



## BULLETIN 370 /

FACILITATION OF TRANSPORT  
AND TRADE IN LATIN AMERICA  
AND THE CARIBBEAN



# Airport infrastructure in Latin America and the Caribbean

## Background

Commercial air transport of passengers and cargo has undergone enormous changes in recent decades, owing to factors such as exponential passenger growth, consolidation of the low-cost airline model and ever more demanding safety and environmental requirements.

Over the past decade, the number of passengers carried worldwide grew at an average annual rate of around 7%, putting the total at some 4 billion passengers per year. In the same period, the number of passengers transported in Latin America and the Caribbean surpassed 270 million and air cargo in the region increased by 25% between 2010 and 2017. This substantial growth has put enormous pressure on airport infrastructure, making operations more complex and requiring greater investment in both physical and technological infrastructure to optimize its use and provide suitable services for both passengers and cargo. →

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This *FAL Bulletin* analyses air transport infrastructure in the region and examines the characteristics of the main projects to expand airport capacity in Latin America and some Caribbean countries. The bulletin also includes policy recommendations for appropriate development of the aeronautical sector in the region.

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The views expressed in this document are those of the authors and do not necessarily reflect the views of the Organization.



This bulletin analyses the performance of the international air passenger transport market and looks at the air transport infrastructure investments being made or planned for the coming decades. Publicly available information is then drawn on to outline air infrastructure expansion projects in various countries of the region. Lastly, a number of recommendations are made regarding the main challenges that must be jointly addressed by the airport industry and governments of the region to maintain the pace of growth without sacrificing the affordability, safety and quality of air transport operations.

## I. An overview of airport infrastructure worldwide

During 2018, world passenger air traffic grew by 6.5% in terms of passenger-kilometres performed (PKP), and by 6.1% in terms of seat-kilometres available (SKA). The International Civil Aviation Organization (ICAO) estimates that by 2040, the number of air passengers could reach 10 billion worldwide, entailing roughly 90 million air transport operations.

The proliferation of low-cost airlines is another factor that has driven demand, with flights offered at prices that are competitive even compared to land transport, thereby increasing the universe with access to air services. In fact, at the global level, low-cost airlines accounted for 30% of total passengers on scheduled flights in 2017 and represented the fastest growing sector in terms of passenger numbers.

In addition to this rise in demand, major aircraft manufacturers expect growth in air traffic to lead to expansion of fleet replacement programmes to include increasingly sophisticated models that are larger and have better specifications for major routes, as well as models with a lower cost per available seat-kilometre (CASK) for “thin” routes offering direct connections between smaller markets. Such changes in fleet structures would favour more flight options, lower costs, reduced negative externalities, and greater air connectivity. However, this technological change will also represent an enormous challenge in terms of infrastructure management, since it will require air transport infrastructure capable of serving both the largest aircraft in the shortest possible time (so as to make the investment profitable) and also smaller aircraft, including those of low-cost airlines. Flexible infrastructure will therefore be required, able to serve a broader range of aircraft safely and promptly.

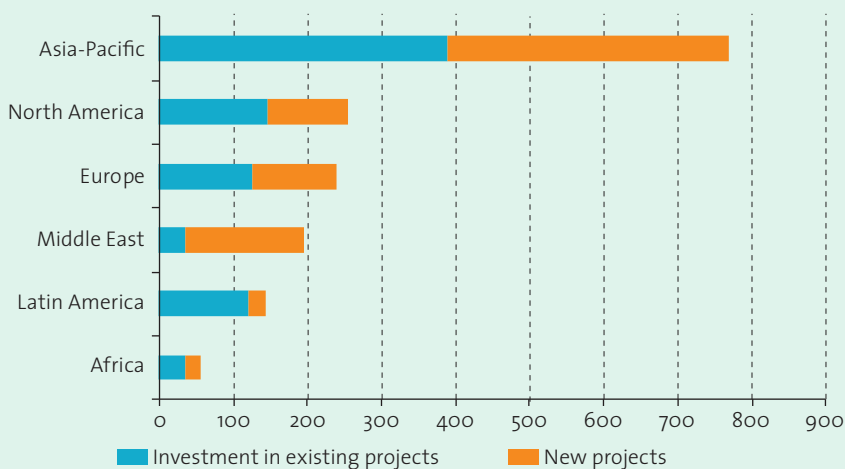
In this context, the need to invest in new airports is more and more pressing, as competition is no longer only between airlines but also between airports that share catchment areas and can benefit from congestion or low service quality at competing facilities. Alternative modes of transport may also capture a share of the market, as has happened in Europe with the expansion of the high-speed train network, which has displaced flights on routes with travel times of less than two hours.

