

The World's Amazingly Beautiful & Magnificent Airports, Flight Destinations & Airlines: Travel Guide for Executive Board of Directors, Government Diplomats, Tourists, International Students, Academics, Entrepreneurs & Other Professionals 1st Edition



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PREFACE TO THE FIRST EDITION

The number one key beneficiary of the airports and aviation industry in a country, province, state, city or town is tourism. On a yearly basis over 1 billion tourists are travelling in various tourist destinations and enormous foreign currency revenue is generated for the host country. The airports and aviation industry plays a significant role in reducing the following: poverty, unemployment, poor living standards, human rights violations, poor transport and building infrastructure developments. Nowadays there is a strong interrelation between human rights, democracy, tourism and nation branding and as a result many globally ranked top tourist destinations are now implementing business and community human rights protection programs or laws in order to continue to enjoy bigger economic benefits through tourism. The main aim of this textbook is to educate readers that the airports and aviation industry has successfully managed to bring together people from different geographical locations for both personal and business purposes. The airports and aviation industry is considered to be one of the most innovative and resilient industry. As a result massive infrastructure development projects have been implemented in various countries around the world. In addition the other key aim of this textbook is to educate readers about the fact that sustainability (environment conservation) is now a critical ingredient that helps airports to achieve their set goals and vision statement. Most of the airports around the world are now adapting green energy solutions in their day-to-day operations to become more climate friendly and remain highly competitive. Passenger traffic at global airports has generally increased due to the following factors: improved passenger safety, various fun activities at the airport facilities, the availability of restaurants, airport shopping malls, airport hotels, passenger lounges, easy access to passenger check-in processes through the use of modern technology, green environment spaces (such as in-door garden parks), clean outdoor spaces and so on. This book specifically targeted people on the continents of Africa, North America, Latin America, Europe, Oceania, Middle East and Asia in order to provide them with basic knowledge about the following: (1) airports and aviation industry infrastructure development projects (through the use of amazing photographs), (2) popular global tourism destinations (*namely: United States of America, Switzerland, Canada, The Netherlands, Belgium, United Kingdom, Germany, Australia, South Africa, Brazil, Chile, Norway, Romania, Sweden, France, Ireland, Singapore, Ghana, Spain and New Zealand*), (3) nation branding strategies

(such as mega airport construction projects), (4) airport technology innovations and (5) the different state-of-the-art international airports around the world.

Acknowledgement:

I would like to thank my 6 siblings (*four brothers & two sisters*) for tirelessly supporting me towards my education and personal life goals. I would also like to take this opportunity to greatly thank my late parents, aunties and uncles for the great role they played in my childhood. Furthermore, I shall forever be grateful to the great men and women in the continent of Africa, North America, Europe, Latin America, Middle East, Oceania and Asia who contributed towards the writing of this book in particular all the named leading 'iconic' entrepreneurs, business leaders, governments, organizations & the various information sources cited in this book.

Chapter 1: What is an airport

After reading this chapter you should be able to:

- Define the following terms ‘business aviation’ and ‘general aviation’. Explain what is an ‘airport’. Describe the brief history of airports.
- Highlight the common tips for travelers at global airports. Explain what is ‘air traffic services’ (ATS).
- Describe relevant examples of the leading airports and aviation associations, councils, conferences and federations in the world.
- Discuss the different views of the business community in relation to human rights. Describe in greater detail the educational facts about ‘human trafficking’ and ‘people smuggling’ during migration (via air, road and sea transport).

1.1 Introduction

¹According to ICAO (2019:6) Aviation is one of the most “global” industries: connecting people, cultures and businesses across continents. Colleagues throughout the sector are committed to raising awareness of the benefits and the role of aviation. **View of the Global Aviation Industry**. Aviation has continued to expand. It has weathered crises and demonstrated long-term resilience, becoming an indispensable means of transport. Historically, air transport has doubled in size every fifteen years and has grown faster than most other industries (ICAO, 2019:6, <https://www.icao.int/>). In general the global airport and aviation industry has significantly transformed many businesses and peoples’ lives for the better. Remarkably over the past number of years the airport and aviation industry has successfully led to massive infrastructure development projects that seem to be in direct alignment with the current ‘global tourism, international trade, aviation, migration & investments’ goals such as environmental conservation, global tourism marketing, technological innovation, human resources & talent management, nation branding, safety & security, human trafficking prevention, human rights protection, legal migration, increased foreign direct investments (FDI), international economic cooperation and so

¹ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

on.²³The airports and aviation industry has significantly strengthened the nation brand values and international trade and cooperation statistics of many nations around the world for example the United States of America, Switzerland, The Netherlands, Canada, Germany, United Kingdom, Belgium, Australia, South Africa, Namibia, Mauritius, Zambia, Senegal, Nigeria, Malawi, Botswana, Brazil, Singapore, India, Ghana, Kenya and many others. Various nations such as United States of America, Switzerland, Canada, The Netherlands, Belgium, United Kingdom, Germany, Australia, South Africa, Brazil, Chile, Norway, Romania, Sweden, France, Ireland, Singapore, Ghana, Spain, and New Zealand, Kenya and many others have quickly mastered the highly ‘innovative culture’ strongly associated with the airports and aviation industry in this modern 21st century. Indeed it is true that many airports located in Africa, Europe, Asia, North America, the Middle East, South America and Oceania are becoming climate change friendly in order to play a greater role towards conserving the environment. The following section will cover information about the definitions of terms in-depth.

1.2 Definition of terms

In general there are several definitions of the terms ‘general aviation’ and ‘business aviation’.⁴“*Business aviation* is the use of any “general aviation” aircraft for a business purpose. The Federal Aviation Administration defines *general aviation* as all flights that are not conducted by the military or the scheduled airlines. As such, business aviation is a part of general aviation that focuses on the business use of airplanes and helicopters. The business aviation community consists of companies of all sizes that rely on many different types of aircraft – from single-pilot airplanes, to turbine aircraft that fly internationally, to helicopters that survey rush-hour traffic –

² Rudolph. Patrick. Tawanda. Muteswa (2022) *28 Amazingly Beautiful Countries in the World & Our World Heroes Towards Humanity (Gathered Articles): A Training Guide for Business Executives, Foreign Diplomats, International Students & Travelers* 1st Edition, Educational Ebook, p1- 146, ISBN: 978-1-77924-684-4

³ Rudolph. Patrick. Tawanda. Muteswa (2022) *The Magnificence & Importance of the United States of America, United Kingdom, Germany, France, Australia, Belgium, Canada, Switzerland, Italy, South Africa, Norway, Denmark & Spain International Relations with the Continent of Africa* 1st Edition, Self Published Educational Ebook, p1-97 ISBN: 978-1-77927-184-6 EAN: 9781779271846

⁴ National Business Aviation Association (2022) *Business Aviation*. Available from: <https://nbaa.org/business-aviation/>
[Accessed December 08, 2022] © 2022 National Business Aviation Association

and the fixed-base operations and many other services that support flight operations at the nation's 5,000 public-use airports”” (National Business Aviation Association, 2022, <https://nbaa.org/business-aviation/>). The following section will cover information about the meaning of the term ‘airport’ in-depth.

1.3 What is an ‘airport’

In general there are many definitions of airports. ⁵“**airport**, also called **air terminal**, **aerodrome**, or **airfield**, site and installation for the takeoff and landing of **aircraft**. An airport usually has paved runways and maintenance facilities and serves as a **terminal** for passengers and cargo” (Ashford, Norman J.. "airport". *Encyclopedia Britannica*, 18 Jul. 2019, <https://www.britannica.com/technology/airport>. Accessed 9 December 2022). Furthermore, the meaning of an airport and the various categories of an airport were also clearly highlighted by the Federal Aviation Administration (FAA) of the U.S. Department of Transport published public information titled: ‘*Airport Categories*’ published via www.faa.gov/. ⁶According to the Federal Aviation Administration (FAA) of the U.S. Department of Transport (2022) An *airport* is defined in the law as any area of land or water used or intended for landing or takeoff of aircraft including appurtenant area used or intended for airport buildings, facilities, as well as rights of way together with the buildings and facilities. Special types of facilities such as seaplane bases and heliports are included in the airport categories listed below. **Definition of Airport Categories.**

1. Commercial Service Airports are publicly owned airports that have at least 2,500 passenger boardings each calendar year and receive scheduled passenger service. Passenger boardings refer to revenue passenger boardings on an aircraft in service in air commerce whether or not in scheduled service. The definition also includes passengers who continue on an aircraft in international flight that stops at an airport in any of the 50 States for a non-traffic purpose, such

⁵ Ashford, Norman J.. "airport". *Encyclopedia Britannica*, 18 Jul. 2019, <https://www.britannica.com/technology/airport>. Accessed 9 December 2022.

⁶ Federal Aviation Administration of the U.S. Department of Transport (2022) *Airport Categories*. Available from: https://www.faa.gov/airports/planning_capacity/categories [Accessed December 08, 2022]

as refueling or aircraft maintenance rather than passenger activity. Passenger boardings at airports that receive scheduled passenger service are also referred to as Enplanements.

2. Nonprimary Commercial Service Airports are Commercial Service Airports that have at least 2,500 and no more than 10,000 passenger boardings each year.

3. Primary Airports are Commercial Service Airports that have more than 10,000 passenger boardings each year. Hub categories for Primary Airports are defined as a percentage of total passenger boardings within the United States in the most current calendar year ending before the start of the current fiscal year. For example, calendar year 2014 data are used for fiscal year 2016 since the fiscal year began 9 months after the end of that calendar year. The table above depicts the formulae used for the definition of airport categories based on statutory provisions cited within the table, including Hub Type described in 49 USC 47102.

4. ⁷Cargo Service Airports are airports that, in addition to any other air transportation services that may be available, are served by aircraft providing air transportation of only cargo with a total annual landed weight of more than 100 million pounds. "Landed weight" means the weight of aircraft transporting only cargo in intrastate, interstate, and foreign air transportation. An airport may be both a commercial service and a cargo service airport.

5. Reliever Airports are airports designated by the FAA to relieve congestion at Commercial Service Airports and to provide improved general aviation access to the overall community. These may be publicly or privately-owned.

6. General Aviation Airports are public-use airports that do not have scheduled service or have less than 2,500 annual passenger boardings (49 USC 47102(8)). Approximately 88 percent of airports included in the NPIAS are general aviation (Federal Aviation Administration of the U.S. Department of Transport, 2022, https://www.faa.gov/airports/planning_capacity/categories). The following section will cover information about the brief history of airports in-depth.

⁷ Federal Aviation Administration of the U.S. Department of Transport (2022) *Airport Categories*. Available from: https://www.faa.gov/airports/planning_capacity/categories [Accessed December 08, 2022]

1.4 Brief history of airports

⁸“Early airports were also major centres of [leisure](#) activity, often attracting more visitors than passengers. In 1929 Berlin’s airport reported 750,000 visitors and boasted a restaurant that could seat 3,000 people on the roof of the passenger terminal. More than 100 airports around the world now handle at least 10 million passengers each per year; nearly half of these are in the [United States](#)” (Ashford, Norman J. "airport". *Encyclopedia Britannica*, 18 Jul. 2019, <https://www.britannica.com/technology/airport>. Accessed 9 December 2022). The following section will cover information about the various airport tips for global travelers in-depth.

1.5 Tips for travelers at global airports

Some of the key tips for global travelers to use when passing through airports were clearly highlighted in an article by globally renowned Tallinn, Estonia headquartered mobility company Bolt Technology OÜ (2022) titled ‘*Best Airport Tips for Easier Travel*’ published via <https://blog.bolt.eu/>. ⁹““We prepared a list of 18 airport tips to help make your next trip a breeze. From the best time to check in to what to pack in your carry-on, we’ve got you covered. So put your tray table up and your seat back in the upright position; we’re about to take off!

1.5.1 Get travel insurance. Even the most carefully planned holiday may be interrupted by unforeseen events, such as cancelled flights, lost luggage, and other travel mishaps. Travel insurance can help protect you from financial losses or provide assistance in an emergency. Sure, it may cost you a few extra bucks, but it could save you a lot of money and headaches in the long run. Be sure to read the travel insurance policy before you buy one, as different policies offer different coverage and levels of protection.

1.5.2. Use online check-in. One of the simplest and most effective ways to make your airport experience more seamless is to check in online. Most airlines allow you to do this 24 hours before

⁸ Ashford, Norman J.. "airport". *Encyclopedia Britannica*, 18 Jul. 2019, <https://www.britannica.com/technology/airport>. Accessed 9 December 2022.

⁹ Bolt Technology OÜ (2022) *Best Airport Tips for Easier Travel*. Available from: <https://blog.bolt.eu/en/best-airport-tips-for-easier-travel/> [Accessed December 08, 2022] © 2022 Bolt Technology OÜ

your flight, saving you time at the airport (especially if you've no checked luggage). You'll need your booking reference number and passport to check in online. Once you have these handy, head to your airline's website and look for the online check-in option. **Pro tip:** Remember that in some cases, online check-in isn't just a time-saving measure but a requirement. You might be charged an airport check-in fee if you don't do it in advance.

1.5.3. Wear comfortable clothes. Comfy clothing makes travel more pleasant and can also help you get through security faster. Easy-to-remove shoes or trousers without a belt speed up the security screening process as you might need to remove them. **Pro tip:** Make sure your clothes have no metal clasps or buttons, as these will set off security detectors and slow you down.

1.5.4. Pack your carry-on wisely. You know the drill: liquids in containers with a maximum volume of 100ml, all packed in a clear, re-sealable 1-litre plastic bag. But there are other things to remember when packing your carry-on. Be mindful of weight and dimensions, as many airlines have strict restrictions on both. Also, be mindful of items not allowed in carry-on luggage, so you don't have to waste time unpacking at airport security.

1.5.5. Weigh your luggage before you leave. No one wants to be the person at the check-in counter paying a hefty fee for overweight luggage. It costs you extra money and slows down your check-in process. Avoid the stress by weighing your bags before you leave for the airport. You can do this using luggage scales — they're portable and relatively inexpensive, so it's a good investment if you travel frequently. In case you don't have one, bathroom scales will do the trick just fine. **Pro tip:** If you're tight on suitcase space, wear your heaviest items of clothing on the plane. This will save you space and might even keep you warmer during the flight!

1.5.6. ¹⁰Research the airport. If you're unfamiliar with the airport you're flying in or out of, do some research before your trip. Find out where things are — the terminal, check-in desks, security checkpoints, toilets, and restaurants — so you can easily navigate your way around. This is especially helpful if you have a connecting flight and need to change terminals. The airport website

¹⁰ Bolt Technology OÜ (2022) *Best Airport Tips for Easier Travel*. Available from: <https://blog.bolt.eu/en/best-airport-tips-for-easier-travel/> [Accessed December 08, 2022] © 2022 Bolt Technology OÜ

is an excellent place to start, but you can also check out travel forums for first-hand accounts of people who've been there before.

1.5.7. Arrive early. This one's probably the most obvious tip, but at the same time, the most common mistake people make. Better late than never doesn't apply when it comes to flying. Make sure you give yourself plenty of time to get to the airport, check in, and clear security. How early should you arrive? It depends on the airport. But a good rule of thumb is to be at the terminal at least two hours before your flight for domestic flights and three hours before international flights. Of course, if you're travelling during peak times, give yourself even more time as the airport is likely to be more crowded than usual.

1.5.8. Get to the airport with ride-hailing. Using a personal car to get to the airport has many drawbacks — the time and cost of parking, the possibility of getting lost, or being late. Save yourself the headache and use a ride-hailing service like Bolt. We offer 24/7 airport transfers to [hundreds of major airports](#) worldwide, so you can sit back and relax on the way to your flight.

1.5.9. ¹¹Buy noise-cancelling earplugs or headphones. Whether it's airport noise, the plane engine, a crying baby or your seatmate's chatter, plenty of things can ruin your airport or in-flight relaxation time. Investing in a good pair of noise-cancelling headphones or earplugs is worth it if you fly often. These will block out most of the ambient noise on the plane so you can (hopefully) get some rest. However, be careful when using noise-cancelling headphones at the airport as they make it difficult to hear important announcements.

1.5.10. Bring snacks and an empty water bottle. We all know how expensive airport food and drinks can be, so it's always a good idea to bring your snacks. An empty water bottle's also a lifesaver. Although liquids are restricted in carry-on luggage, once you clear security, you can fill it up at a water fountain and avoid paying for overpriced bottled water at the airport.

1.5.11. Make your luggage easily identifiable. "Is that suitcase mine or someone else's?" We've all been there, standing in front of the luggage carousel, trying to figure out which black suitcase is ours. Make your bag stand out by attaching a bright ribbon or sticker to the handle. This will help

¹¹ Bolt Technology OÜ (2022) *Best Airport Tips for Easier Travel*. Available from: <https://blog.bolt.eu/en/best-airport-tips-for-easier-travel/> [Accessed December 08, 2022] © 2022 Bolt Technology OÜ

you spot it right away and save you the trouble of rummaging through a pile of identical-looking bags. You can also buy luggage tags with your contact information if your bag gets lost.

1.5.12. Buy a portable charger. If your phone's running out of battery and you're thinking, "I'll charge it when I get to the airport", think again. There are usually only a limited number of outlets available, and they're generally all busy. To avoid being stuck with a dead phone, bring a portable charger with you so you can juice up your devices on the go.

1.5.13. Bring a hand sanitiser or wipes. Airports and aeroplanes are full of germs. From the departure lounge to the in-flight tray table, there are so many surfaces you come into contact with on a plane. A small bottle of hand sanitiser or some disinfectant wipes are easy to throw in your carry-on and will keep you and the surfaces around you clean.

1.5.14. ¹²Stay close to your gate. Once you've checked in and gone through security, find a seat near your gate and stay put — especially if your flight takes off soon. If you've got some spare time and want to grab a bite or do some shopping, choose places close to your gate, so you don't have to walk too far when it's time to board.

1.5.15. Keep an eye on the flight information screen. Flight information screens are usually found around the airport and display relevant information about your flight, such as gate number, boarding time, and any delays. Even if you've already checked, it's a good idea to keep an eye on the screen as your flight information or status may change.

1.5.16. Be cautious when using airport Wi-Fi. Who doesn't enjoy free Wi-Fi, especially when you're stuck at the airport with nothing to do? However, be cautious when using public Wi-Fi, as it's not always secure. Avoid logging into personal accounts or conducting financial transactions while using airport Wi-Fi. If you must use it, switch to a cellular data connection or make sure you have a VPN installed on your device to protect your data.

1.5.17. Consider lounge access for a longer layover. If you have a long layover and want to avoid spending hours in an airport chair, you might want to consider using an airport lounge. Most

¹² Bolt Technology OÜ (2022) *Best Airport Tips for Easier Travel*. Available from: <https://blog.bolt.eu/en/best-airport-tips-for-easier-travel/> [Accessed December 08, 2022] © 2022 Bolt Technology OÜ

lounges offer comfortable seating, complimentary food and drinks, fast Wi-Fi, and other amenities. Of course, access to airport lounges usually comes at a cost, so make sure it's worth it before you purchase a lounge pass.

1.5.18. ¹³**Order a Bolt to get from the airport to your destination.** Arriving at your destination after a long flight can be tiring, especially if you have to figure out how to get from the airport to your hotel or Airbnb. Taxi lines are often long, and public transportation may not be readily available. With Bolt, you can book a private driver to pick you up at the airport and take you directly to your destination. You'll see all the essential info upfront — price, estimated arrival time, driver rating, and more — so you know exactly what to expect. Plus, you can pay for your ride directly through the app, so you don't have to worry about carrying cash or dealing with currency conversion”” (Bolt Technology OÜ, 2022, <https://blog.bolt.eu/en/best-airport-tips-for-easier-travel/>). The following section will cover information about air traffic services in-depth.

1.6 What is ‘air traffic services’ (ATS)

¹⁴15““Definition. A generic term meaning variously, [flight information service](#), [alerting service](#), [air traffic advisory service](#), [air traffic control service](#) (area control service, approach control service or aerodrome control service). *Source: ICAO Doc 4444 PANS-ATM. Description. Objectives of ATS.* The objectives of ATS, as stated in ICAO Annex 11, are to:

- prevent collisions between aircraft;
- prevent collisions between aircraft on the manoeuvring area and obstructions on that area; note that this objective does not include the apron and ATS in general is not intended to prevent collision with terrain.
- expedite and maintain an orderly flow of air traffic;
- provide advice and information useful for the safe and efficient conduct of flights;

¹³ Bolt Technology OÜ (2022) *Best Airport Tips for Easier Travel*. Available from: <https://blog.bolt.eu/en/best-airport-tips-for-easier-travel/> [Accessed December 08, 2022] © 2022 Bolt Technology OÜ

¹⁴ SKYbrary (2022) *Air Traffic Service (ATS)*. Available from: <https://skybrary.aero/articles/air-traffic-service-ats> [Accessed December 08, 2022] Copyright © SKYbrary Aviation Safety, 2021-2022. All rights reserved.

¹⁵ International Civil Aviation Organization (ICAO) (2016) *Doc 444 Procedures for Air Navigation Services. Air Traffic Management. Sixteenth Edition, 2016. ISBN 978-92-9258-081-0*, p1-462

- notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

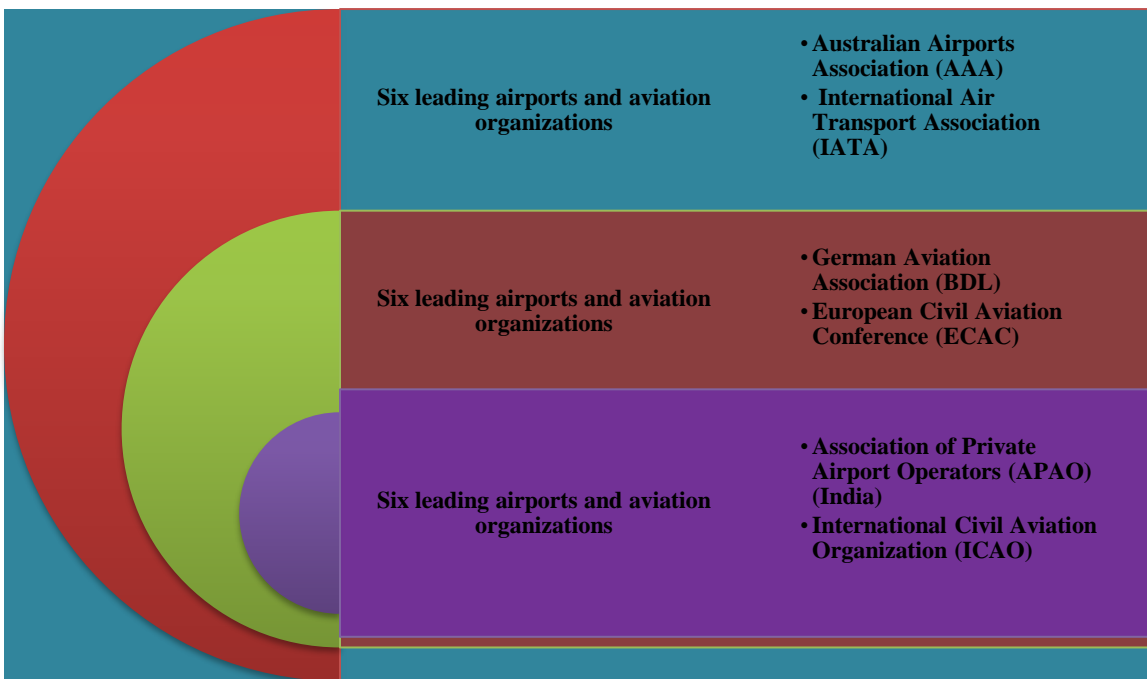
The air traffic control (ATC) service is established to accomplish the first three objectives. While the first and third are universally applicable to all ATC units, the second one is only relevant to aerodrome control units. The fourth objective is covered by the flight information service (FIS) and the last one is subject of the alerting service.

As seen from the definition, there is a fourth type of ATS, the advisory service. No specific objectives are defined for this type of service. It is considered a temporary measure to facilitate the smoother transition from FIS to ATC”” (SKYbrary, 2022, <https://skybrary.aero/articles/air-traffic-service-ats>). The following section will cover information about various examples of the leading airports and aviation associations, councils, conferences and federations in the world in-depth.

1.7 Examples of the leading airports and aviation associations, councils, conferences and federations in the world

The leading airports and aviation councils, associations, conferences and federations around the world will be clearly depicted by Figure 1.1 below.

Figure 1.1 Six leading airports and aviation councils, associations, conferences and federations



Source: Modified (Diagram Created By The Author Using Information Inspired From: Australian Airports Association, 2022, <https://airports.asn.au>; German Aviation Association, 2022, <https://www.bdl.aero/en>; European Civil Aviation Conference, 2022, <https://www.ecac-ceac.org/>; Association of Private Airport Operators, 2022, <https://www.apaointia.com/>; International Air Transport Association, 2022, <https://www.iata.org/>; International Civil Aviation Organization, 2022, <https://www.icao.int/>).

As depicted by Figure 1.1 the six examples of organizations are further discussed as follows:

1.7.1 Australian Airports Association (AAA)

¹⁶“**Who we are.** The Australian Airports Association (AAA) has been connecting Australian airports for more than 40 years. The AAA facilitates co-operation among airport members and their many and varied partners in Australian aviation, whilst contributing to an air transport system that is safe, secure, competitive and environmentally sustainable for the benefit of all Australians and visitors. The AAA is the leading advocate for appropriate national policy relating to airport activities, to ensure regular transport passengers, freight, and the community

¹⁶ Australian Airports Association (AAA) (2022) *Who we are*. Available from: <https://airports.asn.au/who-we-are/> [Accessed December 08, 2022] © Australian Airports Association

enjoy the full benefits of a progressive and sustainable airport industry. With the support of airports and the industry’s leading organisations the AAA will continue working to secure the future of our airports. The AAA is the national voice that represents the interests of more than 340 airports and aerodromes Australia wide – from the local country community landing strip to major international gateway airports. Our Airport members represent vital infrastructure crucial to the communities in which they operate and for the overall national economy. The AAA also has more than 150 corporate members representing aviation stakeholders and organisations that provide goods and services to the airport sector. The AAA partners with corporate members to provide opportunities for all members to build networks and lasting business relationships. To find out more about becoming a Member of the AAA – [Click Here](#)” (Australian Airports Association, 2022, <https://airports.asn.au/who-we-are/>).¹⁷“**Governance and Strategy**. As a leading industry association representing the Aviation sector, the AAA places a strong focus on corporate governance, professionalism and transparency” (Australian Airports Association, 2022, <https://airports.asn.au/governance-and-strategy/>). The following section will cover information about the International Air Transport Association (IATA) in-depth.

1.7.2 International Air Transport Association (IATA)

¹⁸According to the International Air Transport Association (IATA) (2022) **The Founding of IATA**. IATA was founded in Havana, Cuba, on 19 April 1945. It is the prime vehicle for inter-airline cooperation in promoting safe, reliable, secure and economical air services - for the benefit of the world's consumers. The international scheduled air transport industry is more than 100 times larger than it was in 1945. Few industries can match the dynamism of that growth, which would have been much less spectacular without the standards, practices and procedures developed within IATA. At its founding, IATA had [57 members](#) from 31 nations, mostly in Europe and North America. Today it has some [300 members](#) from 120 nations in every part of the globe (International Air Transport Association, 2022, <https://www.iata.org/en/about/history/>).

¹⁷ Australian Airports Association (AAA) (2022) *Governance and strategy*. Available from: <https://airports.asn.au/governance-and-strategy/> [Accessed December 08, 2022] © Australian Airports Association

¹⁸ International Air Transport Association (2022) *History*. Available from: <https://www.iata.org/en/about/history/> [Accessed December 23, 2022] © International Air Transport Association (IATA) 2022. All rights reserved.

¹⁹“**IATA's Industry Priorities.** IATA’s priorities for 2022 were defined by the IATA Board of Governors during their December session. **Environment and sustainability** • Increase the readiness of member airlines for the transition to [Sustainable Aviation Fuel \(SAF\)](#) as the main option to achieve net zero-carbon emissions by 2050 • Secure the support of governments at the ICAO Assembly for the industry’s [climate strategy](#). **Safety** • Increase the industry ground operations safety footprint through implementation of harmonized ground operations standards ([ISAGO](#) and [IGOM](#)) • Address risks related to [lithium batteries](#) • Launch Risk-Based [IOSA](#) pilots. **Diversity** • Increase participation in the [25by2025 initiative](#). **Commercial** • Ensure the success of the IATA Travel Pass and [Timatic](#) in helping airlines comply with COVID-19 travel requirements. **Effective IATA operations** • Ensure efficient settlements systems ([BSP](#) and [CASS](#))” (International Air Transport Association, 2022, <https://www.iata.org/en/about/priorities/>). ²⁰According to the International Air Transport Association (IATA) (2022) **Vision and Mission. Our vision** Working together to shape the future growth of a safe, secure and sustainable air transport industry that connects and enriches our world. **Our mission** IATA’s mission is to represent, lead, and serve the airline industry. **Representing the airline industry.** We improve understanding of the air transport industry among decision makers and increase awareness of the benefits that aviation brings to national and global economies. Advocating for the interests of airlines across the globe, we challenge unreasonable rules and charges, hold regulators and governments to account, and strive for sensible regulation. **Leading the airline industry.** For over 70 years, we have developed global commercial standards upon which the air transport industry is built. Our aim is to assist airlines by simplifying processes and increasing passenger convenience while reducing costs and improving efficiency. **Serving the airline industry.** We help airlines to operate safely, securely, efficiently, and economically under clearly defined rules. Professional support is provided to all industry stakeholders with a wide range of products and expert services. **Our brand values.** Our Brand Values define what we value and how we behave to help us deliver the IATA mission and vision. We all have different personalities, styles and areas of expertise, are at different levels of the

¹⁹ International Air Transport Association (IATA) (2022) *Priorities*. Available from: <https://www.iata.org/en/about/priorities/> [Accessed December 23, 2022] © International Air Transport Association (IATA) 2022. All rights reserved.

²⁰ International Air Transport Association (IATA) (2022) *Mission*. Available from: <https://www.iata.org/en/about/mission/> [Accessed December 23, 2022] © International Air Transport Association (IATA) 2022. All rights reserved.

organization, and play different roles. But you will recognize us by the consistent way in which we act and behave. We live our values and embody the supporting behaviors to make IATA a great place to work:

- We build standards through expertise
- We champion the global big picture
- We partner for mutual benefit²¹
- We act with a simple human touch (International Air Transport Association, 2022, <https://www.iata.org/en/about/mission/>). The following section will cover information about the German Aviation Association in-depth.

1.7.3 German Aviation Association (BDL)

²²“**The association.** German Aviation Association (BDL) was founded in 2010 to represent the interests of the German aviation industry. Members of the association are airlines, airports, German air traffic control and other service providers in German air traffic” (German Aviation Association, 2022, <https://www.bdl.aero/en/the-association/>). ²³“**Our mission: A joint representation of interests for the aviation industry.** The BDL is the common voice of the German aviation industry. It is open to all German aviation companies and associations. The association represents and promotes the interests of airlines, airports, Deutsche Flugsicherung (German air traffic control) and other service providers in German air traffic. The BDL is committed to ensuring that Germany as a location for air traffic can develop efficiently and competitively – hand in hand with responsibility for society and the environment. As the central

²¹ International Air Transport Association (IATA) (2022) *Mission*. Available from: <https://www.iata.org/en/about/mission/> [Accessed December 23, 2022] © International Air Transport Association (IATA) 2022. All rights reserved.

²² German Aviation Association (BDL) (2022) *The Association*. Available from: <https://www.bdl.aero/en/the-association/> [Accessed December 08, 2022]

²³ German Aviation Association (BDL) (2022) *Our Mission*. Available from: <https://www.bdl.aero/en/the-association/our-mission/> [Accessed December 08, 2022]

contact for politics, media and the public, the association bundles and communicates the topics that are important for the German aviation industry:

- Economic benefits of air transport
- Competitiveness and innovative capacity
- Energy efficiency and climate protection
- Noise control
- Safety and security
- Needs-based infrastructure development
- Customer satisfaction and consumer protection
- Opportunities and risks of unmanned aircraft systems” (German Aviation Association, 2022, <https://www.bdl.aero/en/the-association/our-mission/>).²⁴“**Members.** The BDL is the common voice of the German aviation industry. It represents and promotes the interests of airlines, airports, Deutsche Flugsicherung (German air traffic control) and other service providers in German air traffic” (German Aviation Association, 2022, <https://www.bdl.aero/en/the-association/members/>). The following section will cover information about the European Civil Aviation Conference (ECAC).

1.7.4 European Civil Aviation Conference (ECAC)

²⁵“**About ECAC.** Founded in 1955 as an intergovernmental organisation, the European Civil Aviation Conference (ECAC) seeks to harmonise civil aviation policies and practices amongst its Member States and, at the same time, promote understanding on policy matters between its

²⁴ German Aviation Association (BDL) (2022) *Members*. Available from: <https://www.bdl.aero/en/the-association/members/> [Accessed December 08, 2022]

²⁵ European Civil Aviation Conference (ECAC) (2022) *About ECAC*. Available from: <https://www.ecac-ceac.org/about-ecac> [Accessed December 09, 2022] Copyright © 2021-2022 European Civil Aviation Conference (ECAC). All rights reserved.

Member States and other parts of the world. ECAC's mission is the promotion of the continued development of a safe, efficient and sustainable European air transport system. ECAC's long-established expertise in aviation matters, pan-European membership and close liaison with the International Civil Aviation Organization (ICAO) enable it to serve as a unique European forum for discussion of every major civil aviation topic. It enjoys active cooperation with its sister regional organisations ACAO, AFCAC and LACAC through Memoranda of Understanding, and with the European Commission, EUROCONTROL and the JAA Training Organisation. It has particularly valuable links with industry and organisations representing all parts of the air transport industry. Pragmatic and cooperative arrangements are in place for ECAC's engagement with other international organisations. For subjects on which work is led elsewhere, ECAC's added value lies in being able to coordinate and integrate views on a wider pan-European basis. ECAC's main activities are shown in the menu above, and are detailed elsewhere on this website. ECAC works closely and cooperatively with other regional organisations and individual Partner States on a range of civil aviation issues of common interest, including safety, security, facilitation and the environment. ECAC also conducts, at regular intervals, international conferences, workshops, seminars and training events” (European Civil Aviation Conference, 2022, <https://www.ecac-ceac.org/about-ecac>). ²⁶“**Mission.** ECAC's mission is the promotion of the continued development of a safe, efficient and sustainable European air transport system. In so doing, it seeks to:

- harmonise civil aviation policies and practices amongst its Member States, and
- promote understanding on policy matters between its Member States and other regions of the world.

The policy statement on ECAC's Strategy for the Future was endorsed by ECAC's Directors General of Civil Aviation at DGCA/156 on 5 May 2021” (European Civil Aviation Conference, 2022, <https://www.ecac-ceac.org/about-ecac/mission>). ²⁷“**Member States.** ECAC brings together the widest grouping of Member States of any European organisation dealing with civil

²⁶ European Civil Aviation Conference (2022) *Mission*. Available from: <https://www.ecac-ceac.org/about-ecac/mission> [Accessed December 09, 2022] Copyright © 2021-2022 European Civil Aviation Conference (ECAC). All rights reserved.

²⁷ European Civil Aviation Conference (2022) *Member States*. Available from: <https://www.ecac-ceac.org/about-ecac/member-states> [Accessed December 09, 2022] Copyright © 2021-2022 European Civil Aviation Conference (ECAC). All rights reserved.

aviation, being currently composed of 44 Member States (shown on the interactive map below): Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine and United Kingdom” (European Civil Aviation Conference, 2022, <https://www.ecac-ceac.org/about-ecac/member-states>). The following section will cover information about the Association of Private Airport Operators (APAO) in-depth.

1.7.5 Association of Private Airport Operators (APAO) (India)

²⁸“**Association of Private Airport Operators (APAO)** is an apex Industry Association of the Major Private Airports in India. It was founded in 2009 in recognition of the need for a coherent, cohesive, consistent voice for all the privatised major airports in India. APAO is a non-profit organisation registered under the Societies Act, 1860 to represent the interests of member airport operators with the prime objective of promoting the growth and development of the privatised major airports to truly world class standards” (Association of Private Airport Operators, 2022, <https://www.apaoundia.com>). ²⁹“**About Us: Organisation.** The Association comprises of a Governing Board which is headed by the President and assisted by the Vice President. The Secretariat is headed by the Secretary General. The Association has several working group committees to assist the Association on various issues. At present, the Working Group Committees in APAO are the following:

- Regulatory Committee
- Finance Committee
- Legal Committee

²⁸ Association of Private Airport Operators (APAO) (2022) *Association of Private Airport Operators (APAO)*. Available from: [https://www.apaoundia.com/#:~:text=Association%20of%20Private%20Airport%20Operators%20\(APAO\)%20is%20an%20apex%20Industry,privatised%20major%20airports%20in%20India](https://www.apaoundia.com/#:~:text=Association%20of%20Private%20Airport%20Operators%20(APAO)%20is%20an%20apex%20Industry,privatised%20major%20airports%20in%20India). [Accessed December 09, 2022] All rights reserved with APAO 2012 - 2013

²⁹ Association of Private Airport Operators (APAO) (2022) *About Us*. Available from: https://www.apaoundia.com/?page_id=141 [Accessed December 09, 2022] All rights reserved with APAO 2012 - 2013

- Security Committee
- PR Committee
- Cargo Committee
- Environmental Issues Committee
- Operations Committee
- IT Committee
- Taxation + Union Budget Committee
- HR Committee
- Strategy Planning/Development Group Committee

The working group committees meet periodically to assist and advise APAO on specific issues. Every committee has a senior representative from each member airports” (Association of Private Airport Operators, 2022, https://www.apaoindia.com/?page_id=141). The following section will cover information about the International Civil Aviation Organization (ICAO).

