel Price Index*), as it plummeted by more than 60% as compared with the previous year⁴⁸. Throughout 2021 and in early 2022 the price gradually scaled upwards, hitting EUR 110 per barrel in February, a price that was seven times higher than ten months before and which set an all-time high. In order to mitigate these price fluctuations airlines will have to review their hedging policies.

Another factor that will come into play as from 2025 and for which hedging policies will need to be established is the price of SAF, which currently stands at between twice and seven times the price of traditional fuel. All this will necessarily entail an increase of up to two percentage points in fuel costs with respect to 2019.

In addition, although airport charges and commercial costs have a smaller impact on profit or loss, airlines must find ways to reduce this effect, such as for example by reflecting it in their ticket prices –which would affect the recovery– or by increasing investment in the development of the direct sales channel with a view to diminishing their dependency on intermediaries.

However, such measures will need to be assessed in the context of, among other factors, the business model of each airline, the type of routes it covers and the type of customers it serves, and must focus on maintaining these cost items at levels similar to those of 2019.

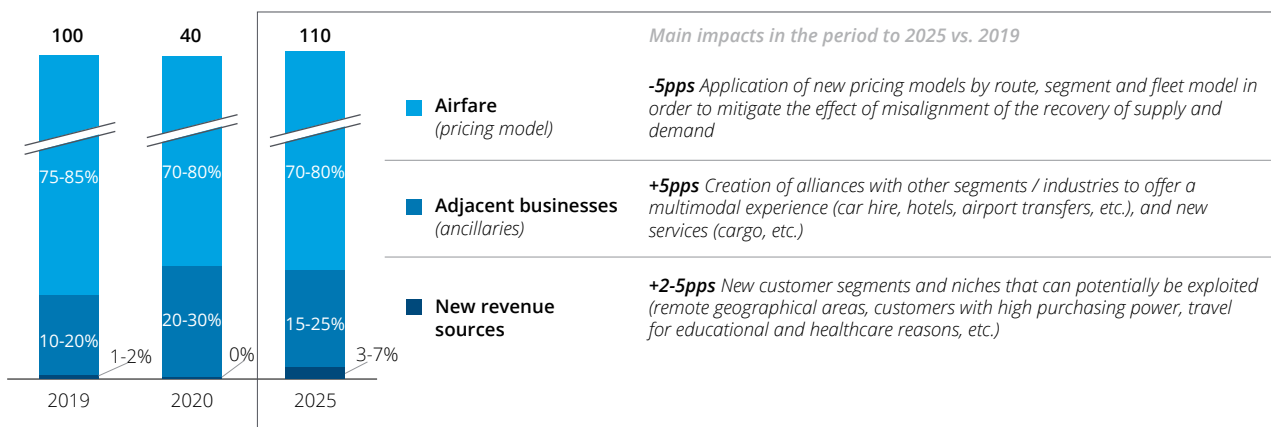
At the same time, it is essential that airlines take into consideration the unit costs of each aircraft model and the type of route that they operate, as well as the expected trend in demand for each route and segment. Thus, the key to mitigating financial risks during the "lift-off" and recovery of the industry will be to include in current fleet assignment models certain cost variables based on engine type, load factor and route type.

Reinvent the air transport business in order to increase revenue sources

The financial management strategy will involve airlines expanding the range of their traditional revenue sources in order to generate short-term profits, guarantee the solvency of the business and acquire sufficient financial capacity to invest in transformation. Airline companies must identify potential sources of revenue to enable them to reinvent their business models, which, according to our analysis (see figure 19), will lead them to create new pricing models (-5 pp in airfares), further exploit revenue streams adjacent to the multimodal experience (+5 pp in *ancillaries*) and develop new businesses, segments or market niches (+2 pp - +5 pp in new revenue sources).