Proper investment planning —and coordination of such planning with other public-private initiatives— can stimulate development that favours emergence of hub airports<sup>1</sup> or airport cities. A Centre for Aviation study estimates that global investment in airport infrastructure stands at US\$ 845 billion on improvement and expansion of runways and terminal buildings at existing airports and US\$ 255 billion on new airports.<sup>2</sup>

As shown in figure 1, Asia-Pacific is the region that is investing the most in air transport infrastructure and is also where the most money is being allocated to new terminals in locations where no air transport infrastructure previously existed (known as greenfield projects). Although as regions North America and Europe have much denser and more consolidated airport networks, investment in new projects is still significant and may be spurred by relocation outside large cities, or by the need to create additional space for new services from low-cost airlines or specialized cargo terminals. Growth in the Middle East outpaces even that in Latin America and the Caribbean, where the amount earmarked for construction of new airports is scarcely greater than in Africa. As a result, the limited investment being made in Latin America and the Caribbean is being used to remodel and expand existing facilities rather than to build new terminals.

**Figure 1**

World regions: investment in airport infrastructure by region, 2017  
(Billions of dollars)



**Source:** Prepared by the authors, on the basis of information from Centre for Aviation (CAPA) [online]<https://centreforaviation.com/analysis/reports>.

**Note:** Figures at July 2017.

The lack of airport infrastructure could therefore become a major impediment to the sector's future growth. The International Air Transport Association (IATA) has urged aviation authorities to be mindful of growth in demand and airlines' current needs when planning new airports and has called for proper allocation of slots<sup>3</sup> to ensure competition and efficient use of available airport capacity.

Neither operation of airports nor their growth are free from environmental restrictions. Of the pollution the aviation sector generates directly at the local level, such as nitrogen oxides, sulphur dioxide, carbon monoxide, other particles and volatile organic compounds, the greatest problems relate to noise during take-off and landing. These factors are constraining growth and operation of flights substantially, especially in airports within urban centres. For example, to obtain a construction permit for a new runway, Frankfurt airport in Germany had to agree to cease air operations at 11 p.m. every day.

<sup>1</sup> The term hub airport is used to refer to aviation facilities that concentrate and distribute cargo and passenger traffic to other destinations around the world.

<sup>2</sup> See <https://centreforaviation.com/analysis/reports>.

<sup>3</sup> An airport slot is the time interval assigned by the authority to operate an aircraft, including air operations and use of the runway and ancillary infrastructure.

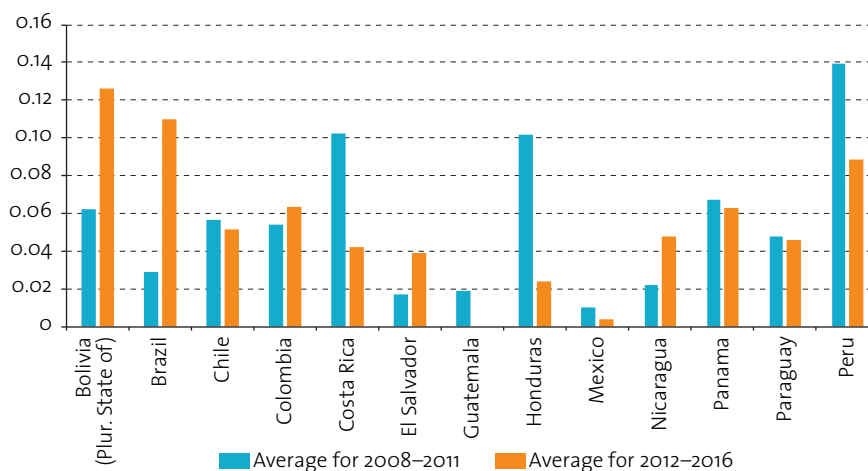
## II. Airport infrastructure in Latin America and the Caribbean

For Latin America and the Caribbean (LAC), the airport sector is key to competitiveness and international integration, since better air connectivity minimizes costs for passengers, businesses and trade in general, as well as promoting tourism and foreign direct investment. In LAC, the sector provides almost 4.9 million jobs, and 153 billion dollars of GDP are directly or indirectly related to aviation (SEO Amsterdam Economics, 2016).