1.7.6 International Civil Aviation Organization (ICAO)

³⁰According to the International Civil Aviation Organization (ICAO) (2022) **About ICAO**. ICAO is funded and directed by 193 national governments to support their diplomacy and cooperation in air transport as signatory states to the [Chicago Convention \(1944\)](#). Its core function is to maintain an administrative and expert bureaucracy (the [ICAO Secretariat](#)) supporting these diplomatic interactions, and to research new air transport policy and standardization innovations as directed and endorsed by governments through the [ICAO Assembly](#), or by the [ICAO Council](#) which the assembly elects. Industry and civil society groups, and other concerned regional and international organizations, also participate in the exploration and development of new standards at ICAO in their capacity as ‘[Invited Organizations](#)’. As new priorities are identified by these stakeholders, the ICAO secretariat convenes panels, task forces, conferences and seminars to explore their technical, political, socio-economic and other aspects. It then provides governments with the best results and advice possible as they collectively and

³⁰ International Civil Aviation Organization (2022) *About ICAO*. Available from: <https://www.icao.int/about-icao/Pages/default.aspx> [Accessed December 23, 2022] © International Civil Aviation Organization

diplomatically establish new international standards and recommended practices for civil aviation internationally. Once governments achieve diplomatic consensus around a new standard's scope and details, it is then adopted by those same 193 countries in order to bring worldwide alignment to their national regulations, helping to realize safe, secure and sustainable air operations on a truly global basis. In addition to these core diplomatic and research capabilities, ICAO also serves as a critical coordination platform in civil aviation through its seven [Regional Offices](#). It also conducts educational outreach, develops coalitions, and conducts auditing, training, and capacity building activities worldwide per the needs and priorities governments identify and formalize. **Not a global regulator.** The stipulations ICAO standards contain never supersede the primacy of national regulatory requirements. It is always the local, national regulations which are enforced in, and by, sovereign states, and which must be legally adhered to by air operators making use of applicable airspace and airports. We cannot arbitrarily close or restrict a country's airspace, shut down routes, or condemn airports or airlines for poor safety performance or customer service. Should a country transgress a given international standard adopted through our organization, ICAO's function in such circumstances, consistent with our core diplomatic capabilities and role, is to help countries conduct any discussions, condemnations, sanctions, etc., they may wish to pursue, consistent with the Chicago Convention and the Articles and Annexes it contains under international law³¹ (International Civil Aviation Organization, 2022, <https://www.icao.int/about-icao/Pages/default.aspx>).³² **Vision and Mission. Vision:** Achieve the sustainable growth of the global civil aviation system. **Mission:** To serve as the global forum of States for international civil aviation. ICAO develops policies and Standards, undertakes compliance audits, performs studies and analyses, provides assistance and builds aviation capacity through many other activities and the cooperation of its Member States and stakeholders" (International Civil Aviation Organization, 2022, <https://www.icao.int/about-icao/Council/Pages/vision-and-mission.aspx>).³³ **Strategic**

³¹ International Civil Aviation Organization (2022) *About ICAO*. Available from: <https://www.icao.int/about-icao/Pages/default.aspx> [Accessed December 23, 2022] © International Civil Aviation Organization

³² International Civil Aviation Organization (2022) *Vision and Mission*. Available from: <https://www.icao.int/about-icao/Council/Pages/vision-and-mission.aspx> [Accessed December 23, 2022] © International Civil Aviation Organization

³³ International Civil Aviation Organization (2022) *Strategic Objectives*. Available from: <https://www.icao.int/about-icao/Council/Pages/Strategic-Objectives.aspx> [Accessed December 23, 2022] © International Civil Aviation Organization

Objectives. In its ongoing mission to support and enable a global air transport network that meets or surpasses the social and economic development and broader connectivity needs of global businesses and passengers, and acknowledging the clear need to anticipate and manage the projected doubling of global air transport capacity by 2030 without unnecessary adverse impacts on system safety, efficiency, convenience or environmental performance, ICAO has established five comprehensive **Strategic Objectives:** **Safety:** Enhance global civil aviation safety. This Strategic Objective is focused primarily on the State's regulatory oversight capabilities. The Global Aviation Safety Plan (GASP) outlines the key activities for the triennium. **Air Navigation Capacity and Efficiency:** Increase the capacity and improve the efficiency of the global civil aviation system. Although functionally and organizationally interdependent with Safety, this Strategic Objective is focused primarily on upgrading the air navigation and aerodrome infrastructure and developing new procedures to optimize aviation system performance. The Global Air Navigation Capacity and Efficiency Plan (Global Plan) outlines the key activities for the triennium. **Security & Facilitation:** Enhance global civil aviation security and facilitation. This Strategic Objective reflects the need for ICAO's leadership in aviation security, facilitation and related border security matters. **Economic Development of Air Transport:** Foster the development of a sound and economically-viable civil aviation system. This Strategic Objective reflects the need for ICAO's leadership in harmonizing the air transport framework focused on economic policies and supporting activities. **Environmental Protection:** Minimize the adverse environmental effects of civil aviation activities. This Strategic Objective fosters ICAO's leadership in all aviation-related environmental activities and is consistent with the ICAO and UN system environmental protection policies and practices” (International Civil Aviation Organization, 2022, <https://www.icao.int/about-icao/Council/Pages/Strategic-Objectives.aspx>).³⁴ According to the International Civil Aviation Organization (ICAO) (2022)

How ICAO Develops Standards. The establishment and maintenance of international Standards and Recommended Practices (SARPs), as well as Procedures for Air Navigation (PANS), are fundamental tenets of the Convention on International Civil Aviation (Chicago Convention) and a core aspect of ICAO’s mission and role. SARPs and PANS are critical to ICAO Member States

³⁴ International Civil Aviation Organization (2022) *How ICAO Develops Standards*. Available from: <https://www.icao.int/about-icao/AirNavigationCommission/Pages/how-icao-develops-standards.aspx> [Accessed December 23, 2022] © International Civil Aviation Organization

and other stakeholders, given that they provide the fundamental basis for harmonized global aviation safety and efficiency in the air and on the ground, the worldwide standardization of functional and performance requirements of air navigation facilities and services, and the orderly development of air transport. Today, ICAO manages over 12,000 SARPs across the 19 Annexes and six PANS to the Convention, many of which are constantly evolving in concert with latest developments and innovations. The development of SARPs and PANS follows a structured, transparent and multi-staged process – often known as the ICAO “*amendment process*” or “*standards-making process*” – involving a number of technical and non-technical bodies which are either within the Organization or closely associated with ICAO. Typically, it takes approximately two years for an initial proposal for a new or improved Standard, Recommended Practice or procedure to be formally adopted or approved for inclusion in an Annex or a PANS.³⁵ Occasionally, this timescale can be expanded or compressed depending on the nature and priority of the proposal under consideration (International Civil Aviation Organization, 2022, <https://www.icao.int/about-icao/AirNavigationCommission/Pages/how-icao-develops-standards.aspx>). The following section will cover information about the various views of the business community in relation to human rights in-depth.

1.8 Views of the business community in relation to human rights

““*What is the business view on human rights?*” The Economist Intelligence Unit (EIU) recently published a [report](#) exploring the views of businesses worldwide on their responsibility to respect human rights. Its findings are mainly based on a global online survey of 853 senior corporate executives carried out in November and December 2014.³⁶ The EIU report is a fundamental piece of research in the business and human rights field, in particular given the importance of tracking progress in the implementation of emerging global standards, such as the UN Guiding Principles on Business and Human Rights (UNGPs) and the OECD Guidelines for Multinational Enterprises. This article offers a brief summary of the most interesting findings of the EIU

³⁵ International Civil Aviation Organization (2022) *How ICAO Develops Standards*. Available from: <https://www.icao.int/about-icao/AirNavigationCommission/Pages/how-icao-develops-standards.aspx> [Accessed December 23, 2022] © International Civil Aviation Organization

³⁶ de Felice, D. (2015) *What is the business view on human rights?* Available from: <https://www.weforum.org/agenda/2015/05/what-is-the-business-view-on-human-rights/> [Accessed march 19, 2021] ©2021 World Economic Forum

report, based on my experience as co-director of the [Measuring Business & Human Rights](#) project.

1.8.1 Reasons for optimism

One of the most encouraging findings of the EIU report is that a very large number of business executives acknowledge that companies should respect human rights, wherever they operate. Eighty-four percent of the respondents disagreed with the statement that “respecting human rights is a matter for governments, not for business”, while 71% of them disagreed with the statement that “the corporate responsibility to respect for human rights means only complying with relevant local laws”. This finding holds true even when business executives are confronted with real-case scenarios where adverse human rights impacts are not directly caused by their companies but indirectly linked to them through business relationships. For example, 85% of the respondents think that “sponsors of major global sporting events should use their influence to ensure the rights of workers and local communities involved with the preparation are respected by all”. Human rights issues are also increasingly mainstreamed within companies. Eighty-five percent of respondents reported that the CEO of their company is involved in meeting their company’s responsibility to respect human rights. Almost half of the respondents further specified that the CEO is actually taking the lead in this process. Furthermore, the survey challenged the assumption that companies generally oppose regulation.³⁷ According to 57% of the respondents, a new legally-binding international treaty on business and human rights would be useful in helping their business respect human rights. Thirty percent of the respondents highlighted that mandatory human rights due diligence would enable companies to better fulfil their corporate responsibility to respect human rights.

1.8.2 Reasons for concern

According to the UNGPs and the OECD guidelines, the first (and arguably easiest) step of human rights due diligence is the adoption of a public statement on human rights. Disappointingly, only 22% of the companies surveyed by the EIU have already adopted a policy

³⁷ de Felice, D. (2015) *What is the business view on human rights?* Available from:

<https://www.weforum.org/agenda/2015/05/what-is-the-business-view-on-human-rights/> [Accessed march 19, 2021] ©2021

World Economic Forum

statement that explicitly references “human rights”. Even worse, short-term improvement seems unlikely. Only 6% of the companies plan to issue a public statement of policy outlining our commitment to respect human rights in the next 12 months. The low levels of adoption of human rights policies are linked to a serious problem of misperception. The EIU report performed a separate analysis of the quarter of respondents who *strongly* agreed with the statement that their company outperforms competitors on human rights policy.³⁸ The companies in this self-benchmarked group of 210 firms were defined by the EIU as “leaders”. Unsurprisingly, “leaders” are more likely than others to have a public statement of policy. Yet, the percentage is still very low: 30% (compared with 19% among non-leaders). This means that 130 self-benchmarked human rights “leaders” think that they outperform their competitors on human rights even though they still lack a publicly available policy statement on human rights. Misperception is accompanied by lack of vision. The survey asked the human rights priorities for the respondents’ companies over the next 12 months. The EIU facilitated the task, and suggested several options, such as “strengthen company’s ability to monitor and assess the impact on human rights related to its business relationships (eg, business partners, suppliers, etc.)” and “strengthen relationship with national governments on human rights issues”. One fifth of the respondents answered: “None of the above”. An additional 12% replied that they do not know. Lastly, the EIU report confirmed that short-termism from investors and shareholders still represents a crucially missing link between wider societal concerns and corporate actions. Only 11% of the respondents considered pressure/encouragement from shareholders (including state owners) to be one of the biggest drivers for their company’s commitment to respect human rights. When asked about the level of involvement of different functions in meeting the company’s responsibility to respect human rights, “investor relations” ranked very low.

1.8.4 The importance of tracking progress

As the business community seems to agree that companies have human rights responsibilities, tracking the evolution of corporate thinking vis-à-vis emerging global standards becomes a crucial exercise. Without a clear understanding of the corporate perception regarding business

³⁸ de Felice, D. (2015) *What is the business view on human rights?* Available from: <https://www.weforum.org/agenda/2015/05/what-is-the-business-view-on-human-rights/> [Accessed march 19, 2021] ©2021 World Economic Forum

and human rights issues, it is impossible to know which topics need more attention, and which initiatives are likely to be more effective”³⁹ (de Felice, D., 2015, <https://www.weforum.org/agenda/2015/05/what-is-the-business-view-on-human-rights/>). The following section will cover information about people smuggling and human trafficking in-depth.

1.9 Educational facts about ‘human trafficking’ and ‘people smuggling’ during migration (via air, road and sea transport)

⁴⁰“Victims of trafficking end up in the hands of traffickers because they are being deceived, being forced or abducted. Human trafficking and smuggling are two different crimes. However, the two are related and often intertwined. *Human trafficking* is involuntary and victims are exploited, whereas *smuggling* is voluntary, yet still bears life-threatening risks. A *smuggling case can become human trafficking* if the victims are exploited, for example by being held for ransom, or to pay off a smuggling debt through forced labour or sex work” (UNHCR, the UN Refugee Agency, 2021, <https://www.unhcr.org/afr/human-trafficking.html>). **What is ‘people smuggling’.** “*People smuggling*. The smuggling of migrants, as defined in Article 3(a) of the [Smuggling of Migrants Protocol](#), involves the facilitation of a person’s illegal entry into a State, for a financial or other material benefit. Although it is a crime against a State, smugglers can also violate the human rights of those they smuggle, ranging from physical abuse to withholding food and water. Given increasing obstacles to access safety, however, refugees, asylum-seekers and other persons in need of international protection are often compelled to use smugglers as their only means to flee persecution, conflict and violence” (UNHCR, the UN Refugee Agency, 2021, <https://www.unhcr.org/afr/smuggling-of-migrants-and-refugees.html>). In the following section a brief background of people smuggling will be covered in-depth.

³⁹ de Felice, D. (2015) *What is the business view on human rights?* Available from: <https://www.weforum.org/agenda/2015/05/what-is-the-business-view-on-human-rights/> [Accessed March 19, 2021] ©2021 World Economic Forum

⁴⁰ “From [*Trafficking in persons*], by [UNHCR, the UN Refugee Agency, <https://www.unhcr.org/afr/human-trafficking.html>]. © UNHCR, the UN Refugee Agency [2021]. April 24, 2021. Reprinted with the permission of the United Nations.”

1.9.1 Brief background on people smuggling trends around the world

⁴¹“Complex criminal networks facilitate the illegal passage of migrants across borders – for a price. *High profits*. People smuggling syndicates are run like businesses, with high profit margins and relatively low risks. Hundreds of thousands of people leave their home countries every year to escape conflict and poverty. Many are willing to take desperate measures in the hopes of finding a better life. Transnational organized crime groups know this and take advantage of people’s desperation. They facilitate the passage of migrants with little or no regard for their safety and wellbeing. What matters is the money. The United Nations Office on Drugs and Crime estimates that at least 2.5 million migrants were smuggled in 2016, generating nearly USD 7 billion for people smugglers. People smuggling is closely tied to the use of fraudulent travel documents and is linked to other crimes such as illicit money flows, corruption, terrorism, trafficking in illicit goods and human trafficking. At INTERPOL, our activities focus on identifying and arresting the criminals involved in smuggling, but not the migrants themselves. Our response includes:

- Operations to dismantle the criminal networks behind people smuggling and related crimes;
- Specialized training for frontline officers in our member countries;
- Investigative support for complex international cases;
- The INTERPOL Specialized Operational Network of experts on smuggling” (INTERPOL, 2021, <https://www.interpol.int/en/Crimes/People-smuggling>). © Interpol. The conclusion of this chapter will be covered in the following section.

1.10 Conclusion

During the early days when aircraft and airports were first introduced the early airports and aircrafts were much smaller in size and overtime when the number of global travelers increased the sizes of airports and aircraft increased as well. It can be concluded that the airports and

⁴¹ INTERPOL (2021) *People Smuggling*. Available from: <https://www.interpol.int/en/Crimes/People-smuggling> [Accessed March 22, 2021] Copyright © INTERPOL All rights reserved.

aviation industry has successfully managed to bring together people from different geographical locations for both personal and business purposes. The airports and aviation industry is considered to be one of the most innovative and resilient industry. As a result massive infrastructure development projects have been implemented in various countries around the world. It can be concluded that the airports and aviation industry significantly leads to increased nation brand values and international trade. It can also be concluded that sustainability (environment conservation) is now a critical ingredient that helps airports to achieve their set goals and vision statement. Most of the airports around the world are now adapting green energy solutions in their day-to-day operations to become more climate friendly and remain highly competitive. Airports in general attract new infrastructure investments in a country due to high traffic and the high demand of goods or services in the country. It can be concluded that airports, travel agencies and airlines must ensure that they clearly communicate about travel tips to travelers in order to provide travelers with a fast memorable customer experience.

1.11 Review questions

- 1) Define the following terms ‘business aviation’ and ‘general aviation’? Discuss what is an ‘airport’? Explain the brief history of airports?
- 2) Identify the common tips for travelers at global airports?
- 3) Explain what is ‘air traffic services’ (ATS)? Describe relevant examples of the leading airports and aviation associations, councils, conferences and federations in the world?
- 4) Discuss the different views of the business community in relation to human rights? Describe in greater detail the educational facts about ‘human trafficking’ and ‘people smuggling’ during migration?

Chapter 2: Switzerland, United States of America, The Netherlands, Canada & Germany Airports

After reading this chapter you should be able to:

- Define the following terms ‘world’ and ‘nation brand’. Describe the important facts about Zurich International Airport and Genève Aéroport/Geneva Airport. Discuss the important facts about Denver International Airport (DEN).
- List the important facts about Amsterdam Airport Schiphol. Describe the important facts about Vancouver International Airport (YVR).
- List the important facts about Munich Airport.

2.1 Introduction

⁴²According to the International Civil Aviation Organization (ICAO) (2019:19-20) **Aviation Supports Tourism**. Air transport activities affect multiple sectors of the economy, especially tourism. The connectivity brought by air transport is at the heart of tourism development, providing substantial economic benefits for all those involved in the tourism value chain. Currently, approximately 1.4 billion tourists are crossing borders every year, over half of whom arrived at their destinations by air. Particularly for Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS), tourism is a main source of foreign exchange earnings and often one of the few activities for which their location, coupled with exceptional natural and cultural resources, is a strong competitive advantage. If tourism is well managed with a strong support by air transport, it can reduce poverty levels through employment of local people in tourism enterprises, goods and services provided to tourists, or the running of small and community based enterprises, etc. Business tourism, specifically meetings, incentives, conferences and exhibitions (MICE) activity, relies

⁴² ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

significantly on the availability of air travel and can generate a bigger economic impact because business travellers spend more, at least per day, than leisure visitors do. In addition to the expected benefits in the hotel, restaurant, and retail sectors, tourism also fosters growth in industries as varied as agriculture, business services, construction, and real estate. **A Driver of Global Trade and E-Commerce.** As a trade facilitator, aviation increases the global reach of businesses, enabling them to get products to market in a more convenient and quicker way. It allows businesses to be more responsive to the needs of customers and improves communication between buyers and sellers, including just-in-time inventory management and build-to-order production. Lower transport costs and improved connectivity have boosted trade flows by globalizing supply chains and associated investments. The availability of air transport allows especially LDCs, LLDCs and SIDS to overcome infrequent boat services or poor infrastructure for ground transportation. Air cargo service routes are regarded as regional lifelines for these areas. **AFRICA.** Of all global regions, the African aviation market is probably the one with the most potential for growth. This is because of its emerging industrial sector and its potential in servicing a large and developing population. The economic activity of the continent is improving but is still catching up to other regions of the world⁴³ (ICAO, 2019:19-20, <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf>). The following section will cover information about the definition of terms in-depth.

2.2 Definition of terms

⁴⁴The definition of the term ‘*world*’ refers to everything that we see and touch from the North, South, East or West in all the countries (Rudolph. Patrick. Tawanda. Muteswa, 2022:13). ⁴⁵“For purposes of this textbook ‘*branding*’ refers to how a country, organization, group or individuals

⁴³ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

⁴⁴ Rudolph. Patrick. Tawanda. Muteswa (2022) *28 Amazingly Beautiful Countries in the World & Our World Heroes Towards Humanity (Gathered Articles): A Training Guide for Business Executives, Foreign Diplomats, International Students & Travelers* 1st Edition, Educational Ebook, p1- 146, ISBN: 978-1-77924-684-4

⁴⁵ Muteswa, R.P.T. (2021) *The Magnificence of Respecting Human Rights, Democracy & Freedoms in a Country & Organizations: (Gathered Articles): A North America, Asia, Africa, Oceania & Europe a 21st Century Perspective*. 1st Edition, ISBN 978-1-77921-415-7, Self -Published Book, p42 and p139.

want to: (1) appeal, (2) be viewed, (3) be differentiated, (4) be identified, (5) benchmarked and so on by both its internal stakeholders (*such as citizens, people, community, domestic market and so on*) and external stakeholders (*such as the international community, international bodies, foreign market and so on*)” (Rudolph. Patrick. Tawanda. Muteswa, 2021:41). The following section will cover information about Switzerland airports in-depth.

2.3 Switzerland (Zurich International Airport and Geneva Airport/Genève Aéroport)

Information about the Switzerland based Zurich International Airport will be discussed in greater detail in this section.

2.3.1 Zurich International Airport - ZRH

The full photographic view of the natural beauty of the Zurich Airport will be clearly depicted by Figure 2.1 below.

Figure 2.1 Zurich Airport outside natural beautiful views



Source: (C) Flughafen Zürich AG <https://www.flughafen-zuerich.ch/newsroom/en/zurich-airport-achieves-the-highest-level-in-the-airport-carbon-accreditation-programme/>

The outside infrastructure facilities at the Zurich Airport will be clearly depicted by Figure 2.2 below.

Figure 2.2 Zurich Airport outside infrastructure facilities



Source: (C) Flughafen Zürich AG, <https://www.flughafen-zuerich.ch/newsroom/en/photos-aviation-operations/>

⁴⁶“**Zurich Airport.** For years it has been known as "Europe's Leading Airport". Nowhere else do departing passengers, transiting passengers and home-coming passengers feel more comfortable than here. Zurich is also the home of SWISS” (Swiss International Air Lines, 2022, <https://www.swiss.com/pl/en/fly/airport/zurich-airport>). The beautiful aerial views of Zurich Airport are clearly depicted by Figure 2.3 below.

⁴⁶ Swiss International Air Lines (2022) *Zurich Airport*. Available from: <https://www.swiss.com/pl/en/fly/airport/zurich-airport> [Accessed December 27, 2022] © Swiss International Air Lines

Figure 2.3 Zurich Airport beautiful aerial views



Source: (C) Flughafen Zürich AG, <https://www.flughafen-zuerich.ch/newsroom/en/photos-aerial-images/>

“**Location and getting here.** Zurich airport is only 11 minutes by train from the city centre. It is easy to get here by rail or car. Zurich is the commercial centre of the country. Switzerland's biggest city is also the perfect starting point for trips into the Swiss mountains. **An interesting and entertaining stay.** Zurich airport is a manageable size, which means transfer times and routes are short. It will take you a maximum of 30 minutes¹⁴⁷ to get from the check-in desk to the gate. And yet passengers and guests find that the attractive, ultra modern infrastructure here is an important hub in international air traffic. There are over 80 shops for you in the Airside Center. Seven days a week, until 9 p.m. (groceries until 11 p.m.). A fast Internet and WiFi service is available all over the airport, which you are welcome to use for two hours free of charge” (Swiss International Air Lines, 2022, <https://www.swiss.com/pl/en/fly/airport/zurich-airport>). Another full photographic view of the shopping and restaurant facilities inside the Zurich Airport will be clearly depicted by Figure 2.4 below.

⁴⁷ No responsibility is taken for the correctness of this information

Figure 2.4 Zurich Airport shopping & restaurant facilities



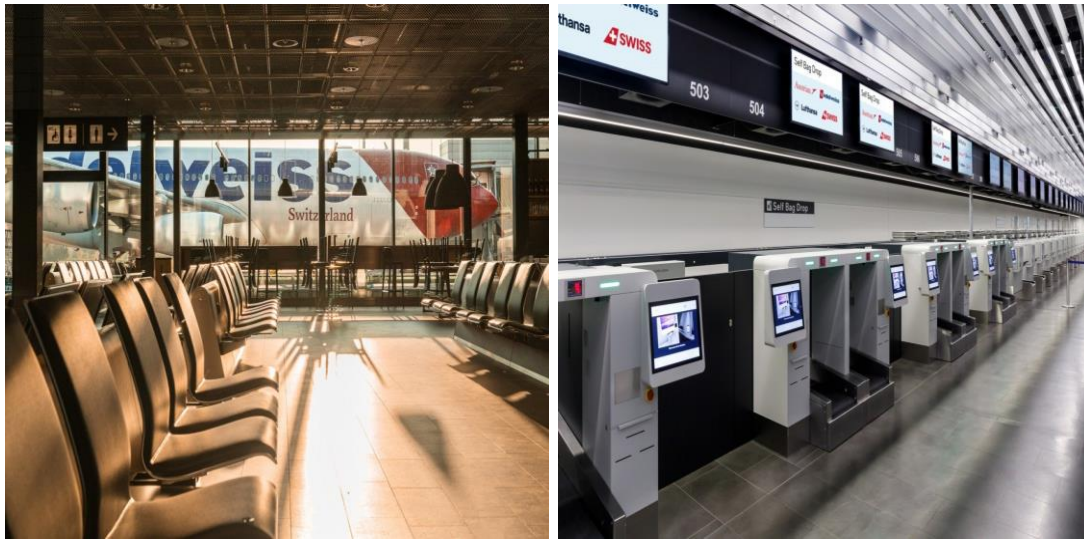
Source: (C) Flughafen Zürich AG <https://www.flughafen-zuerich.ch/newsroom/en/photos-shopping-restaurants/>

⁴⁸“**Flughafen Zürich AG wins award for best airport website in Europe.** As part of the World Travel Tech Awards, the digital experience platform [flughafen-zuerich.ch](https://www.flughafen-zuerich.ch) was named the best airport website in Europe. In addition to Zurich Airport, the websites of Munich Airport, Amsterdam Schiphol and London Heathrow were also nominated. Users and experts alike were able to cast their votes. The World Travel Tech Awards are part of the World Travel Awards and took place for the second time this year. *We are proud to receive this award.* It also honors our digital agency Unic as well as the rest of our partners, who are always committed to further developing and finding new solutions for our passengers, visitors and employees **Stefan Gross, Chief Commercial Officer of Flughafen Zürich AG.** Creating personalized experiences. To ensure an integrated customer experience for passengers and visitors, customer-centric solutions on Flughafen Zürich AG's digital platforms are key. By combining physical and digital experiences, passengers and visitors are supported during their stay at Zurich Airport. The focus

⁴⁸ Flughafen Zürich AG (2022) *Flughafen Zürich AG wins award for best airport website in Europe.* Available from: <https://www.flughafen-zuerich.ch/newsroom/en/flughafen-zuerich-ag-wins-award-for-best-airport-website-in-europe/> [Accessed December 10, 2022]

is on personalizing the experience and the information relevant to it. For example, flight information is presented in a way that is individually tailored to the user's situation. In addition to the latest flight information, the website and messenger services can be used to look up all the information about the stores, catering, services, experiences and events on offer. An interactive map also facilitates orientation. In October 2021, Zurich Airport additionally became the first airport in the world to introduce Google Maps Indoor Live View” (Stefan Gross, Chief Commercial Officer of Flughafen Zürich AG cited in Flughafen Zürich AG, 2022, <https://www.flughafen-zuerich.ch/newsroom/en/flughafen-zuerich-ag-wins-award-for-best-airport-website-in-europe/>). (Courtesy of Google Inc.). ©2017 Google LLC, used with permission. Google and the Google logo are registered trademarks of Google LLC. The state-of-the-art buildings and the aviation operations facilities of Zurich Airport will be clearly depicted in Figure 2.5 below.

Figure 2.5 Zurich Airport state-of-the-art buildings and the aviation operations facilities



Source: (C) Flughafen Zürich AG, <https://www.flughafen-zuerich.ch/newsroom/en/photos-aviation-operations/>



Source: (C) Flughafen Zürich AG, <https://www.flughafen-zuerich.ch/newsroom/en/photos-buildings-infrastructure/>

The positive impact of Zurich Airport to the economy of the amazingly beautiful great nation of Switzerland was clearly highlighted in a study conducted by the independent research and consultancy company Infras for the year of 2021 on behalf of Flughafen Zürich AG (2022) in an article titled ‘*Study confirms significant economic importance of Zurich Airport*’ published via

www.flughafen-zuerich.ch. According to Flughafen Zürich AG (2022) ⁴⁹The latest study by Infrac highlights the significant economic importance of Zurich Airport, which generates CHF 7 billion in added value and creates jobs for 27,400 employees at over 300 companies. Every five years, Flughafen Zürich AG has its key economic figures surveyed by an external company. The latest study was carried out by the independent research and consultancy company Infrac for the reference year 2021. The calculations were based on two scenarios: the value created without COVID-19 (on the basis of growth in 2017-2019) and the actual loss due to the pandemic compared to the last survey five years ago. The Circle, which was opened in 2020, was included in the survey for the first time. **7 billion Swiss francs of value generated.** The companies located at Zurich Airport would have generated 7 billion francs a year without the COVID-19 pandemic. This is equivalent to 4.4% of the GDP of the canton of Zurich or just under 1% of national GDP. Compared with the last survey in 2016, this equates to a growth rate of almost 40%, mainly due to the opening of The Circle. **The COVID effect.** The aviation industry and Zurich Airport were severely affected by the coronavirus pandemic, however. In 2021 the number of full-time equivalents (FTEs) at Zurich Airport fell by 14% compared to 2016, leading to a 43% loss of productivity. This was partly offset by the opening of the Circle: the total value generated fell by 16%, while FTEs increased by 4% altogether to 22,800. **The Circle: 1.6 billion generated in the first year.** Since The Circle opened, around 85% of the space has been let to 48 companies employing over 5,000 people. The study showed that The Circle generated 1.6 billion francs in its first full year. **The importance of air freight.** Accounting for 40% of exports in terms of value (CHF 130 billion per year), air freight remains extremely important for the Swiss economy. Zurich Airport handles an average of 1,076 tons of freight each day, including transit goods. This highlights the importance of a dense network of long-haul routes for the Swiss economy. 99% of the freight at Zurich Airport is transported in the holds of passenger aircraft, of which 82% is destined for America and Asia. **About the study.** In order to calculate economic value generation in the narrower sense, the direct effects of companies and the indirect effects (products and services bought in) are combined. The study shows the importance of Zurich Airport as a

⁴⁹ Flughafen Zürich AG (2022) *Study confirms significant economic importance of Zurich Airport*. Available from: <https://www.flughafen-zuerich.ch/newsroom/en/study-confirms-significant-economic-importance-of-zurich-airport/> [Accessed December 10, 2022]

workplace and Switzerland's gateway to the world for the surrounding region, Canton Zurich and the whole of the country. The airport's core mission to offer as many direct flights to the major cities of the world as possible ensures Switzerland's connection to global markets and thus the prosperity of the country and the airport region⁵⁰ (Flughafen Zürich AG, 2022, <https://www.flughafen-zuerich.ch/newsroom/en/study-confirms-significant-economic-importance-of-zurich-airport/>). The highly attractive infrastructure facilities at Zurich Airport are also clearly depicted by Figure 2.6 below.

Figure 2.6 Zurich Airport highly attractive infrastructure facilities



Source: (C) Flughafen Zürich AG, <https://www.flughafen-zuerich.ch/newsroom/en/photos-aviation-operations/>

Furthermore, the climate change achievements of Zurich Airport were clearly highlighted in a article by Flughafen Zürich AG (2022) article titled ‘*Zurich Airport achieves the highest level in the Airport Carbon Accreditation programme*’ published via www.flughafen-zuerich.ch.

⁵⁰ Flughafen Zürich AG (2022) *Study confirms significant economic importance of Zurich Airport*. Available from: <https://www.flughafen-zuerich.ch/newsroom/en/study-confirms-significant-economic-importance-of-zurich-airport/> [Accessed December 10, 2022]

According to Flughafen Zürich AG (2022) ⁵¹Flughafen Zürich AG has taken another step forward in terms of climate protection, reaching the fourth Airport Carbon Accreditation (ACA) level. This puts Zurich Airport among the top 10 % of airports worldwide that have received accreditation for their efforts to tackle climate change. ACA, the certification programme introduced by Airports Council International (ACI), verifies airports' management of their greenhouse gas emissions and provides a common framework for comparing them. Level 4 requires a greenhouse gas reduction target in line with the Paris Agreement, a corresponding defined roadmap, and evidence that airport partners are also being actively urged to deliver emissions reductions. Flughafen Zürich AG fulfils these requirements and has even greater ambitions: it aims to reduce its greenhouse gas emissions at Zurich Airport to net zero by 2040. **Investment in buildings, vehicles and substitute fuels.** Flughafen Zürich AG achieved Level 3 back in 2010 by reducing its emissions by around 30 % compared with 1991 and by engaging its airport partners to reduce their own emissions. The company aims to pursue these efforts in future. Flughafen Zürich AG has refrained from offsetting its greenhouse gas emissions via carbon credits, instead investing this money in creating actual reductions at its Zurich site: by renovating buildings, implementing energy efficiency measures for its facilities, switching to electric vehicles, and replacing fossil fuels with renewable alternatives. ACA is an accreditation programme launched by ACI with the objective of reporting on airports' commitments to tackle climate change. Around 420 airports worldwide have already received accreditation (Flughafen Zürich AG, 2022, <https://www.flughafen-zuerich.ch/>). The following section will cover information about Geneva Airport/Genève Aéroport in-depth below.

2.3.2 Geneva Airport/Genève Aéroport

The highly attractive architectural building infrastructure design of Genève Aéroport which will be open during the year 2030 will be depicted clearly by Figure 2.7 below. In addition the

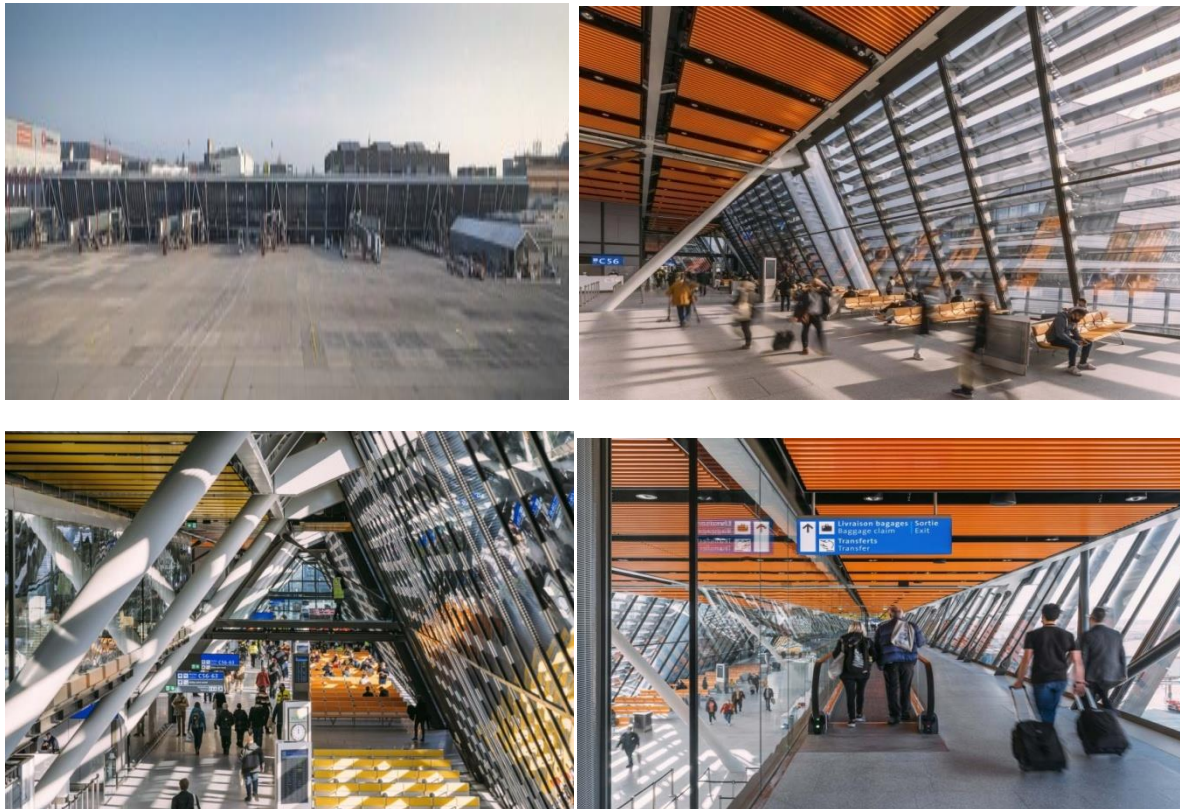
⁵¹ Flughafen Zürich AG (2022) *Zurich Airport achieves the highest level in the Airport Carbon Accreditation programme.* Available from: <https://www.flughafen-zuerich.ch/newsroom/en/zurich-airport-achieves-the-highest-level-in-the-airport-carbon-accreditation-programme/#:~:text=Flughafen%20Z%C3%BCrich%20AG%20has%20taken,efforts%20to%20tackle%20climate%20change> [Accessed December 10, 2022]

currently open East Wing of Genève Aéroport will be clearly depicted by Figure 2.7 below under photographs copyrighted by Joas Souza - joas.co.uk.

Figure 2.7 Genève Aéroport Projet Cap 2030, Vue plateforme multimodale and the currently open East Wing



Source: (Genève Aéroport, 2023, **Projet Cap 2030, Vue plateforme multimodale**, <https://newsroom.gva.ch/media-library>). Copyright © Genève Aéroport. All rights reserved



Source: (Genève Aéroport, 2022, **Vue panoramique, Ailes Est**, <https://newsroom.gva.ch/en/press-kit-east-wing/>). Genève Aéroport. Copyright Joas Souza - joas.co.uk

⁵²“**Geneva Airport.** This airport is a practical hub for transit passengers, and the perfect place for travellers who like an airport that is clear and yet international. **Location and getting here.** Geneva airport is around 5 km north of Switzerland's second biggest city, on the French border. It's just 7 minutes by train from Geneva city centre to the airport. In winter, shuttles buses take incoming winter sports lovers straight to the renowned ski resorts in the French Alps. **Worldwide destinations.** Its exceptional connections and the attractive prices make Geneva Airport an interesting hub for passengers from all over the world.

- Route network with 42 destinations within Europe and North America, plus Marrakech, Cairo and Tel Aviv
- Up to 9 flights per day to Zurich for onward travel
- Additional destinations including Heraklion, Corfu, Olbia, Catania and Ajaccio during the summer season
- Extensive route network thanks to partner airlines from Lufthansa Group and Star Alliance

Exclusive Business Class bus service. SWISS Business Class passengers arriving in Geneva whose flight is handled at a “remote” stand away from the airport docks can enjoy an exclusive additional service. On arrival, they will find a special bus waiting to carry them quickly and promptly to the terminal building”” (Swiss International Air Lines, 2022, <https://www.swiss.com/ch/en/fly/airport/geneva-airport>). The highly attractive eco-friendly building infrastructure facilities of Genève Aéroport are clearly depicted by Figure 2.8 below.

