

The Future of Airports

A Vision of 2040 and 2070

Topic No. 7: Passenger Terminals and Customer Experience

White Paper

ENAC Alumni – Airport Think Tank

April 2020



Disclaimer

The materials of The Future of Airports are being provided to the general public for information purposes only. The information shared in these materials is not all-encompassing or comprehensive and does not in any way intend to create or implicitly affect any elements of a contractual relationship. Under no circumstances ENAC Alumni, the research team, the panel members, and any participating organizations are responsible for any loss or damage caused by the usage of these contents. ENAC Alumni does not endorse products, providers or manufacturers. Trade or manufacturer's names appear herein solely for illustration purposes. 'Participating organization' designates an organization that has brought inputs to the roundtables and discussions that have been held as part of this research initiative. Their participation is not an endorsement or validation of any finding or statement of The Future of Airports.



ENAC Alumni

7 Avenue Edouard Belin | CS 54005 | 31400 Toulouse Cedex 4 | France
<https://www.alumni.enac.fr/en/> | contact@alumni.enac.fr | +33 (0)5 62 17 43 38

Research Team

- Gaël Le Bris, C.M., P.E., Principal Investigator | Senior Aviation Planner, WSP, Raleigh, NC, USA
- Loup-Giang Nguyen, Data Analyst | Aviation Planner, WSP, Raleigh, NC, USA
- Beathia Tagoe, Assistant Data Analyst | Aviation Planner, WSP, Raleigh, NC, USA

Panel Members

- Eduardo H. Bernardi, Director, Department of Investments, Secretaria Nacional de Aviação Civil, Ministério da Infraestrutura, Brasília - DF, Brazil
- Andy Brooker-Tormey, Director, Airport Operations Control Centre, Dubai Airports, Dubai, UAE
- Philippe Fonta, Senior Expert Sustainability, Strategy & Stakeholders, SCRUM-Consult, Geneva, Switzerland
- Matthieu Gualino, Director of the ICAO Security Training Center, ENAC, Toulouse, France
- Ernie Heymsfield, University of Arkansas & Chair of the AV070 Committee, Fayetteville, AR, USA
- Marc Houalla, Managing Director of Paris-Charles de Gaulle, Groupe ADP, Roissy-en-Fr., France
- Marc Huault, Head of Infrastructure, Toulouse-Blagnac Airport, Blagnac, France
- Maurice Jenkins, Division Director, Information Services, Miami-Dade Aviation Department, Miami, FL, USA
- Pierre Jouniaux, Chief Executive Officer, Safety Line, Paris, France
- Magali Kintzler, Air Traffic Manager CDG, DGAC/DSNA, Roissy-en-France, France
- Philippe Laborie, Director of Airport Operations, Groupe ADP, Roissy-en-France, France
- Nicolas Lamballe, Enseignant Aéroport, ENAC, Toulouse, France
- Ferran B. Lazaro, Director of Operations, Quside Technologies S.L., Barcelona, Spain
- Eugene Leeman, Liaison Officer to Eurocontrol, ACI Europe, Brussels, Belgium
- Guy Marguet, Projects and Methods Coordinator, Genève Airport & Chair of The French-Speaking Airports (UAF&FA) Technical Committee, Geneva, Switzerland
- Thomas Pétrelle, Airport CDM Expert, Groupe ADP, Orly, France
- Arlyn Purcell, Director, Aviation Environment & Sustainability, Port of Seattle, Seattle, WA, USA
- Michel Ricaud, Deputy Managing Director – Project Management, Paris-Orly Intl. Airport, Groupe ADP, Orly, France
- Olivier Sciara, Senior Officer, Safety, Air Navigation & Technical Affairs, UAF&FA, Paris, France

Participating Organizations

- AV070 Aircraft/Airport Compatibility Committee of the Transportation Research Board (TRB)
- ENAC – Ecole Nationale de l'Aviation Civile | National University of Civil Aviation
- UAF&FA – The French-Speaking Airports

Foreword



In February 2019, ENAC Alumni – the alumni association of the National University of Civil Aviation (ENAC) – organized a day of discussion and education on the current and future challenges in air transportation: **The State of the Air (“Les Etats de l’Air”)**. This event, held at the headquarter of the French General Directorate for Civil Aviation (DGAC), was part of a broader effort to fulfill some of our primary missions toward our 24,000 members: to maintain their knowledge up to date, to provide them platforms where to express and exchange ideas, and to promote excellence in aviation & space.