International air passenger traffic in the region grew in 2018 at rate of 6.9%. The installed capacity in LAC currently serves 2.6 million flights and connects 385 cities in the region, using 73 international airports in Latin America and 68 international terminals with a range of capacities in the Caribbean.

Between 2008 and 2015, Latin American countries invested just under US\$ 20 billion in air transport infrastructure. This is an average annual investment of 0.05% of regional GDP, making aviation the mode of transport that receives the least public and private investment. It is estimated that, if investments were made in the airport capacity needed to overcome restrictions, demand could rise by more than 50 million passengers, resulting in aviation contributing more than US\$ 42 billion to GDP and creating 900,000 additional jobs (Wiltshire and Jaimurzina, 2017). As shown in Figure 2, from 2008 to 2016 the Plurinational State of Bolivia, Brazil and Peru made the largest investments, as percentages of GDP.

**Figure 2**  
Latin America (selected countries): investment in air transport infrastructure, selected countries, 2008–2016  
(Percentages of GDP)



**Source:** Prepared by the authors, on the basis of information from Economic Infrastructure Investment Data (INFRALATAM) [online] <http://infralatam.info/>.

Demand is expected to be 1.727 billion passengers a year in 2040, with growth mainly from the Andean region with 341 million passengers (34.6% of the regional total), Brazil with 260 million passengers (26.3% of the regional total) and Mexico with 229 million passengers (23.2% of the regional total) (Farromeque, 2018). Air cargo also has significant growth potential, especially in distribution of products linked to e-commerce, technology and manufacturing, and in transport of perishable goods, such as flowers, fish, fruit and vegetables, and other high-value, low-weight items.







The investment needed to close the capacity gap in airport infrastructure in the 2016 to 2040 period is estimated at almost US\$ 53.15 billion at 2016 prices. Nearly half of the total investment (US\$ 25.545 billion) needs to be made in the first decade (2016–2025). In the remaining period (2026–2040), a total investment of US\$ 27.605 billion is required, with more than 80% focused on airports in the region’s major capitals (Farromeque, 2018).

### III. Airport investment plans in the region

To meet these challenges, national authorities and air infrastructure concessionaires draw up medium- and long-term airport investment plans, based on existing air traffic, forecast demand, available capacity and infrastructure (runways, terminals and ancillary facilities), technological platforms and service quality indicators (such as response times, congestion, and landing/take-off wait time). Investment requirements are then determined based on this information, taking into account economic, social and environmental factors. In order to begin new phases of infrastructure investment before congestion begins to affect service quality and competitiveness, these enabling investments are generally managed through “project phases”; the phases are activated by pre-established levels in indicators such as annual aircraft movements, annual passenger numbers or number of passengers per hour.

A number of air terminal expansion projects are described below, based on publicly available information. Given that they are announcements of construction projects, the amounts involved have been omitted and the characteristics and opening dates are provided for reference purposes only, to show the type of investment being made in airports in Latin America and the Caribbean.

#### A. Argentina

Over the next few years, most of Argentina’s airport terminals will be remodelled to adapt them to growth in operations. This includes Ezeiza International Airport, which serves the centre of the country and will quadruple in size, from the current 54,800 m<sup>2</sup> to 217,230 m<sup>2</sup> once work is complete. The new passenger terminal will have 138 check-in desks, 128 self-check-in machines and 54 boarding gates. The safety and energy efficiency of the runway will also be improved by installing LED technology in all runway lights, improving visibility and reducing costs. A new four-storey car park will be built, with a capacity for 1,835 vehicles.

At Jorge Newbery Airport, work is planned to reclaim part of the River Plate to build a new passenger terminal and expand the aircraft apron. The master plan for the airport includes construction of two new buildings linked to the existing ones, a park, an underground car park and ancillary facilities to improve access to the terminal and increase pedestrian and vehicle safety.