⁵² Swiss International Air Lines (2022) *Geneva Airport*. Available from: <https://www.swiss.com/ch/en/fly/airport/geneva-airport> [Accessed December 15, 2022] © Swiss International Air Lines

Figure 2.8 Genève Aéroport highly attractive eco-friendly building infrastructure facilities



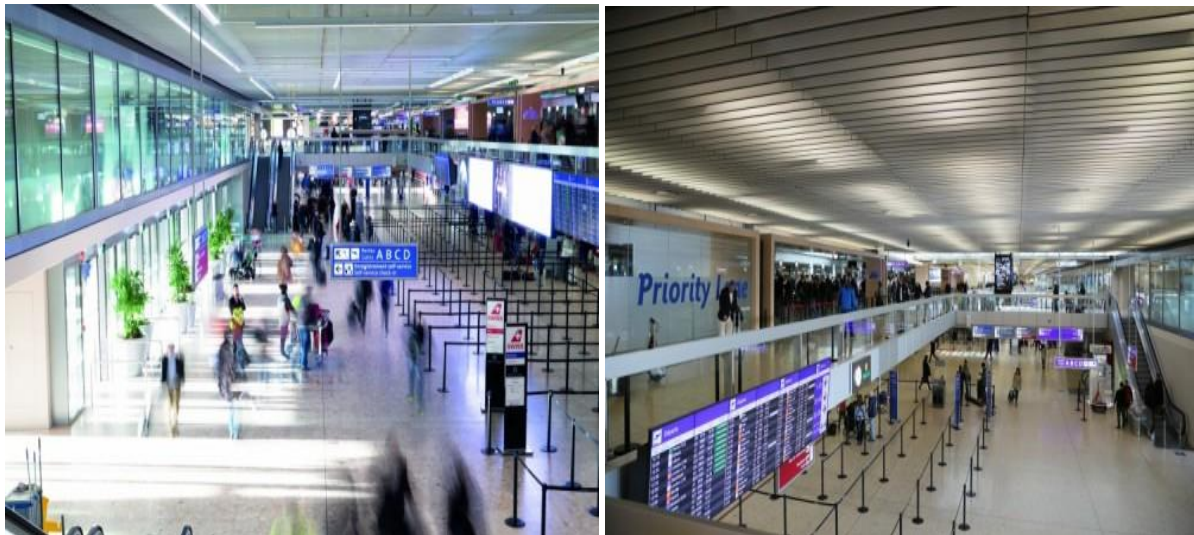
Source: (Genève Aéroport, 2023, Panneaux solaires sur l'Aile Est Genève Aéroport, <https://newsroom.gva.ch/mediatheque/>) © Genève Aéroport

⁵³According to Genève Aéroport (2022) **GENÈVE AÉROPORT PUTS INTO SERVICE THE 3E LARGEST SOLAR ROOF OF THE CANTON OF GENEVA**. Genève Aéroport is taking another step in its energy transition. A new large-scale solar installation was commissioned on 13 October on the roof of the East Wing. 6,700 m² of photovoltaic panels will produce electricity to cover the consumption of this high-performance terminal. This large-scale installation, financed and operated by SIG, makes the East Wing the third largest solar roof in the canton of Geneva. **More than 3'700 solar panels**. The East Wing building, mainly dedicated to long-haul flights, was officially opened on 14 December 2021. It significantly improves the reception of passengers on continental and intercontinental flights, while meeting current standards. A new

⁵³ Genève Aéroport (2022) *GENÈVE AÉROPORT PUTS INTO SERVICE THE 3E LARGEST SOLAR ROOF OF THE CANTON OF GENEVA*. Available from: <https://www.gva.ch/en/Site/Geneve-Aeroport/News/2024-2015/Geneve-Aeroport-met-en-service-la-3e-plus-grande-t> [Accessed December 19, 2022] Copyright © Genève Aéroport. All rights reserved.

solar system has been installed on the roof of the building. 6,700 m² of photovoltaic panels are spread over the 520 metre length of the building. The 3,773 modules will produce 1.5 GWh of electricity per year, which will cover the building's consumption of more than 40,000 m². This installation makes the East Wing the **third largest solar roof in the canton of Geneva** installed by SIG, behind Palexpo (15,000 m²) and the Aïre water treatment plant (7,200 m²). It also completes the energy exemplarity expected of this building designed to be a sustainable model. (Genève Aéroport, 2022, <https://www.gva.ch/en/Site/Geneve-Aeroport/News/2024-2015/Geneve-Aeroport-met-en-service-la-3e-plus-grande-t>). The modern world class check-in halls of Genève Aéroport are clearly depicted by Figure 2.9 below.

Figure 2.9 Genève Aéroport modern world class check-in halls



Source: (Genève Aéroport, 2023, **Hall check-in** Intérieur du hall check-in au T1, ref. C08A1557 and **Hall check-in (02)** Vue intérieur du terminal, ref. Hall-T1_02, <https://newsroom.gva.ch/mediatheque/>) © Genève Aéroport

““**GENÈVE AÉROPORT REWARDED FOR LISTENING TO PASSENGERS.** Despite the Covid-19 epidemic, Genève Aéroport has never stopped receiving comments from its passengers. The ACI (Airport Council International) recognised the airport for its efforts in this domain. On Monday 8 February, Genève Aéroport was awarded the «Voice of the Customer» distinction by the ACI (Airport Council International). This initiative, implemented in 2020, rewards airports that have maintained ASQ (Airport Service Quality) surveys despite the pandemic. This customer satisfaction survey programme measures the airport's performance and provides information on customer behaviour and expectations. Genève Aéroport goes to great

lengths to gather feedback from its passengers. For the past fifteen years, surveys have been carried out throughout the year in order to get to know the airport users, assess the quality of the services on offer and measure passenger satisfaction. Except during the partial lockdown period, these measures were carried out in 2020. Nearly 1'600 passengers responded to the ASQ surveys from Genève Aéroport. The results are particularly encouraging for the airport, especially since the start of the health crisis. In fact, passenger satisfaction has risen to its highest level since surveys were introduced at Genève Aéroport. Passengers' sense of safety has improved significantly, demonstrating the usefulness of the services and measures put in place against Covid-19 by the airport. The particularly short waiting times and the greater space available in the terminal, due to the low number of passengers, are the main reasons for this marked improvement. The courtesy of the staff on duty was particularly appreciated, a key element to ensure an optimal passenger experience”” (Genève Aéroport, 2021, <https://www.gva.ch/en/Site/Geneve-Aeroport/News/2024-2015/Geneve-Aeroport-recompense-pour-son-ecoute-des-pas>). The world class tarmac and runways infrastructure of Genève Aéroport will be clearly depicted by Figure 2.10 below.

Figure 2.10 Genève Aéroport world class tarmac and runways infrastructure



Source: (Genève Aéroport, 2023, **Amortisseur de bruit** Tarmac et amortisseur de bruit, ref C08A8876[1] and **Vue depuis Skyguide (02)** ref. Skyguide-vue_02, <https://newsroom.gva.ch/mediatheque/>). © Genève Aéroport



Source: (Genève Aéroport, 2023, **Avion Swiss-bombardier (01)** ref. Swiss-bombardier-cs_01 and **Toit de panneaux solaires (03)** ref. Panneau-solaire_03, and **Genève Aéroport runway**, View on the track, ref C08A107, <https://newsroom.gva.ch/mediatheque/>). © Genève Aéroport

⁵⁴According to Genève Aéroport (2022) **GENÈVE AÉROPORT: OFFICIAL INAUGURATION OF THE KOFI ANNAN LOUNGE**. Genève Aéroport today officially inaugurated the protocol

⁵⁴ Genève Aéroport (2022) *GENÈVE AÉROPORT: OFFICIAL INAUGURATION OF THE KOFI ANNAN LOUNGE*. Available from: <https://www.gva.ch/en/Site/Genève-Aéroport/News/2024-2015/Genève-Aéroport-inauguration-officielle-de-1%E2%80%99Espace> [Accessed December 12, 2022] Copyright © Genève Aéroport. All rights reserved

lounge, renamed Espace Kofi Annan. The ceremony took place in the presence of Mrs. Nane Annan, the Director General of the United Nations Office, heads of international organisations and a large number of ambassadors. In April 2020, in agreement with the Federal Department of Foreign Affairs and the Kofi Annan Foundation, the name of the former UN Secretary General was given to this lounge. This gesture is a tribute to a man who always fought to strengthen international cooperation. The Kofi Annan Lounge is decorated with images and powerful phrases spoken by Mr. Annan, which are intended to inspire all high-level dignitaries who come to Geneva to find answers to the world's challenges. Initially scheduled for spring 2020, the inauguration of the Kofi Annan Lounge was postponed due to the measures to counter the pandemic. But throughout the last few months, protocol activity has continued at Geneva Airport. **The vocation of Genève Aéroport Protocol service.** Genève Aéroport is one of the few airports with a Protocol Service. Its activity bears witness to the role Geneva plays on the international scene. Since the beginning of 2022 and until 30 September, we have welcomed 2394 dignitaries and diplomats, compared to 1335 for the whole of 2021. In 2019, Genève Aéroport's Protocol Service recorded a record level of 4,790 high-level personalities, including 76 Heads of State, 88 Prime Ministers, 227 Foreign Ministers and 763 members of royal families. The main purpose of the Protocol Service is to receive VIPs and to enable ambassadors based in Geneva to meet and escort their ministers or Heads of State to the aircraft door. In addition to an attentive welcome, it takes care of the formalities - passports and luggage - the security check, and offers a passage and privileged access to the aircraft (airline or private), a meeting and working area⁵⁵ (Genève Aéroport, 2022, <https://www.gva.ch/en/Site/Geneve-Aeroport/News/2024-2015/Geneve-Aeroport-inauguration-officielle-de-l%E2%80%99Espace>). The following section will cover information about the United States of America airports in-depth.

⁵⁵ Genève Aéroport (2022) *GENÈVE AÉROPORT: OFFICIAL INAUGURATION OF THE KOFI ANNAN LOUNGE*. Available from: <https://www.gva.ch/en/Site/Geneve-Aeroport/News/2024-2015/Geneve-Aeroport-inauguration-officielle-de-l%E2%80%99Espace> [Accessed December 12, 2022] Copyright © Genève Aéroport. All rights reserved

2.4 United States of America (**Denver International Airport – DEN, Colorado**)

The United States of America will forever be globally recognized for its pioneering spirit in the airports and aviation industry in particular the construction of mega modern state-of-the-art airports. Many countries were inspired by the historical highly accomplished airport and aviation industry of the United States of America. The following section will cover information about Denver International Airport – DEN, Colorado.

2.4.1 Denver International Airport – DEN

The modern state-of-the-art and amazingly beautiful airport facilities of Denver International Airport will be clearly depicted by Figure 2.11 below.

Figure 2.11 Denver International Airport facilities



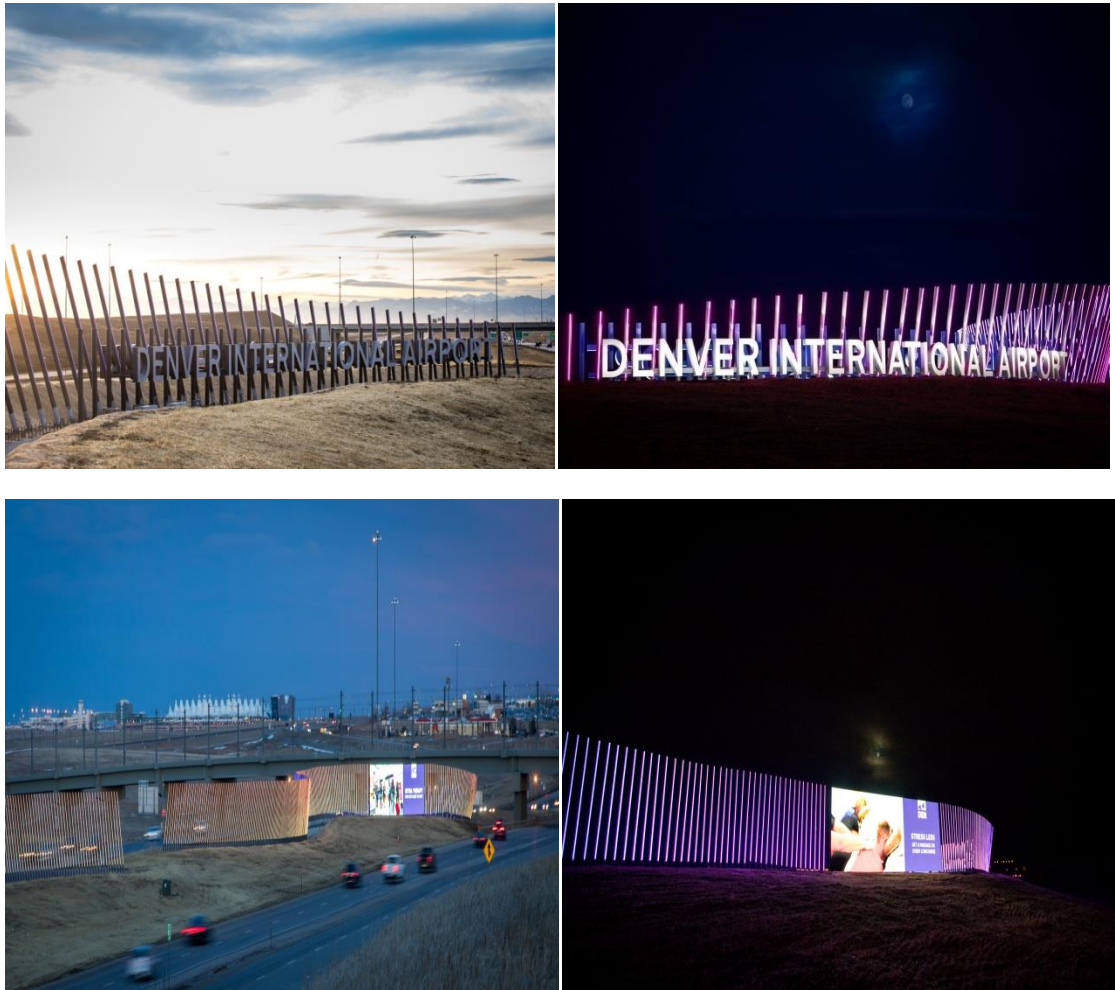
Source: “Photography provided courtesy of Denver International Airport”. Available from: <https://images.flydenver.com/Airport-Facilities>

⁵⁶“**About DEN.** Denver International Airport is the third-busiest airport in the world. With 69 million passengers traveling through the airport in 2019, DEN is one of the busiest airline hubs

⁵⁶ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *About*. Available from: <https://www.flydenver.com/about> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

in the world's largest aviation market. DEN is the primary economic engine for the state of Colorado, generating more than \$33.5 billion for the region annually” (Denver International Airport, DEN of the City & County of Denver Department of Aviation, 2022, <https://www.flydenver.com/about>). The visitor friendly welcoming-signs infrastructure of Denver International Airport (DEN) are clearly depicted by Figure 2.12 below.

Figure 2.12 Denver International Airport (DEN) visitor friendly welcoming-signs infrastructure



Source: “Photography provided courtesy of Denver International Airport”. Available from: <https://images.flydenver.com/Airport-Facilities/DEN-Welcome-Sign/>

⁵⁷“Denver International Airport's mission and vision is to provide excellence in service and support for 100 million annual passengers. DEN will accomplish this through four pillars and four guiding principles:

⁵⁷ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *About*. Available from: <https://www.flydenver.com/about> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

Pillars

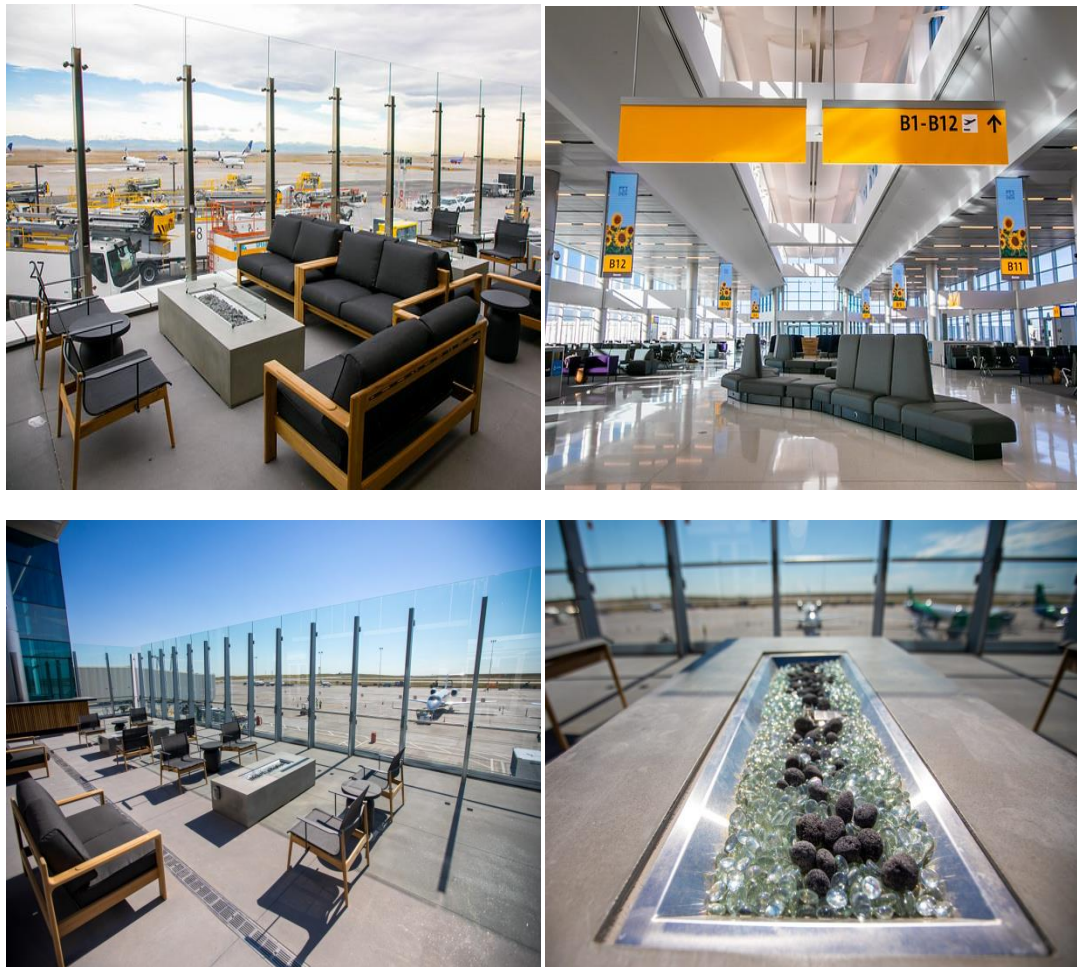
- **Powering Our People:** This includes those who work at DEN and community members who want to be part of DEN today or in the future. Ultimately, we want Denver to become THE place that businesses and governments around the world look to recruit and hire aviation talent.
- **Growing Our Infrastructure:** Investing and growing our facility to ensure DEN can accommodate 100 million annual passengers, a 30% increase in passenger traffic.
- **Maintaining What We Have:** The airport is turning 27 years old this year and is experiencing a great deal of wear and tear due to our increasing passenger volumes.
- **Expanding Our Global Connections:** We want to solidify Denver and DEN's place on the world map and create more business and tourism opportunities.

Guiding Principles:

- **Sustainability:** Our goal is to become the greenest airport in the world
- **Equity, Diversity, Inclusion & Accessibility:** We are better when everyone has a seat at the table and when we respect and listen to all viewpoint
- **Customer Experience:** This is our core business, and we have to exceed the needs and desires of travelers
- **Our Stakeholders:** DEN is bigger than just us. Many individuals, businesses and entities depend on our success including our airline partners, concessionaires, neighbors, businesses, local and federal agencies, elected official, travel and tourism partners, our employees and travelers. ⁵⁸"We must all work together to be successful!" (Denver International Airport, DEN of the City & County of Denver Department of Aviation, 2022, <https://www.flydenver.com/about>). Another full photographic view of the modern world class Denver International Airport interior facilities will be clearly depicted by Figure 2.13 below.

⁵⁸ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *About*. Available from: <https://www.flydenver.com/about> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

Figure 2.13 Denver International Airport interior facilities



Source: "Photography provided courtesy of Denver International Airport". Available from: <https://images.flydenver.com/Airport-Facilities/Concourse-B> & <https://images.flydenver.com/Airport-Facilities/Concourse-C/Concourse-C-Outdoor-Deck/>

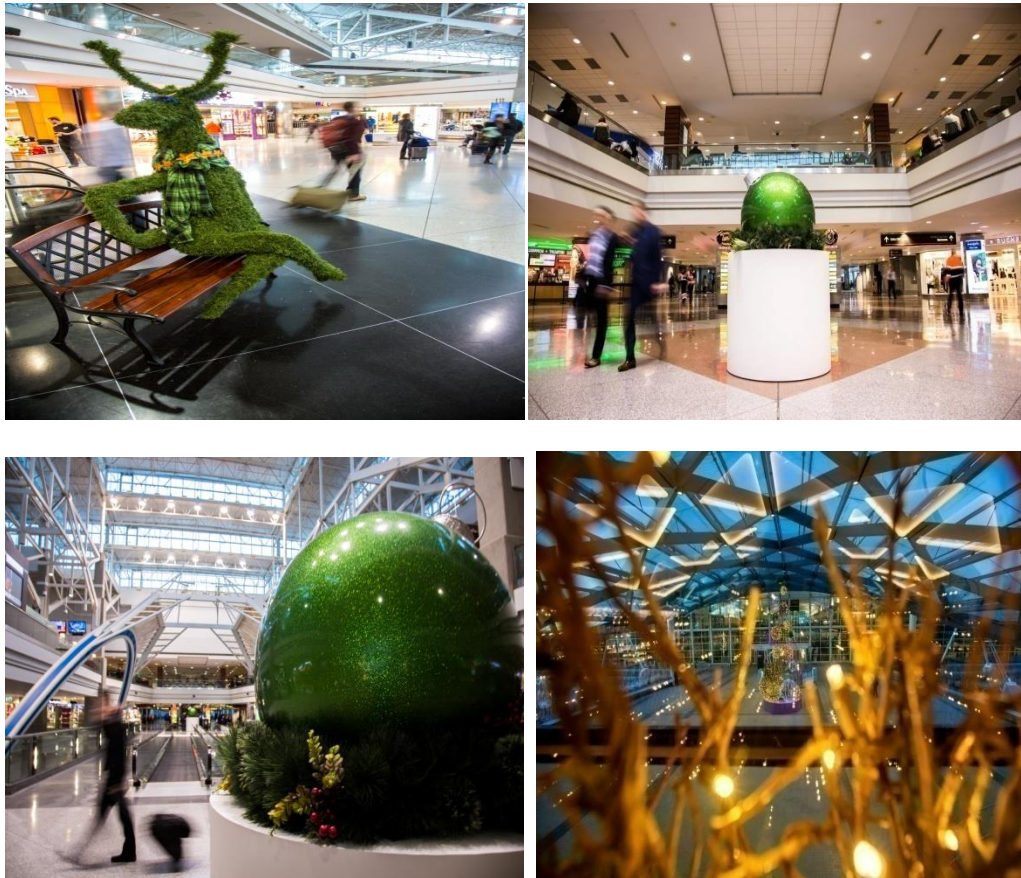
⁵⁹“**Governance, Operation and Control.** The City of Denver owns and operates Denver International Airport. Under the city charter, the management, operation and control of Denver International Airport is delegated to the city's Department of Aviation. Denver's mayor appoints a manager to direct the Department of Aviation, and the manager reports directly to the mayor. Denver has designated the department as an "enterprise" as defined by the Colorado Constitution, and the department has the authority to issue its own revenue bonds or other

⁵⁹ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *Management*. Available from: <https://www.flydenver.com/about/administration/management> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

financial obligations in the name of the city. Read more in the [City Charter](#). Search by keyword "aviation" or "airport system."” (Denver International Airport, DEN of the City & County of Denver Department of Aviation, 2022, <https://www.flydenver.com/about/administration/management>). The outstanding executives of the remarkable United States of America based Denver International Airport (DEN) include the following: Chief Executive Officer, Phillip A. Washington, Chief of Staff, Cristal DeHerrera, Chief Operating Officer, Steve Jaquith, Chief Financial Officer, Sylvester Lavender, Chief Commercial Officer, Penny May Chief Construction and Infrastructure Officer, James Starling⁶⁰ (Denver International Airport, DEN of the City & County of Denver Department of Aviation, 2022, <https://www.flydenver.com/about/administration/management>). The fun and amazing holidays and shopping infrastructure facilities at Denver International Airport (DEN) will be clearly depicted by Figure 2.14 below.

⁶⁰ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *Management*. Available from: <https://www.flydenver.com/about/administration/management> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

Figure 2.14 Denver International Airport (DEN) fun and amazing holidays and shopping infrastructure facilities



Source: “Photography provided courtesy of Denver International Airport”. Available from:

<https://images.flydenver.com/Airport-Facilities/Holidays-at-DEN/>

The future vision of Denver International Airport (DEN) and the positive impact of its operational activities to its community and the entire economy of the United States of America was clearly highlighted in an article by the Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) titled ‘*Message From CEO Phillip A. Washington: CEEA Renderings Revealed*’ published via <https://www.flydenver.com/>.

⁶¹“**Message From CEO Phillip A. Washington: CEEA Renderings Revealed.** Denver

⁶¹ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *Message From CEO Phillip A. Washington: CEEA Renderings Revealed*. Available from:

<https://www.flydenver.com/about/administration/management> [Accessed December 10, 2022] © City & County of Denver

Department of Aviation

International Airport (DEN) takes seriously its responsibility to provide opportunities for our neighbors who surround our airport. As the region’s largest economic engine, we want proximity to our operations to be beneficial to you. Earlier this year, we introduced a strategy to prepare the airport to serve an inevitable 100 million annual passengers within 10 years. We named that strategy Vision 100 and made sure to include the expectations of continuous stakeholder input and feedback. This message and the project it describes are in alignment with those guidelines. We also determined that a primary task would be to “power our people,” both current and future, by providing real opportunities for equity, diversity, inclusion and accessibility. Among the major projects currently under construction at DEN, the development of the Center of Equity and Excellence in Aviation (CEEA) may have the most long-term impact on the future of the airport. CEEA will become an economic powerhouse that will help DEN build and grow its future workforce. Anyone who either works at DEN or hopes to work at DEN one day will benefit from this institution. With the unveiling of first [conceptual renderings](#), you can now envision the resource that will soon be available to you, your friends, family and others interested in the aviation industry. The construction of this one-of-a-kind training center is being funded as part of the Great Hall Project. It creates a pipeline of aviation talent that will provide employees and under-represented individuals, of all ages and backgrounds, from surrounding communities opportunities to start and enhance careers in the aviation industry. CEEA is being constructed within 66,000 square feet of space on Level 4 of the Hotel and Transit Center, below the outdoor plaza. The focal point of the space will be the Hall of Equity, which will accommodate 300 people for training and educational purposes. Other adjacent lecture halls and training rooms will accommodate another 200 – 300 people. A pre-function lobby will feature a small café for networking and small group meetings. Construction will begin in late 2023. ⁶²Until then, we’re already implementing some of the programming that will call CEEA home, including:

- Business Development Training Academy: a program that supports small businesses by providing a systematic approach to entering DEN as a subcontractor in construction, professional services, goods and services, and concessions.

⁶² Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *Message From CEO Phillip A. Washington: CEEA Renderings Revealed*. Available from:

<https://www.flydenver.com/about/administration/management> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

- Career Pathways: a progressive training program that will help attract and retain the current and future workforce.
- The Research and Innovation Lab: will allow DEN to partner with local universities to conduct aviation research, identify best practices and adapt new and existing technology systems to innovate the aviation industry.

As a true tool for equity, CEEA will serve as a way for current and future employees to develop and hone the skills that will help them progress into more responsible and lucrative positions. We hope a good number of program graduates will choose to stay at DEN but we also hope CEEA will become recognized around the world as a source of expertly trained and highly motivated professionals ready to work in the aviation industry”⁶³ (Denver International Airport CEO Phillip A. Washington, 2022 cited in Denver International Airport, DEN of the City & County of Denver Department of Aviation, 2022, https://www.flydenver.com/message_ceo_phillip_washington_ceeda_renderings_revealed). The following section will cover information about The Netherlands airports in-depth.

2.5 The Netherlands (Amsterdam Airport Schiphol)

The modern eco-friendly state-of-the-art infrastructure of Amsterdam Airport Schiphol will be clearly depicted by Figure 2.15 below.

⁶³ Denver International Airport (DEN) of the City & County of Denver Department of Aviation (2022) *Message From CEO Phillip A. Washington: CEEA Renderings Revealed*. Available from: <https://www.flydenver.com/about/administration/management> [Accessed December 10, 2022] © City & County of Denver Department of Aviation

Figure 2.15 Amsterdam Airport Schiphol infrastructure



Source: (Amsterdam Airport Schiphol, 2022, <https://www.schiphol.nl/en/schiphol-group/page/sustainability-at-the-airport/>).

⁶⁴“**Fun facts about Amsterdam Airport Schiphol.** 296 direct destinations from Schiphol • 111 airlines flying at Schiphol. 266,967 air transport movements. 1.7 million tonnes of Cargo. 25.5 million passengers. 43.1% Transfer passengers. Airlines flying to and from AMS. Join good company. There are already 120 airlines that fly directly to and from Schiphol” (Amsterdam Airport Schiphol, 2022, <https://www.schiphol.nl/en/route-development/page/amsterdam-airport-schiphol-airport-facts/>). The customer friendly infrastructure of Amsterdam Airport Schiphol will be clearly depicted by Figure 2.16 below.

⁶⁴ Amsterdam Airport Schiphol (2022) *Fun facts about Amsterdam Airport Schiphol*. Available from:

<https://www.schiphol.nl/en/route-development/page/amsterdam-airport-schiphol-airport-facts/> [Accessed December 10, 2022] ©

Schiphol 2022

Figure 2.16 Amsterdam Airport Schiphol customer friendly infrastructure facilities



Source: "Amsterdam Airport Schiphol" <https://nieuws.schiphol.nl/beeldbank?>

⁶⁵“**Moving towards sustainable aviation.** Royal Schiphol Group aims to operate the most sustainable airports in the world. You will continue to fly and discover the world, but in a responsible and sustainable way. A way in which we do not put extra pressure on the planet, but add value to it instead. One example of how we want to do this is by producing more green energy than we actually need. The surplus energy will go to other users. We are confident that we can fly sustainably. After all, Schiphol has been making the airport more sustainable for many years. We have already achieved a great deal and we will be doing a lot more over the coming years.” (Amsterdam Airport Schiphol, 2022, <https://www.schiphol.nl/en/schiphol-group/page/a-sustainable-future/>). The climate change friendly premises of Amsterdam Airport Schiphol will be clearly depicted by Figure 2.17 below.

⁶⁵ Amsterdam Airport Schiphol (2022) *Moving towards sustainable aviation*. Available from: <https://www.schiphol.nl/en/schiphol-group/page/a-sustainable-future/> [Accessed December 10, 2022] © Schiphol 2022

Figure 2.17 Amsterdam Airport Schiphol climate change friendly premises



Source: "Amsterdam Airport Schiphol" <https://nieuws.schiphol.nl/beeldbank?>

⁶⁶“**Infrastructure: Our capacity & Infrastructure. Capacity.** • 220aircraft stands total. • 91connected aircraft stands. • 129disconnected aircraft stands. • 40,624car parking spaces total. • 27,897car parking spaces passengers/visitors. • 12,727car parking spaces employees” (Amsterdam Airport Schiphol, 2022, <https://www.annualreportschiphol.com/>). In addition the world class aircraft stands and parking spaces infrastructure facilities of Amsterdam Airport Schiphol will be clearly depicted by Figure 2.18 below.

⁶⁶ Amsterdam Airport Schiphol (2022) *Infrastructure*. Available from: <https://www.annualreportschiphol.com/trafficreview2021/infrastructure> [Accessed December 10, 2022] © Schiphol 2022

Figure 2.18 Amsterdam Airport Schiphol world class aircraft stands and parking spaces infrastructure facilities



Source: "Amsterdam Airport Schiphol" <https://nieuws.schiphol.nl/beeldbank?>

The total number of runways and their lengths is clearly depicted in Table 2.1 below cited from the Amsterdam Airport Schiphol, 2022.

Table 2.1 Amsterdam Airport Schiphol Runways



Source: (Amsterdam Airport Schiphol, 2022, <https://www.annualreportschiphol.com/trafficreview2021/infrastructure>).

The following section will cover information about Canada’s airports in-depth.

2.6 Canada (Vancouver International Airport - YVR)

The astounding highly attractive infrastructure buildings of Vancouver International Airport – YVR are clearly depicted by Figure 2.19 below.

Figure 2.19 Vancouver International Airport – YVR astounding highly attractive infrastructure buildings



Source: (Vancouver International Airport - YVR, 2023, <https://www.yvr.ca/-/media/yvr/blog/2022/a-travel-refresher-how-to-make-your-airport-experience-seamless/20180426-yvr-airport-sunset-hires031-3.jpg>). Copyright © 2023 Vancouver Airport Authority. All rights reserved.

⁶⁷“**ABOUT YVR.** Vancouver International Airport (YVR) is a diverse global hub that connects people, cargo, data, and ideas and serves as a platform for our community to come together and thrive. We are motivated by supporting regional economic development and making a positive difference in the lives of British Columbians. We do this with a focus on serving our passengers, partners, workers, and community through digital modernization, climate leadership, reconciliation, and financial sustainability.” (Vancouver International Airport, 2022, <https://www.yvr.ca/en/media/news-releases/2022/yvr-extends-care-and-comfort-to-assist->

⁶⁷ Vancouver International Airport (2022) *About YVR*. Available from: <https://www.yvr.ca/en/media/news-releases/2022/yvr-extends-care-and-comfort-to-assist-delayed-passengers> [Accessed January 06, 2023] Copyright © 2023 Vancouver Airport Authority. All rights reserved.

[delayed-passengers](#)). The modern infrastructure facilities of Vancouver International Airport – YVR are clearly depicted by Figure 2.20 below.



Figure 2.20 Vancouver International Airport – YVR modern infrastructure facilities



Source: (Vancouver International Airport - YVR, 2023, <https://www.yvr.ca/-/media/yvr/blog/2022/a-travel-refresher-how-to-make-your-airport-experience-seamless/airport.png>). Copyright © 2023 Vancouver Airport Authority. All rights reserved.

⁶⁸ “**Who We Are.** • Mission: Connecting British Columbia proudly to the world. • Vision: A world class sustainable hub airport. • Values: Safety, Teamwork, Accountability and Innovation.

Connecting and supporting the communities we serve.

-  **Community** We are committed to building positive relationships with the communities we serve.
-  **Noise management** We strive to be a good neighbor and reduce impacts from aircraft noise.

⁶⁸ Vancouver International Airport (2023) *About YVR*. Available from: <https://www.yvr.ca/en/about-yvr> [Accessed January 07, 2023] Copyright © 2023 Vancouver Airport Authority. All rights reserved.



• **Environment** We care about our environment and our place in it.

YVR's Art Collection. YVR has one of the most dynamic airport wildlife management programs in the world. • YVR welcomes and bids farewell to millions of passengers every year with award-winning art and architecture that captures British Columbia's diverse landscapes and cultures. **Wildlife Management.** YVR has one of the most dynamic airport wildlife management programs in the world⁶⁹ (Vancouver International Airport, 2023, <https://www.yvr.ca/en/about-yvr>). The Vancouver International Airport – YVR astounding world class international arrivals area infrastructure facilities are clearly depicted by Figure 2.21 below.

⁶⁹ Vancouver International Airport (2023) *About YVR*. Available from: <https://www.yvr.ca/en/about-yvr> [Accessed January 07, 2023] Copyright © 2023 Vancouver Airport Authority. All rights reserved.

Figure 2.21 Vancouver International Airport – YVR astounding world class international arrivals area infrastructure facilities



Source: (Vancouver International Airport - YVR, 2021, The arrivals COVID-19 test centre at YVR international arrivals area in Level 2, <https://www.yvr.ca/-/media/yvr/blog/2021/top-ten-photos-of-2021/covid-19-testing-at-yvr.jpg?h=400&w=600&hash=FD2B150D151F00E1242C0F268E4360BE>). Copyright © 2023 Vancouver Airport Authority. All rights reserved.

⁷⁰According to Vancouver International Airport (2023) *Who We Are*. YVR's success is thanks to our unique structure. As a community-based organization, we reinvest our profits back into the airport and region. This model is something to be proud of—something worth protecting. YVR's success comes from our unique operating model. As a not-for-profit, community-based organization, we are not government-run or beholden to shareholders. Rather, we are committed to our communities, constantly improving the airport for everyone while supporting our region. Because we are community-based, we are able to reinvest our profits back into the airport and the things that matter to you. We constantly develop innovative solutions to make your airport experience better—from border kiosks that cut down on wait times to faster baggage systems and of course free in-terminal WiFi. We drive economic growth, supporting thousands of jobs at the

⁷⁰ Vancouver International Airport (2023) *Who We Are*. Available from: <https://www.yvr.ca/en/about-yvr/who-we-are> [Accessed January 06, 2023] Copyright © 2023 Vancouver Airport Authority. All rights reserved.

airport and across the province while working with our partners to provide more air services that link our communities with the world. Our operating model is worth protecting. It has led to global recognition, as YVR has been named Best Airport in North America for a record 12-years in a row. Most importantly, it has created an airport that we can all be proud of (Vancouver International Airport, 2023, <https://www.yvr.ca/en/about-yvr/who-we-are>).⁷¹“Environment. At YVR, we are boldly pursuing a greener and more resilient future and have committed to eliminating emissions from our operations, becoming net-zero by 2030. We are driven by our purpose to serve our community and the economy that supports it. As we work to deliver on our purpose, we are looking ahead with a heightened sense of responsibility to reduce the impact of our operations on the environment and take a leadership role in shaping a greener and more resilient future. Our operations are carbon neutral as of 2020 and will be net zero by 2030. We will also continue our work to divert waste from the landfill, improve ecosystem health and reduce our water consumption. And, while we do not have direct control over emissions and other environmental impacts from outside of our operations—those of our partners and the airport community—we recognize that we must also support all partners in reducing their overall impact as well. Our [2020 – 2024 Environmental Management Plan \(EMP\)](#), developed every five years, outlines the initiatives that will allow us to achieve our climate goals and to support the work of our partners. Specifically, it sets clear, measurable activities and targets in four key areas:

- [Carbon reduction](#)
- [Water conservation](#)
- [Waste reduction](#)
- [Ecosystem health](#)

We think of our EMP as a journey—one that guides our actions and provides opportunity for us to engage with our employees, passengers and our airport community to adapt to the evolving changes of the global pandemic and align our collective initiatives to our ambitious net-zero emissions goal. We know that achieving our climate goals requires innovative thinking and

⁷¹ Vancouver International Airport (2023) *Environment*. Available from: <https://www.yvr.ca/en/about-yvr/environment>
[Accessed January 07, 2023] Copyright © 2023 Vancouver Airport Authority. All rights reserved.

solutions-oriented actions. Above all, it requires teamwork. We invite you to join us on our journey”” (Vancouver International Airport, 2023, <https://www.yvr.ca/en/about-yvr/environment>). The following section will cover information about Germany’s airports in-depth.

2.7 Germany (Munich Airport)

Munich Airport is one of the most sustainable airports in the world and it handles many popular destinations and airlines across the world. The amazingly beautiful architecturally attractive infrastructure at Munich Airport will be clearly depicted by Figure 2.22 below.