In addition to master classes on Airports, Aircraft and Systems, Design & Certification, Airline Operations, Air Traffic Management, Aircraft Maintenance, Pilots & Flight Operations, Safety & Compliance, and Entrepreneurship, **the State of the Air** featured a series of roundtables bringing together key leaders of the industry in the sectors of air transportation, tourism and general aviation who presented their vision of the future.

Following the large success of the State of the Air, and considering the dedication and expertise of our alumni, it has been decided to take the momentum and invite our think tanks to launch projects on the future of aviation. These think tanks reflect the diversity and excellence of our alumni community: air traffic management, airline operations, airports, digital innovation, and sustainable development.

The Airport Think Tank chaired by Gaël Le Bris is one of the most active of our research groups. The Future of Airports is an important study that brings a significant value added to help us foresee future challenges and prepare our industry for the changes to come. The participants of The Future of Airports have provided remarkable work. The output of the working sessions and the research findings are being released as white papers and other practice-ready materials that will be shared and brought to decision makers and leaders of both the public and private sectors worldwide. I am confident that the outcome of this Think Tank will be a huge move forward for the promotion and recognition of the ENAC Alumni.

Marc Houalla, President of ENAC Alumni

Introduction



From March 2019 to April 2020, the Airport Think Tank of ENAC Alumni conducted a research project on the long-term future of the airport industry: “The Future of Airports”. The project involved thought aviation leaders from diverse backgrounds and affiliations who looked at the trends and potentially disruptive changes, emerging transformational innovations, their impact on practice and their challenges for air transportation, and the needs in research, education, and policies for anticipating and facilitating these changes.

The future of airports cannot be envisioned without considering the future of our societies. At the 2040 and 2070 horizons of our study, we will count more fellow human beings than ever. Overall, we will be wealthier and more educated, and have a longer life expectancy. However, we will all face increased impacts from climate change that will put pressure on resources and communities, and might increase inequalities. We will have different social expectations. How can aviation address these new paradigms and continue to provide mobility?

First and foremost, we shall never forget that safety always comes first. As we are making air transportation increasingly automated and connected, we shall remember that our top priority must be to safeguard life, health, and property, and to promote the public welfare.

Human-induced climate change is the most formidable threat to our civilization. Transportation must become greener if we want to sustain the development of our societies without degrading our well-being and endangering public health at a horizon increasingly visible. Aviation shall keep pioneering green policies.

As aviation professionals, we are on the front line to tackle the fundamental issues arising and still continue to interconnect people and move freight. Aviation shall remain a world of opportunities and “create and preserve friendship and understanding among the nations and peoples of the world” as stated in the Convention of Chicago of 1947.

By 2040 and 2070, it is likely that unforeseeable groundbreaking technological innovations, scientific discoveries, and social and political changes will occur and deeply impact our world. When reading these pages, remember that we conducted our work and prepared these materials with our eyes of 2019.

We are all part of this future, and we can make a difference individually if we make ethical and sustainable decisions. Aviator and writer Antoine de Saint-Exupéry said that when it comes to the future, “it is not about foreseeing it, but about making it possible”. Let’s make a bright aviation future possible together.

Gaël Le Bris, Chair of the Airport Think Tank of ENAC Alumni

Topic No. 7: Passenger Terminals and Customer Experience

From Facility Providers to Mobility Providers and Hosts

Airport operators used to be infrastructure managers providing aviation facilities as a public service. As their vision is now more passenger-centric, airport operators consider the passengers as their clients and might sometimes even compete with air carriers on providing specific services to them. The missions of airport operators are being transformed as they are transitioning from facility providers to mobility providers and hosts competing on the experience they offer.