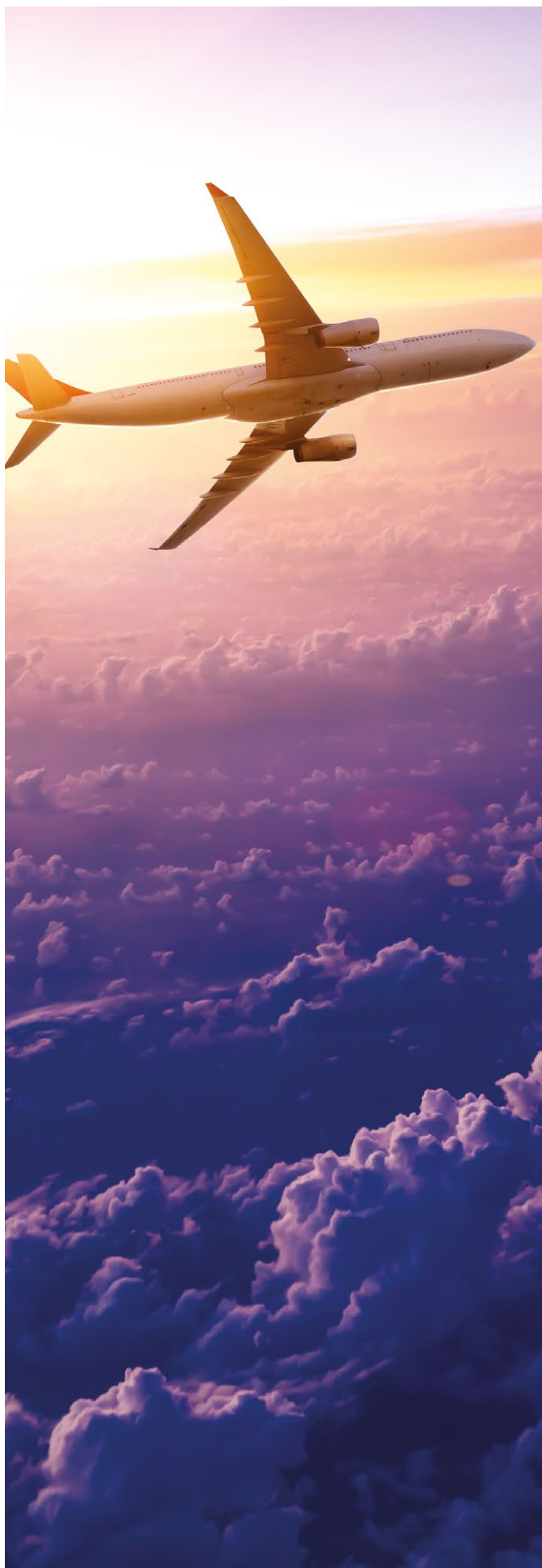
The type of airline concerned, i.e., *legacy* or *low-cost*, will determine the optimum means of transforming each business model; whereas low-cost airlines have traditionally focused on the sale of additional services, legacy airlines have sought to gain maximum advantage from the services they include in the ticket price in order to provide a complete flight experience.

Figure 19: Evolution of the revenue structure of a typical European airline in the period to 2025
(% of revenue; base value 100: 2019)



Source: Eurocontrol, IATA, industry sources, Deloitte analysis

48. IATA, "Jet Fuel Price Monitor", International Air Transport Association, February 2022



The aforementioned pricing models must include dynamic models adapted to changes in advance ticket purchasing and the higher demand for leisure and tourism flights, which entail shorter-haul routes and fewer connections. Another aspect to be borne in mind in the short and medium term will be an across-the-board price increase caused by a misalignment in the recovery of supply and demand. This misalignment will be determined by the recovery curves, which predict that growth in demand will advance at a faster pace than the recovery of the industry's capacity.

Airlines must reflect upon how they can increase their revenue through other adjacent businesses (ancillaries). The post-COVID traveller's demand for an integrated, multimodal and digital experience will act as a key driving force to position airlines in the mobility ecosystem and encourage them to exploit new opportunities. There are examples of companies that have added new services to their offerings, such as the sale of travel insurance or mobility, carsharing and car hire services, while others are combining the sale of tickets with hotel reservations or short stays in cities or at intermediate connection points. These services also increase revenue from the traditional business as a result of the new customers gained and the increased loyalty of existing customers.