Figure 2.22 Munich Airport modern architectural infrastructure



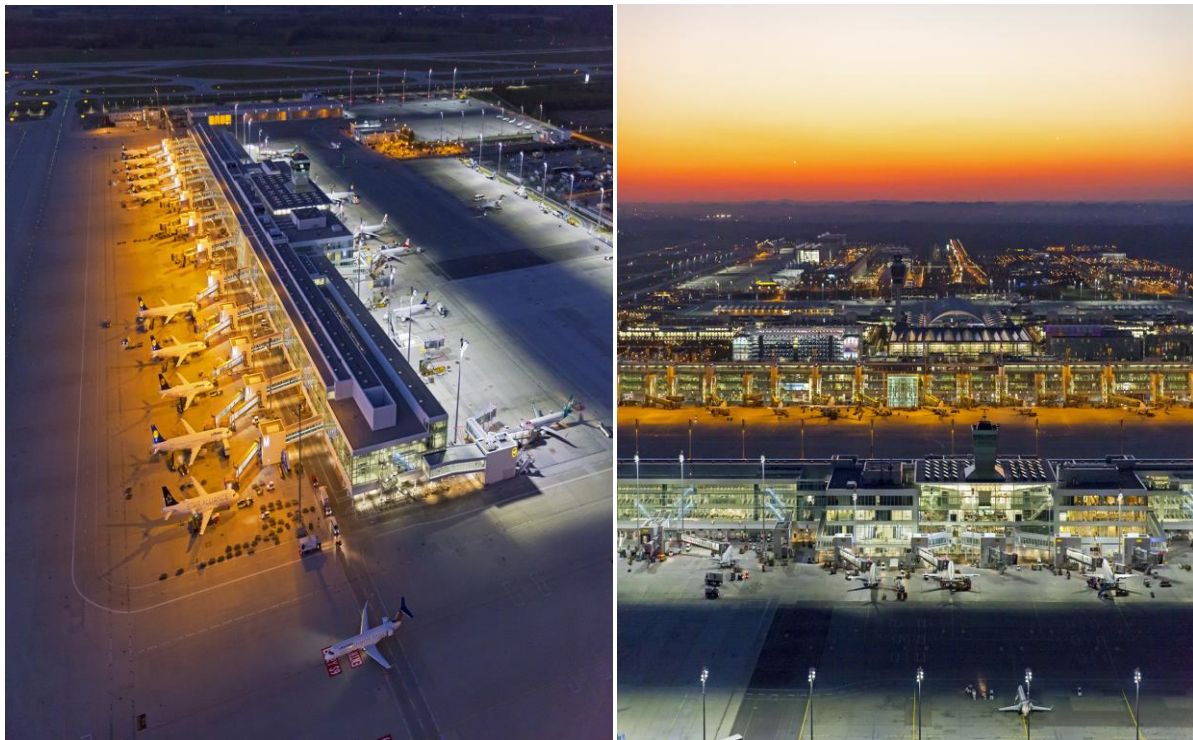
Source: ("Flughafen München GmbH", 2023, <https://www.munich-airport.com/company-business-260134>). ©2023, Munich Airport International

⁷²“**History of Munich Airport.** Then and now: Passenger numbers

⁷² Flughafen München GmbH (FMG) (2022) *History of Munich Airport*. Available from: <https://www.munich-airport.com/history-of-munich-airport-453566> [Accessed December 12, 2022] ©2022, Munich Airport International

• Since the airport opened in 1992, the number of passengers in Munich has more than tripled. The new Munich Airport opened in 1992 with 12 million passengers. The terminal reached its capacity limit within a few years. With the opening of Terminal 2 in 2003 and its expansion to include the satellite, the number of passengers also increased significantly: In 2016, 42.3 million passengers used Munich Airport.” (Flughafen München GmbH, 2022, <https://www.munich-airport.com/history-of-munich-airport-453566>). The state-of-the-art aircraft arrival terminals infrastructure of Munich Airport will be clearly depicted by Figure 2.23.

Figure 2.23 Munich Airport’s state-of-the-art aircraft arrival terminals infrastructure



Source: (“Flughafen München GmbH”, 2023, <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=iy5XENGagusB> and <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=umZUVoXRXan0>). ©2023, Munich Airport International

“Aircraft movements. Munich Airport recorded 192,000 take-offs and landings in its early years. In 2016, the total was 394,000. Meanwhile, the capacity bottlenecks in the runway system are becoming increasingly evident. During peak traffic hours, there are no longer any free slots for takeoffs and landings, which means that many of the connections in demand cannot be

realized”⁷³ (Flughafen München GmbH, 2022, <https://www.munich-airport.com/history-of-munich-airport-453566>). The world class highly attractive and fun interior infrastructure facilities of Munich Airport are clearly depicted by Figure 2.24 below.

Figure 2.24 Munich Airport highly attractive and fun interior infrastructure facilities



Source: ("Flughafen München GmbH", 2023, <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=hugMFSy5BxG0> and <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=umZUVoRRXan0> and <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=RD78VtSPmKQh>). ©2023, Munich Airport International

⁷³ Flughafen München GmbH (FMG) (2022) *History of Munich Airport*. Available from: <https://www.munich-airport.com/history-of-munich-airport-453566> [Accessed December 12, 2022] ©2022, Munich Airport International

“**Air freight.** Air freight at Munich Airport experienced a particular boom: in 1992, just 57,000 tons of freight were handled. The growing demand for passenger and freight traffic necessitated extensive expansion measures: In 2005, a new 4,400-square-meter cargo hall was put into operation. In 2007, a new forwarding agent building was opened where more than 50 trucks can dock simultaneously. In 2016, 356,000 metric tons of freight were handled through Munich Airport”⁷⁴ (Flughafen München GmbH, 2022, <https://www.munich-airport.com/history-of-munich-airport-453566>). The overall traffic figures of Munich Airport for the year 2021 are clearly depicted by Figure 2.25 below.

Figure 2.25 Munich Airport traffic figures



Source: (Munich Airport, 2021, <https://www.munich-airport.com/traffic-figures-263342>) ©2023, Munich Airport International

⁷⁵“**Profile.** • Flughafen München GmbH (FMG), founded in 1949, operates Munich Airport along with its subsidiaries. • The Bavarian air traffic hub is Germany's second biggest airport

⁷⁴ Flughafen München GmbH (FMG) (2022) *History of Munich Airport*. Available from: <https://www.munich-airport.com/history-of-munich-airport-453566> [Accessed December 12, 2022] ©2022, Munich Airport International

⁷⁵ Flughafen München GmbH (FMG) (2022) *Profile*. Available from: <https://www.munich-airport.com/company-profile-263193> [Accessed December 12, 2022] ©2022, Munich Airport International

and the first five-star airport in Europe. As a "full-service operator" it provides services in every area of airport management. • Since its opening in 1992, Munich Airport has been one of the most important passenger terminals in Europe, number 2 in Germany and an important international air traffic hub” (Flughafen München GmbH, 2022, <https://www.munich-airport.com/company-profile-263193>). The world class runways infrastructure of Munich Airport will be clearly depicted by Figure 2.26 below.

Figure 2.26 Munich Airport runways infrastructure



Source: ("Flughafen München GmbH", 2023, <https://www.munich-airport.com/climate-protection-264236> & <https://www.munich-airport.com/environmental-protection-264103> & <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=umZUVoXRXan0>). ©2023, Munich Airport International

⁷⁶“**Press: Munich Airport celebrates milestone birthday.** Becoming a major hub airport in three decades. Exactly 30 years ago, on the night of May 17, 1992, Munich Airport moved to its current location about 30 kilometers northeast of Munich. Since then, Munich Airport has handled around 850 million passengers and almost six million tons of air freight on a total of nearly ten million flights to and from Munich. In the record year of 2019, Munich Airport recorded a total of nearly 48 million passengers and approximately 417,000 takeoffs and landings. The number of aircraft movements has thus more than doubled since the airport opened in 1992, while passenger numbers have nearly quadrupled over the same period. And in fact, the volume of air freight has increased six-fold. This above-average growth was mainly driven by the further development of the new airport into a major European hub airport. Munich Airport's success story was interrupted in March 2020 by the Corona pandemic, which had a massive impact on air traffic worldwide. In the meantime, a significant recovery followed the lifting of many travel restrictions. During this year's Easter vacations, traffic in Munich reached more than 70 percent of pre-crisis levels for the first time again. The airport's relocation from Munich's suburb of Riem to the northeast between the cities of Freising and Erding received worldwide attention. In just one night, around 5,000 people with almost 700 trucks managed this mega move and the punctual start of operations on the following morning. Thanks to the expertise and reputation gained in this way, Munich Airport has since been operating successfully as a consultant for airport relocations and airport openings worldwide. As strategic partners, Munich Airport and Lufthansa joined forces when they reached an agreement in 1998 to jointly build, finance and operate Munich Airport's Terminal 2. To date, this cooperation between the airport and the airline is unique within the international aviation industry.” (Flughafen München GmbH, 2022, <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272>). The modern technology (deicing of snow/ice) equipment and infrastructure tarmac facilities at Munich Airport are clearly depicted by Figure 2.27 below.

⁷⁶ Flughafen München GmbH (FMG) (2022) *Press: Munich Airport celebrates milestone birthday*. Available from: <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272> [Accessed December 12, 2022]

Figure 2.27 Munich Airport modern technology (deicing of snow/ice) equipment and facilities



Source: ("Flughafen München GmbH", 2023, <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=UwZGpSPI480x>). ©2023, Munich Airport International

⁷⁷“With the Munich Airport Center (MAC), which opened in September 1999, the airport gained a state-of-the-art multifunctional service center. Today, the MAC with its spectacular glass membrane roof and the large forum area below is not only an architectural highlight, but also the airport's commercial center and marketplace. The opening of Terminal 2 in June 2003 provided the necessary capacity expansion. Lufthansa and its partners have exclusive use of the

⁷⁷ Flughafen München GmbH (FMG) (2022) *Press: Munich Airport celebrates milestone birthday*. Available from: <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272> [Accessed December 12, 2022]
©2022, Munich Airport International

terminal, which is designed to meet the specific requirements of transfer traffic. It quickly scored points with its users thanks to its multi-faceted retail and gastronomy offers, attractive rest areas and workplaces, as well as a wide range of service facilities⁷⁸ (Flughafen München GmbH, 2022, <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272>). The world class environmentally friendly infrastructure facilities of Munich Airport are clearly depicted by Figure 2.28.

⁷⁸ Flughafen München GmbH (FMG) (2022) *Press: Munich Airport celebrates milestone birthday*. Available from: <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272> [Accessed December 12, 2022]

Figure 2.28 Munich Airport’s world class environmentally friendly infrastructure facilities



Source: ("Flughafen München GmbH", 2023, <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=iy5XENGagusB>). ©2023, Munich Airport International

““According to Skytrax Munich Airport ranks for years among the most passenger-friendly airports in Europe and also received the award as a 5-star airport. The opening of Germany's first midfield terminal in 2016 marked the next significant expansion, adding a capacity of 11 million to a total capacity of 50 million passengers. Just three years after opening the mid-field terminal, the first construction phase began in April 2019 for the new pier at Terminal 1, which will significantly improve the service and quality of stay in Terminal 1. Munich Airport is known for its spirit of innovation and diversification. In March 2018, the kick-off for the LabCampus took

place in the northwest of the airport: a cross-industry innovation and collaboration center on the airport site. LAB 48, the first building on the LabCampus, will be completed soon. **Jost Lammers, CEO of Munich Airport**, takes the airport's birthday as an opportunity to look to the future with confidence: "Even though its impressive success story was interrupted by the massive impact of the Covid 19 pandemic, Munich remains a main player in the Champions League of European airports. In these weeks, we are seeing the enormous momentum with which air traffic is currently picking up again after two years of crisis. I am therefore confident that we will soon reach pre-crisis levels again and subsequently grow beyond them."⁷⁹ (Flughafen München GmbH, 2022, <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272>). The following section will cover the conclusion of this chapter.

2.8 Conclusion

The number one key beneficiary of the airports and aviation industry in a country, province, state, city or town is tourism. In general airports are part of the web of globalization and overtime they often become the strength behind the success of the tourism sector in a country. On a yearly basis over 1 billion tourists are travelling in various tourist destinations and enormous foreign currency revenue is generated for the host country. The airports and aviation industry plays a significant role in reducing poverty, unemployment, poor living standards, human rights violations, poor transport and building infrastructure developments. Airports in general help to promote international trade through cargo and passenger handling on a daily basis thus enabling the global reach of many organizations. Generally airports unquestionably empower nation branding since they are the first point of entry for tourists or travelers and they critically help to position the national identity, nation brand value, culture, economic success, security and infrastructure development of a country, province, city and town. Therefore, airports must adopt an 'innovation-centered culture' in order to continuously remain appealing to the following: tourists, travelers, freight industry, government airport/aviation regulators and global tourism ranking agencies.

⁷⁹ Flughafen München GmbH (FMG) (2022) *Press: Munich Airport celebrates milestone birthday*. Available from: <https://www.munich-airport.com/press-munich-airport-celebrates-milestone-birthday-13546272> [Accessed December 12, 2022]

2.9 Review questions

- 1) Define the following terms 'world' and 'nation brand'? Describe the important facts about Zurich International Airport and Geneva Airport/Genève Aéroport? Discuss the important facts about Denver International Airport?
- 2) List the important facts about Amsterdam Airport Schiphol?
- 3) Describe the important facts about Vancouver International Airport (YVR)?
- 4) List the important facts about Munich Airport?

Chapter 3: Australia, United Kingdom, South Africa, Norway & Chile Airports

After reading this chapter you should be able to:

- Define the following terms ‘air transport movement’ and ‘cargo movement’.
- Discuss the important facts about Sydney Airport and Melbourne Airport.
- List the important facts about London Heathrow Airport. Describe the important facts about O.R. Tambo International Airport. Discuss the important facts about Oslo Airport.
- Discuss the key facts about Arturo-Merito Benítez International Airport in Santiago de Chile.

3.1 Introduction

⁸⁰According to the International Civil Aviation Organization (ICAO) (2019:11-13) **Exponential Growth of Air Traffic**. From a long-term historical perspective, air transport has doubled in size every fifteen years and has experienced greater growth than most other industries. Since 1960, increasing demand for passenger and freight services, technological progress and associated investment have combined to multiply the output of the aviation industry by a factor of more than 30. This expansion of air transport compares favourably with the broadest available measure of world output (global GDP), which, when measured in real terms, has multiplied by more than five times over the same period. It is no mystery why air traffic growth has so consistently defied recessionary cycles. The air transport sector resisted these recessions precisely because it served as one of the most effective tools for ending them – an important consideration for governments at every level in a challenging economic environment. **Air Travel Affordability**. A key driver in the growth of passenger traffic has been the steady decrease in the real cost of air travel — a reduction of over 70 per cent since 1970. This decrease in cost has led to an increase in accessibility of air travel democratization. Air travel is no longer a luxury commodity. It is

⁸⁰ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

becoming increasingly accessible in the developing world, with various low-cost travel options available to more and more people. The aviation industry has undergone a structural transformation and has adjusted to a dynamic marketplace by consolidating and expanding in new markets. The evolution of low-cost carriers (LCCs), particularly since the beginning of the 21st century, is notable in emerging economies, making air travel more affordable⁸¹ (ICAO, 2019:11-13, <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf>). The following section will cover information about the definition of terms in-depth.

3.2 Definition of terms

There are many definitions used in the airports and aviation industry today.⁸² “*Air transport movements* - An air transport movement means a landing or take-off. Air transport movement in scheduled traffic means a movement in commercial traffic according to an official timetable. Air transport movement in non-scheduled traffic means a non-scheduled movement in commercial traffic (charters, relief services, etc.; taxi flights excluded). *Cargo transport* - Both paying and non paying freight, including military mail and express freight. Goods leaving the airport on the same aircraft as the one by which they have arrived (transit-direct) are left out of account, as well as trucking freight” (Amsterdam Airport Schiphol, 2022, <https://www.annualreportschiphol.com/trafficreview2021/glossary>). The following section will cover information about Australia’s airports in-depth.

3.3 Australia (Sydney Airport and Melbourne Airport)

The two leading airports in Australia will be discussed below.

⁸¹ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

⁸² Amsterdam Airport Schiphol (2022) *Glossary*. Available from: <https://www.annualreportschiphol.com/trafficreview2021/glossary> [Accessed December 10, 2022] © Schiphol 2022

3.3.1 Sydney Airport

The amazingly beautiful architecture of Sydney Airport infrastructure will be clearly depicted by Figure 3.1 below.

Figure 3.1 Sydney Airport amazingly beautiful architecture



Source: (Sydney Airport, 2022, <https://www.sydneyairport.com.au/corporate/about>).

⁸³“**Ownership.** Sydney Airport is one of Australia’s most important pieces of infrastructure. It is our international gateway and an essential part of our transport network, connecting to more than 90 destinations around the world. Prior to COVID, Sydney Airport welcomed more than 44 million passengers annually, generated more than \$42 billion in economic activity, equivalent to nearly 7% of NSW’s Gross State Product, and directly and indirectly supported 336,000 jobs. Sydney Airport is located only 8 kilometres from the city centre and less than 10 kilometres from major tourist attractions. The convenience of our location has benefits for both business and tourism and is a major strength that will help to underpin Sydney’s future prosperity. Sydney

⁸³ Sydney Airport (2022) *Ownership*. Available from:

<https://www.sydneyairport.com.au/corporate/about/ownership> [Accessed December 10, 2022]

Airport is owned and operated by Sydney Airport Corporation Limited (SACL). SACL is ultimately owned by the following institutional investors.

Institutional Investors	Percentages
IFM Global Infrastructure Fund	18.00%
UniSuper	15.01%
IFM Australian Infrastructure Fund	14.99%
Australian Retirement Trust	7.50%
AustralianSuper	7.50%
Global Infrastructure Partners and managed or advised funds and clients	37.00%””

(Sydney Airport, 2022, <https://www.sydneyairport.com.au/corporate/about/ownership>). The full photographic view of the vast world class airport facilities of Sydney Airport will be clearly depicted by Figure 3.2 below.

Figure 3.2 Sydney Airport world class airport facilities



Source: (Sydney Airport, 2022, <https://www.sydneyairport.com.au/corporate/about>).

⁸⁴“**Purpose and values. Our purpose:** To Make Sydney Proud Every Day. Our purpose statement was developed by staff and reflects the positive impact we aspire to have in the community, with our customers, and for NSW and Australia more broadly. It’s designed to guide how and where we invest our time and capital, and the standards we set for ourselves in terms of how we interact with all our stakeholders. **Our values are:** Always do the right thing. Integrity and honesty is at the heart of everything we say and do. Have each other's backs. Working at SYD is a team sport. We care. We keep each other safe and well. Do what you say. We challenge respectfully then collaborate to get to 'Yes'. We commit and deliver. Think like our customers. We walk in their shoes and always strive to improve” (Sydney Airport, 2022, <https://www.sydneyairport.com.au/corporate/about/ownership/vision-and-values>).⁸⁵ According to

⁸⁴ Sydney Airport (2022) *Purpose and Values*. Available from:

<https://www.sydneyairport.com.au/corporate/about/ownership/vision-and-values> [Accessed December 10, 2022]

⁸⁵ Sydney Airport (2022) *Sustainability*. Available from:

<https://www.sydneyairport.com.au/corporate/sustainability/investor-sustainability> [Accessed December 10, 2022]

Sydney Airport (2022) **Sustainability**. We recognise that the world around us is rapidly evolving. Sydney Airport plays a vital role in the transport value chain, bringing together a wide range of parties that jointly facilitate tourism, personal and business travel and logistics. Evolution in our business context is taking many forms whether it be advancements in the aviation sector, technological disruption, climate change, changing consumption trends and passenger travel patterns, global health crises, changing employee preferences or community expectations. Understanding and embracing change will shape our future and drive our strategic thinking. Our [Sustainability Policy](#) sets out our commitment to sustainability and our [latest Sustainability Report](#) provides a window into our strategic objectives, initiatives and performance for the year. **Sustainability strategy**. Our sustainability strategy responds to a changing world, and to the challenges and opportunities that shape business in Australia and globally. We believe that by focussing on sustainable growth, we will deliver long-term value for our stakeholders. The strategy forms an integral part of our broader business strategy and supports the delivery of our purpose: to make Sydney proud every day⁸⁶ (Sydney Airport, 2022, <https://www.sydneyairport.com.au/corporate/sustainability/investor-sustainability>). The following section will cover information about Melbourne Airport in-depth.

3.3.2 Melbourne Airport

The state-of-the-art Melbourne Airport infrastructure facilities will be clearly depicted by Figure 3.3 below.

⁸⁶ Sydney Airport (2022) *Sustainability*. Available from:

<https://www.sydneyairport.com.au/corporate/sustainability/investor-sustainability> [Accessed December 10, 2022]

Figure 3.3 Melbourne Airport state-of-the-art infrastructure facilities



Source: (Melbourne Airport, 2023, https://www.melbourneairport.com.au/getmedia/07db6148-c392-4a1b-ae4c-f87b16e925b2/20170613_SDP_1005.jpg.aspx?width=2400&height=1597&ext=.jpg). © Melbourne Airport 2017

⁸⁷“Melbourne Airport is a major, and growing centre of economic activity in the north-west. 36 million passengers travelled through Melbourne Airport in 2017, with nearly 70 million expected by 2038” (Melbourne Airport, 2023, <https://www.melbourneairport.com.au/Corporate/Working-here/Careers>). ⁸⁸“About Melbourne Airport. Melbourne Airport has been Victoria’s gateway to the world for more than 50 years. The airport is located 22 kilometres north-west of Melbourne’s central business district and is well connected to the city’s freeway and arterial road network. Plans are underway for a rail link connecting the airport terminals to the suburban train network via Sunshine. The airport is close to major industrial areas and serves as a hub for freight and logistics, while providing employment to thousands of residents in nearby suburban growth corridors. Before the Covid-19

⁸⁷ Melbourne Airport (2023) *Careers*. Available from: <https://www.melbourneairport.com.au/Corporate/Working-here/Careers> [Accessed January 06, 2023] © Melbourne Airport 2017

⁸⁸ Australia Pacific Airports Corporation (2021) *FY21 Annual Report*. Available from: <https://www.melbourneairport.com.au/getmedia/bec848f5-f96a-4abc-8098-5b7d3ceef584/APAC-Annual-Report-FY21-FA.pdf.aspx?ext=.pdf> [Accessed January 06, 2023] p8-10

pandemic, there were 20,600 full-time equivalent (FTE) jobs supported on the precinct. The Melbourne Airport site is approximately 2,740 hectares and is predominantly surrounded by nonurban properties to the immediate north and west. This helps protect the community and safeguards the airport from encroachment of sensitive and incompatible uses. There is urban development to the east and south of the airport, comprising a mix of residential and industrial properties” (Australia Pacific Airports Corporation, 2021:8, <https://www.melbourneairport.com.au/getmedia/bec848f5-f96a-4abc-8098-5b7d3ceef584/APAC-Annual-Report-FY21-FA.pdf.aspx?ext=.pdf>). The world class tarmac and runways infrastructure of Melbourne Airport will be clearly depicted by Figure 3.4 below.

Figure 3.4 Melbourne Airport world class tarmac and runways infrastructure



Source: (Melbourne Airport, 2023, https://www.melbourneairport.com.au/getmedia/946d7574-748d-429f-b29a-7780dc4cf58f/DSC_4652.jpg.aspx?width=7360&height=4912&ext=.jpg and https://www.melbourneairport.com.au/getmedia/b79b987e-ad5e-4f10-b3e3-792e85d540d5/DSC_4563.jpg.aspx?width=7352&height=4907&ext=.jpg) © Melbourne Airport 2017

⁸⁹According to Melbourne Airport (2023) **Ownership**. Melbourne Airport is owned and operated by Australia Pacific Airports (Melbourne) Pty Ltd - APAM - ACN 076 999 114. Australia

⁸⁹ Melbourne Airport (20223) *Ownership*. Available from: <https://www.melbourneairport.com.au/Corporate/About-us/Corporate-Information/Ownership> [Accessed January 08, 2023] © Melbourne Airport 2017

Pacific Airports Corporation Limited (APAC) - ACN 069 775 266 owns APAM and Australia Pacific Airports (Launceston) Pty Ltd (APAL) - ACN 081 578 903. APAL owns and operates [Launceston Airport](#). APAC is a privately held corporation owned by institutional investors, predominantly superannuation/ pension funds (Melbourne Airport, 2023, <https://www.melbourneairport.com.au/Corporate/About-us/Corporate-Information/Ownership>). The astounding photographic views of aircraft take-offs and landings at Melbourne Airport are clearly depicted by Figure 3.5.

Figure 3.5 Melbourne Airport astounding photographic views of aircraft take-offs and landings



Source: (Melbourne Airport, 2023, https://www.melbourneairport.com.au/getmedia/ed19bd04-3a8b-4d96-828c-b00e8a08a21f/_DSC6631.jpg.aspx). © Melbourne Airport 2017

⁹⁰“**Environment at Melbourne Airport.** Melbourne Airport recognises that a sustainable and environmentally responsible approach to business is vital to our success. This responsibility extends to our staff, airport tenants and other stakeholders. [Melbourne Airport's Environment Policy](https://www.melbourneairport.com.au/Corporate/About-us/Environment/Environment-at-Melbourne-Airport) outlines our environmental principles and management objectives” (Melbourne Airport, 2023, <https://www.melbourneairport.com.au/Corporate/About-us/Environment/Environment-at-Melbourne-Airport>). The following section will cover information about the United Kingdom’s airports in-depth.

3.4 United Kingdom (London Heathrow Airport - LHA)

According to the London Heathrow Airport (2022) ⁹¹**About Heathrow.** Our company, Heathrow Airport Holdings Limited (formerly BAA) owns and runs London [Heathrow Airport](https://www.heathrow.com/), Britain's aviation hub. Heathrow Airport Holdings Limited is in turn owned by FGP Topco Limited, a consortium owned and led by the infrastructure specialist Ferrovial S.A. (25.00%), Qatar Investment Authority (20.00%), Caisse de dépôt et placement du Québec (CDPQ) (12.62%), GIC (11.20%), Alinda Capital Partners of the United States (11.18%), China Investment Corporation (10.00%) and Universities Superannuation Scheme (USS) (10.00%). The company is subject to financial regulation by the [Civil Aviation Authority](https://www.caa.co.uk/) (CAA) and the [Competition and Markets Authority](https://www.competitionandmarkets.gov.uk/) (CMA). In matters of safety and security we are regulated by the Government and CAA (London Heathrow Airport, 2022, <https://www.heathrow.com/>). One of the world’s most popular and beautiful modern architecture at the London Heathrow Airport will be clearly depicted by Figure 3.6 below.

⁹⁰ Melbourne Airport (20223) *Environment at Melbourne Airport*. Available from: <https://www.melbourneairport.com.au/Corporate/About-us/Environment/Environment-at-Melbourne-Airport> [Accessed January 08, 2023] © Melbourne Airport 2017

⁹¹ London Heathrow Airport (LHA) (2022) *About Heathrow*. Available from: <https://www.heathrow.com/> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.6 London Heathrow Airport modern architecture infrastructure



Source: (London Heathrow Airport, 2022, <https://mediacentre.heathrow.com/pressrelease/detail/14117>). © LHR Airports Limited

⁹²**Facts and figures.** Heathrow is Britain's busiest airport, serving millions of passengers every year. Find out some top facts and figures, from the length of the runway to the number of tonnes of cargo shipped through the airport every year. **Flights and passenger numbers.** In 2021 Heathrow served 19.4 million passengers, that's an average of 128,178 every day. Last year, 87.6% of our passengers were international (17.0 million) versus 12.4% of passengers who were domestic (2.4 million). Most of these passengers were travelling for leisure (62%, 12.0 million) versus for business (28%, 7.4 million). The busiest year ever recorded was 2019 when 80.9 million passengers travelled through our airport. Last year (2021) there were 195,340 air transport movements at Heathrow. On average, that's 536 flights arriving or departing every day. **Destinations.** From Heathrow you can fly to 214 destinations across 84 countries. And you have 89 airlines to choose from. View our destinations. **Cargo.** Heathrow is the UK's largest port by value with a network of over 350 destinations worldwide. Our top cargo export destinations include the United States, China and the United Arab Emirates. Last year Heathrow

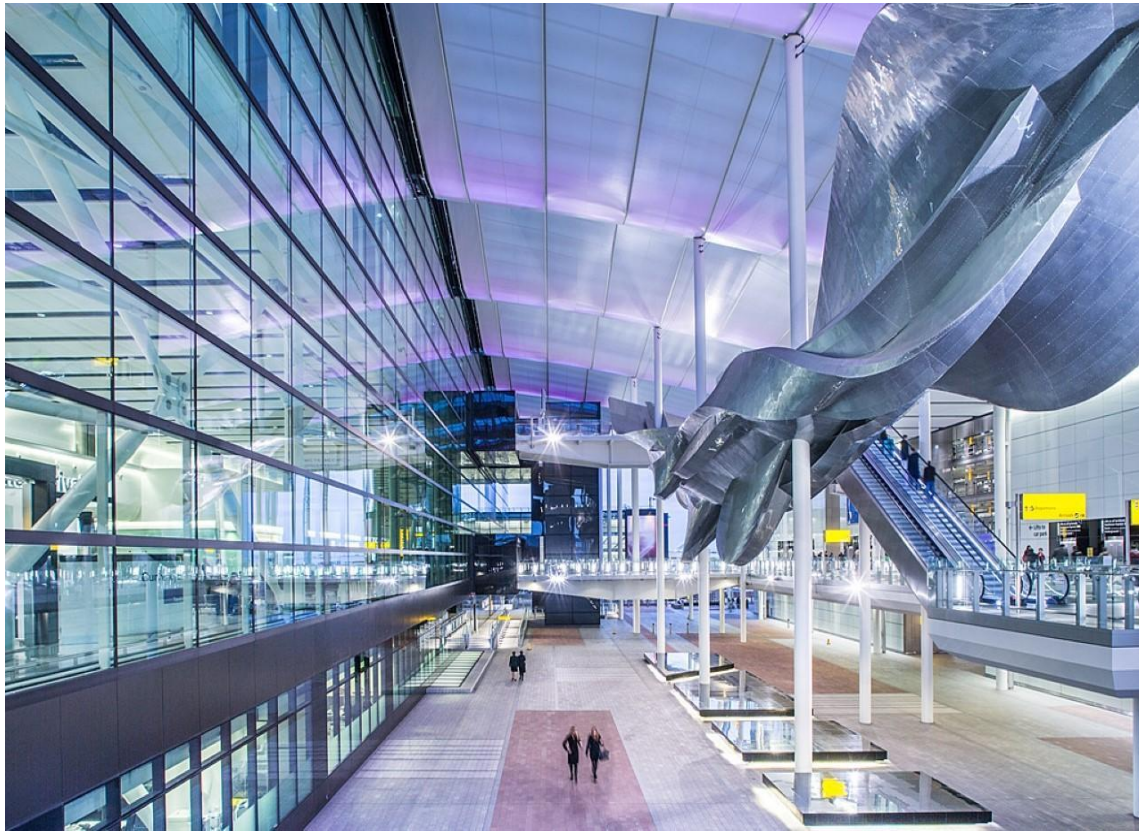
⁹² London Heathrow Airport (LHA) (2022) *Facts and Figures*. Available from: <https://www.heathrow.com/company/about-heathrow/facts-and-figures> [Accessed December 11, 2022] © LHR Airports Limited

handled 1.4 million tonnes of cargo. Our top products exported were salmon, books and car parts. In fact, in 2021, we exported more than £237 million worth of salmon through Heathrow. That's a lot of salmon! ⁹³**About the airport.** In total, Heathrow measures 1,227 hectares. The airport has two runways, the Northern Runway which is 3,902 metres by 50 metres and the Southern Runway which is 3,658 metres by 50 metres.

- Number of aircraft stands served by an airbridge: 192
- Number of remote stands: 97
- Number of cargo stands: 15
- Height of control tower: 87m (285ft)” (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). The four Terminals of London Heathrow Airport will be discussed in this section in-depth. In addition the full photographic view of Terminal 2 will be clearly depicted by Figure 3.7 below.

⁹³ London Heathrow Airport (LHA) (2022) *Facts and Figures*. Available from: <https://www.heathrow.com/company/about-heathrow/facts-and-figures> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.7 London Heathrow Airport Terminal 2



Source: (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). © LHR Airports Limited

“Terminal 2

⁹⁴Terminal 2, also known as the “Queen’s terminal”, was opened in 2014 by Queen Elizabeth II herself. Terminal 2 measures 40,000 square metres and was designed to be sustainable, with 124 solar panels on the roof. In 2018, Terminal 2 became our first terminal to run on green gas. Last year (2021) 6.1 million passengers travelled through Terminal 2 on 65,839 flights” (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). The full photographic view of Terminal 3 will be clearly depicted by Figure 3.8 below.

⁹⁴ London Heathrow Airport (LHA) (2022) *Facts and Figures*. Available from: <https://www.heathrow.com/company/about-heathrow/facts-and-figures> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.8 London Heathrow Airport Terminal 3



Source: (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). © LHR Airports Limited

“Terminal 3

⁹⁵Terminal 3 opened in 1961 and was originally named the Oceanic Terminal. The terminal housed the UK's first ever moving walkways. It now measures 98,962 square metres and last year (2021) saw 2.8 million passengers travelling through the terminal on 28,288 flights” (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). The full photographic view of Terminal 4 will be clearly depicted by Figure 3.9 below.

⁹⁵ London Heathrow Airport (LHA) (2022) *Facts and Figures*. Available from: <https://www.heathrow.com/company/about-heathrow/facts-and-figures> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.9 London Heathrow Airport Terminal 4



Source: (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). © LHR Airports Limited

“Terminal 4

⁹⁶Terminal 4 was opened in 1986 by Prince Charles and Princess Diana. Measuring 105,481 square metres, the terminal was originally the home of British Airways before they moved most of their operation to Terminal 5. In 2021, 0.002 million passengers travelled through Terminal 4 on 513 flights” (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). The full photographic view of Terminal 5 will be clearly depicted by Figure 3.10 below.

⁹⁶ London Heathrow Airport (LHA) (2022) *Facts and Figures*. Available from: <https://www.heathrow.com/company/about-heathrow/facts-and-figures> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.10 London Heathrow Airport Terminal 5



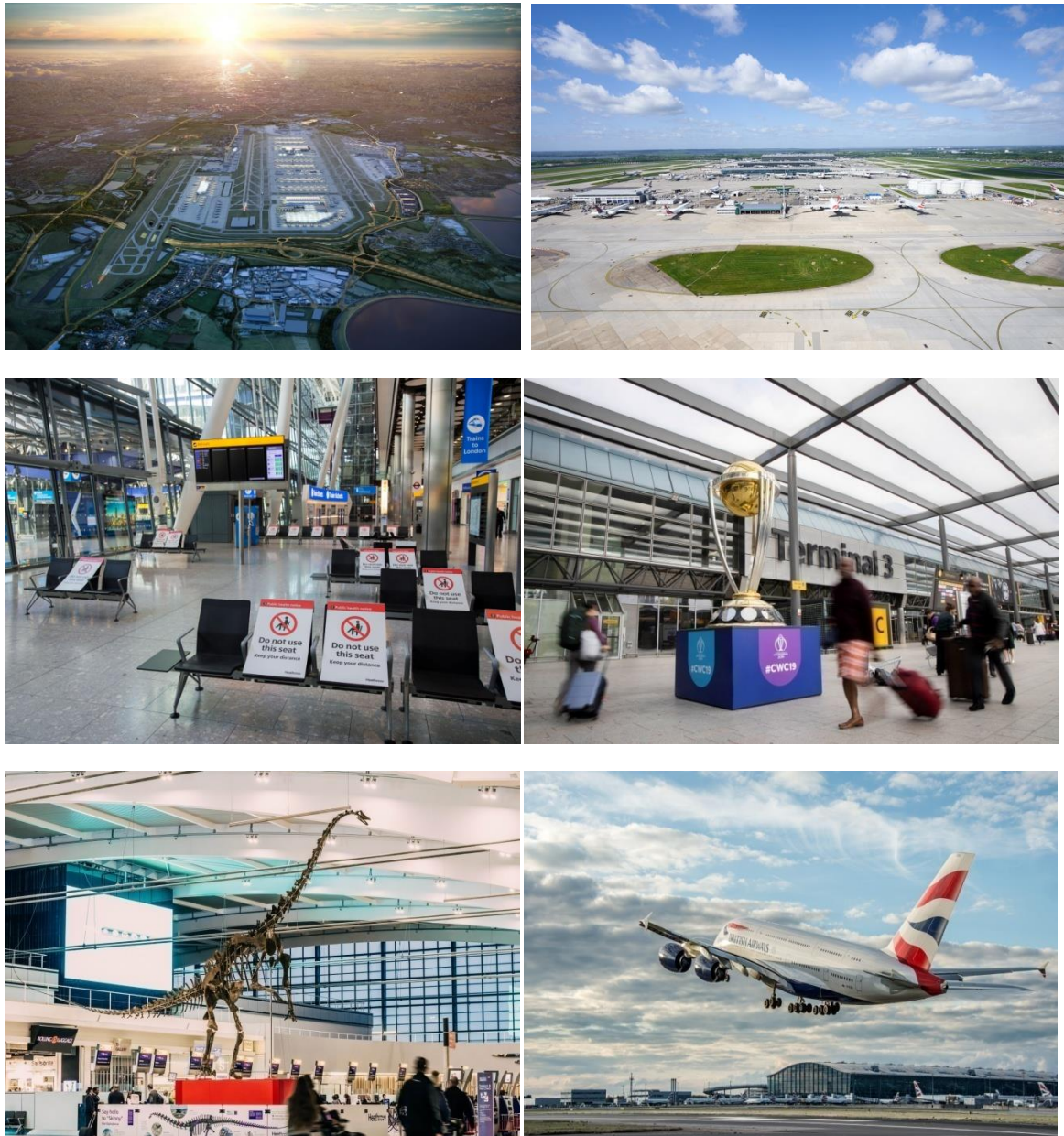
Source: (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). © LHR Airports Limited

“Terminal 5

⁹⁷Terminal 5 opened in 2008 and more than 60,000 people were involved in building it. The terminal measures 353,020 square metres which is the same size as 50 football pitches. In 2021, 10.5 million passengers travelled through Terminal 5 on 92,925 flights” (London Heathrow Airport, 2022, <https://www.heathrow.com/company/about-heathrow/facts-and-figures>). The world class astounding modern interior and exterior infrastructure facilities at London Heathrow Airport are clearly depicted by Figure 3.11 below.