At the Cataratas del Iguazú International Airport in Misiones, in addition to the recently opened new control tower, the passenger terminal will be expanded from 8,000 m<sup>2</sup> to 15,000 m<sup>2</sup>, and the taxiways and the main runway will be rebuilt. Work is also planned to modernize other airports such as Tucumán and Jujuy.

## B. Belize

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The Government of Belize, together with the Belize Airport Concession Company Limited, is carrying out a three-phase investment programme at Philip S.W. Goldson International Airport (PGIA). The first phase, which has already been completed, included expansion of the terminal building and automation of entrances and exits. The second phase, which is now under way, involves adding three new departure gates to the departure hall, expanded security and immigration facilities, and a 20% expansion of the aircraft apron to 12 stands. The third phase includes expansion of the airport terminal building floor area to 103,000 ft<sup>2</sup>.

## C. Plurinational State of Bolivia

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At the end of 2015, the first phase of expansion and furnishing of the El Alto International Airport was completed, including remodelling of the runway, expansion and remodelling of check-in areas, national and international arrival control areas, and new retail and transit areas to improve passenger service. Work is currently underway to modernize the land access to the airport.

There are also near-term plans to expand Viru Viru International Airport in Santa Cruz de la Sierra, which is considered the hub for cargo and passengers in Bolivia. The project includes construction of a second runway, a 50,000 m<sup>2</sup> terminal building and a 70,000 m<sup>2</sup> apron for cargo.

## D. Brazil

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Brazil has recently resumed public investments in air transport infrastructure. It has also restructured its regulatory framework to make it more appealing to the private sector and to resume infrastructure work that was on hold. In 2018, the airports of Jijoca de Jericoacoara and Juazeiro do Norte (Ceará), Vitória (Espírito Santo) and Rio Branco (Acre) received sizeable investments in physical infrastructure. In the same year, the Federal Government of Brazil awarded a new round of 30-year concessions for the following airports: Recife (Pernambuco), Maceió (Alagoas), Aracaju (Sergipe), João Pessoa (Paraíba), Campina Grande (Paraíba) and Juazeiro do Norte (Ceará), Vitória (Espírito Santo), Macaé (Rio de Janeiro), Cuiabá, Sinop, Rondonópolis and Alta Floresta (Mato Grosso) (National Civil Aviation Agency (ANAC), 2019). The service parameters are based on recommendations from IATA and the national authorities concerning the passenger terminal and related infrastructure, and require the new concessionaires to make investments to expand the airports—including updating signage inside and outside passenger terminals, installing free high-speed internet in passenger terminals and overhauling HVAC systems.

## E. Chile

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The development plan for Arturo Merino Benítez International Airport, which serves the centre of Chile, has a planning horizon of 2030 and aims to increase capacity for passenger and cargo transport. The facility currently has a floor area of 90,000 m<sup>2</sup> and a capacity for 15 million passengers per year. Once the work has been completed in 2020, the floor area will have been enlarged to 375,000 m<sup>2</sup>, enough for twice the passenger traffic.

A number of other airports are also being expanded through new airport concessions, such as the one for Diego Aracena Airport in Iquique, to remodel and expand the passenger terminal to meet growth in demand for domestic and international flights.

## F. Colombia

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Colombia's 2010–2026 Air Navigation Plan establishes strategic guidelines for development of air navigation, guiding the aeronautical community in the short (2010–2014), medium (2015–2019) and long term (2020–2026). This instrument is also aligned with the Global Air Navigation Plan of the International Civil Aviation Organization (ICAO).

One of the key investments in infrastructure is the new El Dorado II Airport, which will be located in the Department of Cundinamarca. The plan is divided into six investment phases, at the end of which the new airport will have a surface area of 1,300 ha, three 4-km runways, a control tower, and cargo and passenger terminals. Ancillary work is also planned, such as a motorway and a tramway to connect the airport with the centre of Bogotá. There is a possibility that the current terminal, from which the national shuttle air service runs, could become a specialized terminal for low-cost airlines.

## G. Costa Rica

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Juan Santamaría International Airport, located on the outskirts of San José, is the country's main point of arrival and departure for air traffic. In February 2019, Block V was opened, expanding the airport westward, adding four additional departure lounges, two passenger boarding bridges and two remote stands, adding a total of more than 6,000 m<sup>2</sup>, in addition to ancillary work on taxiways and perimeter security. In the medium term, there are plans to build a domestic terminal north of the airport, to separate international and domestic traffic.