Airlines must define new businesses and identify new market segments or niches and consequently engage in services additional to the traditional sale of air tickets. On the one hand, airlines must create maintenance centres of excellence, associated with first-in-class infrastructure or hubs for the development of technologies and the training of qualified technicians, and, on the other hand, they must promote the cargo, haulage and goods delivery business, thereby creating synergies with respect to aircraft occupancy and under-used time bands, among other examples. Furthermore, airlines should seek out new customer segments and niches by analysing new value propositions beyond the traditional markets. Some of the niches that airline companies should consider are travellers with high purchasing power, travellers in more remote geographical areas and travellers whose motivation for flying is different from the traditional leisure, tourism and business-related reasons, such as for example those travelling for healthcare or educational purposes or to move between their different places of residence.

Conclusions: the transformation roadmap must harness the recovery momentum in order to reinvent air transport business

The recovery of the industry is an opportunity for airlines to reinvent their business after having endured the greatest crisis in their history in 2020. Airlines must take advantage of the transformation and the investments they make in order to meet the challenges arising from decarbonisation, the transformation of the relationship with the traveller and their complex financial position, by adapting their business model to the post-COVID world. To define a roadmap taking as a reference the pre-pandemic status quo could mean missing an opportunity to build the competitive advantages of the future.

Sustainability must be a key driver for the improvement of fleet and operational efficiency, expediting recovery from the impact of the pandemic. Accordingly, airlines should make a realistic appraisal of the abatement potential of mature technologies, including more efficient aircraft models or the use of SAF, which would make it possible, in conjunction with implementation of the Single European Sky, to achieve a 36% reduction in current emission levels. To reach a more ambitious goal would require airlines to work together with public institutions and other industries to develop mechanisms to incentivise and drive the adoption of other technologies that will be mature in the long term, such as hydrogen-powered aircraft or large-scale SAF production.

The development of a uniquely different experience based on service integration, multimodality and digitalisation for the post-COVID traveller must consolidate both the aim of digital transformation and the related programmes, speeding up the integration of new data analysis technologies and the creation of multimodal and multiservice platforms. This process must drive the provision of a distinctive offering during each passenger’s “travel journey”, based on anticipating changes in demand and

taking real-time decisions about the experience as perceived by the traveller. To put it in a nutshell, airlines must transform their vision of the passenger to that of a traveller who accesses all the services and information they require for their trip through the airline itself.

The strategy adopted must facilitate a financial discipline capable of mitigating the impact of the pandemic and fostering the development of new businesses, whilst ensuring that it does not take the whole decade to complete the recovery of the industry’s financial position. The strategy must establish strict financial control and seize any opportunity to make the cost model more flexible, whilst at the same time boosting the generation of additional revenue through new pricing models and the exploitation of new businesses, segments or market niches. It is of key importance that the strategy should generate the necessary economic resources with which to make the investments that will allow airlines to reinvent their business.

The recovery of the commercial aviation industry is without doubt a vital, strategic issue at national, European and world level. Firstly, it is a key industry in terms of citizen mobility and, secondly, it constitutes a vital link in the value chain of the tourism industry, in particular in Spain, while the contribution it has made to the manufacturing industry, among others –such as through the development and maintenance of air propulsion systems– should not be overlooked. Having an efficient, sustainable and interconnected transport system is crucial if we are to lay the foundations for the economic recovery of Spain within the context of the European economy, and contribute to the well-being of citizens and the competitiveness of our companies.

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For further information

For further information on key aspects of the points of view expressed herein, including the challenges facing the air transport industry, the impact of sustainability, or the impact of the COVID-19 pandemic, Deloitte places the following documents at your disposal:

- [The Consumer industry's road to recovery](#)
- [Energy sustainable cities - Urban energy transition 2030](#)
- [A decarbonised transport model for Spain in 2050 - Recommendations for the transition](#)
- [The future of freight - How new technology and new thinking can transform how goods are moved](#)
- [Last mile logistics - Challenges and solutions in Spain](#)
- [COVID-19: Orchestrating the recovery of organizations and supply chains](#)
- [COVID-19: Managing supply chain risk and disruption](#)
- [COVID-19: Managing cash flow during a period of crisis](#)
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- [COVID-19: People, technology and the path to organizational resilience](#)
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