⁹⁷ London Heathrow Airport (LHA) (2022) *Facts and Figures*. Available from: <https://www.heathrow.com/company/about-heathrow/facts-and-figures> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.11 London Heathrow Airport world class astounding modern interior and exterior infrastructure facilities



Source: (London Heathrow Airport, 2023,

https://mediacentre.heathrow.com/contents/archives/175/81/images/thumb1280x1683_width/heathrow_17581340029086_thumb.jpg and

https://mediacentre.heathrow.com/contents/archives/175/81/images/thumb1280x1683_width/heathrow_175811298207542_thumb.jpg and

https://mediacentre.heathrow.com/contents/archives/175/81/images/thumb1200x630_width/heathrow_175811732690106_thumb.jpg and

https://mediacentre.heathrow.com/contents/archives/175/81/images/thumb1200x630_width/heathrow_175811713440970_thumb.jpg and

https://mediacentre.heathrow.com/contents/archives/175/81/images/thumb1200x630_width/heathrow_17581141392556_thumb.jpg). © LHR Airports Limited

“**New report reveals Heathrow and aviation sector's £12bn boost to annual economy.** • New report reveals Heathrow is “Britain’s most valuable port” – boosting regional economies by £400m • More than £153bn of non-EU exports and imports are shipped through Heathrow in 2021 • Heathrow sits at the centre of the UK aviation sector’s £12 billion annual boost to the British economy. A new report details Heathrow’s value to Britain and its support for the UK’s regions: delivering a £400 million boost to economies across the UK. The study, which contains new research by consultancy Frontier Economics, reveals Heathrow is Britain’s “most valuable port”. It charts how in 2021, as Britain emerged from the pandemic, more than £153 billion of non-EU exports and imports travelled through Heathrow while in 2019 visitors travelling through the airport went on to spend £400 million in towns and cities across the UK. The report: [‘Heathrow: Sustainable Growth, Global Connectivity’](#), notes the part Britain’s hub airport plays in the UK aviation sector’s £12 billion annual boost to the British economy. And it details the importance of the global hub airport model to the UK’s economic growth and to Britain’s exporters who rely on aviation trade routes. The hub model helps to drive trade growth and regional economies by pooling demand for global connections and providing more choice of destinations for passengers and businesses. British consumers and businesses can reach 95% of the global economy with a direct flight from Heathrow with over 200 ‘unique’ one-stop connections between the UK regions and rest of the world. The report focuses on how Heathrow’s unrivalled connectivity to the world’s growth markets support the economies of Scotland, Wales, Northern Ireland and all the English regions with case studies from across the UK of business. The data reveals that Heathrow’s domestic route network connects the nations and regions of the UK to global growth and strengthens the fabric of the Union. In 2019, passengers travelling through Heathrow spent more in Scotland than in any other part of the UK, some £276 million.⁹⁸ In the North East, business passengers who travelled through Heathrow generated more than £150 million in trade and investment in 2019. In Northern Ireland more than £120 million in trade and investment was generated by Heathrow’s business passengers and in the South West it was £10 million. **Heathrow CEO John Holland-Kaye** welcomed the findings

⁹⁸ London Heathrow Airport (LHA) (2022) *New report reveals Heathrow and aviation sector's £12bn boost to annual economy*. Available from: <https://mediacentre.heathrow.com/pressrelease/detail/14274> [Accessed December 11, 2022] © LHR Airports Limited

of Frontier Economics. However, he said growth could not come at any cost and reconfirmed Heathrow's goal by 2030 of cutting carbon emissions in the air by up to 15% and at least 45% on the ground compared to 2019. He said: "Aviation is a force for good in the world, lifting millions out of poverty through trade and tourism. But these social and economic benefits cannot come at any cost. Climate change is an existential threat to aviation and the planet and our industry must play its part by taking fossil fuel carbon out of flying. "That is why at Heathrow, we are taking the lead to decarbonise aviation. We have worked with others across the industry to develop a plan to do so and are taking in our own airport." The publication of the new report follows the launch in early 2022 of the Heathrow 2.0: Connecting People and Planet strategy. The strategy sets out how the UK's only hub airport is driving forward net zero aviation and ensuring the local area remains a great place to live and work, including ambitious new actions and plans on net zero, air quality, noise pollution and waste""⁹⁹ (London Heathrow Airport, 2022, <https://mediacentre.heathrow.com/pressrelease/detail/14274>). The following section will cover information about South Africa airports.

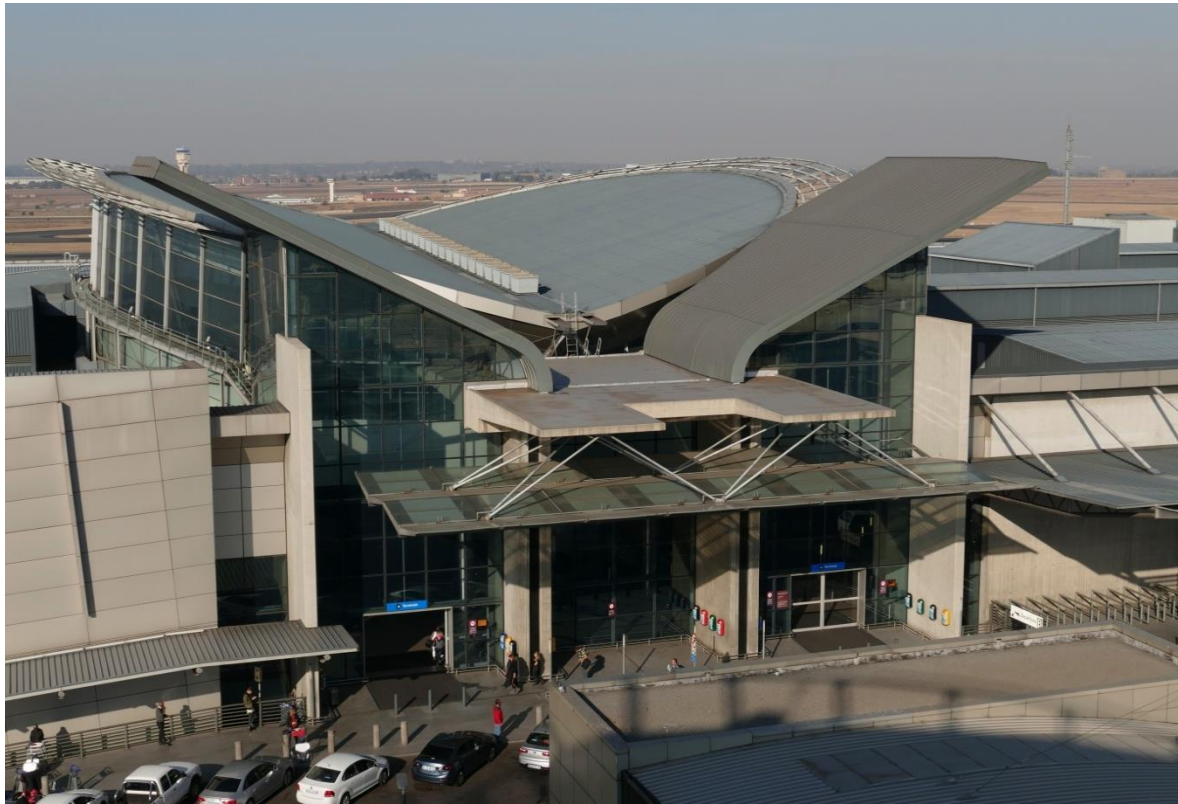
3.5 South Africa (O.R. Tambo International Airport)

The modern highly attractive architectural infrastructure of the O.R. Tambo International Airport will be clearly depicted by Figure 3.12 below.

⁹⁹ London Heathrow Airport (LHA) (2022) *New report reveals Heathrow and aviation sector's £12bn boost to annual economy.*

Available from: <https://mediacentre.heathrow.com/pressrelease/detail/14274> [Accessed December 11, 2022] © LHR Airports Limited

Figure 3.12 O.R. Tambo International Airport modern architectural infrastructure



Source: (Airports Company South Africa, 2022, <https://www.airports.co.za/airports/or-tambo-international-airport/the-airport/about-or-tambo>) © Airports Company South Africa. All rights reserved.

¹⁰⁰“**Welcome to the Gateway of the African Continent.** O.R. Tambo International Airport, previously known as Johannesburg International Airport, the biggest and busiest airport in Africa, carries all the hallmarks of a world-class airport business – location, accessibility and connectivity. It is ideally situated in Johannesburg, South Africa's commercial and in the heart of Ekurhuleni Municipality, the heart of the city's industrial hub. The airport boasts excellent road infrastructure linking it to the national road network. O.R. Tambo International Airport services airlines from five continents across the world and plays a vital role in serving the local and regional air transport needs of South Africans, as well as international travelers. As the flagship

¹⁰⁰ Airports Company South Africa (2022) *About O.R. Tambo*. Available from: <https://www.airports.co.za/airports/or-tambo-international-airport/the-airport/about-or-tambo> [Accessed December 12, 2022] © Airports Company South Africa. All rights reserved.

airport in Airports Company South Africa's network of nine airports, O.R. Tambo International Airports facilitates over 21 million passengers and has the capacity to facilitate 28 million passengers per annum. Not only is it a passenger hub, but has a cargo facilitation capacity of 650 000 tonnes per annum. The airport also has a significant retail footprint which cuts across the spectrum from high-end duty-free stores, African curio shops and a wide range of food and beverage offerings. O.R. Tambo International Airport is also home to top-of-the-range hotels which are situated in and around the airport precinct”” (Airports Company South Africa, 2022, <https://www.airports.co.za/airports/or-tambo-international-airport/the-airport/about-or-tambo>).

The various statistics of O.R. Tambo International Airport cited by Airports Company South Africa (2022) are clearly depicted in Table 3.1 below.

Table 2.2 Some Statistics

Annual passenger volumes	21,179, 061 million
Annual passenger capacity	28 million
Annual cargo capacity	650 000 tons
Air traffic movements	220 934
Hourly air traffic movement capacity	53
Parking bays	16 300
Airport employees	> 3 000
Stakeholder airport-based employees	> 35 000
Airlines	41
Domestic terminal	90 000 sqm
Central terminal building	110 000 sqm
On-Time Performance	86.68%

Source: (Airports Company South Africa, 2022, <https://www.airports.co.za/airports/or-tambo-international-airport/the-airport/about-or-tambo>) © Airports Company South Africa. All rights reserved.

The state-of-the-art facilities of O.R. Tambo International Airport are further depicted by Figure 3.13 below.

Figure 3.13 O.R. Tambo International Airport state-of-the-art facilities



Sources: (Airports Company South Africa, 2022, <https://www.airports.co.za/airports/or-tambo-international-airport>). © Airports Company South Africa. All rights reserved.

¹⁰¹“**History.** South Africa’s airports were owned and operated by the state until 23 July 1993, when Airports Company South Africa was officially established and nine airports were transferred to the company. The company’s sole shareholder from then, until partial privatisation was the state, through the Ministry of Transport. In April 1998, i di Roma, an Italian airports-management firm, won a competitive bid to become Airports Company South Africa's strategic equity partner and paid R819 million for 20% of the company's shares. The bidding process revealed that top international airport companies had high regard for entity's professionalism, and confidence in the company’s inherent value – indicating just how well it measured up to international best practices. Other shareholders include five empowerment consortia: G10

¹⁰¹ Airports Company South Africa (2022) *About O.R. Tambo*. Available from: <https://www.airports.co.za/about-us/airports-company/history> [Accessed December 12, 2022] © Airports Company South Africa. All rights reserved.

Investments, Telle Investments, Pybus Thirty-34, Up-Front Investments 64 and Lexshell 342 Investments Holdings. Together they own 4.2%. Airports Company South Africa is now a mature organisation. We have emerged from a phase of radical, sustained transformation and reconstruction to become an efficient, expanding commercial company with a skilled and motivated management team and staff. An important development has been the introduction of a balanced scorecard management system. This multi-dimensional system enables us and our stakeholders to consider business's objectives, decisions and actions - and to assess our progress - in relation to four major determinants of business success: financial performance, customer satisfaction, business systems and human capital development. This approach enables Airports Company South Africa to plan for a future filled with technological, global, economic and regulatory challenges. It enables us to use our assets - including brand, expertise and intellectual capital - to the full. Our success as a commercial, world-class, globally competitive company is a model for successful privatisation. Airports Company South Africa is a prime example of how an innovative, private-enterprise undertaking can emerge from a loss-making, state-owned company”¹⁰² (Airports Company South Africa, 2022, <https://www.airports.co.za/about-us/airports-company/history>). The following section will cover information about Norway’s airports in-depth.

3.6 Norway (Oslo Airport)

Oslo Airport is globally renowned for its climate friendly operational activities and massive infrastructure developments. The world class architecturally attractive facilities of Oslo Airport will be clearly depicted by Figure 3.14 below.

¹⁰² Airports Company South Africa (2022) *About O.R. Tambo*. Available from: <https://www.airports.co.za/about-us/airports-company/history> [Accessed December 12, 2022] © Airports Company South Africa. All rights reserved.

Figure 3.14 Oslo Airport architecturally attractive facilities



Source: (Avinor AS, 2022, <https://avinor.no/en/corporate/airport/oslo/development/>). © Avinor AS

¹⁰³“**ABOUT OSLO AIRPORT.** Oslo Airport (OSL) is Norway's main airport and was opened on 8 October 1998. In 2020, Oslo Airport served 9 million travelers. The airport is located in Ullensaker and Nannestad Municipality, approximately 47 km north of Oslo. The airport has a strong environmental profile which includes major focus on public transport to and from the airport. 15,000 people work at Oslo Airport to keep the airport running 24 hours a day. They are employed by more than 100 companies working on everything from baggage handling to air navigation” (Avinor AS, 2022, <https://avinor.no/en/corporate/airport/oslo/about-us/about-oslo-airport/about-oslo-airport/>).

¹⁰⁴““**BACKGROUND AND FACTS.** The current airport was opened in 1998 and was built

¹⁰³ Avinor AS (2022) *About Oslo Airport*. Available from: <https://avinor.no/en/corporate/airport/oslo/about-us/about-oslo-airport/about-oslo-airport/> [Accessed December 12, 2022] © Avinor AS

¹⁰⁴ Avinor AS (2017) *The New Oslo Airport 2017*. Available from: <https://avinor.no/en/corporate/airport/oslo/development/this-is-new/this-is-new> [Accessed December 12, 2022] © Avinor AS

to handle 17 million passengers annually. In 2013, nearly 23 million passengers flew to and from the airport. April 27, 2017 was the official opening of the new Oslo Airport, which now can handles 32 million passengers a year. **Brief history.** • Planning of the new major expansion of Oslo Airport started in 2007 in close collaboration with airlines and handling companies. • In March 2008, the board of Avinor chose the design concept and location of the new central building and new pier with aprons. • In January 2009, Oslo Airport signed a contract for the delivery of project and construction management with Advansia. • On 12 February 2009, the board of Avinor chose the project team Team_T to design the capacity increase at Oslo Airport. The preliminary project was completed on 4 February 2010. It was developed in close cooperation with OSL's project organisation, Advansia's project management and Team_T. • June 2010 saw the start-up of the first minor construction work and other preparations. • The project was approved by Avinor's board on 19 January 2011. • The main expansion project started in the spring of 2011. The new Oslo Airport is as simple, efficient and architecturally attractive as the original. The expansion represents a further development of Norwegian construction, with extensive use of natural materials and with simple and intricate solutions. The terminal still appears as a building because the new part has become an integral part of the original building and has the same characteristic roof shape and volume. Passengers have received large areas of landfills both before and after security checks. The security check is expanded with 12 new locks and is assembled in one area. Passengers are short walking distance to both domestic and international flights. Emphasis has been placed on good accessibility and universal design. The service offer has been expanded with new serving venues and more and bigger stores. There have also been several new well-placed toilets and changing rooms. Construction commenced in the summer of 2012 and the new Oslo Airport was completed April 27, 2017¹⁰⁵ (Avinor AS, 2017, <https://avinor.no/en/corporate/airport/oslo/development/this-is-new/this-is-new>). The vast landscape and eco-friendly infrastructure of Oslo Airport will be clearly depicted by Figure 3.15 below.

¹⁰⁵ Avinor AS (2017) *The New Oslo Airport 2017*. Available from: <https://avinor.no/en/corporate/airport/oslo/development/this-is-new/this-is-new> [Accessed December 12, 2022] ©Avinor AS

Figure 3.15 Oslo Airport landscape and eco-friendly infrastructure



Source: (Avinor AS, 2022, <https://avinor.no/en/corporate/airport/oslo/development/expansion-of-the-non-schengen-travel-area/>).
© Avinor AS

“**CLIMATE.** As is the case for aircraft, the climate impact of emissions from airport operations is both local and global. **CLIMATE PROGRAM.** *Objective: "No fossil greenhouse gas emissions from own controllable activities by 2022" and "Oslo Airport shall have a public transport share of 70% by 2020."* In May 2014, Oslo Airport's management decided to set a new and ambitious target for its work on emission-reducing measures, namely that we will not release fossil greenhouse gas emissions from our own activities by 2020.¹⁰⁶ In practice, this means that the main airport shall not release greenhouse gases from its own fleet of vehicles, use of the fire training area, as a result of de-icing or through consumption of thermal energy by 2020. A special climate programme that will work systematically and comprehensively towards this goal has been established at the airport. Our biggest source of greenhouse gas emissions is the LTO cycle, i.e. emissions from aircraft below 3,000 feet that are landing, taxiing and taking off at the airport. These emissions can be significantly reduced

¹⁰⁶ Avinor AS (2022) *Climate*. Available from: <https://avinor.no/en/corporate/airport/oslo/community-and-environment/klima/klimaprogram> [Accessed December 12, 2022] © Avinor AS

if second generation biofuels are phased in. Under commission from Avinor, SAS, Norwegian and the Federation of Norwegian Aviation Industries (NHO luftfart), Rambøll has studied whether it is possible to establish commercially profitable Norwegian production of sustainable biofuels for aviation. The report concludes that synthetic biofuels can be produced in Norway at competitive prices by 2025. **Greenhouse gas inventory.** We have mapped our greenhouse gas emissions annually since 2006 and have presented them in a carbon inventory. The greenhouse gas inventory we prepare is in accordance with the Greenhouse Gas Protocol and ISO 14064. Moreover, Oslo Airport has been an Airport Carbon Accreditation (ACA) airport, the highest level in the scheme, since 2009. Oslo Airport's carbon inventory and ACA application are verified annually by third parties. **Increased public transport share.** Oslo Airport is also working to increase the share of public transport to the airport. Ground transport, i.e. how our passengers get to and from the airport, is actually our second largest source of emissions. The public transport share in 2014 was 68% and it is a goal to see this rate rise to 70% by 2020. The Institute of Transport Economics (TØI) has studied ground transport at Oslo Airport and come up with specific recommendations on what measures should be taken if we are to achieve this goal¹⁰⁷ (Avinor AS, 2022, <https://avinor.no/en/corporate/airport/oslo/community-and-environment/klima/klimaprogram>). The following section will cover information about Chile's airports in-depth.

3.7 Chile (Arturo-Merito Benítez International Airport in Santiago de Chile)

The astounding night view of Arturo-Merito Benítez International Airport buildings will be depicted by Figure 3.16 below in this email.

¹⁰⁷ Avinor AS (2022) *Climate*. Available from: <https://avinor.no/en/corporate/airport/oslo/community-and-environment/klima/klimaprogram> [Accessed December 12, 2022] © Avinor AS

Figure 3.16 Arturo-Merito Benítez International Airport astounding night view



Source: Groupe ADP, 2023, Frontal Terminal Internacional (©Nuevo Pudahuel) <https://presse.groupeadp.fr/>

Arturo-Merito Benítez International Airport is located in Chile in the major capital city of Santiago de Chile. The unique and highly attractive architectural infrastructure facilities at the Arturo-Merito Benítez International Airport in Santiago de Chile will be clearly depicted by Figure 3.17 below.

Figure 3.17 Arturo-Merito Benítez International Airport modern facilities



Source: (©Nuevo Pudahuel, 2023, Frontal Terminal Internacional, <https://presse.groupeadp.fr/>).

¹⁰⁸“**Santiago de Chile airport.** Since October 2015, Groupe ADP and its partners have been operating the concession of Arturo-Merito Benítez International Airport in Santiago de Chile, the 6th largest airport in Latin America. With the inauguration of the new international terminal on 26 February 2022, the airport can handle up to 38 million passengers per year” (Groupe ADP, 2022, <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile>). The highly attractive interior (Espigón D - Sala de embarque) and exterior infrastructure (Bulevar T2 walk-way) at Arturo-Merito Benítez International Airport in Santiago de Chile will be clearly depicted by Figure 3.18 below.

¹⁰⁸ Groupe ADP (2022) *Santiago de Chile airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile> [Accessed December 12, 2022]

Figure 3.18 Arturo-Merito Benítez International Airport highly attractive interior (Espigón D - Sala de embarque) and exterior infrastructure (Bulevar T2 walk-way)



Bulevar T2

Espigón D - Sala de embarque.JPG

Source: (©Nuevo Pudahuel, 2023, Bulevar T2 and Espigón D - Sala de embarque).

“Groupe ADP (45% of the capital) and its partners Vinci Airports (40%) and Astaldi Concessioni (15%) are in charge of operating all the infrastructures for the full period of the concession (20 years), within the **Nuevo Pudahuel consortium**. In particular, in less than five years the consortium has built a new 248,400 m² international terminal, which will be inaugurated on 26 February 2022. This project began with the first two departure lounges, which were opened in 2018 and 2019. With the extension of the existing terminal, which was reallocated to domestic traffic, the airport's capacity more than doubled from 16 to 38 million passengers per year” (Groupe ADP, 2022, <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile>). The modern technology-oriented ‘passenger hall counters’ facilities of Arturo-Merito Benítez International Airport are clearly depicted by Figure 3.19 below.

Figure 3.19 Arturo-Merito Benítez International Airport modern technology-oriented passenger hall counters facilities



Source: (©Nuevo Pudahuel, 2023, Hall público counters 3er piso - T2).

“The passenger experience has also been improved. With the new terminal, waiting times are greatly reduced thanks to 96 automatic check-in kiosks, 64 baggage drop-off counters, 40% more border control counters and a new baggage handling system. The terminal also includes new shopping areas, restaurants and services, such as a crèche and a showroom”¹⁰⁹ (Groupe ADP, 2022, <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile>). The world class interior infrastructure facilities of Arturo-Merito Benítez International Airport will be clearly depicted by Figure 3.20 below.

¹⁰⁹ Groupe ADP (2022) *Santiago de Chile airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile> [Accessed December 12, 2022]

Figure 3.20 Arturo-Merito Benítez International Airport world class interior infrastructure facilities



Source: Groupe ADP, 2023, Interiors of International terminal of Santiago du Chile (©Nuevo Pudahuel)

<https://presse.groupeadp.fr/wp-content/uploads/2022/02/612486-500x325.jpg>

“Arturo-Merito Benítez Airport, which ranks among the top 10 airports in South America for the quality of passenger services (*Skytrax World Airports Awards 2020*), is becoming an international hub, the most modern in South America. At the same time, the airport is engaged in an active process of environmental transition driven by Groupe ADP's Environment Plan and Vinci Airports' AirPact action plan. These have enabled the airport to be one of the first in South America to achieve level 2 of the ACA (Airport Carbon Accreditation) issued by the ACI (Airports Council International)”¹¹⁰ (Groupe ADP, 2022, <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile>). The full area view of the modern state-of-the-art infrastructure development of the now open Arturo-Merito Benítez International Airport in Santiago de Chile will be clearly depicted by Figure 3.21 below.

¹¹⁰ Groupe ADP (2022) *Santiago de Chile airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile> [Accessed December 12, 2022]

Figure 3.21 Arturo-Merito Benítez International Airport infrastructure development



Source: (©Nuevo Pudahuel, 2023)

¹¹¹“For example, 10,336 LED lights have been installed, reducing energy consumption for lighting by 70%. Ground transportation emissions are also being reduced thanks to six new electric buses that have been in service since July 2021. More than 7 hectares have been reforested on the airport site and over 600 trees have been donated to the municipality of Pudahuel. This dynamic will be further strengthened with the commissioning in 2022 of a photovoltaic plant with a capacity of 826 KW, installed on the roof of the existing terminal. The overall objective is to reduce the airport's carbon footprint by 40% by 2030 and to achieve zero net emissions by 2050. With the Santiago de Chile airport, Groupe ADP expresses all its know-how as a global airport operator and its expertise in design and engineering. **38 million passengers per year expected. 20 new destinations open in 2019. 40% reduction in carbon footprint by 2030**”¹¹² (Groupe ADP, 2022, <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile>). The following section will cover information about the conclusion of this chapter.

¹¹¹ Groupe ADP (2022) *Santiago de Chile airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile> [Accessed December 12, 2022]

¹¹² Groupe ADP (2022) *Santiago de Chile airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/santiago-de-chile> [Accessed December 12, 2022]

3.8 Conclusion

It is now unquestionable that the management of growth in the airports and aviation industry has become part of their business operations since the air transport industry is enormously growing in size. It can be concluded that the enlargement of aircrafts and the opening of new global markets has led to air travel affordability and this has become a positive real life reality that is enjoyed by travelers around the world. Nowadays it has been consistently observed that millions of travelers pass through international airports on a yearly basis and passenger traffic generally increases during holiday seasons. It can therefore be concluded that the airports and aviation industry is still recovering from the global pandemic Covid-19 travel restrictions era since these were mostly lifted during the year of 2021 – 2022 and they may also be reinstated depending on the spreading of new Covid-19 variants globally in the future.

3.9 Review questions

- 1) Define the following terms ‘air transport movement’ and ‘cargo movement’?
- 2) Discuss the important facts about Sydney Airport and Melbourne Airport?
- 3) List the important facts about London Heathrow Airport? Describe the important facts about O.R. Tambo International Airport?
- 4) Discuss the important facts about Oslo Airport? Discuss the key facts about Arturo-Merito Benítez International Airport in Santiago de Chile?

Chapter 4: Ghana, Singapore, Spain, France & Sweden Airports

After reading this chapter you should be able to:

- Define the following terms ‘transfer passengers’ and ‘full freighter’. Describe important facts about Kotoka International Airport.
- Discuss the key facts about Changi Airport.
- List the important facts about Adolfo Suárez Madrid-Barajas Airport.
- Discuss the important facts about Paris-Charles de Gaulle Airport. List the key facts about Stockholm Arlanda Airport.

4.1 Introduction

¹¹³According to the International Civil Aviation Organization (ICAO) (2019:17-18) **Air Connectivity**. The air transport network is dynamic and constantly developing. It is truly a global industry connecting all parts of the world seamlessly. Aviation is a customer-focused economic sector. While there is no single definition of air connectivity, it can be viewed as the ability of a network to move passengers, cargo and mail involving the minimum of transit points, which makes the trip as short as possible with optimal user satisfaction at the minimum price possible. **Direct Impacts**. The aviation industry itself is a source of considerable economic activity, creating jobs that directly serve passengers at airlines, airports and air navigation services providers. These include check-in, baggage handling, on-site retail, cargo and catering facilities. Moreover, aviation directly enables jobs in the manufacturing sector (those companies that produce aircraft, engines and other vital technologies). Aviation is a highly productive industry, as measured in terms of GDP per worker. Air transport employees are considered to be highly skilled, trained and experienced. **Indirect Impacts**. The economic benefits of aviation extend much further than the industry’s direct impacts. The indirect impacts include employment

¹¹³ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

and economic activity generated by suppliers to the aviation industry: aviation fuel suppliers; construction companies that build airport facilities; suppliers of subcomponents used in aircraft; manufacturers of goods sold in airport retail outlets; and a wide variety of activities in the business services sector (such as call centres, information technology and accountancy). **Induced Impacts.** The spending of those directly or indirectly employed in the aviation sector supports additional jobs in other sectors such as retail outlets, companies producing consumer goods and a range of service industries (for example, banks, telecommunication providers and restaurants). Worldwide, nearly eight million induced jobs are supported globally through employees in the aviation industry (whether direct or indirect) using their income to purchase goods and services for their own consumption. The induced contribution to global economic activity is estimated at USD 454 billion. **Catalytic Impacts.** Furthermore, many other industries rely on effective air transport links to function. Aviation's impact on other industries improves the efficiencies in a wide spectrum of economic activities, for example: offers just-in-time delivery systems in the supply chains; enables international investments into and out of countries and regions; and supports innovations by encouraging effective networking and collaboration between organizations located in different parts of the globe. Good air transport links are considered to be essential factors influencing where companies choose to invest. Countries need connectivity to fully participate in the worldwide economy. This encourages higher productivity, investment and innovation. Connectivity helps businesses operate efficiently and attract high-quality employees

¹¹⁴ (ICAO, 2019:17-18, <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf>). The following section will cover information about the definition of terms in-depth.

¹¹⁴ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

4.2 Definition of terms

¹¹⁵“*Transfer passengers* those who change planes within 24 hours without leaving the customs area are counted both arriving and departing. *Full freighter* an aircraft that transports cargo exclusively. This can also be a passenger aircraft, that is used for only transporting cargo in cabin/belly” (Amsterdam Airport Schiphol, 2022, <https://www.annualreportschiphol.com/>). The following section will cover information about Ghana airports in-depth.

4.3 Ghana (Kotoka International Airport)

The amazing future oriented highly attractive infrastructure facilities of Kotoka International Airport one of Africa’s top destination point of entry will be clearly depicted by Figure 4.1 below.

Figure 4.1 Kotoka International Airport highly attractive infrastructure facilities



Source: (Ghana Airports Company Limited, 2022, <https://www.gacl.com.gh/publications/kotoka-international-airport-adjudged-winner-of-the-aci-safety-awards-2022/>).

¹¹⁵ Amsterdam Airport Schiphol (2022) *Glossary*. Available from: <https://www.annualreportschiphol.com/trafficreview2021/glossary> [Accessed December 10, 2022] © Schiphol 2022

¹¹⁶“**Kotoka International Airport. Our History.** Kotoka International Airport (KIA), was originally a military airport used by the British Royal Air Force during World War II in 1946. The facility was handed over to civilian authority after a successful pull-out by the military. In response to globalization and the growing demand for air travel at the time, a development project was launched to reconfigure the structure into a terminal building in 1956. **Accessibility.** The airport occupies 1610 acres (651 hectares) within the city of Accra, and is about 10 kilometres from the City Centre. The reference point co-ordinates are 05° 35’ 47” North Latitude by 000° 10’ 12” West longitude. Elevation is 63.5m (205 ft). K.I.A’s central location in the world, (on the Greenwich Meridian and close to the Equator) makes it easily accessible from any part of the world. **The New Direction.** In 2013, GACL embarked on a complete strategic redirection with a focus on upgrading and transforming Kotoka International Airport (KIA) and the domestic airports to conform with current trends in aviation infrastructure and service delivery. The new strategic direction aligned perfectly with the corporate vision of positioning Ghana as the Preferred Aviation Hub and leader in Airport business in West Africa” (Ghana Airports Company Limited, 2022, <https://www.gacl.com.gh/kotoka-international-airport/>). The mega modern technology centred and world class infrastructure facilities of Kotoka International Airport (KIA) will be clearly depicted by Figure 4.2.

¹¹⁶ Ghana Airports Company Limited (2022) *Kotoka International Airport*. Available from: <https://www.gacl.com.gh/kotoka-international-airport/> [Accessed December 12, 2022] © 2018 GACL. All Rights Reserved.

Figure 4.2 Kotoka International Airport (KIA) Terminal 3 and the Expansion of T2 Arrival Hall



Source: (Ghana Airports Company Limited, 2022, <https://www.gacl.com.gh/kotoka-international-airport/> & <https://www.gacl.com.gh/kotoka-international-airport/>).

““In 2014, work commenced on the expansion of the arrival to ease the congestion experienced during peak hours. Currently, the existing floor area of the arrival hall has been expanded by 5,148m². Additional works include electrical installations, fire detection and protection systems, provision and installation of two new baggage handling equipment to bring to four the number of baggage carousels in the arrival hall, provision and installation of twenty-six immigration booths, 10 e-gates, a moving walkway, new air-condition systems among others. Other works include the creation of a Data Centre, transit lounge and additional floors to serve as offices for GACL and other stakeholders at the airport. ¹¹⁷The existing terminal building has also witnessed some improvements as part of the transformation process. These include the replacement of the escalator with two new ones, the installation of two new lifts, refurbishment of washrooms and the re-roofing of the entire terminal building. GACL's flagship project, Terminal 3, has been completed and operational. The new terminal 3 has modern airport terminal facilities that will

¹¹⁷ Ghana Airports Company Limited (2022) *Kotoka International Airport*. Available from: <https://www.gacl.com.gh/kotoka-international-airport/> [Accessed December 12, 2022] © 2018 GACL. All Rights Reserved.

undoubtedly position KIA among the best-equipped airport in the region. Some of the outstanding features include: - Capacity to handle 5 million passengers a year, Process 1,250 passengers per hour, Six boarding bridges, A large commercial and retail area, Three business lounges, Purpose built transit facilities and a CIP terminal”” (Ghana Airports Company Limited, 2022, <https://www.gacl.com.gh/kotoka-international-airport/>).¹¹⁸“Kotoka International Airport Adjudged “Winner” of the ACI Safety Awards 2022. Kotoka International Airport has been adjudged ‘Winner’ of the ACI Safety Awards 2022 – Excellence in Safety Management Systems (SMS) for the West Africa sub-region. The award was presented at the 68th ACI Africa/World Conference and Exhibition in Marrakesh, Morocco on October 24, 2022. The Safety Awards 2022 focused on SMS Excellence, showcasing ACI Africa airport members with fully functional SMS in place at their airport. It looked at airports which had taken the lead in adopting, implementing and enforcing most, if not all, Safety Policies and Procedures within their SMS Manual. Airports Council International, Africa envisioned these awards to recognize excellence and professionalism in the management of Aerodrome Safety. The awards provided an opportunity for all airport members, irrespective of size including the Domestic and International Aerodromes to celebrate successes in this vital aspect of airport operations. It also presented an opportunity to celebrate the pledge of airports to continuously improve their safety and quality commitments. Members of the jury were impressed with the quality of submissions by Ghana Airports Company Limited (GACL) and most importantly, on the motivation and dedication in implementing excellence in safety at the GACL operated airports. *Reacting to news of the award, Managing Director of Ghana Airports Company Limited, Mrs Pamela Djamson-Tettey said “For us at GACL, safety is non-negotiable and so this award is a massive endorsement of GACL’s attempt to position Ghana as an aviation hub and leader in airport business in West Africa, and we are immensely proud of this recognition.* It will be recalled that in 2017, Kotoka International Airport (KIA) was adjudged ‘Best Improvement in Safety’ by the Airports Council

¹¹⁸ Ghana Airports Company Limited (2022) *Kotoka International Airport Adjudged “Winner” of the ACI Safety Awards 2.*

Available from: <https://www.gacl.com.gh/publications/kotoka-international-airport-adjudged-winner-of-the-aci-safety-awards-2022/> [Accessed December 12, 2022] © 2018 GACL. All Rights Reserved.

International (ACI)''''¹¹⁹ (*Managing Director of Ghana Airports Company Limited, Mrs Pamela Djamson-Tettey, 2022 cited in Ghana Airports Company Limited, 2022, <https://www.gacl.com.gh/publications/kotoka-international-airport-adjudged-winner-of-the-aci-safety-awards-2022/>*). The following section will cover information about Changi Airport in-depth.

4.4 Singapore (Changi Airport)

The globally recognized world class infrastructure at Changi Airport will be clearly depicted by Figure 4.3 & Figure 4.4 & Figure 4.5 below.

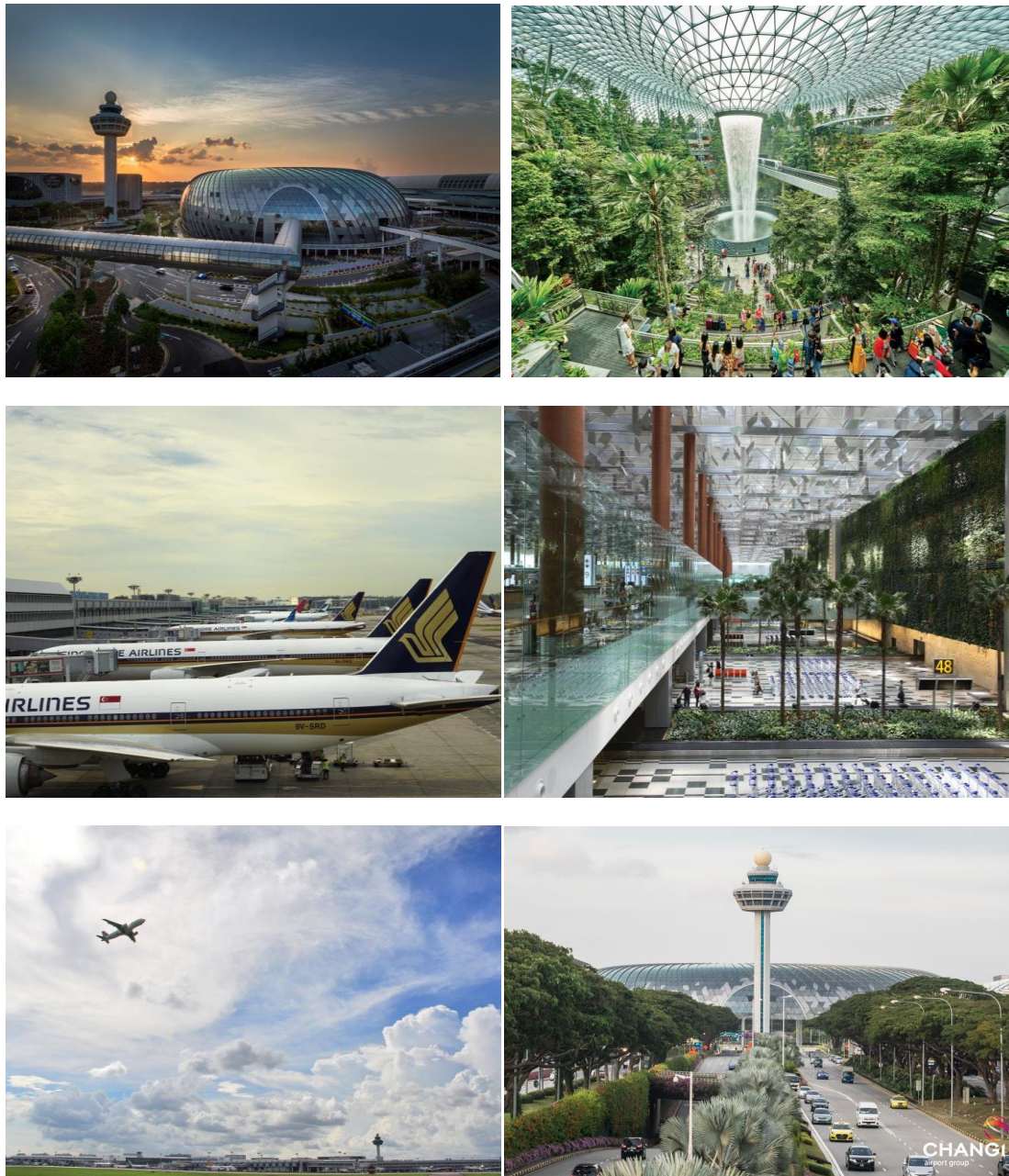
Figure 4.3 Changi Airport highly attractive infrastructure



Source: (Changi Airport Group, 2022, <https://www.changiairport.com/corporate.html>).

¹¹⁹ Ghana Airports Company Limited (2022) *Kotoka International Airport Adjudged “Winner” of the ACI Safety Awards 2*. Available from: <https://www.gacl.com.gh/publications/kotoka-international-airport-adjudged-winner-of-the-aci-safety-awards-2022/> [Accessed December 12, 2022] © 2018 GACL. All Rights Reserved.

Figure 4.4 Changi Airport world class environmentally friendly infrastructure facilities



Source: (Changi Airport Group, 2023, <https://gallery.changiairport.com/content/cag-corp/en/media-centre/resources.mgimage.vkTYEWaPXV.view.low.jpg> and <https://gallery.changiairport.com/content/cag-corp/en/media-centre/resources.mgimage.g9KXO1jcf9.view.low.jpg> and <https://gallery.changiairport.com/content/cag-corp/en/media-centre/resources.mgimage.4SN44Jgvak.view.low.tif> and <https://gallery.changiairport.com/content/cag-corp/en/media-centre/resources.mgimage.6IU0imTCgL.view.low.jpg> and <https://gallery.changiairport.com/content/cag-corp/en/media-centre/resources.mgimage.SFwzv3M7sl.view.low.jpg> and <https://gallery.changiairport.com/content/cag-corp/en/media-centre/resources.mgimage.8k1Ow9Nj5w.view.low.jpg>).