They are mobility providers because they consider themselves as part of a broader door-to-door mobility-as-a-service (MaaS) continuum. Airports are just one step of the traveler journey. They shall work on a better integration and coordination with the non-airport steps of this journey with a “total customer experience” approach. This is about getting control of their overall competitiveness and attractiveness as passengers do consider ground accessibility when choosing their airport¹ or considering alternative modes of transportation². It is also about the quality of service and the customer experience. Consequently, some airports are developing their own ground transportation offers, such as Groupe ADP partnering with Keolis on Le Bus Direct from Paris downtown to CDG and ORY. Groupe ADP is also part of a joint venture with the state-owned rail operator SNCF Réseau for commissioning by 2025 the light rail infrastructure for the CDG Express service³. Airports are also improving their curbside and ground transportation access. Airports such as Los Angeles Intl. Airport (LAX) with LAX-it and the Landside Access Modernization Program (LAMP)⁴ are developing remote ground transportation centers (GTC) connected to the terminals with bus services or a people mover to ease congestion issues on a crowded landside.

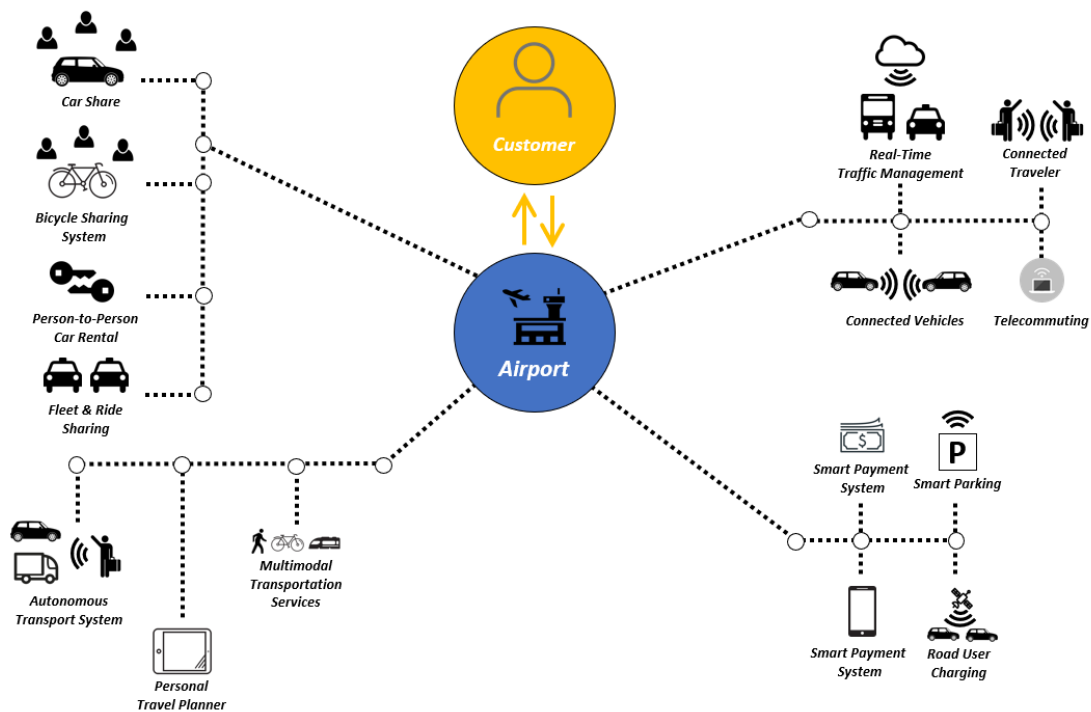


Figure 7-1 - Airport as a Door-to-Door Mobility-as-a-Service (MaaS)

They are hosts because they do not just provide a “shelter” where passengers transit through as at the dawn of commercial aviation. They serve a community, and the world is their guest. Airports are the first impression that visitors get of their destination. They shall be a gateway reflecting the region they serve. New York LaGuardia Airport (LGA) had been derided for decades with former U.S. Vice-President Joe Biden even declaring in 2014 that he “must be in some third-world country”. Since then, the Port Authority of New York & New Jersey (PANYNJ) went under a Public-Private Partnership (PPP) for an ambitious redevelopment of the airport that will be experiencing a second life and become a top-notch facility once the program is complete.⁵ Terminal 3 (TPS 3) at GRU Airport, SP, Brazil, significantly leveled up the customer experience to the best international standards on time for the 2014 FIFA World Cup. Signature atmospheres are developed to create a unique experience often in relation to cultural markers of their community. Munich International Airport (MUC) is well-known for its central Plaza featuring pubs and animations. Singapore Changi (SIN) opened in 2020 its 135,700 m² “Jewel” featuring over 300 retail and dining facilities on 10 floors arranged around a tropical forest with a 40-meter-tall indoor rainfall. Ted Stevens Anchorage International Airport (ANC), Paris-Charles de Gaulle (CDG), or Beijing Daxing (PKX) feature respectively Alaskan, Parisian and Chinese cultural elements all along the passenger journey. Smaller airports as well seek to provide a high-end experience such as Paine Field Passenger Terminal (PAE) in the Washington States, USA.