## H. Cuba

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The Ministry of Transport of Cuba announced that it will award the concession for José Martí International Airport in Havana, which currently has five terminals, to the French companies Bouygues Bâtiment International and Groupe ADP (formerly Aéroports de Paris). The agreement includes financing and operation of the international terminal, as well as of the San Antonio de los Baños aerodrome, to the west of the Cuban capital, and expansion, modernization and management of the facilities.

The concessions for the international airports of Varadero, Santiago, Cayo Coco, Santa Clara and Holguín will all soon be put out to tender.

## I. Ecuador

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Ecuador has built one of the few greenfield airports of recent decades in Latin America: Quito's Mariscal Sucre International Airport (NAIQ), which was opened in February 2013 to replace the previous terminal that had been surrounded by the city of Quito. In 2018, the terminal served 5.2 million passengers, and a specialized cargo terminal with usable floor area of 14,000 m<sup>2</sup>, serving 14 cargo airlines, processed more than 230,000 metric tons of cargo.

The NAIQ Sustainable Growth and Development Plan has a planning horizon of 35 years and schedules investments in 10-year periods according to sector growth. When it opened, NAIQ had a 38,000 m<sup>2</sup> passenger terminal with 6 passenger boarding bridges and a 4,100 m runway. In May 2015, Phase 2A of the passenger terminal was opened, expanding the area for domestic flights by 7,910 m<sup>2</sup> and adding 870 seats, two passenger boarding bridges and ten boarding gates, resulting in a 30% increase in departure lounge capacity. The 2017–2020 expansion and improvement plan includes nine additional projects to expand the floor area of the passenger terminal by 18% and the processing area by 21% (self-check-in, immigration and customs). As a result of this work, the passenger terminal will be expanded to 64,500 m<sup>2</sup> with 11 passenger boarding bridges. The goal is to expand the floor area to 70,500 m<sup>2</sup> by 2030, with 16 passenger boarding bridges. The terminal would then be used solely for international traffic and a second domestic terminal would be built, in addition to ancillary work.

## J. El Salvador

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El Salvador's Autonomous Executive Port Commission (CEPA) has prepared an Institutional Strategic Plan for the 2015–2019 period, containing measures for the national ports, airports and railways under its jurisdiction. Extensive work has been carried out to modernize and expand the Monseñor Óscar Arnulfo Romero y Galdámez International Airport, including renovation of the runway, construction of a new apron for aircraft, acquisition of a new radar and general improvements to existing infrastructure, to allow operation of 14 connected stands and three remote stands in an area of almost 44,000 m<sup>2</sup>.

A new passenger terminal building is currently being erected, alongside the existing building. It will have three floors and a total area of 23,216 m<sup>2</sup>, adding five new boarding gates and boarding bridges, improvements to retail areas and passenger control and transit areas, and a new 1,543 m<sup>2</sup> public area for the main lobby of the building. In a second stage, six new gates will be built, with their respective departure lounges, resulting in an additional gross floor area of 42,930 m<sup>2</sup>.

## K. Guatemala

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The modernization and expansion of Guatemala's La Aurora International Airport aims to enhance airport terminal services, improve existing infrastructure and streamline processes. The latest information states that work will be performed by a public-private partnership (PPP) in the BOT format (build–operate–transfer), improving and expanding the taxiway, the passenger terminal (with new boarding bridges), the cargo area, the hangars, and the perimeter security of the facilities.

There are also plans to overhaul three aerodromes: Mundo Maya, Puerto Barrios and Retalhuleu, to improve national air connectivity.

## L. Honduras

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At Toncontín International Airport in the city of Tegucigalpa, work has been carried out to extend the runway by 300 m, as well as ancillary work to improve the safety of air operations.

The new Palmerola International Airport in Comayagua, which is currently under construction, will improve the services of the existing Toncontín terminal and serve as an airport of embarkation for Salvadoran and Nicaraguan cargo. It will be located next to the Soto Cano Air Base and will have its main entrance on the road that connects Tegucigalpa with San Pedro Sula. The terminal will comprise a 26,000 m<sup>2</sup> building and six boarding bridges and is scheduled to open in 2021.