Figure 4.5 Changi Airport Terminal 4 infrastructure



Source: (Changi Airport Group, 2022, Terminal 4, <https://www.changiairport.com/corporate/partnerships/office-and-warehouse-leasing.html>).

¹²⁰“**A HISTORY OF FIRSTS.**

• **A BRIGHT FUTURE**

Future of Changi

Today, Changi Airport is renowned for its unrivalled passenger experiences, which have become synonymous with global connectivity, clockwork efficiency and unique, thoughtful services. As the number of passengers we welcome continues to rise, and the needs of those passengers become increasingly sophisticated, our challenge is to raise our standards even higher. It’s a challenge we are already embracing, with creative solutions and signature experiences that will redefine air travel for generations to come.

¹²⁰ Changi Airport Group (2022) *Our Story*. Available from: <https://www.changiairport.com/corporate/about-us/our-story.html>
[Accessed December 13, 2022]

Changi East

Passenger traffic at Changi Airport is expected to grow by 3–4% every year for the next 20 years. At this rate, current airport capacity will be reached by the late 2020s. The Changi East development is a response to this expected growth. It's a bold strategy to maintain Changi Airport's and Singapore's competitive edge for the long term. With a new, third runway, one of the world's largest mega terminals, and a range of exciting new facilities, Changi East will ensure Changi Airport is equipped to accommodate and delight ever more passengers and their ever-increasing demands" (Changi Airport Group, 2022, <https://www.changiairport.com/corporate/about-us/our-story.html>).The following section will cover information about Adolfo Suárez Madrid-Barajas Airport.

4.5 Spain (Adolfo Suárez Madrid-Barajas Airport)

The world class and amazingly beautiful architecture of Adolfo Suárez Madrid-Barajas Airport will be clearly depicted by Figure 4.6 below.

Figure 4.6 Adolfo Suárez Madrid-Barajas Airport amazingly beautiful architecture



Source: (Aena SME, S.A., 2022, <https://www.aena.es/en>). The images are the property of Aena and their use is authorized only for the purpose for which they have been requested, their publication in the book *The World's Amazingly Beautiful & Magnificent Airports & Flight Destinations & Airlines*. They may not be transferred to third parties without the express authorization of Aena.

¹²¹““**History.** STARTADOLFO SUÁREZ MADRID-BARAJASGET TO KNOW USHISTORY. Madrid National Airport opened on 22 April 1931, but commercial flights did not begin until late in 1933. To build the large airport to substitute the Getafe and Carabanchel airfields 330 hectares of barren land were chosen near the then town of Barajas, now a district of Madrid city, due to the fact that it was well communicated to the capital via the road to France. On the airfield, a large white circle with the name of Madrid inside served as a guide for pilots. On 15 May 1933 a Fokker VII/3M three-engine plane landed, marking the opening of Madrid-Barajas to commercial civilian traffic. The first scheduled routes operated by LAPE, the company that would later become Iberia, were to Barcelona and Seville. That year, with Lieutenant Colonel Jacobo de Armijo y Fernández de Alarcón as the first director, 378 flights were operated, transporting 2,873 passengers. Soon successive renovations were undertaken to

¹²¹ Aena SME, S.A. (2022) *History*. Available from: <https://www.aena.es/en/adolfo-suarez-madrid-barajas/get-to-know-us/history.html> [Accessed December 12, 2022] © Aena SME, S.A., 2018.

meet the needs of the new aircraft and the first paved 1,400 metre airstrip was built in 1944. **In the 1950s there were half a million passengers a year.** In the mid 50s half a million passengers a year used Barajas airport. The Airport continued to grow and adapt to new needs. In 1954 a new terminal was built, called the National Terminal, now Terminal T2. The passenger terminal was completed with a cargo terminal and cargo aircraft aprons. In 1965, Barajas changed its name to *Aeropuerto de Madrid - Barajas*. **Jumbo jets "land" in the 70s.** In the 1970s, which began with the arrival of Jumbo jets, air traffic doubled to exceed one million passengers a year. In 1971 work commenced on a new passenger terminal devoted exclusively to international flights, now known as Terminal T-1. **A necessary extension.** In 2000, to increase the airport's capacity to 70 million passengers a year the so-called Barajas Plan was put into effect; a third runway and a new control tower were constructed. The extension of the airport included two new runways, parallel to the existing ones, so that they could all function fully and continuously. This project was completed on 4 February 2006 with the opening of the new terminal which included the current T4 and its satellite building T4S, with a surface area of over 750,000 m² and capacity for 35 million passengers a year and 120 flights an hour, enhancing Madrid-Barajas's standing as a world *hub* airport. On 24 March 2014 the official name of the airport was changed to *Adolfo Suárez Madrid- Barajas*¹²² (Aena SME, S.A., 2022, <https://www.aena.es/en/adolfo-suarez-madrid-barajas/get-to-know-us/history.html>). The vast landscape, tarmac and world class facilities of Adolfo Suárez Madrid-Barajas Airport will be clearly depicted by Figure 4.7 below.

¹²² Aena SME, S.A. (2022) *History*. Available from: <https://www.aena.es/en/adolfo-suarez-madrid-barajas/get-to-know-us/history.html> [Accessed December 12, 2022] © Aena SME, S.A., 2018.

Figure 4.7 Adolfo Suárez Madrid-Barajas Airport state-of-the-art facilities



Source: (Aena SME, S.A., 2022, <https://www.aena.es/en>). The images are the property of Aena and their use is authorized only for the purpose for which they have been requested, their publication in the book *The World's Amazingly Beautiful & Magnificent Airports & Flight Destinations & Airlines*. They may not be transferred to third parties without the express authorization of Aena.

¹²³“**Presentation.** STARTADOLFO SUÁREZ MADRID-BARAJAS GET TO KNOW US PRESENTATION. **Adolfo Suárez Madrid-Barajas Airport is one of the main points of entry for tourists to Spain.** A short distance from the city centre, it is a key element of our tourist industry as it is convenient and saves passengers time and money in transport. Madrid-Barajas plays a very important role in the economies of Madrid and Spain as a whole, **driving the regional economy** and fostering business growth and tourism. The airport has been consolidated as a **hub airport where airlines can increase connectivity between Latin American, domestic and European markets.** Making it a true bridge between Europe and Latin America. Adolfo Suárez Madrid-Barajas is now a symbol of modernity and progress, securing its position of leadership among the world's leading airports. Its **innovative and attractive facilities**, equipped with the latest technology to offer passengers greater mobility, efficiency and speed, with

¹²³ Aena SME, S.A. (2022) *Presentation*. Available from: <https://www.aena.es/en/adolfo-suarez-madrid-barajas/get-to-know-us/presentation.html> [Accessed December 12, 2022] © Aena SME, S.A., 2018.

modern baggage handling systems, shopping areas and the expansion of the airfield **make Madrid one of the airport capitals of the 21st century.**

- 24,135,039

- passengers in 2021

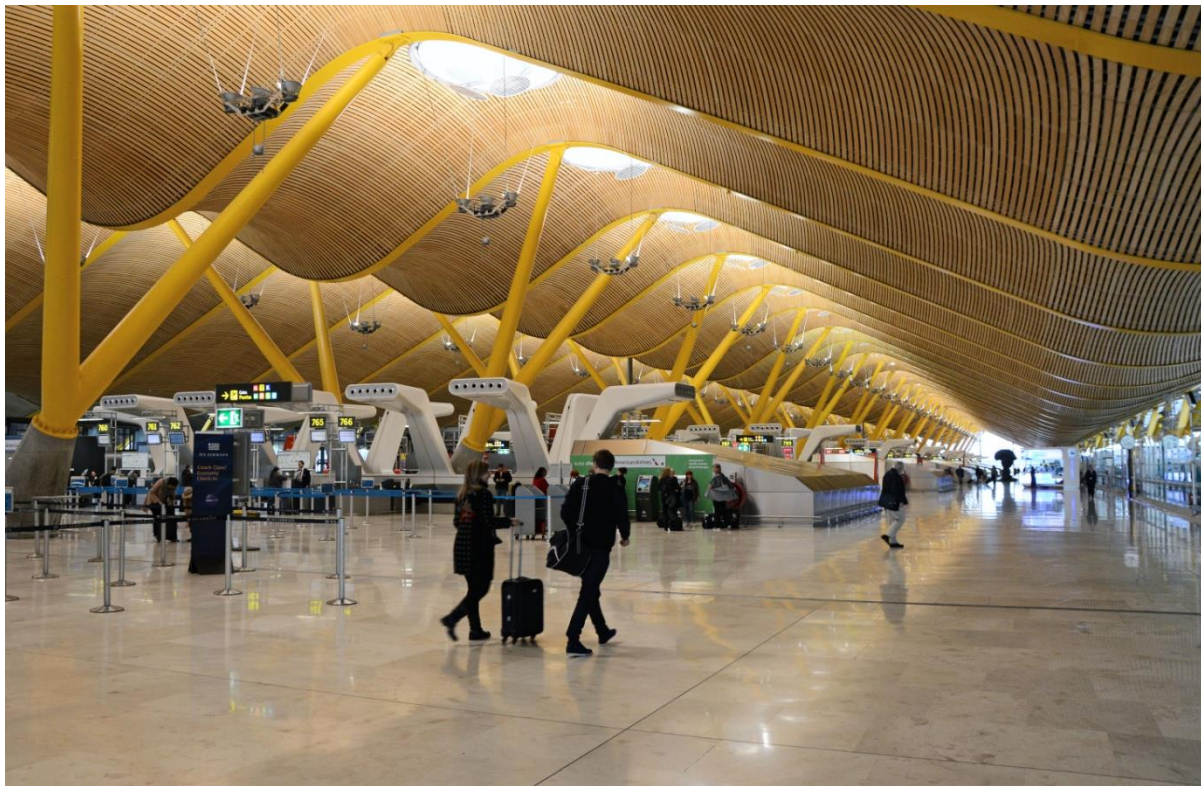
- 217,539

- operations in 2021

- 523,480

- tonnes of cargo in 2021” (Aena SME, S.A., 2022, <https://www.aena.es/en/adolfo-suarez-madrid-barajas/get-to-know-us/presentation.html>). The customer friendly and world class interior infrastructure facilities of the globally recognized Adolfo Suárez Madrid-Barajas Airport will be clearly highlighted by Figure 4.8 below.

Figure 4.8 Adolfo Suárez Madrid-Barajas Airport customer friendly and world class interior infrastructure facilities



Source: (Aena SME, S.A., 2022, <https://www.aena.es/en>). The images are the property of Aena and their use is authorized only for the purpose for which they have been requested, their publication in the book *The World's Amazingly Beautiful & Magnificent Airports & Flight Destinations & Airlines*. They may not be transferred to third parties without the express authorization of Aena.

“**Awards. Recognition. Skytrax Awards.** COVID-19 Airport Excellence Awards 2021. **ACI Awards.** Best Airport in Europe with more than 25 million passengers 2008 and 2017. **Skytrax Awards.** Best Airport in the south of Europe at the World Airport Awards in 2015, 2017, 2019 and 2020. **CAPA Awards.** International Airport of the Year 2014 in the over 25 million passengers category. **Fundación Madrid por la Excelencia Awards.** Madrid Excelente for Customer Confidence 2018”¹²⁴ (Aena SME, S.A., 2022, <https://www.aena.es/en/adolfo-suarez->

¹²⁴ Aena SME, S.A. (2022) *Presentation*. Available from: <https://www.aena.es/en/adolfo-suarez-madrid-barajas/get-to-know-us/presentation.html> [Accessed December 12, 2022] © Aena SME, S.A., 2018.

[madrid-barajas/get-to-know-us/presentation.html](https://www.madrid-barajas/get-to-know-us/presentation.html)). The following section will cover information about France airports in-depth.

4.6 France (**Paris-Charles de Gaulle Airport**)

The astounding world class climate friendly infrastructure facilities of Paris-Charles de Gaulle Airport are clearly highlighted in Figure 4.9 below.

Figure 4.9 Paris-Charles de Gaulle Airport astounding world class climate friendly infrastructure facilities



Source: (Groupe ADP, 2023).

¹²⁵¹²⁶¹²⁷ According to the Groupe ADP (2022) [Paris-Charles de Gaulle Airport](https://www.parisaeroport.fr/en/group/strategy/airport-network/paris-charles-de-gaulle-airport). Paris-Charles de Gaulle airport, largest hub in Europe. Paris-Charles de Gaulle, located 25 kilometres north of

¹²⁵ Groupe ADP (2022) *Paris-Charles de Gaulle Airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/paris-charles-de-gaulle-airport> [Accessed December 12, 2022]

Paris, welcomed 76.2 million passengers in 2019, making it the leading airport in France and the 2nd largest in Europe. Paris-Charles de Gaulle serves 328 destinations in 119 countries. • 76,2million passengers • 328destinations covered in 119 countries • 4runways • 298aircrafts parking stands including 131 in contact with the terminals • 90 190direct jobs. As the hub of the national airline Air France and the main European hub of the Sky Team alliance, the airport handles the largest share of long-haul flights from Paris. Its connecting platform makes it the 3rd European hub for global connectivity (source: Hub Connectivity report), but the 1st for intercontinental traffic. The airport has nine passenger terminals spread over three large terminals and two independent runway doubles adapted to very large aircraft, which allow a maximum scheduling capacity of 120 movements per hour. The airport has 298 aircraft parking positions, 131 of which are in contact with the terminals. Finally, Paris-Charles de Gaulle is also home to the European hub of the express carrier FedEx and the largest cargo area in Europe. More than 700 companies are present at the Paris-Charles de Gaulle hub, which provides 90,190 direct jobs in all sectors of activity. A privileged location for the traffic. Point-to-point traffic accounts for over two-thirds of passenger traffic at Paris-Charles de Gaulle airport. The airport is also ideally located. The airport is also ideally located to attract connecting traffic, thus boosting long-haul traffic since Paris is less than two hours by air from all major Western European cities. In 2017, connecting traffic accounted for 30.6% of traffic. A powerful hub. Paris-Charles de Gaulle airport is the global hub of the airline Air France-KLM and the main European hub of the SkyTeam alliance. 3rd European hub for global connectivity (number of cities covered), behind Frankfurt and Amsterdam According to the ACI Europe “Airport Industry Connectivity 2017” report which assesses the network of connections offered at airports. It is the European hub of La Poste and FedEx, the extension underway will enable an approximate 50% increase in sorting and parcel processing capacity and will be operational in 2019. It is also home to all of the main international freight companies. Its processing capacity of around 3.6 million tonnes of cargo per year provides expansion opportunities for cargo companies (ACI Europe “Airport Industry Connectivity 2017” & ACI Europe Hub Connectivity report, 2022 cited in Groupe ADP, 2022,

¹²⁶ ACI Europe (2022) *Connectivity report*. Available from: <https://www.aci-europe.org/downloads/resources/CONNECTIVITY%20REPORT%202022.pdf> [Accessed December 12, 2022]

¹²⁷ ACI Europe “Airport Industry Connectivity 2017”, <https://www.aci-europe.org/>

<https://www.parisaeroport.fr/en/group/strategy/airport-network/paris-charles-de-gaulle-airport>).

The highly attractive Terminal 1 Boarding Hall infrastructure building of Paris-Charles de Gaulle Airport will be clearly depicted by Figure 4.10 below.

Figure 4.10 Paris-Charles de Gaulle Airport highly attractive infrastructure building



Source: Groupe ADP, 2023, Paris-CDG Terminal 1 with new boarding hall (@Arnaud Gaulupeau, Groupe ADP)

<https://presse.groupeadp.fr/wp-content/uploads/2022/12/7bb04dc3cf48d630f3c0ded63c0b7885-500x277.png>

Furthermore, according to Groupe ADP (2022) *Airlines and cities served*. The main airlines operating from Paris-Charles de Gaulle airport serve 325 cities. *Easy access to the airport*. The airport is served by a road and railway network that provides easy access for passengers, cargo transporters and airport personnel. This places it at the cutting edge for intermodality compared with other airports. The airport is accessible thanks to the proximity of motorways, a TGV high-speed train station at the heart of terminal CDG2, two RER commuter stations and a coach station at terminal 1. ¹²⁸Lastly, the automatic shuttle rail service CDGVal, connects the three airport terminals, the RER-TGV stations and the long-stay car parks. As part of the “New Grand Paris” project, the Prime Minister indicated that the government would like line 17 between

¹²⁸ Groupe ADP (2022) *Paris-Charles de Gaulle Airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/paris-charles-de-gaulle-airport> [Accessed December 12, 2022]

Saint Denis Pleyel and the Paris-Le Bourget airport, to be in service by 2024 and with an extension as far as the Paris- Charles de Gaulle airport by 2030. The airport will then be located 35 minutes from La Défense and 32 minutes from the Saint Lazare train station with a connection at Saint Denis Pleyel. Line 17 was declared of public utility by Decree on 14 February 2017. The CDG Express project, which will link the airport to the Gare de l’Est in 20 minutes The link is expected to be commissioned by 2024. There are around 28,600 parking spaces at Paris-Charles de Gaulle airport, 18,000 of which are in adjacent car parks (in direct contact with the terminals)¹²⁹ (ACI Europe “Airport Industry Connectivity 2017” & ACI Europe Hub Connectivity report, 2022 cited in Groupe ADP, 2022, <https://www.parisaeroport.fr/en/group/strategy/airport-network/paris-charles-de-gaulle-airport>). The highly attractive interior facilities of Paris-Charles de Gaulle Airport are clearly depicted by Figure 4.11 below.

¹²⁹ Groupe ADP (2022) *Paris-Charles de Gaulle Airport*. Available from: <https://www.parisaeroport.fr/en/group/strategy/airport-network/paris-charles-de-gaulle-airport> [Accessed December 12, 2022]

Figure 4.15 Stockholm Arlanda Airport infrastructure



Source: (“Photos and information: Swedavia Airports”).

¹³²“**Welcome to Stockholm Arlanda Airport.** Stockholm Arlanda Airport is Sweden's largest airport, and is a juncture between Stockholm and other Swedish cities as well as the rest of the world. Stockholm Arlanda Airport offers about 107 non-stop routes, of which 87 are abroad and 20 are domestic. In addition to our non-stop routes, we also have many charter destinations. In 2021, Stockholm Arlanda Airport was awarded "ECO-Innovation Airport of the Year" by the airport industry organisation ACI Europé. The airport is described as a pioneer in sustainability development within the industry, and as a leading example in becoming fossil free in one's own organisation. **Opening hours.** The airport is open 24 hours a day. **Facts about the airport.** In 2020, over 6.5 million people traveled to or from Arlanda. **Travelers 2020** 6 535 000 (2019: 25 642 623). **Airlines** [Here you see all airlines operating Stockholm Arlanda Airport.](#) **Runways** 3 take-off and landing runways (3,300 m, 2,500 m and 2,500 m). **Miscellaneous** 17,000

¹³² Swedavia AB (2022) *Welcome to Stockholm Arlanda Airport*. Available from: <https://www.swedavia.com/arlanda/about-the-airport/> [Accessed December 13, 2022]

employees. Stockholm Arlanda Airport is located in the municipality of Sigtuna. **History. Historical facts about Stockholm Arlanda Airport.** In 1946, the Riksdag (Swedish Parliament) agrees to establish a major airport next to Lake Halmsjön. At the time, air traffic flies out of Bromma Stockholm. **Construction on the airport begins in 1952.** The economy is in a slump, so a simple concrete runway – the Halmsjön Runway – is built. **On November 26, 1954,** the first official flight from Bromma to Halmsjön takes off. The inaugural pilot, Georg Lindow, says to the press, ¹³³"Nowhere else in the world have I seen a newly constructed runway that was designed as stupidly as the Halmsjön Runway". The concrete runway is nicknamed “the hump runway” because of its corkscrew-like shape and is little used. Several years later, the Halmsjön Runway is converted into what is today the taxiway by Runway 2. **The new airport is to be christened.** A competition to name it is announced in Året Runt magazine in 1958, but the jury does not like any of the names and instead puts forward its own suggestion, Arlanda, since the airport is located in the parish of Husby-Ärtinghundra, known in popular parlance as Arland. The name “Stockholm-Arlanda Airport” is approved by the Riksdag. **The main runway, Runway 1, is opened in 1959.** The airport starts to be used for scheduled service. On June 23, 1960, a Scandinavian Airlines System (SAS) Douglas DC-8 takes off on the first scheduled flight to New York. The present-day field garage serves as the terminal. The airport’s first hangar, “the DC8 hangar”, is built. **On April 1, 1962,** “Stockholm-Arlanda Airport” is officially declared open by King Gustav VI Adolf. International flights are moved from Bromma to Stockholm Arlanda. **The international terminal, “Arlanda International”** (now Terminal 5), is inaugurated in 1976 by King Carl XVI Gustav. All international flights, scheduled and charter, are moved here. **Domestic Terminal 1 (now Terminal 4) is inaugurated in 1983** by King Carl XVI Gustav and Queen Silvia. In 2006 Cargo City at Stockholm Arlanda inaugurated. Jumbo Hostel, the world’s first hotel in a jumbo jet, is established in 2008 at the airport entrance. In 2009 Stockholm Arlanda is the world’s first airport to be certified at the highest level of the European Airport Carbon Accreditation (ACA) programme, which assesses the climate impact of airports. LFV is split into two in 2010. The airport company Swedavia is formed and takes overall control of Sweden’s ten most important airports. In 2015 Swedavia launches its long-

¹³³ Swedavia AB (2022) *Welcome to Stockholm Arlanda Airport*. Available from: <https://www.swedavia.com/arlanda/about-the-airport/> [Accessed December 13, 2022]

term plan to develop Stockholm Arlanda Airport – over the next 30 years, SEK 13 billion will be invested in the airport. The goal is to be Scandinavia’s leading airport!”” (Swedavia AB, 2022, <https://www.swedavia.com/arlanda/about-the-airport/>). The highly attractive architectural design of the Stockholm Arlanda Airport passageway, aircraft stands and parking spaces facilities will be clearly depicted by Figure 4.16 below.

Figure 4.16 Stockholm Arlanda Airport passageway, aircraft stands & parking spaces facilities



Source: (“Photos and information: Swedavia Airports”, <https://www.swedavia.com/future-airports/stockholm-arlanda-airport/improved-passageway-in-terminal-5/>).

According to Swedavia AB (2022) **Role of the airport.** Stockholm Arlanda Airport stands for efficient transport services – primarily by air, but also through good ground transport services to and from the airport. Efficient transport facilitates the exchange of ideas, goods and services – an essential requirement for economic growth and prosperity in Sweden and the region. But what are the role and significance of the airport in more concrete terms? ¹³⁴Stockholm Arlanda Airport is located in the heart of Scandinavia. Internationally, the airport is a hub for traffic to and from Scandinavia and the Baltic Sea region. Stockholm Arlanda currently has the strongest route network in this area – with a total of 180 different destinations, nationally and internationally. **Ground traffic hub.** In the Stockholm region, Stockholm Arlanda is also a hub for ground traffic,

¹³⁴ Swedavia AB (2022) *Welcome to Stockholm Arlanda Airport*. Available from: <https://www.swedavia.com/arlanda/about-the-airport/> [Accessed December 13, 2022]

with good road connections, bus routes, long-distance trains, high-speed trains (Arlanda Express) and commuter trains. But there is still a great deal of room for improvement when it comes to regional public transport – today driving a car is the only alternative from a number of areas ¹³⁵ (Swedavia AB, 2022, <https://www.swedavia.com/arlanda/about-the-airport/>). The world class infrastructure facilities of Stockholm Arlanda Airport will be clearly depicted by Figure 4.17 below.

Figure 4.17 Stockholm Arlanda Airport world class infrastructure facilities



Source: (“Photos and information: Swedavia Airports”).

“**The airport generates more jobs.** There are some 600 companies and organisations with about 17,000 employees at Stockholm Arlanda Airport. The airport indirectly generates an additional 1,000 jobs per million passengers and around 2,000 jobs in the region for taxi drivers, day care staff and more. This translates to more than 50,000 jobs in addition to those at the airport

¹³⁵ Swedavia AB (2022) *Welcome to Stockholm Arlanda Airport*. Available from: <https://www.swedavia.com/arlanda/about-the-airport/> [Accessed December 13, 2022]

itself”¹³⁶ (Swedavia AB, 2022, <https://www.swedavia.com/arlanda/about-the-airport/>). The world class runways and climate eco-friendly infrastructure of Stockholm Arlanda Airport will be clearly depicted by Figure 4.18 below.

Figure 4.18 Stockholm Arlanda Airport runways and climate eco-friendly infrastructure



Source: (“Photos and information: Swedavia Airports”).

““**Stockholm Arlanda important for tourism.** Foreign visitors spend SEK 60 billion a year in Sweden on shopping, accommodation and food. This is more than the country’s car exports, more than its pharmaceutical exports and ten times more than its music exports. Travel is also expected to increase, and Stockholm Arlanda Airport plays an important role here. **Regional collaboration for development going forward.** Being part of the region and working to drive development forward is important for Stockholm Arlanda. The airport therefore takes part in a number of different collaboration mechanisms. **Connect Sweden.** An apolitical collaborative forum including businesses, public sector organisations, the City of Stockholm, the region, Swedavia and other stakeholders. The aim is to establish at least five new international direct routes from Stockholm Arlanda Airport to elsewhere in Europe, North America and Asia within

¹³⁶ Swedavia AB (2022) *Welcome to Stockholm Arlanda Airport*. Available from: <https://www.swedavia.com/arlanda/about-the-airport/> [Accessed December 13, 2022]

three years and thus strengthen Stockholm Arlanda's position as Scandinavia's leading airport. **Tourism industry.** Stockholm Arlanda Airport is also active in a number of marketing initiatives aimed at attracting travellers to Stockholm and the Lake Mälare region¹³⁷ (Swedavia AB, 2022, <https://www.swedavia.com/arlanda/about-the-airport/>). The following section will cover information about the conclusion of this chapter.

4.8 Conclusion

Change is strongly associated with the airport and aviation industry since it is a global industry that enables the movement of passengers from one destination to another whilst simultaneously providing customer experience. It can be concluded that the airport and aviation industry helps to boost the skills and education development of a country since it requires highly skilled employees. In general one of the key benefits of the airport and aviation industry to a country is the rapid expansion of its transport infrastructure network in order to enable the country to remain highly appealing to tourists. The consistent growth of the airport and aviation industry on the continent of Africa over the past decades has led to the increased construction of new airport infrastructure facilities in many countries.

4.9 Review questions

- 1) Define the following terms 'transfer passengers' and 'full freighter'? Describe important facts about Kotoka International Airport?
- 2) List the important facts about Changi Airport? Describe the key facts about Adolfo Suárez Madrid-Barajas?
- 3) Describe the important facts about Paris-Charles de Gaulle Airport?
- 4) List the key facts about Stockholm Arlanda Airport?

¹³⁷ Swedavia AB (2022) *Welcome to Stockholm Arlanda Airport*. Available from: <https://www.swedavia.com/arlanda/about-the-airport/> [Accessed December 13, 2022]

Chapter 5: Belgium, New Zealand, Ireland, Romania & Brazil Airports

After reading this chapter you should be able to:

- Define the following terms ‘passenger load factor’ and ‘transit direct passengers’.
Describe the important facts about Brussels Airport.
- Highlight the key facts about Auckland Airport.
- Highlight the important facts about Dublin Airport. Describe the key facts about Bucharest Henri Coandă International Airport.
- Describe the important facts about São Paulo Guarulhos International Airport – GRU.

5.1 Introduction

¹³⁸According to the International Civil Aviation Organization (ICAO) (2019:7-8) **Aviation Is a Major Contributor to Global Economic Prosperity.** Aviation provides the only rapid worldwide transportation network, which makes it essential for global business. It generates economic growth, creates jobs, and facilitates international trade and tourism. One of the industries that relies most heavily on aviation is tourism. By facilitating tourism, air transport helps generate economic growth and alleviate poverty. Currently, approximately 1.4 billion tourists are crossing borders every year, over half of whom travelled to their destinations by air. In 2016, aviation supported almost 37 million jobs within the tourism sector, contributing roughly USD 897 billion a year to global GDP. Air transport is a driver of global trade and e-commerce, allowing globalization of production. The small volumes of air cargo amount to big values in world trade. **Aviation Provides Significant Social Benefits.** The availability of reliable air transport services provides people with access to what they need: better living standards, food, healthcare, education, safe communities and spaces, etc. Aviation is by far the world’s safest and most efficient mode of long-range transportation. It often serves as the only possible means of transportation to provide health care and food supplies to many remote

¹³⁸ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

communities, and it is a fast and reliable way to deliver urgent humanitarian aid during emergencies caused by natural disasters, famine and war. In remote or peripheral regions, air transport functions as an essential service to provide lifeline connections that otherwise would not be available (ICAO, 2019:7-8, <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf>).¹³⁹ Furthermore, according to the International Civil Aviation Organization (ICAO) (2019:30-32) Aviation provides vital lifelines and connections to remote or peripheral destinations that otherwise would not be available, for example, in the Arctic, across vast stretches of wilderness and to small island States all around the world. It offers accessibility to these destinations without the need for expensive and challenging road and port infrastructure development. Aviation contributes to **Improving Quality of Life** by broadening people's leisure and cultural experiences. It provides an affordable means to visit distant friends and relatives. Low cost and more frequent access to air travel has increased the range of potential holiday destinations. As people move for employment, educational or lifestyle reasons, many families are now located in different regions around the world (ICAO, 2019:30-32, <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf>). The following section will cover information about the definition of terms in-depth.

5.2 Definition of terms

¹⁴⁰ “*Passenger load factor*. The passenger load factor means the number of passengers (including 2x transit-direct) expressed in a percentage of the number of available seats. *Transit-direct passengers*. Those who leave the airport on the same flight number as the one by which they arrived, without leaving the customs area are not counted incoming or outgoing, but stated separately” (Amsterdam Airport Schiphol, 2022, <https://www.annualreportschiphol.com/>). The following section will cover information about Belgium airports in-depth.

¹³⁹ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

¹⁴⁰ Amsterdam Airport Schiphol (2022) *Glossary*. Available from: <https://www.annualreportschiphol.com/trafficreview2021/glossary> [Accessed December 10, 2022] © Schiphol 2022

5.3 Belgium (Brussels Airport)

The modern state-of-the-art infrastructure facilities at Brussels Airport are clearly highlighted in Figure 5.1 below.

Figure 5.1 Brussels Airport modern state-of-the-art infrastructure facilities



Source: (Brussels Airport Company, 2022, <https://www.brusselsairport.be/en/pressroom/news/more-than-1-7-million-passengers-in-june>).

¹⁴¹“**Brussels Airport in Numbers.** With 26.4 million passengers handled, 2019 was yet another record year for Brussels Airport! But do you have any idea of how many cups of coffee are served here every day? Or of the total length of escalators and walkalators at Brussels Airport? Here's a flyby overview in numbers*”¹⁴² (Brussels Airport Company, 2022, <https://brusselsairportinnumbers.brusselsairport.be/en#we-love-numbers>). The globally

¹⁴¹ Brussels Airport Company (2022) *Brussels Airport in Numbers*. Available from: <https://brusselsairportinnumbers.brusselsairport.be/en#we-love-numbers> [Accessed December 13, 2022] © Brussels Airport Company

¹⁴² Brussels Airport Company (2022) *Brussels Trends*. Available from: <https://www.brusselsairport.be/en/our-airport/facts-figures/butrends> [Accessed December 13, 2022] © Brussels Airport Company

recognized eco-friendly infrastructure facilities of Brussels Airport are depicted in Figure 5.2 below.

Figure 5.2 Brussels Airport globally recognized eco-friendly infrastructure facilities



Source: (Brussels Airport, 2023, Solar Panels Brussels Airport, https://media.brusselsairport.be/bruweb/pressroom_context/0001/35/1e662fa487043ad2b3c79c372bfa0f659ae4ee92.jpeg).

¹⁴³According to the Brussels Airport Company (2022) **In a nutshell**. • More than just an airport. • Brussels Airport is one of the most important centres of economic growth in Belgium. • Watch a short video for more information about Brussels Airport! **In the heart of Europe**. As a national airport located in the heart of Europe, Brussels Airport is the **ideal gateway** to Brussels, Belgium and the rest of the world. Brussels Airport is simultaneously a city in itself, bustling with activity, innovation and engagement. Our employees are passionate about the airport, and this zeal translates into an extremely **customer-friendly service**, suffused with typical Belgian hospitality. Other business are keen to establish themselves here, attracted by the promotion of

¹⁴³ Brussels Airport Company (2022) *In a Nutshell*. Available from: <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/in-a-nutshell> [Accessed December 13, 2022] © Brussels Airport Company

Belgian pride that Brussels Airport propagates at an international level. Brussels Airport is **the ultimate experience for each and everyone!** (Brussels Airport Company, 2022, <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/in-a-nutshell>). The world class aircraft tarmac infrastructure facilities at Brussels Airport will be clearly depicted by Figure 5.3 below.

Figure 5.3 Brussels Airport world class aircraft tarmac infrastructure facilities



Source: (Brussels Airlines at Brussels Airport, 2023). ©Brussels Airlines.

¹⁴⁴Furthermore, according to Brussels Airport (2022) **The human touch**. The numbers speak for themselves: Brussels Airport is one of the most important airports in Europe. Yet, alongside all those capacity expansions and infrastructure investments, we manage to keep things on an exceptionally intimate level. Indeed, we remain an airport with a decidedly human touch, with

¹⁴⁴ Brussels Airport Company (2022) *In a Nutshell*. Available from: <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/in-a-nutshell> [Accessed December 13, 2022] © Brussels Airport Company

due **regard for the needs of every individual**. Regardless of whether it is a passenger, business, supplier or partner: the customer always comes first. **More than an airport**. We are constantly looking forward and consider more than the conventional services. Our role as an **intermodal hub** is an excellent example. By aligning all transport modes, we actively increase accessibility and attract foreign companies as a consequence. This has resulted in an **Airport Business District**, where growing activity implies an additional source of employment. ¹⁴⁵**National growth engine**. The National Bank of Belgium regards the airport industry as ‘an essential sector that plays a key role in the Belgian economy’. We are the second most important growth pool in our nation and have a responsibility for general prosperity and well-being. As an indication: the airport accounts for **60,000 direct and indirect jobs**, by virtue of both its commercial flights and leading international cargo operations. **Sustainability**. The environment and well-being of local residents are central to our strategy. We strive to **maintain a careful balance** between economic growth and a controlled impact on our surroundings. This is evidenced by our CO₂ neutrality, own water purification station, solar panel parks, noise abatement efforts and biodiversity initiatives etc. Brussels Airport profiles itself as a responsible player! (Brussels Airport Company, 2022, <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/in-a-nutshell>). The modern infrastructure buildings of Brussels Airport are clearly depicted by Figure 5.4 below.

¹⁴⁵ Brussels Airport Company (2022) *In a Nutshell*. Available from: <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/in-a-nutshell> [Accessed December 13, 2022] © Brussels Airport Company

Figure 5.4 Brussels Airport modern infrastructure buildings



Source: (Brussels Airport, 2023, Extension P3 – 2, https://media.brusselsairport.be/bruweb/pressroom_context/0001/35/75810081ec7e8b90149678e16459333126307443.jpeg).

¹⁴⁶“**The history of Brussels Airport.** The history of Brussels Airport starts in 1914 with the construction of an airship hangar. Over a century later, Brussels Airport has developed into a state-of-the-art comfortable airport that connects the capital of Europe to 238 destinations around the world” (Brussels Airports Company, 2022, <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/history>). The amazingly beautiful and fun plane spotting facilities at Brussels Airport will be clearly depicted by Figure 5.5.

¹⁴⁶ Brussels Airports Company (2022) *The History of Brussels Airport*. Available from: <https://www.brusselsairport.be/en/our-airport/about-brussels-airport/history> [Accessed December 13, 2022] © Brussels Airport Company

Figure 5.5 Brussels Airport fun plane spotting facilities



Source: (Brussels Airlines at Brussels Airport, 2023). ©Brussels Airlines.

¹⁴⁷According to Brussels Airport Company (2022) **Plane spotting at Brussels Airport**. Airplanes speak to everyone's imagination. Brussels Airport provides customised infrastructure and up-to-date news for the most ardent fans. This web page puts plane spotters firmly in the spotlight (Brussels Airport Company, 2022, <https://www.brusselsairport.be/en/our-airport/brussels-airport-and-you/plane-spotting>). The following section will cover information about New Zealand airports in-depth.

5.4 New Zealand (Auckland Airport)

The world class and highly attractive passenger lounge at Auckland Airport will be clearly depicted by Figure 5.6.

¹⁴⁷ Brussels Airport Company (2022) *Plane spotting at Brussels Airport*. Available from: <https://www.brusselsairport.be/en/our-airport/brussels-airport-and-you/plane-spotting> [Accessed December 13, 2022] © Brussels Airport Company

Figure 5.6 Auckland Airport highly attractive passenger lounge



Source: (Auckland Airport, 2022, <https://corporate.aucklandairport.co.nz/about/50-years>). Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

¹⁴⁸According to Auckland International Airport Ltd (2022) **Kia Ora**. Welcome to Auckland Airport, New Zealand's gateway. We're the first to welcome you to our beautiful city, the last to farewell you from the islands of New Zealand. E ngā iwi o te ao katoa, Haere mai ki Aotearoa (Auckland International Airport Ltd, 2022, <https://www.aucklandairport.co.nz/>). “**Kia Ora**. As New Zealand's gateway and one of the largest listed companies, Auckland Airport has many corporate responsibilities to trade and tourism, our passengers, our partners, our shareholders and all our many other stakeholders. We take these responsibilities very seriously” (Auckland International Airport Ltd, 2022, <https://corporate.aucklandairport.co.nz/>). According to the Auckland International Airport Ltd (2022) **About**. From the arrival of the Tainui Waka into the Manukau Harbour, Auckland Airport has always been a place of journeys. We stand proudly as the gateway to Aotearoa, welcoming travellers beginning their journeys, farewelling Kiwis to

¹⁴⁸ Auckland International Airport Ltd (2022) *Kia Ora*. Available from: <https://www.aucklandairport.co.nz/> [Accessed December 13, 2022] Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

new destinations, connecting businesses and workers to new opportunities, and celebrating partners and investors who back us along the way. From our humble beginnings in 1966, Auckland Airport has grown into one of the largest international airports in Australasia. More than three-quarters of all international visitors to New Zealand arrived here before the outbreak of Covid-19, with 21 million passengers travelling through our terminals in the 2021 financial year. We play a significant role in supporting New Zealand businesses, with around \$15 billion worth of freight passing through the airport each year prior to the pandemic. More than 15,000 people, across more than 100 businesses, work in and around us. The wider airport precinct features a world-class business park, commercial office buildings, transport and logistics warehouses, hotels and leisure and recreation facilities. Today we are focused on transforming Auckland Airport into a world-class travel experience. Not just a place where people go from A to B, but a place where the journey brings as much enjoyment as the destination. E mahi ana mātou mō Aotearoa. We are working for New Zealand¹⁴⁹ (Auckland International Airport Ltd, 2022, <https://corporate.aucklandairport.co.nz/about>). “**Sustainability.** Being a sustainable business matters. Sustainability matters to Auckland Airport because we are a long-term multi-generational business. It is natural for us to take a long-term approach to our place in the world, the New Zealand economy and the local environment and community in which we operate. We are committed to making a positive contribution through our business activities, operating in a way that creates enduring value for New Zealand and generations to come. Auckland Airport was one of New Zealand’s early adopters of sustainability principles and has made considerable progress in the areas of emissions reductions, energy savings, waste management and social performance. We have lifted our sights and challenged ourselves again by setting another suite of sustainability targets, which outline how we will create value for our people and communities; contribute to the economy; and help tackle global challenges such as climate change. Our Sustainability Pathway to FY30 is focused around four key pillars:

¹⁴⁹ Auckland International Airport Ltd (2022) *About*. Available from: <https://corporate.aucklandairport.co.nz/about> [Accessed December 13, 2022] Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

Table 5.1 Auckland Airport Sustainability Pathway Four Key Pillars



Source: (Auckland International Airport Ltd, 2022, <https://corporate.aucklandairport.co.nz/sustainability>). © 2022 Auckland International Airport Ltd. All rights reserved.