They develop services to passengers that may not all be commercially viable but have an overall positive impact on customer satisfaction. Innovative services include free lounge to connecting travelers, entertainment nearby the holdrooms, concerts and exhibitions, lactation rooms, water stations to replenish bottles, and even yoga rooms. Some of them, like the in-airport hotels, can be a competitive edge and a source of revenues as well like the iconic and retro TWA Flight Center Hotel at New York John F. Kennedy International Airport. Airport retail and concessions are another key to generate substantial ancillary revenues. These retail spaces are part of the experience itself (e.g., CDG, DBX, LHR). Airports have developed their own reward programs with perks and discounts (e.g., CDG, LHR, SAT) and personal shoppers (e.g., LHR). These services and experience should follow the evolution of passengers’ expectations and values as well. Exclusivity is becoming outmoded as it is now accessible to many and does not have the same glamour as before at the era of social- and eco-consciousness. Passenger-centric and customized experience to everyone is the way of the future. It will be supported by information and intelligent systems. But bringing more IT in does not mean that airport helpers and other customer service employees shall go away. On the contrary, airports will need well-trained professionals as these services will need a continued and adequate staffing who can address complex requests, provide a warm and human interface, and ensure resilience if the systems go down.

Back to the Future: Designing Passenger-Centric Terminal Facilities

Passenger terminal facilities have tremendously evolved since the beginning of aviation. Simple block “shelters” after World War II, they quickly evolved into new concepts with the emergence of jet aircraft and supersonic flights at the horizon, and the introduction of the jetbridges and mobile lounges. The newest, largest facilities have a polyform and centralized layout that can accommodate several dozens of million annual passengers under one single roof. The gigantism should not hinder the customer experience, operational efficiency, and resilience. Future concepts shall also achieve simplicity and modularity – and this is not necessarily a question of shape or configuration of the building only.

Passenger facilities shall go beyond grand architectural designs and get back to the roots of terminal design: providing a straightforward, seamless, and pleasant access to the aircraft from the curbside. There is a race to the biggest “cathedral-terminal” building between mega-hub airports. But we shall not forget that many passengers just want to get from their car or mass transit system to the gate, or from the gate to the gate for short connections. Passengers expect not to have to face a complex

itinerary through the airport, and spend time taking air trains and airport people movers (APM). Providing a unique experience and promoting retail, food and beverage are conciliable with this prospect. “Internal mobility” is a real issue at most of the large hub airports. This intraconnectivity shall transcend the terminal concepts and provide an interrupted journey, unlike most of the APM solutions that require a change of level and waiting time between trains. Bridges with mobile walkways (e.g., DEN, HKG, LGW, SEA) can provide an alternative. Cable cars also achieve the need for leveled, uninterrupted transportation. Mobile lounges are still intensively used at Washington Dulles International Airport (IAD) as they allow a flexible use of gates and terminal facilities.³ Could personal rapid transit-like (PRT) systems address these challenges and create point-to-point and personalized connections?

Modularity should be another function achieved by future terminals. While air transportation has been experiencing strong long-term growth, air traffic is also highly sensitive to temporary economic turndowns that can lead to quick market transformations such as airline consolidations and strategic decisions with impactful decisions for airports, from a restructuring of the network to more dramatic reductions of the number of airline hubs. The past decade has seen emerged other novelties such as low-cost, long-range air carriers, single-aisle aircraft being used on long-haul routes that call for more agile passenger facilities that can handle fairly dynamically larger and smaller aircraft, and domestic and international passengers. Geopolitical changes (e.g., new countries, new custom unions, Brexit) and disruptive events changing standards and practices (e.g., 9/11, COVID-19) are other conundrums for airports. The information and intelligence technologies might ultimately influence how space and resources are used and change the main ratios and reference values used by the industry for planning and design. Self-service bag drops, biometric identity from the check-in to the gate, walk-through security screening checkpoints, and similar emerging solutions will positively impact passenger flows. Airport planners and designers shall keep in mind that modularity and flexibility are keys to long-term success in a changing world that is constantly speeding up.

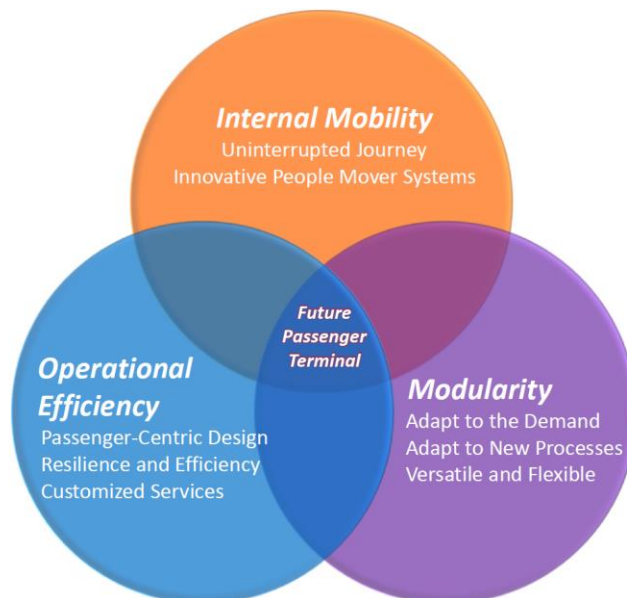


Figure 7-2 - Emerging Issues in Passenger Terminal Design

³ The use of these vehicles was discontinued at other airports because of their operating costs. Some aviation facilities (ATL, YUL) has kept few mobile lounges as a contingency plan for supporting remote operations.

In the end, getting the basics right is as important as creating a “wow” effect. The top priority of a passenger is either locating the departure gate or recovering his bag and securing a ride to arrive on time to the final destination. Satisfying other needs usually occurs afterward to begin to fulfill discretionary needs.⁶ Applications and services may alleviate this mental load, improve the experience, and perhaps increase ancillary revenues. But simplicity does not mean low-cost. No-frills terminals show their limits as they do not achieve passengers’ expectations. It might be a difficult paradigm to address for some airport operators that need funds to maintain or upgrade their facilities while facing a strong opposition of air carriers to collect adequate user fees to do so.^{7,8,9}

The Coming Battle for Door-to-Door Services

The lack of regional integration and custom unions are an increasing concern for arriving passengers in some parts of the world. Travelers enjoy free movements without border control within the European Schengen Area. MERCOSUR citizens can travel within the block with their national ID cards only. Visa exemptions (e.g., CARIPASS, ESTA, ETA, ETIAS) and simplified electronic border controls (e.g., EGate, Global Entry, NEXUS, SENTRI, SmartGate, PARAFE) expedite border controls. However, most of Africa and the ASEAN region do not have some instruments yet and passport controls are mentioned as one of the first negative points of the journey by passengers.

Efficient and passenger-friendly terminals will be a key competitive advantage for air carriers. Individual carriers and wider alliances are spending a large amount of money modernizing terminal facilities and customizing them to offer a consistent high-end experience from airport to airport. For instance, Delta Air Lines is investing 12 billion USD over a five-year period in airport infrastructure with flagship projects at ATL, LAX, LGA, SEA, SLC and took ownership in 2016 of 5% of CLEAR – a private biometric screening process. Outside of the United States, airlines rarely own their passenger terminal facilities. Their brand is typically less visible, and they might share airport-owned infrastructure and equipment with other air carriers. In return, airports are competing to attract and retain these air carriers. This competitive edge of airlines at airports cannot be achieved without a close cooperation between airport or terminal operators and innovative partnerships with service providers.

The next competition will be on the first and last miles – from the door to the curbside. Airlines and airports might team or at least better coordinate with transportation network companies to simplify this part of the trip. It is already possible in some cities to check-in bags at hotels or the train station to the airport. Additional services will be proposed, such as the baggage pickup and delivery at home or the workplace. This is one of the multiple innovations that could help passengers “extracting” value out of their entire trip door-to-door. A real seamless journey shall allow clients to work, join a meeting, or be entertained during their trip including in the transit to the airport or final destination. Watching a movie on a smartphone with a bad connection or using a computer in precarious conditions is not what 21st century citizens deserve. As we now spend a significant part of our life in transportation, we need to unlock this lost time to make it available and effective. New technologies and behaviors might facilitate this move. Carry-on bags become lighter under the pressure of air carrier fees. Individual computers might become dematerialized and available everywhere through cloud-based solutions.

Abbreviations

AAI	Airports Authority of India
AAJ	Airport Authority of Jamaica
ACAC	Airport Construction Advisory Council
A-CDM	Airport Collaborative Decision Making
ACRP	Airport Cooperative Research Program
ACSA	Airports Company South Africa
ADAC	Abu Dhabi Airport Company
ADM	Aéroports de Montréal
ADR	Aeroporti di Roma
AENA	Aeropuertos Españoles y Navegación Aérea
AFIS	Aerodrome Flight Information Service
AHA	Aviation Hazard Areas
AI	Artificial Intelligence
ANAC	Agência Nacional de Aviação Civil (Brazil)
ANN	Artificial Neural Network
APOC	Airport Operations Center
APM	Airport People Mover
ARIWS	Autonomous Runway Incursion Warning System
ASEAN-SAM	ASEAN Single Aviation Market
ASUR	Grupo Aeroportuario del Sureste, S.A.B. de C.V.
ATL	Hartsfield-Jackson Atlanta International Airport
ATM	Air Traffic Management
BCB	Body Cavity Bomb
BKG	Branson Airport
BNDES	Banco Nacional de Desenvolvimento Econômico e Social
BVLOS	Beyond the Visual Line of Sight
CAAC	Civil Aviation Administration of China
CAG	Changi Airport Group
CAGR	Compound Annual Growth Rate
CAH	Capital Airport Holding
CDG	Paris-Charles de Gaulle Airport
CDM	Collaborative Decision Making
CNS	Communication, Navigation and Surveillance
DAC	Dubai Airports Company
DAESP	Departamento Aeroviário do Estado de São Paulo
DFW	Dallas-Fort Worth International Airport
DGAC	Direction générale de l'aviation civile (France)
DOK	Donetsk Airport
EASA	European Aviation Safety Agency
ECAA	European Common Aviation Area
EGSA	Etablissement de Gestion de Services Aéroportuaires
EHCAAN	Egyptian Holding Company for Airports and Air Navigation
EMI	Electromagnetic Impulse
ENAC	Ecole Nationale de l'Aviation Civile
ENANA-EP	Empresa Nacional de Exploração de Aeroportos e Navegação Aérea E.P.
ERAU	Embry-Riddle Aeronautical University

FAA	U.S. Federal Aviation Administration
FIT	Florida Institute of Technology
GACA	General Authority of Civil Aviation
GANP	Global Air Navigation Plan
GASeP	Global Aviation Security Plan
GASP	Global Aviation Safety Plan
GMF	Global Market Forecast
GMR Group	Grandhi Mallikarjuna Rao Group
GRU	GRU Airport / São Paulo/Guarulhos–Gov. André Franco Montoro Intl. Airport
GTAA	Greater Toronto Airport Authority
GTC	Ground Transportation Center
HCC	Hub Control Center
HKG	Hong Kong International Airport
IAD	Washington Dulles International Airport
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
Infraero	Empresa Brasileira de Infraestrutura Aeroportuária
IoT	Internet of Things
IPCC	Intergovernmental Panel on Climate Change
IST	Istanbul Airport
KUL	Kuala Lumpur International Airport
LAC	Latin American and Caribbean
LAMP	Landside Access Modernization Program
LAWA	Los Angeles Airport World
LAX	Los Angeles International Airport
LGA	New York LaGuardia Airport
LGP	LaGuardia Gateway Partners
LGW	London Gatwick Airport
LHR	London-Heathrow
MaaS	Mobility as a Service
MANPAD	Man-Portable Air-Defense System
MDAD	Miami-Dade Aviation Department
MIA	Miami International Airport
ML	Machine Learning
MRS	Marseille-Provence International Airport
MUC	Munich International Airport
MWAA	Metropolitan Washington Airports Authority
NEXTT	New Experience Travel Technologies
NFC	Near-Field Communication
NOAA	U.S. National Oceanic and Atmospheric Administration
O&C	Ownership & Control
OCC	Operations Control Center
OER	Örnsköldsvik Airport
ONDA	Office National Des Aéroports
ORD	Chicago-O’Hare International Airport
ORY	Paris-Orly International Airport
PPP	Public-Private Partnership
PPP	Purchasing Power Parity