## M. Jamaica

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The Ministry of Transport and Mining of Jamaica has begun the process of forming a PPP to operate, develop and maintain the Norman Manley International Airport in the city of Kingston, including expansion and improvement of the facilities.

Sangster International Airport, which serves Montego Bay, is also being expanded. The work includes resurfacing taxiways, aircraft aprons and cargo areas. There are medium-term plans to extend the runway and to add 25,800 ft<sup>2</sup> to the departure terminal to improve services.

## N. Mexico

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From 2014 to mid-2018 Mexico was working on the construction of Mexico City's New International Airport (NAIM) on the bed of the former Lake Texcoco, 15 km from the centre of Mexico City. It would have been the largest airport in Latin America and the third largest worldwide, alleviating congestion at the existing Benito Juárez International Airport (AICM).



After the government of Andrés Manuel López Obrador took office, a referendum was held to choose between building NAIM or another project that would resolve the technical and environmental questions raised, bolstering AICM facilities and making additional investments in Toluca International Airport and in Santa Lucía Air Base, both of which are located around 45 km from the capital. The second option was chosen by 69.5% of those who voted. As a result, the project was halted and the land in Texcoco will be repurposed as a public space for environmental protection, recreation and sport.

A new master plan is currently being prepared. Toluca airport has sufficient capacity and will be connected to the capital in the future by a fast train service. The Santa Lucía facility will be built over an area of 23.2 km<sup>2</sup> and will include two runways (5.1 km and 4.6 km), a control tower, a terminal with 33 stands, taxiways and a service building, in addition to a 4.7-km<sup>2</sup> air base, as the project will be both civil and military. The work is expected to take three years.

## O. Nicaragua

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The government agency Empresa Administradora de Aeropuertos Internacionales (EAAI) is responsible for Nicaragua's airport infrastructure. The agency's plans include projects to extend runways and other facilities, with a view to modernizing and expanding Augusto C. Sandino International Airport and the air terminals on the Atlantic coast.

## P. Panama

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The air passenger traffic has quadrupled in Panama in the last decade, reaching 15.6 million passengers in 2017, of whom around 96% travelled through Tocumen International Airport, which is one of the most important air terminals in Latin America in terms of number of destinations and traffic.

Tocumen airport is in the process of building a South Terminal, which will have a floor area of around 116,000 m<sup>2</sup>, 62 boarding bridges for arrivals and departures, a new control tower, and a capacity of 20 connected stands and 8 remote stands. In addition to other support infrastructure such as taxiways, there will be a 2.6 km access road and a new apron, covering a total area of 250,000 m<sup>2</sup>. It will also use the latest security check technology to facilitate and expedite passenger screening, as well as special baggage handling technology capable of moving 6,500 items of luggage per hour, fire safety systems, passenger information systems, and other equipment. Once the project is completed, Tocumen will be able to serve 33 million passengers per year.

In the case of cargo, despite expansion problems, there are plans to consolidate a cargo hub specializing in courier and messenger companies, as well as a logistics area for added-value services and manufacturing activities.

## Q. Paraguay

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The National Directorate of Civil Aeronautics (DINAC) has announced that expansion and remodelling of Silvio Pettrossi International Airport could begin in early 2020. Before that, the master plan will be finalized and the project will be put out to public tender. The work to be performed in the near term includes remodelling of the current terminal, expansion of the departure lounge and service desks, and fitting of two new boarding bridges, in addition to a new system for transporting luggage and cargo. In the medium term, there is also a possibility that the terminal could have two runways to facilitate air operations.

The Guaraní International Airport, in Ciudad del Este on the border with Brazil, which is 320 km from Asunción and mostly used for cargo, has recently received investment in work to renovate and expand the terminal, including a new building, boarding bridge and other equipment to offer better service for passengers and cargo.

## R. Dominican Republic

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There is a construction and remodelling plan for the passenger service areas of four of the country's main international airports that are operated as concessions. Most of the investment will be used to expand Las Americas International Airport, including improvements to the passenger terminal, which will have a floor area of 10,000 m<sup>2</sup>, improvements to security and immigration services, and new spaces for shops and restaurants. There are also plans to improve the car parks, pavements and lighting systems and to install additional security cameras, in addition powering the terminal with solar energy. All construction and refurbishment work is scheduled to be completed by December 2019.