Furthermore, according to Auckland International Airport Ltd (2022) *Our sustainability targets are:*

Table 5.2 Auckland Airport Sustainability Targets for 2030



Source: (Auckland International Airport Ltd, 2022, <https://corporate.aucklandairport.co.nz/sustainability>). © 2022 Auckland International Airport Ltd. All rights reserved.

150“**What matters most.** Every three years we undertake a comprehensive materiality assessment, including interviews with stakeholders, to identify the sustainability issues and topics that are most significant for our business. **Our eight material issues, reconfirmed in 2022, are:**

1. Safety, health, wellbeing and security
2. Wider economic contribution
3. Customer experience
4. Aircraft noise
5. Responsible employer
6. Climate change mitigation and adaptation

¹⁵⁰ Auckland International Airport Ltd (2022) *Sustainability*. Available from: <https://corporate.aucklandairport.co.nz/sustainability> [Accessed December 13, 2022] Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

7. Minimising our environmental footprint

8. Community and tangata whenua involvement

Our material issues are aligned to the United Nations Sustainable Development Goals”¹⁵¹ (Auckland International Airport Ltd, 2022, <https://corporate.aucklandairport.co.nz/sustainability>).

The globally recognized and highly attractive architectural infrastructure facilities of Auckland Airport will be clearly highlighted by Figure 5.7 below.

Figure 5.7 Auckland Airport highly attractive architectural infrastructure facilities



Source: (Auckland Airport, 2022, <https://corporate.aucklandairport.co.nz/about/50-years>). Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

¹⁵¹ Auckland International Airport Ltd (2022) *Sustainability*. Available from: <https://corporate.aucklandairport.co.nz/sustainability> [Accessed December 13, 2022] Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

¹⁵²“**Celebrating 50 years.** 2016 marked 50 years since Auckland Airport officially opened its doors. Manukau has long been a transport hub. The land was farmed and then became a centre for aviation enthusiasts until secured in 1955 with the purpose of becoming the country’s primary international airport. On 29 January 1966, Auckland Airport was officially opened. The opening was commemorated with a ‘Grand Air Pageant’ held over three days, which attracted a crowd of over 200,000 members of the public” (Auckland International Airport Ltd, 2022, <https://corporate.aucklandairport.co.nz/about/50-years>). The following section will cover information about Ireland based airports in-depth.

5.5 Ireland (Dublin Airport)

The state-of-the-art infrastructure of Terminal 2 at Dublin Airport will be clearly depicted by Figure 5.8 below.

¹⁵² Auckland International Airport Ltd (2022) *Celebrating 50 years*. Available from: <https://corporate.aucklandairport.co.nz/about/50-years> [Accessed December 13, 2022] Copyright © 2022 Auckland International Airport Ltd. All rights reserved.

Figure 5.8 Dublin Airport state-of-the-art Terminal 2



Source: (Dublin Airport, 2022, <https://www.dublinairport.com/corporate>). © Dublin Airport 2022

¹⁵³“**Dublin Airport Vision.** Dublin Airport opened in January 1940 when an Aer Lingus Lockheed 14 departed for Liverpool. Over 80 years on, our mission is to continue the legacy of anticipating the future and create the vision for how Dublin Airport will serve Ireland over the coming decade. Dublin Airport’s national strategic role is to deliver high quality international connectivity for Ireland and become a leading European secondary hub” (Dublin Airport, 2022, <https://www.dublinairport.com/corporate/dublin-airport-vision>). The modern runways and infrastructure facilities at Dublin Airport will be clearly depicted by Figure 5.9 below.

¹⁵³ Dublin Airport (2022) *Dublin Airport Vision*. Available from: <https://www.dublinairport.com/corporate/dublin-airport-vision> [Accessed December 13, 2022] © Dublin Airport 2022

Figure 5.9 Dublin Airport modern runways and infrastructure facilities



Source: (Dublin Airport, 2022, <https://www.dublinairport.com/latest-news/2>). © Dublin Airport 2022

¹⁵⁴According to Dublin Airport (2022) **Dublin Airport's History & Passenger Profile**. Here you can learn about the journey that Dublin Airport has enjoyed in the last 80 years and the passengers that pass through its doors. **Eighty Years And Counting**. Dublin Airport officially opened at 9:00am on January 19, 1940. It was a cold Friday morning when the inaugural flight - an Aer Lingus Lockheed 14 bound for Liverpool - departed from Collinstown Airport, as it was then known. In the late 1930s, development had begun on a terminal building and grass runways at the Collinstown site. The architect of the new terminal building was Desmond FitzGerald, an elder brother of the former Taoiseach, Dr. Garret FitzGerald. The curved building with its tiered floors was designed to echo the lines of a great ocean liner and won many architectural awards for its design. This original terminal building was designed to cater for just 100,000 passengers a year. The airport opened with just one flight a day to Liverpool and Collinstown was effectively mothballed during the Second World War, as Aer Lingus operated a twice-weekly service to Liverpool. Aer Lingus resumed its London service to Croydon in November 1945. By 1947,

¹⁵⁴ Dublin Airport (2022) *History and passenger profile*. Available from: <https://www.dublinairport.com/corporate/dublin-airport-vision/history-and-passenger-profile> [Accessed December 13, 2022] © Dublin Airport 2022

flights departing from Dublin had ventured as far as Continental Europe, with Dutch airline KLM beginning the first European service to Dublin. New concrete runways were completed in 1948, and in 1950 - after ten years in operation - the airport had been used by a total of 920,000 passengers. By the late 1950s, the original terminal was incapable of handling growing passenger numbers, so the new North Terminal was opened in June 1959. Originally it had been planned that this building would handle all U.S. and European flights, but instead it became the arrivals area for all passengers. By the 1960s, new departure gate piers were added adjacent to the old terminal to cope with larger aircraft. However it soon became apparent that the original terminal building could no longer cope with passenger demand. Work began in 1971 on a new terminal building designed to cater for an expected six million passengers per year. The new £10 million terminal opened in June 1972. The airport has greatly expanded since then with the addition of a new terminal, new departure gate piers, an extension to the 1971 terminal building, a new runway and taxiways. In November 2010, Dublin Airport's Terminal 2 and its connected boarding gate pier were opened. The award-winning new terminal will allow the airport to handle more than 30 million passengers per year. It will ensure that Dublin Airport continues to be what Desmond FitzGerald had originally envisaged - a modern European airport that is Ireland's premier aviation gateway. More than 400 million passengers have travelled through Dublin Airport since that first flight took off in 1940. The old terminal, which is a listed building, is still partially used for daily passenger operations and many of the internal design features of the building have been retained as a reminder of those early days of aviation¹⁵⁵ (Dublin Airport, 2022, <https://www.dublinairport.com/corporate/dublin-airport-vision/history-and-passenger-profile>). The following section will cover information about Romania airports in-depth.

5.6 Romania (Bucharest Henri Coandă International Airport)

Bucharest is a city located in Romania. The world class infrastructure facilities of Bucharest Henri Coandă International Airport will be clearly depicted by Figure 5.10 below.

¹⁵⁵ Dublin Airport (2022) *History and passenger profile*. Available from: <https://www.dublinairport.com/corporate/dublin-airport-vision/history-and-passenger-profile> [Accessed December 13, 2022] © Dublin Airport 2022

Figure 5.10 Bucharest Henri Coandă International Airport world class infrastructure facilities



Source: (Bucharest Henri Coandă International Airport, 2016, <https://www.bucharestairports.ro/en/news/henri-coanda-international-airport-in-top-3-of-european-airports-with-highest-air-traffic-growth-in-february1460713251>). © 2022 Bucharest Henri Coandă International Airport All rights reserved

¹⁵⁶“**2021 Air Traffic at Bucharest Airports.** During 2021, the air traffic on Bucharest Henri Coandă International Airport and Bucharest Băneasa Aurel Vlaicu International Airport recorded **6.922.297** passengers (a **54.89%** raise as compared to 2020) and **92.377** aircraft movements (landings and take offs), a **36.45%** raise as compared to the previous year). Yet, compared to the highest traffic for Bucharest Airports (2019), there is a 53% decrease. **Henri Coandă Airport** recorded **6.914.610** passengers (a **55,16%** increase as compared to 2020) and **72.190** aircraft movements (a **38,06%** raise as compared to the last year). Bucharest Băneasa Aurel Vlaicu International Airport recorded **7,687** passengers (+24.17%) and **20,187** aircraft

¹⁵⁶ Bucharest Henri Coandă International Airport (2022) *2021 Air Traffic at Bucharest Airports*. Available from: <https://www.bucharestairports.ro/en/news/2021-air-traffic-at-bucharest-airports> [Accessed December 13, 2022] © 2022 Bucharest Henri Coandă International Airport All rights reserved

movements. At present, 45 airlines operate on Bucharest Henri Coandă International Airport, carrying passengers to 128 destinations” (Bucharest Henri Coandă International Airport, 2022, <https://www.bucharestairports.ro/en/news/2021-air-traffic-at-bucharest-airports>). The highly attractive architecture at the Bucharest Henri Coandă International Airport will be clearly depicted by Figure 5.11 below.

Figure 5.11 Bucharest Henri Coandă International Airport highly attractive architecture



Source: (Bucharest Henri Coandă International Airport, 2016, <https://www.bucharestairports.ro/en/news/recommendation-for-passengers>). © 2022 Bucharest Henri Coandă International Airport All rights reserved

¹⁵⁷“**BANC presentation.** Bucharest Airports National Company manages the two main airports in Romania: Henri Coanda International Airport and Aurel Vlaicu International Airport, with a traffic of over 7.6 million passengers in 2013” (Bucharest Airports National Company, 2022, <https://www.bucharestairports.ro/cnab/en/>). ¹⁵⁸According to Bucharest Henri Coandă

¹⁵⁷ Bucharest Airports National Company (2022) *BNC Presentation*. Available from: <https://www.bucharestairports.ro/cnab/en/> [Accessed December 13, 2022] © 2022 Bucharest Henri Coandă International Airport All rights reserved

¹⁵⁸ Bucharest Henri Coandă International Airport (2022) *2021 Air Traffic at Bucharest Airports*. Available from: <https://www.bucharestairports.ro/en/news/2021-air-traffic-at-bucharest-airports> [Accessed December 13, 2022] © 2022 Bucharest Henri Coandă International Airport All rights reserved

International Airport (2022) *Brief information on Bucharest Airports National Company: Bucharest Airports National Company commenced functioning on February the 5th, 2010, ensuring the operational coordination and the management of the two airports in Bucharest. The company was set up following the merger of the two companies managing at that time Bucharest's airports: Bucharest Henri Coandă International Airport and Bucharest-Băneasa Aurel Vlaicu International Airport* (Bucharest Henri Coandă International Airport, 2022, <https://www.bucharestairports.ro/en/news/2021-air-traffic-at-bucharest-airports>).¹⁵⁹ According to Bucharest Henri Coandă International Airport (2022) *History. 1940-1944* On the present land of Bucharest Henri Coanda International Airport there functioned a military base of the IIIrd Reich. **1944 - 1965** The existing infrastructure (a 1200 m runway and buildings) is used by the Romanian military aviation. **1965** The increase of the air traffic, provided until then exclusively by Baneasa Airport, imposes the erection of a new airport. The metamorphosis process of the military air base Bucharest-Otopeni International Airport gets green light. The works were focused mainly on the modernization of the main runway so that it allows landing of the big capacity aircraft, the extension of the runway up to 3500 m (exceeding at that time the runway of the "old" Paris-Orly), the modernization of the airport electric plant and building of a passengers terminal. **1969** For the passengers boarding the cargo terminal is temporarily used. On the 2nd of August the Official Protocol Lounge of the airport was inaugurated on the occasion of Richard Nixon's visit in Romania. **1970** 13th April - the passengers terminal is inaugurated, haing the capacity of handling 1,2 million passengers/year. **1986** The airport is undergoing a new development stage. The second runway (3500m) and the corresponding taxiways system are built. The operational capacity increases to 35 aircraft movements/hour. The lighting system is modernized. **1991** The airport starts a vast investment program - "BOIA Development and Modernization" - together with a Romanian-Italian joint - venture (Italstrade, S.E.A. Milano, C.C.C.F.) **1993** Becomes regular ACI member (Airport Council International). **1997** December - The International Departures Terminal was inaugurated, haing a capacity of processing 1200 passengers/peak hour. The boarding hall is equipped with five air-bridges for the passengers direct access to the aircraft. **1998** June - The passengers of TAROM flight for Paris inaugurates

¹⁵⁹ Bucharest Henri Coandă International Airport (2022) *History*. Available from: <https://www.bucharestairports.ro/en/about-the-airport/history> [Accessed December 13, 2022] © 2022 Bucharest Henri Coandă International Airport All rights reserved

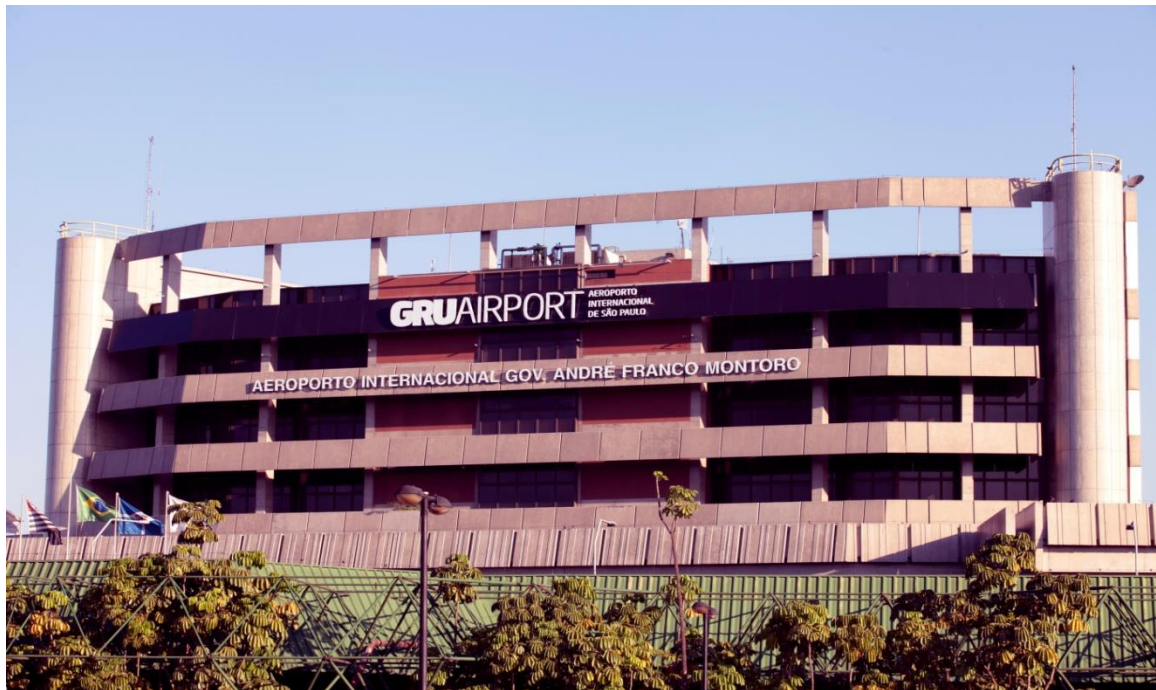
the modern boarding system. **2000** November - The "International Arrivals" passengers flow is inaugurated, as a result of the rearrangement of the old terminal. **2001** June - The parking corresponding to the Arrivals Terminal is inaugurated (3 levels with 900 places). August - Bucharest International Cargo Center (BICC) is commissioned - the cargo center meant to respond to the new requests from the field of cargo air transport. **2003** 16th of July - The Domestic Flights Terminal is inaugurated having a capacity of 200 passengers/peak hour for each of the two flows (Departures/Arrivals). **2004** September - when celebrating 35 years of civil aeronautical activity, the airport was ennobled with the name of the famous pioneer of the Romanian and international aviation, HENRI COANDA. **2005** August – commissioning of a new system – the hold baggage 100% security check integrated system. September – new components of the movement area are ready to be used: “Oscar” taxi-way (extension) and “Victor” rapid exit belt. ¹⁶⁰October – inauguration of the connection corridor between International Departures and International Arrivals/Domestic Flights Terminals. December – the sculpture dedicated to Henri Coandă, pioneer of jetplanes and fluids mechanics, is inaugurated. **2008** Commencing of Phase III of the airport infrastructure development and modernization project. **2011** The new boarding area extension becomes functional. **2012** November – The new Departures Terminal was opened in order to welcome more and more passengers and airlines. The new terminal doubles the airport processing capacity (Bucharest Henri Coandă International Airport, 2022, <https://www.bucharestairports.ro/en/about-the-airport/history>). The following section will cover information about Brazil airports.

5.7 Brazil (São Paulo Guarulhos International Airport - GRU)

The unique architectural building infrastructure of São Paulo Guarulhos International Airport – GRU will be clearly depicted by Figure 5.12 below.

¹⁶⁰ Bucharest Henri Coandă International Airport (2022) *History*. Available from: <https://www.bucharestairports.ro/en/about-the-airport/history> [Accessed December 13, 2022] © 2022 Bucharest Henri Coandă International Airport All rights reserved

Figure 5.12 São Paulo Guarulhos International Airport (GRU) unique architectural building infrastructure



Source: Credit: GRU Airport.

¹⁶¹“**History.** Get to know GRU Airport, the largest airport in Latin America. One of the main HUBs in Latin America, the International Airport of São Paulo, in Guarulhos, was inaugurated on January 20, 1985, and was privatized through a concession program on February 6, 2012. On February 6, the consortium comprised of Invepar and ACSA (Airports Company South Africa) was announced the winner of the concession bid. The contract was signed in July 2012 for 20 years, creating the Concessionária do Aeroporto Internacional de Guarulhos S.A. with 51% of the shares and the state-owned Infraero with 49%. On November 15, 2012, during the operational transfer period, the airport adopted a new brand: GRU Airport – Aeroporto Internacional de São Paulo” (São Paulo Guarulhos International Airport, 2022, <https://www.gru.com.br/en/institucional/sobre-gru-airport/history>). The various international destinations from São Paulo Guarulhos International Airport are depicted in Table 5.3 below.

¹⁶¹ São Paulo Guarulhos International Airport (2022) *History*. Available from: <https://www.gru.com.br/en/institucional/sobre-gru-airport/history> [Accessed December 13, 2022]

Table 5.3 São Paulo Guarulhos International Airport international destinations



Source: (<https://www.gru.com.br/en/institucional/sobre-gru-airport/history>, International destinations from GRU Airport)

162“GRU AIRPORT IN NUMBERS

- ILS (Instrument Landing System): Category III-A
- Operating hours: 24 hours in all terminals
- Airport total area (patrimonial fence): 11,905,056.52 square meters
- Total airport area (operational fence): 5,883,000 square meters
- Total ramp area: 815,903.46 square meters
- Takeoff/landing runways: 301,500 square meters - 09R/27L with 3,000 meters x 45 meters and 09L/27R with 3,700 meters x 45 meters, approved for Code F aircraft (A380) operation
- Taxiways: 485,632.1 square meters
- Slots available per hour: 57
- Aircraft stands: 179
- Boarding bridges: 54
- Aircraft types: Codes A, B, C, D, E and F (including 747-800 and A380)
- Stand Coordination: ATA level 2 Airport
- Check-in counters: 294

¹⁶² São Paulo Guarulhos International Airport (2022) *History*. Available from: <https://www.gru.com.br/en/institucional/sobre-gru-airport/history> [Accessed December 13, 2022]

Terminal 1: 34

Terminal 2: 170

Terminal 3: 90

• Boarding gates: 90

Terminal 1: 11

Terminal 2: 46

Terminal 3: 33” (São Paulo Guarulhos International Airport, 2022, <https://www.gru.com.br/en/institutional/sobre-gru-airport/history>). The world class interior infrastructure facilities of São Paulo Guarulhos International Airport (GRU) will be clearly depicted by Figure 5.13 below.

Figure 5.13 São Paulo Guarulhos International Airport (GRU) world class interior infrastructure facilities



Source: Credit: GRU Airport.

¹⁶³“The objective of corporate governance at GRU Airport – Aeroporto Internacional de São Paulo – is to be a constant guide for quality management and decision making processes, aligned to shareholder and investor interests. This approach to management includes adherence to the

¹⁶³ São Paulo Guarulhos International Airport (2022) *Overview*. Available from: <http://ri.gru.com.br/en/corporate-governance/overview/> [Accessed December 13, 2022]

highest ethical standards in the relationship with all publics related to the Concessionaire” (São Paulo Guarulhos International Airport, 2022, <http://ri.gru.com.br/en/corporate-governance/overview/>). The following section will cover information about the conclusion of this chapter in-depth.

5.8 Conclusion

The global economy is strengthened by the connectivity of people from different parts of the world and in general the aviation industry enables the movement of people from one destination to another. It can be concluded that the airport and aviation industry significantly contributes towards the stability, growth and prosperity of the global economy on a yearly basis. The affordability of air travel continues to play a critical role in the growth of the air transport industry. Generally the shipping of cargo at national airports to various geographical locations around the world helps to facilitate international trade and boost the Global Gross Domestic Product on a yearly basis. Historically before the industrial revolution era many people were separated by national borders and were only exposed to poor modes of transport and overtime technological advancement in the aviation sector brought about life changing travel experiences. Remarkably, today air transport is considered to be the safest, fastest and affordable mode of transport when travelling very long distances.

5.9 Review questions

- 1) Explain the meaning of the following terms ‘passenger load factor’ and ‘transit direct passengers’? Describe the important facts about Brussels Airport?
- 2) List the key facts about Auckland Airport in-depth?
- 3) List the important facts about Dublin Airport?
- 4) Describe the key facts about Bucharest Henri Coandă International Airport? Describe the important facts about São Paulo Guarulhos International Airport – GRU?

Chapter 6: Popular global airlines to use for travel to local & international tourist destinations

After reading this chapter you should be able to:

- Define the following terms ‘MTOW’ and ‘punctuality’.
- Explain the reasons why the aviation industry is associated with the tourism industry sector.
- Highlight the various popular global airlines headquartered on the continent of Europe.
- List the various popular global airlines headquartered on the continent of Asia and the continent of North America.

6.1 Introduction

¹⁶⁴According to the International Civil Aviation Organization (ICAO) (2019:30-32) Aviation provides vital lifelines and connections to remote or peripheral destinations that otherwise would not be available, for example, in the Arctic, across vast stretches of wilderness and to small island States all around the world. It offers accessibility to these destinations without the need for expensive and challenging road and port infrastructure development. Aviation contributes to **Improving Quality of Life** by broadening people’s leisure and cultural experiences. It provides an affordable means to visit distant friends and relatives. Low cost and more frequent access to air travel has increased the range of potential holiday destinations. As people move for employment, educational or lifestyle reasons, many families are now located in different regions around the world (ICAO, 2019:30-32, <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf>). The following section will cover information about the definition of terms in-depth.

¹⁶⁴ ICAO (2019) *Aviation Benefits Report*. Available from: <https://www.icao.int/sustainability/Documents/AVIATION-BENEFITS-2019-web.pdf> [Accessed December 17, 2022] p1-76 © International Civil Aviation Organization

6.2 Definition of terms

¹⁶⁵“*MTOW*. Maximum take-off weight of an aircraft. *Punctuality*. Punctuality is the percentage of flights departing/arriving within no more than 15 minutes of its scheduled time on/off blocks, regarding passenger flights only” (Amsterdam Airport Schiphol, 2022, <https://www.annualreportschiphol.com/>). The following section will cover information that will help to explain why the airline industry is linked to the aviation industry.

6.3 Why the airline industry is associated with the tourism industry sector

Today many travelers around the world now expect airlines to offer them high quality, safe and convenient air transport at affordable prices. In general air transport is the fastest mode of transport and many global travelers opt to use it in order to enjoy convenience. Modern aircrafts are becoming spacious or bigger in terms of size while on the other hand airline companies are now making tremendous efforts to match some of their services (*such as food menus, executive packages of inflight cabin features with large television sets, single/double beds, bathrooms and so on*) to those offered by hotels and restaurant services. In a nutshell aircrafts have become hubs of tourism as they seek to offer fun, amazing, memorable and unique customer experiences at very affordable prices to their passengers. Therefore, this enables airlines to enjoy a competitive advantage over other modes of transport (*rail, sea and road*) when travelling. ¹⁶⁶“**Aviation is the backbone of the tourism industry.** Germans mainly travel to other countries by plane, and large numbers of foreign tourists also come to Germany by air. This creates jobs – both here in Germany and in the tourist destination countries. Air transport makes a decisive contribution to people’s individual mobility. Even long distances can be covered quickly and safely with air travel, which is why airplanes are indispensable in private and business travel. Air transport enables millions of people to engage in cultural exchange, and it also boosts the tourism industry, which is a major economic factor both in Germany and in the tourist destination countries. **Foreign passengers in Germany.** Guests from abroad mainly choose airplanes for private or

¹⁶⁵ Amsterdam Airport Schiphol (2022) *Glossary*. Available from:

<https://www.annualreportschiphol.com/trafficreview2021/glossary> [Accessed December 10, 2022] © Schiphol 2022

¹⁶⁶ German Aviation Association (2023) *Tourism*. Available from: <https://www.bdl.aero/en/topics-and-positions/the-importance-of-air-transport/tourism/> [Accessed January 23, 2023]

business travel to Germany. For the vast majority of people in the world, air travel is the only way to travel to Germany, as it is the only means of transport that can cover long distances in a short time.” (German Aviation Association, 2023, <https://www.bdl.aero/en/topics-and-positions/the-importance-of-air-transport/tourism/>). This chapter will help to educate travelers about the various highly attractive services and latest aircraft cabin features aircraft passengers are now enjoying when flying to different local and international destinations. The following section will cover information about the various examples of popular global airlines in-depth.

6.4 Examples of global airlines to use for travel to local & international tourist destinations

There are many globally renowned airlines that are playing a great role towards providing affordable, high quality, comfortable and fun transport to passengers from different parts of the world. The nine popular global airlines that will be covered in this chapter will be clearly depicted by Figure 6.1 below.

Figure 6.1 Nine popular global airlines



Source: Diagram Inspired By Information From: (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/>; Southwest Airlines®, 2023, <https://www.southwest.com/>, British Airways, 2023, <https://www.britishairways.com/>, Air France, 2023, <https://corporate.airfrance.com>, Deutsche Lufthansa AG, 2023, <https://www.lufthansagroup.com>, Swiss International Air Lines, 2023, <https://www.swiss.com/>, Brussels Airlines, 2023, <https://www.brusselsairlines.com>, International Airlines Group, 2023, <https://www.iairgroup.com> & Air India, 2023, <https://www.airindia.in/on-ground.htm>).

The following section will cover information about the different popular and top ranked global airlines that play a key role in the transportation of passengers in the air transport industry.

6.4.1. Scandinavian Airlines Systems (SAS)

The astounding world class passenger aircraft of SAS will be clearly depicted by Figure 6.2 below.

Figure 6.2 SAS passenger aircraft



Source: (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/files/en/wp-content/uploads/sites/2/2014/10/sas-group-fleet-banner.jpg>).

¹⁶⁷“**THIS IS SAS.** Aviation is a vital part of Scandinavian infrastructure. We maintain the highest frequency of departures to and from Scandinavia and connect smaller regional airports with larger hubs. As part of Star Alliance, we fly our customers to 1300 destinations worldwide. **OUR DNA.** We are Scandinavian by name and nature and our operational priorities are:

- Safety

- Punctuality

- Care” (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/about-sas/this-is-sas/>). The top notch amazing cabin interior of Scandinavian Airlines System Denmark-Norway-Sweden will be clearly depicted by Figure 6.3 below.

¹⁶⁷ Scandinavian Airlines System Denmark-Norway-Sweden (2023) *This is SAS*. Available from: <https://www.sasgroup.net/about-sas/this-is-sas/> [Accessed January 23, 2023] © 2023 Scandinavian Airlines System Denmark-Norway-Sweden, org.nr 902001-7720, 195 87 Stockholm

Figure 6.3 Scandinavian Airlines System Denmark-Norway-Sweden amazing cabin interior features/décor



A321LR - Seats Go - Scandinavian Airlines



SAS Business



A321LR - Business Seat - Scandinavian Airlines



SAS Business

Source: (Scandinavian Airlines Systems. 2023, <https://www.sasgroup.net/images/65c2c249-a730-44b4-8b89-1e4566940593/dt/A321LR-Seats-GO-SAS-Scandinavian-Airlines-281A4954.jpg> & https://www.sasgroup.net/images/bdafbe65-5787-4571-9f64-1156d49afbce/content-image/MG_9672.jpg & <https://www.sasgroup.net/images/f206ac94-f695-4c2e-aa5c-c62ea4e3f198/dt/A321LR-Business-seat-SAS-Scandinavian-Airlines-281A4911.jpg> & https://www.sasgroup.net/images/1c34ef6b-c5ea-4593-8aee-ce8877aac095/content-image/MG_9764.jpg).

¹⁶⁸“**OUR BRAND PROMISE.** We make life easier by making time matter to travelers, to employees and to the planet. **OUR STRATEGIC PRIORITIES**

- Preferred airline for Scandinavia’s travelers
- Modern single-type Airbus fleet
- Fully competitive operating model
- Global leadership in sustainable aviation” (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/about-sas/this-is-sas/>). The modern aircraft cockpit of the Scandinavian Airlines Systems Airbus A340 aircraft will be depicted by Figure 6.4 below.

Figure 6.4 Scandinavian Airlines Systems Airbus A340 modern aircraft cockpit



Source: (Scandinavian Airlines Systems. 2023, Cockpit, Airbus A340, <https://www.sasgroup.net/images/e544fbe8-4100-4a46-850f-f6457c6a4547/content-image/History-Cockpit-A340.jpg>).

¹⁶⁹“**BOARD AND MANAGEMENT.** The Board is responsible for the organization and administration of the Group, for ensuring proper control of its accounting and other financial

¹⁶⁸ Scandinavian Airlines System Denmark-Norway-Sweden (2023) *This is SAS*. Available from: <https://www.sasgroup.net/about-sas/this-is-sas/> [Accessed January 23, 2023] © 2023 Scandinavian Airlines System Denmark-Norway-Sweden, org.nr 902001-7720, 195 87 Stockholm

circumstances as well as for appointing the President. All Board members elected by the Shareholders' Meeting are independent of the company and company management. Group Management is responsible for the company's business management, financial reporting, acquisitions/disposals, financing and communication and other corporate matters" (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/about-sas/board-and-management/>).¹⁷⁰The current President & CEO of SAS is Anko van der Werff since July 15, 2021 and Erno Hildén is the current Executive Vice President & CFO since April, 2022 (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/about-sas/board-and-management/sas-group-management/>).¹⁷¹The current Chairman of SAS AB is Carsten Dilling and the Deputy Chairman of SAS is Lars-Johan Jarnheimer (Scandinavian Airlines System Denmark-Norway-Sweden, 2023, <https://www.sasgroup.net/about-sas/board-and-management/sas-board-of-directors/>). The following section will cover information about Southwest Airlines® in-depth.

6.4.2 Southwest Airlines®

Southwest Airlines® is a United States of America based leading airline. The modern passenger aircraft image of Southwest Airlines® will be clearly depicted by Figure 6.5 below.

¹⁶⁹ Scandinavian Airlines System Denmark-Norway-Sweden (2023) *Board and Management*. Available from: <https://www.sasgroup.net/about-sas/board-and-management/> [Accessed January 23, 2023] © 2023 Scandinavian Airlines System Denmark-Norway-Sweden, org.nr 902001-7720, 195 87 Stockholm

¹⁷⁰ Scandinavian Airlines System Denmark-Norway-Sweden (2023) *SAS Group Management*. Available from: <https://www.sasgroup.net/about-sas/board-and-management/sas-group-management/> [Accessed January 23, 2023] © 2023 Scandinavian Airlines System Denmark-Norway-Sweden, org.nr 902001-7720, 195 87 Stockholm

¹⁷¹ Scandinavian Airlines System Denmark-Norway-Sweden (2023) *SAS Board of Directors*. Available from: <https://www.sasgroup.net/about-sas/board-and-management/sas-board-of-directors/> [Accessed January 23, 2023] © 2023 Scandinavian Airlines System Denmark-Norway-Sweden, org.nr 902001-7720, 195 87 Stockholm

Figure 6.5 Southwest Airlines® modern passenger aircraft image



Source: “Photography provided courtesy of Denver International Airport”. Available from: <https://images.flydenver.com/Airport-Facilities/Airfield/>”.

¹⁷²“**About Southwest Airlines® Welcome!** Southwest is proud to offer one-of-a-kind value and Hospitality at more than 120 airports across 11 countries. **OUR HISTORY.** We first took flight in 1971 from Dallas (Love Field) to democratize the sky through friendly, reliable, and low-cost air travel.. **OUR PROMISES.** Our Promises are rooted in delivering unmatched Hospitality and cherishing passionate loyalty among our People. **OUR PEOPLE.** We are the airline with Heart, which represents the utmost love and care we have for our Customers and Employees. *“The biggest thing that makes us ‘us’ is our People, and the unique and unrivaled Hospitality they deliver. No one has a Heart for service like the People of Southwest Airlines. No one.”* - Bob Jordan, Chief Executive Officer, Southwest Airlines”” (Southwest Airlines Co., 2023, <https://www.southwest.com/about-southwest/?clk=GFOOTER-ABOUT-ABOUT>). The unique and amazing image of the passenger aircraft of Southwest Airlines® at the airfield during winter season will be clearly depicted by Figure 6.6 below.

¹⁷² Southwest Airlines Co. (2023) *About Southwest Airlines®*. Available from: <https://www.southwest.com/about-southwest/?clk=GFOOTER-ABOUT-ABOUT> [Accessed January 23, 2023] © 2023 Southwest Airlines Co. All Rights Reserved.

Figure 6.6 Southwest Airlines® unique and amazing image of the passenger aircraft



Source: (Southwest Airlines, 2023, Book Today: New Seasonal Getaways To The Gulf Coast And Colorado Ski Slopes. Southwest Airlines extends flight schedule through March 8, 2023, <https://wieck-swa-production.s3.amazonaws.com/photos/b7b0b7323b926485e24eaa582f53e4d6a73a39cd/preview-768x432.jpg>).

¹⁷³“**Purpose and Vision. Our Purpose.** To connect People to what's important in their lives through friendly, reliable, and low-cost air travel. **Our Vision.** To be the world's most loved, most efficient, and most profitable airline. **Leadership.** Southwest is grateful for a strong Leadership Team and our ongoing commitment to Leadership development equips us with a deep bench of talented Leaders. We believe support is a key part of every Leader’s empowerment” (Southwest Airlines Co., 2023, <https://www.southwest.com/about-southwest/?clk=GFOOTER-ABOUT-ABOUT>). The modern inflight cabin features of Southwest Airlines® will be clearly depicted by Figure 6.7 below.

¹⁷³ Southwest Airlines Co. (2023) *About Southwest Airlines®*. Available from; <https://www.southwest.com/about-southwest/?clk=GFOOTER-ABOUT-ABOUT> [Accessed January 23, 2023] © 2023 Southwest Airlines Co. All Rights Reserved.

Figure 6.7 Southwest Airlines® modern inflight cabin features



Source: Southwest Airlines, 2022, Southwest Airlines & Tiff's Treats Teamed Up to Deliver Sweet Treats to Customers Onboard a Flight f [...] <https://wieck-swa-production.s3.amazonaws.com/photos/9049d7f90fe3958044cd43e431e885374b453238/preview-768x432.jpg>

¹⁷⁴“**Corporate Citizenship.** For more than 50 years, Southwest Airlines has been committed to doing the right thing by our People, through our Performance, and in service to our Planet, all supported with strong corporate governance. We take pride in our reputation as the airline with Heart, and that naturally extends to a passion for making a difference in our communities and protecting our

¹⁷⁴ Southwest Airlines Co. (2023) *About Southwest Airlines®*. Available from; <https://www.southwest.com/about-southwest/?clk=GFOOTER-ABOUT-ABOUT> [Accessed January 23, 2023] © 2023 Southwest Airlines Co. All Rights Reserved.

resources. These efforts, commonly referred to as ESG (environmental, social, and governance), support our Purpose to connect People to what’s important in their lives through friendly, reliable, and low-cost air travel, and our Vision of being the world’s most loved, most efficient, and most profitable airline” (Southwest Airlines Co., 2023, <https://www.southwest.com/about-southwest/?clk=GFOOTER-ABOUT-ABOUT>). The following section will cover information about British Airways in-depth.

6.4.2 British Airways

Figure 6.8 below will help to provide an example of the various types of aircraft used by British Airways to transport its passengers.

Figure 6.8 British Airways Airplane Photo



Source: (Photo Credit: British Airways, 2022, <https://www.iairgroup.com/en/our-brands/british-airways>).

The highly distinguished and exemplary leadership team of British Airways includes the following: ¹⁷⁵Claire Bentley (*Holiday’s Managing Director of British Airways*) and ¹⁷⁶Sean

¹⁷⁵ British Airways (2022) *Management Team*. Available from: <https://mediacentre.britishairways.com/factsheets/details/86/Management-Team->

Doyle (*Chief Executive Officer and Chairman of British Airways*). (British Airways, 2022, <https://mediacentre.britishairways.com/>). The customer friendly business class ‘Club Suite’ of British Airways will be clearly highlighted by Figure 6.9 below.

Figure 6.9 British Airways customer friendly business class ‘Club Suite’



Source: (Photo Credit: British Airways, 2019, British Airways Welcomes Its New A350 Aircraft and Unveils Its New Business Class 'Club Suite', <https://mediacentre.britishairways.com/pressrelease/details/86/Aircraft-373/10846>).

¹⁷⁷“**ABOUT BA.** *Connecting Britain with the world and the world with Britain.* British Airways is a global airline, bringing people, places and diverse cultures closer together for more than 100

[23/214?category=23&pgck=L2ZhY3RzaGVldHM~bW9kZT1pbmNsc3ViJmNhdGVnb3J5PTIz](https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba) [Accessed October 29, 2022] ©

British Airways - all rights reserved

¹⁷⁶ British Airways (2022) *Management Team*. Available from:

[https://mediacentre.britishairways.com/factsheets/details/86/Management-Team-](https://mediacentre.britishairways.com/factsheets/details/86/Management-Team-23/216?category=23&pgck=L2ZhY3RzaGVldHM~bW9kZT1pbmNsc3ViJmNhdGVnb3J5PTIz)

[23/216?category=23&pgck=L2ZhY3RzaGVldHM~bW9kZT1pbmNsc3ViJmNhdGVnb3J5PTIz](https://mediacentre.britishairways.com/factsheets/details/86/Management-Team-23/216?category=23&pgck=L2ZhY3RzaGVldHM~bW9kZT1pbmNsc3ViJmNhdGVnb3J5PTIz) [Accessed October 29, 2022] ©

British Airways - all rights reserved

¹⁷⁷ British Airways (2022) *About BA*. Available from: [https://www.britishairways.com/en-us/information/about-](https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba)

[ba?source=BOT_about_ba](https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba) [Accessed October 28, 2022] © British Airways - all rights reserved

years. Serving our community and planet is at the heart of everything we do, and we look forward to sharing our exciting sustainability initiatives with you” (British Airways, 2022, https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba). The customer friendly top notch business class ‘Club World’ of British Airways will be depicted by Figure 6.10 below.

Figure 6.10 British Airways customer friendly top notch business class ‘Club World’



Source: (Photo credit: British Airways, 2015, A380 Club World cabin, <https://mediacentre.britishairways.com/image/details/43004>).

¹⁷⁸“**Message from Sean Doyle, our CEO and Chairman.** British Airways exists today because of you. This is why we want to make every trip you take with us a great experience. Our entire team is here to provide exceptional service – from our signature warm welcome to ensuring that you arrive at your destination safely. As the UK’s flag carrier, we have a responsibility to help create a sustainable future for our planet, and we’re on a mission to be carbon net zero by 2050” (British Airways, 2022, https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba). The astounding A350 passenger aircraft of British Airways will be clearly depicted by Figure 6.11 below.

Figure 6.11 British Airways astounding A350 passenger aircraft



Source: (Photo Credit: British Airways, 2019, British Airways' A350 Gears Up For Its First Long Haul Flight to Dubai, <https://mediacentre.britishairways.com/pressrelease/details/86/Aircraft-373/11450>).

“**BA Better World.** Flying is magic – connecting us to our world and bringing people, places and communities closer together. We recognise that it has an environmental cost, which is why we’re

¹⁷⁸ British Airways (2022) *About BA*. Available from: https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba [Accessed October 28, 2022] © British Airways - all rights reserved

taking urgent action to tackle the effects it has on our planet. This is our most important journey yet – one that leads to a better, more sustainable future. We call it BA Better World. Our business. 100+ years of service. 30,000 dedicated people. Flying newer, more fuel efficient aircraft”¹⁷⁹ (British Airways, 2022, https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba). The following section will cover information about Air France in-depth.

6.4.3 Air France

The amazing modern passenger aircraft of Air France will be clearly depicted by Figure 6.12 below.

¹⁷⁹ British Airways (2022) *About BA*. Available from: https://www.britishairways.com/en-us/information/about-ba?source=BOT_about_ba [Accessed October 28, 2022] © British Airways - all rights reserved

Figure 6.12 Air France’s amazing modern passenger aircraft



Source: (Air France, 2023, <https://corporate.airfrance.com/en/photo-library>).

¹⁸⁰“**PROFILE.** The group Air France-KLM relies on the strength of its hubs at Paris-Charles de Gaulle and Amsterdam-Schiphol to offer a vast international network. Its Flying Blue frequent flyer programme has over 18 million members. Air France and KLM are members of the SkyTeam alliance which has a total of 19 member airlines. Air France places the health and safety of its customers and staff at the heart of its priorities and, from the start of the health crisis, introduced exceptional measures, grouped together under the [Air France Protect](#) label, to ensure a stress-free trip. As part of its [Horizon 2030](#) programme, Air France is committed to reducing its CO2 emissions per passenger kilometre by 50% by 2030” (Air France, 2022,

¹⁸⁰ Air France (2022) *Company*. Available from: <https://corporate.airfrance.com/en/company?language=fr> [Accessed October 29, 2022] “This document appears courtesy of the Air France Corporate website: <http://corporate.airfrance.com> and is covered by copyright. Usage and reproduction is strictly regulated”.

<https://corporate.airfrance.com/en/company?language=fr>). Figure 6.13 below will help to provide an example of the various types of aircraft used by Air France to transport its passengers.

Figure 6.13 Air France Airplane Photo



Source: (Published on - October 27th, 2022 — Awards. Air France, 2022, <https://corporate.airfrance.com/en/news/air-france-awarded-5-stars-apex-airline-ratings>).

¹⁸¹“**ACTIVITES.** Air France's activities are based on four main sectors coordinated by the Operations Control Centre: passenger transport, cargo transport, maintenance and ground handling.

- PASSENGER TRANSPORT
- CARGO
- MAINTENANCE

¹⁸¹ Air France (2022) *Company*. Available from: <https://corporate.airfrance.com/en/company?language=fr> [Accessed October 29, 2022] “This document appears courtesy of the Air France Corporate website: <http://corporate.airfrance.com> and is covered by copyright. Usage and reproduction is strictly regulated”.

- CUSTOMER AIRLINE GROUND HANDLING DIVISION

- THE OPERATIONS CONTROL CENTER” (Air France, 2022, <https://corporate.airfrance.com/en/company?language=fr>). The customer friendly A330 Economy class of Air France will be clearly depicted by Figure 6.14 below.

Figure 6.14 Air France customer friendly A330 Economy class



Source: (Air France, 2023, Air France A330 Economy 9. <https://corporate.airfrance.com/en/photo-library>).

“**GOVERNANCE.** Air France governance is structured around two bodies, the Board of Directors comprising 17 directors on one side and the Executive Committee comprising 11 operational managers of the company and its subsidiaries” (Air France, 2022, <https://corporate.airfrance.com/en/company?language=fr>). **EXECUTIVE COMMITTEE.** Anne Rigail, Alexandre Baclet, Alain-Herve Bernard, Alexandre Blanc, Gilles Laurent, Anne-Sophie Le Lay, Olivier Mazzucchelli, Gery Mortreux, Nathalie Stubler, Patrice Tizon and Catherine Villar. **MEMBERS OF THE BOARD OF DIRECTORS.** Anne Marie Couderc, Benjamin Smith, Anne Rigail, Gael Amaudry, Alexandre Boissy, Pieter Bootsma, Veronique Damon, Francesca Ecsery, Silvia Gonzales, Fabrice Huret, Catherine Jude, Djibril Koita, Bruno Mettling, Ursula Saint-Leger, Vincent Salles, Bernard Spitz and Florence Verzelen (Air France, 2022,

<https://corporate.airfrance.com/en/company?language=fr>). “This document appears courtesy of the Air France Corporate website: <http://corporate.airfrance.com> and is covered by copyright. Usage and reproduction is strictly regulated”. The customer friendly Air France La Première, B777 300 will be clearly depicted by Figure 6.15 below.

Figure 6.15 Air France La Première, B777 300



Source: (Air France, 2023, Air France La Première, B777 300 (1).jpg. <https://corporate.airfrance.com/en/photo-library>).

¹⁸²“**THE AIR FRANCE FOUNDATION, 30 YEARS OF ACTION IN FAVOUR OF CHILDREN IN NEED.** On 4 October 2022, the Air France Foundation is celebrating 30 years of support for children in need. It is active in mainland France, in the French overseas departments and in all the countries served by the airline. The Air France Foundation supports

¹⁸² Air France (2022) *THE AIR FRANCE FOUNDATION, 30 YEARS OF ACTION IN FAVOUR OF CHILDREN IN NEED.*

Available from: <https://corporate.airfrance.com/en/news/air-france-foundation-30-years-action-favour-children-need?language=fr>

[Accessed October 29, 2022] “This document appears courtesy of the Air France Corporate

website: <http://corporate.airfrance.com> and is covered by copyright. Usage and reproduction is strictly regulated”.

education, inclusion, social and professional integration, as well as cultural, sporting and artistic development for disadvantaged, sick or disabled young people. To do this, it provides financial support for numerous projects such as the construction of educational and social structures in Brazil and Dakar, the development of school support programmes and the distribution of IT equipment in France, the purchase of books, educational and creative games and sports equipment in Madagascar, as well as the purchase of medical equipment in the Dominican Republic. The Foundation also supports actions to raise the environmental awareness of the younger generation. It relies on a vast network of associations and humanitarian organisations as well as NGOs with whom it shares the conviction that access to education, training, leisure activities and culture is the best way to develop. To carry out its work, the Air France Foundation counts on Air France staff, among whom a vast network of over 4,800 "friends of the Foundation" volunteers et involved to help and participate in the actions it carries out and supports. In 30 years, over 1,500 projects have been supported and financed in 80 countries. In 2022, the Foundation is financing 49 projects throughout the world. Among them, it is supporting associations fighting school dropout and the digital divide in France, taking part in environmental education in Senegal and helping disabled children to overcome exclusion in the Dominican Republic”¹⁸³ (Air France, 2022, <https://corporate.airfrance.com/en/news/air-france-foundation-30-years-action-favour-children-need?language=fr>). “This document appears courtesy of the Air France Corporate website: <http://corporate.airfrance.com> and is covered by copyright. Usage and reproduction is strictly regulated”. The following section will cover information about Deutsche Lufthansa AG in-depth.

6.4.4 Deutsche Lufthansa AG

Figure 6.16 below will help to provide an example of the various types of aircraft used by the Deutsche Lufthansa AG to transport its passengers.

¹⁸³ Air France (2022) *THE AIR FRANCE FOUNDATION, 30 YEARS OF ACTION IN FAVOUR OF CHILDREN IN NEED*. Available from: <https://corporate.airfrance.com/en/news/air-france-foundation-30-years-action-favour-children-need?language=fr> [Accessed October 29, 2022] “This document appears courtesy of the Air France Corporate website: <http://corporate.airfrance.com> and is covered by copyright. Usage and reproduction is strictly regulated”.

Figure 6.16 Deutsche Lufthansa AG Airplane Photo



Source: (Deutsche Lufthansa AG, 2023, <https://www.lufthansagroup.com/en/company/company-management.html>).

¹⁸⁴The exemplary and outstanding members of the Lufthansa Executive Board include the following: Carsten Spohr *Chief Executive Officer*, Christina Foerster *Member of the Executive Board Brand & Sustainability*, Harry Hohmeister *Member of the Executive Board Global Markets & Network*, Dr. Detlef Kayser *Member of the Executive Board Fleet & Technology*, Dr. Michael Niggemann *Member of the Executive Board Chief Officer Human Resources & Infrastructure* and Remco Steenbergen *Member of the Executive Board Chief Financial Officer* (Deutsche Lufthansa AG, 2022, <https://investor-relations.lufthansagroup.com/en/corporate-governance/executive-board.html>). The various types of aircraft that are used to transport passengers to different destinations by Lufthansa will be clearly depicted by Figure 6.17 below.

¹⁸⁴ Deutsche Lufthansa AG (2022) *Executive Board*. Available from: <https://investor-relations.lufthansagroup.com/en/corporate-governance/executive-board.html> [Accessed October 29, 2022]

Figure 6.17 Lufthansa various types of aircraft that are used to transport passengers to different destinations



Source: Lufthansa, 2023, 20221016_787_BRE_012.jpg, <https://medialounge.lufthansagroup.com/en/search?list4.filter=%7B%22sp:pixels-keyword-ref%22:%5B%224815199%22%5D%7D> and "Flughafen München GmbH", 2023, <https://celum.munich-airport.de/pinaccess/pinaccess.do?pinCode=UwZGpSPI480x>). ©2023 Munich Airport

¹⁸⁵“**COMPLIANCE**. Compliance describes all measures taken to ensure the correct conduct of companies, their management and staff with respect to statutory and the Company’s own obligations and prohibitions. The Lufthansa Group Compliance Program is intended to prevent staff and the Company from coming into conflict with the law and to help them apply statutory regulations correctly. Compliance Comprehensive programme helps to ensure compliance [read article](#). **Code of Conduct**. Responsible and lawful behaviour is a prerequisite for the sustainable economic success of the Lufthansa Group. [read article](#)” (Deutsche Lufthansa AG, 2022, <https://www.lufthansagroup.com/en/company.html>). The Lufthansa airline astounding and highly attractive onboard business & economy cabins are clearly depicted by Figure 6.18 below.

¹⁸⁵ Deutsche Lufthansa AG (2022) *Company*. Available from: <https://www.lufthansagroup.com/en/company.html> [Accessed October 29, 2022]

Figure 6.18 Lufthansa airlines astounding and highly attractive onboard business & economy cabins



Source: Lufthansa, 2023, Business and Boarding Eco_formatiert.jpg, https://medialounge.lufthansagroup.com/en/search?list4_filter=%7B%22sp:pixel-keyword-ref%22:%5B%223654462%22%5D%7D & https://medialounge.lufthansagroup.com/en/search?list4_filter=%7B%22sp:pixel-keyword-ref%22:%5B%223654462%22%5D%7D & https://medialounge.lufthansagroup.com/en/search?s.text=&list4_filter=%7B%22sp:pixel-keyword-ref%22:%5B%223654462%22%5D%7D&m.fset=false&s.page=2&m.loadmore=true & https://medialounge.lufthansagroup.com/en/search?s.text=&list4_filter=%7B%22sp:pixel-keyword-ref%22:%5B%223654462%22%5D%7D&m.fset=false&s.page=2&m.loadmore=true

186““**COMPANY PORTRAIT.** The Lufthansa Group is an aviation group with operations worldwide. With 105,290 employees, the Lufthansa Group generated revenue of EUR 16,811m in the financial year 2021. The Lufthansa Group is composed of the segments Network Airlines, Eurowings and Aviation Services. Aviation Services comprises the segments Logistics, MRO,

¹⁸⁶ Deutsche Lufthansa AG (2022) *Company*. Available from: <https://www.lufthansagroup.com/en/company.html> [Accessed October 29, 2022]

Catering and Additional Businesses and Group Functions. The latter also include Lufthansa AirPlus, Lufthansa Aviation Training and the IT companies. All segments occupy a leading position in their respective markets. **KEY FIGURES.** The Lufthansa Group generated revenue of 16.8 billion euros in the fiscal year 2021, around 24 percent more than in the previous year (previous year: 13.6 billion euros). An increase in passengers, the transformation and restructuring of the company, and the associated cost reductions contributed to a significant improvement in earnings. The company returned to profit in the third quarter due to strong summer travel months. For the full year, the operating loss was significantly reduced, despite the third and fourth pandemic wave and the resulting travel restrictions. **Key figures 2021.** 105,290 **Employees** 302 **Subsidiaries and equity investments** 16,811 **Total revenue** €m 1,329 **Capital expenditure** €m. **BUSINESS SEGMENTS.** Network Airlines, Eurowings, Logistics, Maintenance Repair Overhaul, Catering. **ALLIANCES AND PARTNER AIRLINES** Alliances are fundamental to Lufthansa's success. As a founding member of Star Alliance, Lufthansa offers innumerable advantages in the world's biggest global network. Its regional strategy under the Lufthansa Regional brand connects Europe's regions with one another and with the world beyond. Bilateral partnerships augment and enhance the services portfolio. **Star Alliance.** The Star Alliance network is the leading global airline network. It was established in 1997 as the first truly global airline alliance to offer customers convenient worldwide reach and a smoother travel experience”” (Deutsche Lufthansa AG, 2022, <https://www.lufthansagroup.com/en/company.html>). The following section will cover information about Swiss International Air Lines Ltd in-depth.

6.4.5 Swiss International Air Lines (SWISS)

Figure 6.19 below will help to provide an example of the various types of aircraft used by the Swiss International Air Lines Ltd to transport its passengers.

Figure 6.19 Swiss International Air Lines Airplane Photo



Source: (Swiss International Air Lines, 2022, <https://www.swiss.com/>) © Swiss International Air Lines

¹⁸⁷“**Company profile.** Swiss International Air Lines (SWISS) is The Airline of Switzerland, serving over 100 destinations worldwide from Zurich and Geneva. SWISS is part of the Lufthansa Group, and is also a member of Star Alliance” (Swiss International Air Lines, 2022, <https://www.swiss.com/corporate/en/company/about-us>). The world class customer friendly ‘Premium Economy’ of Swiss International Air Lines will be clearly depicted by Figure 6.20 below.

¹⁸⁷ Swiss International Air Lines (2022) *About Us*. Available from: <https://www.swiss.com/corporate/en/company/about-us>
[Accessed October 28, 2022] © Swiss International Air Lines

Figure 6.20 Swiss International Air Lines world class customer friendly ‘Premium Economy’



Source: (Swiss International Air Lines, 2023, SWISS_Premium_Economy_4, <https://brand.swiss.com/media-gallery/collection/515>). © Swiss International Air Lines

“**Board of Directors.** There are five members on the Board of Directors of Swiss International Air Lines (SWISS). Reto Francioni has been Chairman of the Board since 2016” (Swiss International Air Lines, 2022, <https://www.swiss.com/corporate/en/company/about-us/board-of-directors>). The astounding onboard cabin of the Premium Economy of Swiss International Air Lines will be clearly depicted by Figure 6.21 below.

Figure 6.21 Swiss International Air Lines astounding onboard cabin of the Premium Economy



Source: (Swiss International Air Lines, 2023, SWISS_Premium_Economy_2, <https://brand.swiss.com/media-gallery/collection/515>). © Swiss International Air Lines

¹⁸⁸Members of the SWISS board include the following: Reto Francioni *Chairman*, André Blattmann *Member*, Christina Foerster *Member*, Doris Russi Schurter *Member* and Remco Steenbergen *Member* (Swiss International Air Lines, 2022, <https://www.swiss.com/corporate/en/company/about-us/board-of-directors>). ¹⁸⁹“**Environmental responsibility**. SWISS is fully aware of its responsibility towards the natural environment and to future generations, and pursues a comprehensive environmental strategy. Air transport is a

¹⁸⁸ Swiss International Air Lines (2022) *Board of Directors*. Available from: <https://www.swiss.com/corporate/en/company/about-us/board-of-directors> [Accessed October 28, 2022] © Swiss International Air Lines

¹⁸⁹ Swiss International Air Lines (2022) *Environmental Responsibility*. Available from: <https://www.swiss.com/corporate/en/company/corporate-responsibility/environmental-responsibility> [Accessed October 29, 2022] © Swiss International Air Lines

global catalyst for growth, providing access to markets, creating jobs and promoting tourist travel. And civil aviation is of vital importance to Switzerland's appeal as a place to live, work and visit. In addition to its many positive economic effects, though, air transport does have a negative impact on the natural environment. SWISS is fully aware of its environmental responsibilities, however, and makes great efforts to minimize the impact on the climate of its business and operations. **Our environmental goals.** Together with the Lufthansa Group, SWISS has set itself ambitious targets for reducing CO₂: **Flight operations** By 2030: 50% reduction in net CO₂ emissions compared to 2019. By 2050: CO₂-neutral aviation ('net zero')" (Swiss International Air Lines, 2022, <https://www.swiss.com/corporate/en/company/corporate-responsibility/environmental-responsibility>). The following section will cover information about Brussels Airlines in-depth.

6.4.6 Brussels Airlines

Figure 6.22 below will help to provide an example of the various types of aircraft used by the Brussels Airlines to transport its passengers.

Figure 6.22 Brussels Airlines Airplane Photo



Source: (Brussels Airlines at Brussels Airport, 2023). ©Brussels Airlines.

¹⁹⁰“**OUR COMPANY**. As Belgium’s national airline, Brussels Airlines was founded in 2002 and has its base at Brussels Airport. The airline operates flights to Europe, Africa and North America and is one of the hub airlines of the Lufthansa Group” (Brussels Airlines, 2022, <https://www.brusselsairlines.com/be/en/our-company>). ¹⁹¹“**ORGANISATION**. Shareholders. Brussels Airlines is for almost 100% owned by the SN Airholding (1,811,308 shares out of 1,811,309 actions). Since December 2016, SN Airholding is 100% owned by Deutsche Lufthansa AG” (Brussels Airlines, 2022, <https://www.brusselsairlines.com/be/en/our-company/organisation>). The outstanding and highly distinguished **Management** of Brussels

¹⁹⁰ Brussels Airlines (2022) *Our Company*. Available from: <https://www.brusselsairlines.com/be/en/our-company> [Accessed October 31, 2022]

¹⁹¹ Brussels Airlines (2022) *Organisation*. Available from: <https://www.brusselsairlines.com/be/en/our-company/organisation> [Accessed October 31, 2022]

Airlines includes the following: Christina Foerster (*Chairwoman of the board*), Peter Gerber (*Chief Executive Officer*), Nina Owerdieck (*Chief Financial Officer*), Tilman Reinshagen (*Managing Director Operations*) (Brussels Airlines, 2022, <https://www.brusselsairlines.com/be/en/our-company/organisation>). The world class ‘Boutique Hotel in the air - new Long-Haul experience’ of Brussels Airlines will be clearly depicted by Figure 6.23 below.

Figure 6.23 Brussels Airlines world class ‘Boutique Hotel in the air - new Long-Haul experience’



Source: (Brussels Airlines, 2023, Boutique Hotel in the air - new Long-Haul experience, <https://press.brusselsairlines.com/media/album/7344>). ©Brussels Airlines.

¹⁹²“**ABOUT BRUSSELS AIRLINES.** Brussels Airlines is the home carrier of Belgium and one of the four network airlines of the Lufthansa Group. It connects the European capital from Brussels Airport with over 85 destinations, 17 of which are in Sub Saharan Africa. The company employs 3,200 people and operates 40 aircraft. Brussels Airlines aims to emit 50% less CO₂ by 2030 compared to 2019 and plans to be carbon neutral by 2050. The airline is participating in the Stargate Project led by Brussels Airport and is therefore part of the testing ground for sustainable aviation at its home base. In addition, the airline signed the Circular Economy agreement of the Antwerp Management School in 2021. In 2023, Brussels Airlines welcomes three state-of-the-art Airbus A320neo allowing the airline to significantly lower its CO₂- and noise-emissions on its medium-haul network. Next to that, the airline aims to operate its first flight using Sustainable Aviation fuel (SAF) by 2023. As an ambassador of its country, Brussels Airlines brings the world to Belgium and the best of Belgium to the world, among others through collaborations with Belgian Star Chefs, Belgian culinary products and the Belgian Icons, specially painted aircraft that honor a Belgian iconic person, team or event to promote Belgian culture worldwide. More information on brusselsairlines.com” (Brussels Airlines, 2022, <https://press.brusselsairlines.com/>). The onboard delicious food services in the ‘Boutique Hotel in the air - new Long-Haul experience’ of Brussels Airlines will be clearly depicted by Figure 6.24 below.

¹⁹² Brussels Airlines (2022) *About Brussels*. Available from: <https://press.brusselsairlines.com/> [Accessed October 31, 2022]

Figure 6.24 Brussels Airlines onboard delicious food services in the ‘Boutique Hotel in the air - new Long-Haul experience’



Source: (Brussels Airlines, 2023, Boutique Hotel in the air - new Long-Haul experience, <https://press.brusselsairlines.com/media/album/7344>). ©Brussels Airlines.

¹⁹³“**About Star Alliance.** The Star Alliance network was established in 1997 as the first truly global airline alliance, based on a customer value proposition of global reach, worldwide recognition and seamless service. Since inception, it has offered the largest and most comprehensive airline network, with a focus on improving customer experience across the Alliance journey. Overall, the Star Alliance network currently offers more than 10,000 daily flights to almost 1,200 airports in 184 countries” (Brussels Airlines, 2022, <https://press.brusselsairlines.com/>). The following section will cover information about the International Airlines Group (IAG) in-depth.

¹⁹³ Brussels Airlines (2022) *About Brussels*. Available from: <https://press.brusselsairlines.com/> [Accessed October 31, 2022]

6.4.7 International Airlines Group (IAG)

¹⁹⁴“**IAG Overview.** International Airlines Group (IAG) is one of the world's largest airline groups, with a fleet of 531 aircraft. Before the impact of the COVID-19 pandemic it operated to 279 destinations and carried around 118 million passengers each year. It is a Spanish registered company with shares traded on the London Stock Exchange and Spanish Stock Exchanges” (International Airlines Group, 2022, <https://www.iairgroup.com/en/the-group/iag-overview>).

¹⁹⁵The highly distinguished board of directors of the International Airlines Group (IAG) include the following: Nicola Shaw *Non-Executive Director*, Javier Ferrán *Chairman*, Luis Gallego *Chief Executive Officer*, Heather Ann McSharry *Senior Independent Director*, Giles Agutter *Proprietary*, Peggy Bruzelius *Non-Executive Director*, Eva Castillo *Non-Executive Director*, Margaret Ewing *Non-Executive Director*, Robin Phillips *Proprietary*, Maurice Lam *Non-Executive Director* and Emilio Saracho *Non-Executive Director* (International Airlines Group, 2022, <https://www.iairgroup.com/en/investors-and-shareholders/corporate-governance/board-of-directors>). ¹⁹⁶The exemplary and outstanding **Management Committee** of the International Airlines Group (IAG) include the following: Marco Sansavini *Chairman and CEO of Vueling*, Luis Gallego *Chief Executive Officer*, Nicholas Cadbury *Chief Financial Officer*, Fernando Candela *Chief Transformation Officer*, Adam Daniels *Chairman and CEO of IAG Loyalty*, Sean Doyle *Chairman and CEO British Airways*, Lynne Embleton *Chairman and CEO Aer Lingus*, John Gibbs *Chief Information Officer*, Chris Haynes *General Counsel*, Carolina Martinoli *Chief People, Corporate Affairs and Sustainability Officer*, David Podolsky *Chief Strategy Officer and Chief Executive IAG Cargo*, Javier Sanchez-Prieto *Chairman and CEO of Iberia* and Marco Sansavini *Chairman and CEO of Vueling* (International Airlines Group, 2022,

¹⁹⁴ International Airlines Group (IAG) (2022) *IAG Overview*. Available from: <https://www.iairgroup.com/en/the-group/iag-overview> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

¹⁹⁵ International Airlines Group (2022) *Board of Directors*. Available from: <https://www.iairgroup.com/en/investors-and-shareholders/corporate-governance/board-of-directors> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

¹⁹⁶ International Airlines Group (IAG) (2022) *Management Committee*. Available from: <https://www.iairgroup.com/en/investors-and-shareholders/corporate-governance/management-committee> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

<https://www.iairgroup.com/en/investors-and-shareholders/corporate-governance/management-committee>). Figure 6.25 below will help to provide an example of the various types of aircraft used by the International Airlines Group to transport its passengers.

Figure 6.25 International Airlines Group Airplane Photo

Aer Lingus



British Airways



Iberia



Level

Source of Photos: (International Airlines Group, 2022, <https://www.iairgroup.com/en/the-group/our-fleet>).

“How we’re organized. IAG is the parent company of the Group and actively engages and works collaboratively with its portfolio of operating companies to drive synergies and maximise performance. Its independence from the operating companies allows for objective, flexible and rapid decision-making and enables IAG to implement the strategy to deliver the long-term vision for the Group. The operating companies are in turn able to focus their efforts on their target customers, competitive environment and their people. The portfolio sits on the Group’s common integrated platform which drives efficiency and simplicity while allowing each operating company to achieve individual performance targets and maintain its unique identity. **History. Explore our history.** Since our launch in 2011, we’ve increased our global presence so that we now reach over 268 destinations globally, carrying 113 million passengers each year. The

alliance between British Airways, Iberia and American Airlines completes after getting the go-ahead from regulators in the European Union and the U.S. British Airways and Iberia merge, creating the International Airlines Group (IAG). Shares in IAG start trading. **Our vision.** IAG's purpose – 'To connect people, businesses and countries' - underpins the Group's vision to be the world's leading airline group, maximising sustainable value creation for its stakeholders. IAG will continue to use its unique business model to pursue this purpose and vision and always aims to deliver sustainable value for its customers, its people, its shareholders and the communities it serves"¹⁹⁷ (International Airlines Group, 2022, <https://www.iairgroup.com/en/the-group/iag-overview>). ¹⁹⁸"**What we do.** In 2021, IAG's network continues to reflect COVID-19's impact and associated government travel restrictions, with the impact of the COVID-19 pandemic felt across all regions. However, the Group progressively started operating a larger network than in 2020, as global travel restrictions began to ease as vaccine programmes advanced. Capacity was increasingly restored during the year, in line with the easing of travel restrictions, although with some impact of the Omicron variant of COVID-19 felt in December. **A combined network for cargo and passengers.** Our roster of renowned airlines and product/service-providing brands combine to create an international network, one able to serve customers from all over the world" (International Airlines Group, 2022, <https://www.iairgroup.com/en/the-group/what-we-do>). ¹⁹⁹"**Business model.** Our business model is built to maximise choice and value creation. IAG's vision is to be the world's leading airline group, maximizing sustainable value creation for its shareholders and customers. Its business model makes it well positioned to achieve this in an increasingly competitive and fast paced environment. At IAG we don't believe in one-size-fits-all and, through the Group structure, IAG's diverse set of airlines and associated businesses can together deliver an unrivalled customer proposition across the full spectrum of travel occasions. The Group portfolio sits on a common integrated platform driving efficiency and simplicity while still allowing each operating company to achieve its individual performance targets and

¹⁹⁷ International Airlines Group (IAG) (2022) *IAG Overview*. Available from: <https://www.iairgroup.com/en/the-group/iag-overview> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

¹⁹⁸ International Airlines Group (IAG) (2022) *What We Do*. Available from: <https://www.iairgroup.com/en/the-group/what-we-do> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

¹⁹⁹ International Airlines Group (IAG) (2022) *Business Model*. Available from: <https://www.iairgroup.com/en/the-group/business-model-and-strategy> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

maintain its unique identity” (International Airlines Group, 2022, <https://www.iairgroup.com/en/the-group/business-model-and-strategy>).²⁰⁰“Our network. IAG holds attractive leadership positions in each of its home markets Barcelona, Dublin, London and Madrid, with a major presence in the North Atlantic, South Atlantic and Intra-Europe. The Group portfolio consists of unique operating companies, from full service longhaul to low-cost shorthaul carriers, each targeting specific customer needs and geographies. IAG has been reinforcing its leadership positions since its creation in 2011 through both organic growth in these markets and also through the acquisitions of bmi, Vueling and Aer Lingus. The development of joint businesses has also helped the Group to grow its global reach. These relationships with business partners offer customers better frequencies and easier connections in the markets they serve. Our routes. In 2021, IAG’s network continues to reflect COVID-19’s impact and associated government travel restrictions, with the impact of the COVID-19 pandemic felt across all regions. However, the Group progressively started operating a larger network than in 2020, as global travel restrictions began to ease as vaccine programmes advanced. Capacity was increasingly restored during the year, in line with the easing of travel restrictions, although with some impact of the Omicron variant of COVID-19 felt in December (International Airlines Group, 2022, <https://www.iairgroup.com/en/the-group/our-network>).²⁰¹“Our fleet. IAG combines leading airlines in the UK, Spain and Ireland, operating a fleet of 531 aircraft. A closer look at recent fleet developments. 2021 saw the continued replacement of the IAG fleet with new generation aircraft but at a slower pace reflecting both capital deferrals and production and delivery delays in the airframe manufacturers. A total of 8 new aircraft were delivered in 2021, comprising 5 A320s and 3 A321LRs. The new aircraft are up to 20% more fuel efficient than the aircraft they replace. Fleet modernisation will continue in coming years with further deliveries of 56 Airbus A320neo series aircraft, 26 Airbus A350s, 10 Boeing 787s and 18 Boeing 777-9 aircraft” (International Airlines Group, 2022,

²⁰⁰ International Airlines Group (IAG) (2022) *Our Networks*. Available from: <https://www.iairgroup.com/en/the-group/our-network> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

²⁰¹ International Airlines Group (IAG) (2022) *Our Fleet*. Available from: <https://www.iairgroup.com/en/the-group/our-fleet> [Accessed October 29, 2022] Copyright © 2022. All rights reserved.

<https://www.iairgroup.com/en/the-group/our-fleet>). The following section will cover information about Air India in-depth.

6.4.8 Air India

Figure 6.26 below will help to provide an example of the various types of aircraft used by Air India to transport its passengers.

Figure 6.26 Air India Airplane Photo



Source (Air India, 2022, <https://www.airindia.in/on-ground.htm>).

²⁰²“**About Air India Brand. Logo.** The Air India logo features a red swan (symbolising flight) with spokes in orange placed inside. The wheel is inspired by the Ashoka Chakra - depicting the wheel of righteous duty, which also features in the Indian Flag and underlines the deep-rooted connect to India’s cultural heritage” (Air India, 2022, <https://www.airindia.in/about-airindia.htm>). The customer friendly and amazing cabin facilities and staff of Air India will be depicted by Figure 6.27 below.

²⁰² Air India (2022) *About Air India*. Available from: <https://www.airindia.in/about-airindia.htm> [Accessed October 31, 2022]

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Figure 6.27 Air India customer friendly staff and amazing onboard cabin facilities



Source: (Air India, 2023, <https://www.airindia.in/about-airindia.htm>). Copyright © 2023 Air India Ltd. All rights reserved.

Board of Directors. Mr. N Chandrasekaran CHAIRMAN, Mr. Sanjiv Mehta INDEPENDENT DIRECTOR, Mrs. Alice Vaidyan INDEPENDENT DIRECTOR (Air India, 2022, <https://www.airindia.in/about-airindia.htm>). **“Our Fleet.** Air India has a state-of -the-art fleet, comprising of Boeing (777-200LR, 777-300ER and 787-800 Dreamliner) and Airbus (319, 320, 320Neo and 321) aircraft” (Air India, 2022, <https://www.airindia.in/about-airindia.htm>). The amazing onboard cabin of Air India will be clearly depicted by Figure 6.28 below.

Figure 6.28 Air India amazing onboard cabin



Source: (Air India, 2023, https://www.airindia.in/images/DSC_5038.png). Copyright © 2023 Air India Ltd. All rights reserved.

²⁰³“**About Air India.** Air India’s journey took off in 1932, when Bharat Ratna J.R.D Tata formed an Airline, realising his dream. The first Indian to receive a commercial pilot’s license, it was his passion for flying that had sparked Air India’s origins - with the launch of an Airmail service from the then Bombay to Karachi via Ahmedabad. Nationalized in 1953, Air India has been spreading its wings over the years to become a leading domestic and global brand. Air India’s international connectivity, spanning cities in Europe, USA, UK, Africa, the Gulf, Asia and Australia, was strengthened after joining Star Alliance – the largest global air consortium – in July, 2014. The airline also covers every remote corner of our country. It has always stood by the Nation and its people during the hour of need and has played a key role in evacuation missions during crises like the Gulf War, the Covid pandemic and the recent Ukraine conflict.

²⁰³ Air India (2022) *About Air India*. Available from: <https://www.airindia.in/about-airindia.htm> [Accessed October 31, 2022]
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On 27th January, 2022, Air India has been welcomed back to the Tata Group and is poised to soar high - redefining its goals & approach with focus on overall excellence & customer-centric processes. "The Tata group welcomes Air India's new customers and is excited to work together to make Air India the airline of choice in terms of passenger comfort and service.", remarked Mr. Ratan Tata, Chairman Emeritus, Tata Sons on the occasion²⁰⁴ (Air India, 2022, <https://www.airindia.in/about-airindia.htm>). The astounding aircraft image and customer friendly staff of Air India will be clearly depicted by Figure 6.29 below.

Figure 6.29 Air India's astounding aircraft image and customer friendly staff



Source: (Air India, 2023, <https://www.airindia.in/about-airindia.htm>). Copyright © 2023 Air India Ltd. All rights reserved.

“**About Tata Group.** Founded by Jamssetji Tata in 1868, the Tata Group is a global enterprise, headquartered in India, comprising 30 companies across 10 verticals. The group operates in over 100 countries across six continents, with a mission 'To improve the quality of life of the communities we serve globally, through long-term stakeholder value creation based on Leadership with Trust'. Tata Sons is the principal investment holding company and promoter of Tata companies. Sixty-six percent of equity share capital of Tata Sons is held by philanthropic trusts, supporting education, health, art and culture. **Our People - The Air Indians.** Air India has

²⁰⁴ Air India (2022) *About Air India*. Available from: <https://www.airindia.in/about-airindia.htm> [Accessed October 31, 2022]
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a dedicated and skilled workforce from all over India and abroad united by the spirit to connect homes and hearts - offering world class service to our global guests. Pilots, cabin crew, aircraft & ground engineers, flight dispatchers, simulator maintenance engineers, flight safety, safety auditors, catering and ticketing and reservations and customer services, ground handling, security teams function with clockwork precision backed by software technologists, information technology, Market Planning, Route Planning, Finance, Personnel, Materials Management departments etc to make our fleet fly high. ²⁰⁵However, Air India is not just an airline transporting people and cargo, it serves as the Wings of the Nation with each and every Air Indian rising to the occasion putting the interest of our Nation & its people ahead of their own concerns during any crisis. Team Air India has scripted many an epic evacuation all over the world from the Gulf or Yemen, Wuhan or Ukraine over the last so many decades. The Vande Bharat mission during covid times was very challenging. The AI group operated 58,895 flights bringing 8,077,755 people home. A galaxy of sportspersons amongst the Air India workforce has done Air India and India proud - winning laurels for the country at prestigious global events. Air India has been nurturing budding talent - many of whom matured into champions and honoured with the highest national sports awards. Many legends in Cricket, Hockey, Carom, Chess, Shooting & other sports are Air Indians, the organization feels proud of. Air India is proud of its women workforce excelling in every area of operation – from the cockpit to the aircraft cabin, engineering units, ramp, office desks and the board room across our network. Women comprise over 30% of our total strength, including pilots (over 200), aircraft engineers & senior directors. Women pilots & crew in Air India hold the distinction of flying the longest around-the-world all-women flight on the Delhi-San Francisco-Delhi sector. Women in Air India have been leaving their mark in every area of functioning to reiterate that hands which rock the cradle can also make an airline soar high. In their pursuit of excellence to offer a world class service to our guests, every Air Indian is driven by the conviction "If I don't do it then who will?" (Air India, 2022, <https://www.airindia.in/about-airindia.htm>). The following section will cover information about the conclusion of this chapter in-depth.

²⁰⁵ Air India (2022) *About Air India*. Available from: <https://www.airindia.in/about-airindia.htm> [Accessed October 31, 2022]

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6.5 Conclusion

Today it is unquestionable that the aviation industry is developing at an accelerated rate due to the digital revolution and high innovation rates associated with the industry. It can be concluded that global airlines nowadays are investing a lot of their scarce financial resources towards: building powerful corporate brands, designing high quality air travel products, acquiring the latest technologically advanced aircrafts and operating systems in order to remain competitive and profitable. Over the past number of years the number of domestic and international travel destinations has significantly increased due to the increased modern aircraft models that have fuel efficient engines. It can be concluded that global airlines are successfully winning customer loyalty through offering customer friendly services on a consistent basis.

6.6 Review questions

- 1) Define the following terms ‘MTOW’ and ‘punctuality’?
- 2) Discuss the reasons why the aviation industry is associated with the tourism industry sector?
- 3) Identify the various popular global airlines headquartered on the continent of Europe?
- 4) Describe the various popular global airlines headquartered on the continent of Asia and the continent of North America.

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