The Future of Airports: A Vision of 2040 and 2070

PKX	Beijing Daxing International Airport
PRT	Personal Rapid Transit
RAM	Rural (or Regional) Air Mobility
RESA	Runway End Safety Area
RIPS	Runway Incursion Prevention System
RIPSA	Runway Incursion Prevention through Situational Awareness
RIRP	Runway Incursion Reduction Program
ROAAS	Runway Overrun Awareness and Alerting System
ROPS	Runway Overrun Prevention System
RPA	Regional Plan Association
RPK	Revenue Passenger Kilometer
RPZ	Runway Protection Zone
RTC	Remote Tower Center
rTWR	Remote Tower
RVA	Régie des Voies Aériennes de la République Démocratique du Congo
SAAS	San Antonio Airport System
SAATM	Single African Air Transport Market
SAC	Secretaria de Aviação Civil (Brazil)
SAF	Sustainable Aviation Fuels
SAT	San Antonio International Airport
SARP	Standards and Recommended Practices
SDI	Space Data Integrator
SDL	Sundsvall–Timrå Airport
SFB	Orlando Sanford International Airport
SIIED	Surgically Implanted Improvised Explosive Device
SIN	Singapore-Changi International Airport
SJU	San Juan Luis Muñoz Marín International Airport
SMS	Safety Management System
SWIM	System Wide Information Management
TAM	Total Airport Management
TIP	Tripoli International Airport
TNC	Transportation Network Companies
TOSC	Technical, Operations & Safety Committee
TRB	Transportation Research Board
TRT	Turnaround Time
UAM	Urban Air Mobility
UATM	Urban Air Traffic Management
USOAP	Universal Safety Oversight Audit Programme
UTM	Unmanned Traffic Management

References

- ¹ Welch, T. F., Mishra, S., & Wang, F. (2015). Interrelationship between Airport Enplanements and Accessibility: Case of Three Airports in Metropolitan Washington, D.C., Region. *Transportation Research Record*, 2501(1), 46–55. <https://doi.org/10.3141/2501-07>
- ² Clever, R., & Hansen, M. M. (2008). Interaction of Air and High-Speed Rail in Japan. *Transportation Research Record*, 2043(1), 1–12. <https://doi.org/10.3141/2043-01>
- ³ CDG Express. Accessed on March 22, 2020. <https://cdgexpress.groupeadp.fr/>
- ⁴ Landside Access Modernization Program (LAMP), Connecting LAX, Los Angeles World Airports. Accessed March 22, 2020. <https://www.lawa.org/en/connectinglax>
- ⁵ A Whole New LaGuardia, PANYNJ. Accessed March 22, 2020. <https://www.anewlga.com/about-the-project/>
- ⁶ Boudreau, B. J. et al., Improving the Airport Customer Experience, ACRP Report 157, TRB, Washington, D.C., USA, pp. 14-16
- ⁷ Members of Congress Announce Framework for Infrastructure Bill That Includes a PFC Increase, ACI-NA, Feb. 3, 2020. Accessed on March 22, 2020. <https://airportsCouncil.org/2020/02/03/members-of-congress-announce-framework-for-infrastructure-bill-that-includes-a-pfc-increase/>
- ⁸ Five More Reasons to Oppose an Increase to the Passenger Facility Charge, Airlines for America. Accessed on March 22, 2020. <https://www.airlines.org/news/five-more-reasons-to-oppose-an-increase-to-the-passenger-facility-charge/>
- ⁹ How Airport Tax Increases Might Affect You, Air Asia. Accessed on March 22, 2020. <https://newsroom.airasia.com/how-airport-tax-increases-might-affect-you>