Work is also planned for Doctor Joaquín Balaguer International Airport in the Higüero district of Santo Domingo, Gregorio Luperón International Airport near the city of San Felipe de Puerto Plata, as well as for Samaná El Catey International Airport in the province of Samaná.

## S. Peru

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Phase III of the modernization project for Jorge Chávez International Airport is currently underway. Once the phase has been completed in 2024, the facilities will have been expanded from 2 million m<sup>2</sup> to a total of 9 million m<sup>2</sup>. In addition to the investments already made in a new baggage reclaim area and in remodelling of the check-in area and departure lounges, an environmental plan is being applied to separate, collect, process and transport waste and to repurpose the land adjacent to the airport, which belonged to the armed forces. After this work, which will take around a year, construction will begin on a second runway, scheduled to open in 2022, and a new control tower and passenger terminal, to open in the fourth quarter of 2023. The plan also includes construction of an airport city by 2051, to be used for commercial activities, also with logistical areas.

The Ministry of Transport and Communications of Peru will soon award concessions for a third group of domestic airports —Chiclayo, Iquitos, Piura, Talara, Pucallpa, Tumbes and Chachapoyas— in order to expand and improve their connectivity and operational security.

## T. Trinidad and Tobago

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Piarco International Airport, 25 km from Port of Spain, is the third airport in the English-speaking Caribbean in terms of passenger traffic. The airport has a 3,600 m runway and a passenger terminal with 14 international boarding gates, two ground-level domestic gates and 82 check-in desks. Improvements have recently been made to the security facilities and checkpoints to improve service time.

There are also plans to build a “Caribbean aerotropolis”, the first phase of which will cover 168 acres and will contain a service station, a hotel and conference centre, office facilities, retail stores, a shopping plaza, areas for aircraft maintenance, general facility supplies and warehouses.

## U. Uruguay

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The new passenger terminal at Carrasco International Airport opened in December 2009 and covers an area of around 39,500 m<sup>2</sup>. The layout of the facility is linear, to facilitate future expansions.

A technological development plan called Easy Airport is currently being jointly implemented by the airport, the National Directorate of Civil Aviation and Aeronautical Infrastructure and the National Directorate of Migration, with the aim of fully automating the terminal to reduce waiting times, simplify processes and improve security. As part of the programme, automatic biometric gates are operating in immigration control, boarding cards can be scanned at five self-check-in desks and a facial recognition system is being used at

boarding gates, meaning that passengers do not need to provide their documentation when boarding. Work has also been done to improve the energy efficiency of the terminal, by installing a photovoltaic solar generation plant, fitting a new HVAC system throughout the building, replacing light fittings with LED technology and undertaking various actions to reduce electricity consumption.

## V. Venezuela (Bolivarian Republic of)

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The Master Plan for Simón Bolívar International Airport, which serves the country's capital, covers the period from 2013 to 2019. The plan includes expansion of the domestic terminal, construction of hardstand for international flights, rehabilitation of taxiways, modernization of the cargo apron, and updating of technological systems for air traffic control, internal security and data processing.

## IV. Conclusions and recommendations

To maximize the benefits that aviation can bring to countries' development, it is crucial that regulatory and operational frameworks are capable of adapting to the rapid changes the sector is undergoing. In order to achieve this, the following medium- and long-term strategic actions must be implemented through coordination between the public and private sectors.

### **Provide the airport system and its management model with flexible governance and a long-term planning horizon**

National air infrastructure is under significant pressure from growth in international passenger and cargo traffic, together with changes in market structure brought about by the arrival of low-cost airlines and larger aircraft. In these circumstances, it is essential for there to be sector guidelines to promote efficient national airport systems, capable of adjusting as required to social and economic changes affecting the aviation industry, and of adapting the facilities and services they provide to demand (passengers and cargo) and to users' additional requirements.

It is also important to improve connectivity between intermediate cities. Less than half of the region's main cities are connected by a daily flight, and there are no daily flights between a number of Central American capitals. In addition, as a result of activity at regional hubs, direct air connections between capitals have been lost. Consequently, there is great potential for airlines to generate additional intraregional traffic, with competitive prices and slots. To achieve this, land connectivity with air infrastructure must be improved, procedures must be established for handling high-value logistical cargo and technological development hubs must be promoted.

The lack of space for construction or expansion of airports is a central issue in the region. Urban sprawl has gradually surrounded airports, taking away their natural growth spaces. It is essential to establish a long-term master plan that links land use with investment in infrastructure and urban mobility, to guide investments and ensure that they make a real contribution to economic growth, inclusion and social well-being.

Establishing effective leadership and a mechanism for dialogue with the public and private actors involved in air mobility and logistics is therefore one of the strategic actions for proper implementation (Jaimurzina and Sánchez, 2017). These measures will provide the institutional framework and tools needed to achieve institutional goals, keeping in mind that the planning and implementation horizons of some of these actions, particularly those that involve expansion of infrastructure, often exceed several terms of government. In other words, good governance is not merely management of infrastructure expansion contracts: it also facilitates proactive action to support sustainable growth in the sector and maximise social benefits.

## **Promote appropriate economic regulation of the activity, promoting competition among actors and modes, to foster sustainable logistics and mobility**

For airport facilities to be properly managed, maintained, expanded and financed, national airport systems must operate in a coordinated and hierarchical manner, enabling investments to be prioritized and maximizing social benefits, especially with regard to small airfields, which provide connectivity for small inland towns.

The measures relating to construction and maintenance of infrastructure, and the human resources and equipment needed, all require sizeable investments. It is therefore important to be open to seeking financing through other channels, including concessions, other forms of public-private partnerships, international financing or innovative financing mechanisms (such as green bonds or institutional bonds). In response to this situation, ECLAC has proposed regulatory policy that enables operating costs to be allocated in full to the different modes of transport, whilst also promoting activities' economic efficiency and sustainability. Such an approach enables an efficient and sustainable supply of goods for public and private use and must therefore include economic and technical regulations that facilitate transfers between modes, internalization of externalities into prices and creation of ancillary infrastructure between modes, whilst also promoting balanced territorial development, among other public policy measures (Jaimurzina, Pérez and Sánchez, 2015).

## **Incorporate aviation plans into national logistics and mobility policies, so that they form an integral part of development strategies**

ECLAC has stated that the separation between infrastructure and services, between different modes of transport, or between freight and passenger transport is solely an operational necessity. In other words, aeronautical plans must be an integral part of logistics and mobility policies, to foster greater competitiveness. Such policies seek to include infrastructure services, production, mobility, distribution of goods and regulation of services and information throughout the global supply chain, regardless of whether air, land or maritime transport is used. (Jaimurzina, Pérez, Sánchez, 2016).

Consequently, integrated national logistics and mobility policy must be consolidated by organizing and coordinating intersectoral, inter-agency and intermodal operational actions, and by promoting cooperation between such actions. This is the most viable means of achieving efficient, competitive and safe transit of goods and people, thus bolstering countries' productivity and competitiveness and their economies, as well as fostering social inclusion of the entire population.

The challenges facing the aeronautical sector are also present in other modes of transport, such as scarcity of basic infrastructure, increases in negative externalities, insecurity, lack of facilitation of processes, obsolete or incomplete regulatory frameworks, among others. There is also a lack of coordination with other development agendas such as territorial planning, competitiveness and promotion of innovation, which affect the sector's development and future competitiveness. In order to resolve these issues, it is crucial that there is leadership from States through their public bodies, to ensure that services are rendered and regulated for the common good.



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## VI. Publications of interest



### Reflections on the future of container ports in view of the new containerization trends

Ricardo Sánchez  
Eliana Barleta

Recent years have seen a relative slowdown in container movements, which cannot be fully explained by fluctuations in the world economy. The authors note that the year-on-year change in throughput is decreasing relative to changes in GDP. In an attempt to explain these “seesaw” variations, several hypotheses are proposed and some are demonstrated, in particular the reprimarization of the economy, the miniaturization of cargoes, the possible decrease in transshipments, and the increasing use of 40-foot containers.

Available in:



### Transport Governance: theoretical and policy perspectives

Azhar Jaimurzina

This *FAL Bulletin* presents a theoretical and policy perspective on the issue of transport governance. The document offers a summary of the key concepts related to governance, as such, and then analyses the way in which the issue of governance has been approached in transport studies. It then analyses examples of how international policy forums and initiatives, global and regional, dealt with this subject matter. The concluding section formulates some proposals for the LAC policy dialogue on transport governance.

Available in: