



MetroAirports

Planning, governance
and economic development
in airport areas

Examples and lessons
from Atlanta, Barcelona and Paris

Planning, governance and economic development in airport areas is the final report of the project "METROAirports; Socioeconomic impact and uses of new-generation airports", led by the Barcelona Metropolitan Area, with Atlanta, Île-de-France and the Airport Regions Conference as partners.

The views expressed herein are those of the authors alone, and the AMB cannot be held responsible for any use that may be made of the information contained in this document.

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Table of contents

List of abbreviations	4
Executive summary	5
1. Introduction.....	7
1.1. Background of METROAirports project	7
1.2. What does this project add to the previous work?	7
1.3. Partners in the project	8
1.4. List of meetings	9
2. Conceptualising airport areas	10
2.1. The concept of airport city	10
2.2. The concept of the airport area	12
2.3. The concept of airport corridor.....	13
3. Airport area case studies	14
3.1. Atlanta.....	14
3.2. Barcelona	17
3.3. Paris	23
3.4. Comparing Atlanta, Barcelona and Paris Airport Areas	36
4. Challenges and lessons	39
4.1. Planning airport areas	39
4.2. Governance of airport areas	41
4.3. Economic development and employment policies in airport areas....	44
5. Final remarks	46

List of abbreviations

ADP	Aéroports de Paris. Paris airports operator.
AMB	Àrea Metropolitana de Barcelona (Barcelona Metropolitan Area)
ARC	Atlanta Regional Commission
ATL	Atlanta Hartsfield-Jackson airport
BCN	Barcelona-El Prat Airport
CDG	Paris Charles de Gaulle Airport
CID	Community Improvement District
IAU	Institut d'Aménagement et Urbanisme. Paris Region Planning and Urban and Environmental Agency
HQ	headquarters
MGP	Métropole du Grand Paris (Paris metropolitan authority)
ORY	Paris Orly Airport
PDU	Pla director urbanístic metropolità (Barcelona's Metropolitan Urban Master Plan)
RER	Paris regional rail
TGV	France's high-speed rail
ha	hectares
sqft	square feet
sqkm	square kilometers
sqm	square meters
sqmi	square miles

Executive summary

This METROAirports report is the continuation of the **Sustainable Airport Areas** project, which was carried out between 2015 and 2017 under the leadership of IAU. This initiative resulted in the publication of a report entitled “Sustainable Airport Areas. Guidelines for Decision Makers”.

This project represents an attempt to further conceptualise the notion of “airport area” and to broaden the perspective beyond the scope of previous research, which had focused mainly (but not exclusively) on airports and airport cities. The project has focused on three aspects related to airport areas, namely: (i) planning, (ii) governance, and (iii) economic development and employment policies.

Airport area planning

1. Integrated land planning of airport areas is recommended, so as to facilitate the coordination of infrastructure planning, integrate the airport and airport cities on a broader urban and territorial scale and strike a balance between development on the one hand and the protection of the environment and local communities on the other.
2. Airport and territorial logics and priorities need to enter into dialogue and avoid unilateral impositions. Airport-related developments should avoid becoming extra-territorial. In particular, developments that involve a high volume of mobility of people should be clustered around intermodal transport nodes.
3. As airport areas are becoming more appealing locations for distribution centres and logistical operations, appropriate planning and connections to freight areas should be encouraged.

Airport area governance

4. Partnerships bringing together most airport area stakeholders can play a positive role in promoting constructive dialogue, especially among stakeholders who

This report summarizes the results of the exchanges and visits from late 2017 to early 2019 among the project partners: Atlanta Regional Commission, Àrea Metropolitana de Barcelona, Institut d’aménagement et urbanisme Île-de-France and Airport Regions Conference.

A tentative definition of the airport area includes a second ring beyond the airport city, i.e. an area strongly and directly influenced by the airport but not fully controlled by the airport company.

Born of the exchanges and discussions throughout the course of this project, the following recommendations pertaining to the three aspects studied have been drafted:

can sometimes have conflicting interests. These dialogues can help to build a shared vision for the airport area.

5. These partnerships should ideally go beyond economic promotion and help build consensus on hard decisions with regard to planning, zoning, incentives, etc.
6. The partnerships should not be limited to marketing the airport and the airport city, but should be aimed at building an integrated vision for an extended airport area.

Development and jobs in airport areas

7. Provision of public transport links between residential and business areas in airport areas is critical part of improving the access of people living near the airport (and suffering from its nuisances) to job opportunities.
8. Schemes should be implemented to enhance the visibility of employment opportunities in the airport area and bring them closer to the communities around the airport. Such schemes require active involvement on the part of the airport operator, businesses in the area and employment agencies. The schemes should not be restricted to on-site airport jobs, but should instead adopt a wider perspective covering the broader airport area.

1. Introduction

1.1. Background of METROAirports project

METROAirports is the continuation of the project “Sustainable Airport Areas”, which was carried out from 2015 to 2017 and resulted in the publication of the document “Sustainable Airport Areas. Guidelines for Decision Makers”.

The project leader was IAU, the Paris Region Urban Planning and Development Agency, in partnership with the Paris Region Council (Conseil Régional d’Île-de-France) and the Hubstart Paris Region Alliance. More than 50 organisations, experts and representatives of airport areas from around the world participated in the three workshops held as part of the initiative. Prominent participants included the Airport Regions Conference, the Atlanta Regional Commission, GIP Emploi Roissy CDG, Paris Region Entreprises, Orly International, Aéroports de Paris, Àrea Metropolitana de Barcelona, Vantaa Aviapolis and Beijing Aerotropolis.

This project highlighted a number of experiences and best practices covering most areas of policy making and planning in airport areas, as illustrated in the figure below.



Figure 1. Identified areas for policy making and planning in airport areas
 Source: IAU ÎdF, “Sustainable Airport Areas. Guidelines for Decision Makers”. 2017

1.2. What does this project add to the previous work?

The aim of METROAirports was to build on prior experience and further elaborate on four main topics:

a. Conceptualisation of airport areas. The previous project provides various definitions of “airport areas”, although the definitions acknowledge that perimeters vary according to the approach. Additionally, other concepts such as airport city, airport corridor and airport area are sketched, although their contours are often blurred. This project aims to provide further clarity on these concepts, as the question “What is an airport area?” has implications for the planning, governance and economic policy fields.

b. Airport area planning. Planning airport areas is typically a challenge for land planning authorities, since

a substantial portion of the land is controlled by an airport company that acts as an “extraterritorial” entity. Planning authorities need to strike a balance in airport areas between development on the one hand and the protection of the environment and local communities on the other. This is especially the case now as these zones are becoming hot spots for urban development, while local communities often see the airport as a nuisance more than as an opportunity.

c. Governance of airport areas. The previous project pointed to several examples of good practices involving various stakeholders in airport areas, with a range of partners collaborating in the fields of raising awareness, economic development, international promotion, employment and environmental protection. However, in

this report we intend to go further and develop a map of the stakeholders typically present in airport areas and identify their interests, priorities and the ability/power of each to influence public decisions.

d. Fostering economic development and jobs. Quite often, airports are surrounded by economically

depressed areas and hence authorities are keen to implement schemes to bring airport-related employment opportunities closer to local communities. One obstacle to this goal is that while airports tend to have good transport links to central cities, this is less true of neighbouring towns, a reality that hinders the access of local communities to airport-related jobs.

1.3. Partners in the project

Three core partners than have been actively engaged in METROAirports project are: Barcelona Metropolitan Area (AMB), the Atlanta Regional Commission, IAU Île-de-France (Paris), and the Airport Regions Conference as an associated partner. A brief description of each is provided below.

A. Atlanta (ATL): Atlanta Regional Commission

<https://atlantaregional.org/>

The Atlanta Regional Commission is the regional planning and intergovernmental coordination agency for the 10-county Atlanta region. ARC helps the region's leadership focus attention, collaboration, and resources on critical issues affecting the area's collective future.

ARC works with local jurisdictions and various regional partners to:

- Plan new transportation and mobility options.
- Wisely manage water resources.
- Encourage the development of vibrant, liveable communities.
- Provide services for older and disabled residents.
- Help businesses recruit and retain workers and provide services for job seekers.
- Analyse data to inform leaders and decision makers.
- Cultivate regional leaders to meet the region's challenges.
- Serve as a regional convener to address complex, regional issues.
- Coordinate with local first responders in preparing for a secure region.

B. Barcelona (BCN): Àrea Metropolitana de Barcelona (AMB)

<http://www.amb.cat/en/home>

The Barcelona Metropolitan Area (AMB) is the public administration body of the metropolitan area of

Barcelona, which occupies 636 km² and is made up of 36 municipalities with more than 3.2 million inhabitants.

The metropolitan area is a territorial, social, demographic, economic and cultural reality that has taken shape over the last century, as a product of the growth and connection of urban systems around the city of Barcelona. Barcelona's airport sits in a central position within the AMB territory.

The AMB has powers in the following fields:

- Territorial: Urban planning, metropolitan infrastructures, public space. In particular, AMB is responsible for metropolitan area land use planning (PDU).
- Transport and mobility: Mobility infrastructures, public transport services, information, mobility reports.
- Environment and sustainability: Water supply and treatment, waste, education for sustainability.
- Housing: Affordable housing promotion, asset management.
- Economic development: Employment, industry, branding, economic promotion.
- Social cohesion: Programmes, support for town councils

C. Paris (CDG & ORY): Institut d'aménagement et d'urbanisme d'Île-de-France (IAU îdF)

<http://www.iau-idf.fr/en.html>

IAU (short for IAU îdF) is the Paris Region's urban planning and environmental agency. It is France's oldest and largest urban planning agency. It was created in 1961 to help the French state plan the development of the Paris Region in an era of rapid population and urban growth and of large-scale housing needs and economic development. With the decentralisation laws of the 1980s, it became an "associate body" of the Île-de-France/Paris Region. It is mostly funded by the Regional Council. Its board is chaired by the President of the Regional Council (Valérie Pécresse

since December 2015) and also includes representatives from the central and local governments, as well as other private and public partners.

One of IAU's main missions is to assist the Regional Council in preparing, implementing and monitoring the regional Master Plan, called SDRIF (see section 3.2.2 for more detail on SDRIF). More broadly, it helps the Regional Council set and implement its policies in many sectors (urban, transport, economic development, housing, environment, energy, biodiversity, agriculture, health, etc.), across the urban and rural areas of the Region's territory. It also assists other local governments in the Paris Region in the development of their own strategies.

Digital transition, climate change, urban resilience, smart mobility, innovative ecosystems, sustainable development, collaborative economy, biodiversity, urban agriculture... In a fast-changing world, IAU's 200 experts explore all dimensions of regional and metropolitan life to help local decision makers improve the quality of life and plan for the future.

D. Airport Regions Conference (ARC)

<https://airportregions.org/>

The Airport Regions Conference is an association of regional and local authorities from places across Europe with an international airport situated within or near their

territories. The ARC brings together participants with a wide range of expertise that they bring to bear on the interface of air transport and local and regional policies. A shared concern is how to balance the economic benefits generated by airports with their environmental impact.

The ARC represents:

- Regional and local authorities hosting or neighbouring an international airport.
- The democratically elected representatives of all the citizens living near airports.
- The voice of regional and local authorities in dialogue with aviation stakeholders, economic and institutional partners at the national, European and international level.

The ARC's mission is:

- To help its members by interfacing sky and earth.
- To foster knowledge building.
- To be a platform of excellence in knowledge sharing.
- To help its members anticipate aviation changes.
- To support the recognition of regional and local authorities' concerns.

The ARC's membership (30+ members) is diverse, ranging from members whose territories host the largest air hubs in Europe to members that have small but important regional airports bound for development.

1.4. List of meetings

The project partners have met physically or virtually on the occasions listed below.

- Kick-off phone meeting (Oct. 25 2017).
- Workshop and technical visit in Barcelona (Nov. 30-Dec. 1 2017).
- Workshop and technical visit in Atlanta (April 13-14, 2018).
- Workshop and technical visit in Paris (November 15-16, 2018).

The project will be wrapped up during a final workshop in Barcelona (March 28-29, 2019).

2. Conceptualising airport areas

The definition of “airport area” used in the previous Metropolis study is “the territory around the airport, and in which the economic, social, and environmental development is related to the activity of the airport”. It is acknowledged that there is no defined boundary and that the territory corresponds more to an area functioning with a particular rationale (or a territory of influence).

2.1. The concept of airport city

No indisputable definition of “airport city” exists. Nonetheless, an interesting one can be found in the publication “From Airport to Airport City”, published by the Airport Regions Conference in 2001:

“(…), the Airport City is the more or less dense cluster of operational, airport-related as well as other commercial and business activities on and around the airport platform. However, this cluster is called an Airport City only if it shows the qualitative features of a city (density, access quality and environment services).

An Airport City does not stand aloof. It is not detached from the airport’s surroundings, but is part of a broader regional strategy to take advantage of the spin-off of the airport, combining transport and land-use planning”.¹

This definition includes various interesting aspects that may help us to come closer to a definition of airport cities:

- The airport city is a dense cluster (i.e. a critical mass well beyond the few hangars and airport offices that are typically found in most airports).
- Commercial and business activities are dominant (i.e. housing and other non-commercial land uses are not typically found within airport cities).
- The airport city may provide space for operational and airport-related activities, but also other non-airport-related ones, which are in practice the most common.

Airport areas can thus cover territories of widely varying sizes and may also vary depending on the issues addressed.

For the sake of greater clarity, we would like to shed some light on the concepts “airport city” and “airport area” and provide some examples of each, so that differences can be discerned. We will also address the related concept of “airport corridor”.

- They are located on and around the airport platform (i.e. a notion of close proximity is implicit).

- Access quality (airport cities need the multimodal access nodes typically found at major airports).

Another element could be added:

- Airport cities are normally developed on airport-owned/controlled land and/or developed by an authority or entity in which the airport has an important stake.

¹ Güller & Güller Architecture Urbanism: “From Airport to Airport City”. Airport Regions Conference. 2001. (Underlining added by authors).

Examples

Manchester Airport City

The Manchester Airport city project consists of three zones: North, close to the passenger terminal, occupied mainly by office buildings and hotels, and South, close to the air freight centre, devoted more to logistics. Most land (although not 100 %) is airport-owned, and development is carried out under a joint venture where the airport group owns a 50 % stake.



Figure 2. Illustration of MAN airport city areas
 Source: MAG and own elaboration

Frankfurt Airport City

Fraport, the company that owns and operates the airport, is busy developing a series of business/ logistics and airfreight sites such as central airport city (offices, hotels, commercial), Gateway Gardens (offices and hotels), Cargo City North and South (airfreight) and Mönchhof (logistics), with a combined gross surface of 350 ha.



Figure 3. FRA Central airport city and Mönchhof logistics park
 Source: Fraport

2.2 The concept of the airport area

The second paragraph in Güller’s definition above points to a broader territorial scale within which the airport and the airport city are inscribed, one that could well be called the “airport area”. Sometimes this area is referred to as an “Aerotropolis”, following John D. Kasarda’s notion.

Thus, the airport area includes a second ring beyond the airport city, i.e. an area strongly and directly influenced by the airport but not fully controlled by the airport company. As mentioned above, the boundaries may be undefined or vague, and they may vary according to the approach taken or to the issues being addressed.

Example: Amsterdam Airport City and Airport Area

Airport City

The figure below shows business, industrial and logistics parks located on and around the Amsterdam Schiphol Airport platform (i.e. adjacent or within the airside) and controlled directly by the airport operator. The total gross surface is over 650 ha. This could be defined as Schiphol’s Airport City.



Figure 4. Business and industrial areas around Amsterdam Airport Schiphol
 Source: Google maps and own elaboration. Surfaces are estimations

Airport Area

Although the airport area is not precisely defined, various public and private bodies have partnered to form Amsterdam Airport Area (AAA) to promote and attract business to a broad area that includes the city of Amsterdam as well as the airport and other municipalities, some even found outside the province of Noord Holland where the airport and the capital city are located.

Meanwhile, the Schiphol Area Development Company (SADC), a joint venture between the airport and the local governments of Amsterdam, Haarlemmermeer (the town that hosts the airport) and the Province of Noord Holland is devoted to the promotion of various business, industrial and logistics parks located within the airport area. SADC projects are the red spots (the circle around Aalsmeer is just one of them). The aggregate surface is about 580 ha.



Figure 5. Map of SADC projects as in Jan 2018
 Source: <https://www.sadc.nl/en/>

The geographical locations of SADC projects lie beyond the limits of the airport city but fall within the wider Amsterdam Airport Area.



Figure 6. Airport City and range SADC project locations within Amsterdam Airport Area
 Sources: <https://www.sadc.nl/en/about-sadc/partner-projects/amsterdam-airport-area-aaa/> and the authors

2.3. The concept of airport corridor

An airport corridor is usually characterised by a concentration of urban developments clustered along the main thoroughway linking the airport and the central city. Typical features of these developments are hotels, exhibition and convention centres, business parks hosting company headquarters, shopping malls and sports stadiums.

Airport corridors and airport areas do not need to be equivalent concepts. Airport corridors may stretch beyond the airport area and reach into the central city's urban fabric.

These three concepts, airport city, airport area and airport corridor, are illustrated in the figure below.

Examples: Brussels and Paris

Brussels

A business corridor has grown along the M22/ Boulevard Leopold III, hosting a number of hotels and European business headquarters, as well as NATO headquarters. This corridor stretches across the border of the Brussels capital region into Flanders, where the airport is located



Figure 7. Brussels airport corridor
Sources: Google Maps and the authors

Paris

The corridor includes major economic and business parks as well as exhibition centres (Villepinte), shopping centres (Aéroville) and sports venues (Stade de France).

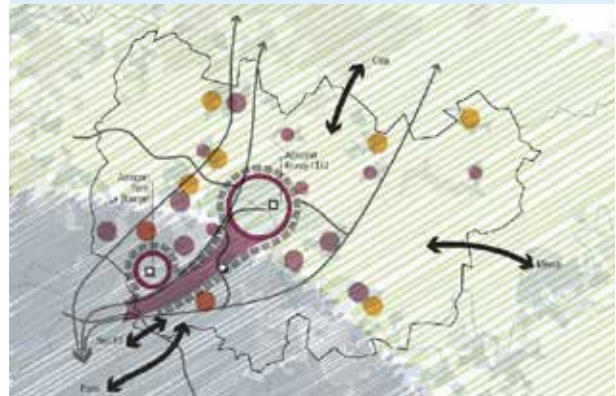


Figure 8. CDG airport corridor
Source: IAU

THE AIRPORT AREA, A KEY DRIVER OF THE REGIONAL ECONOMIC DEVELOPMENT

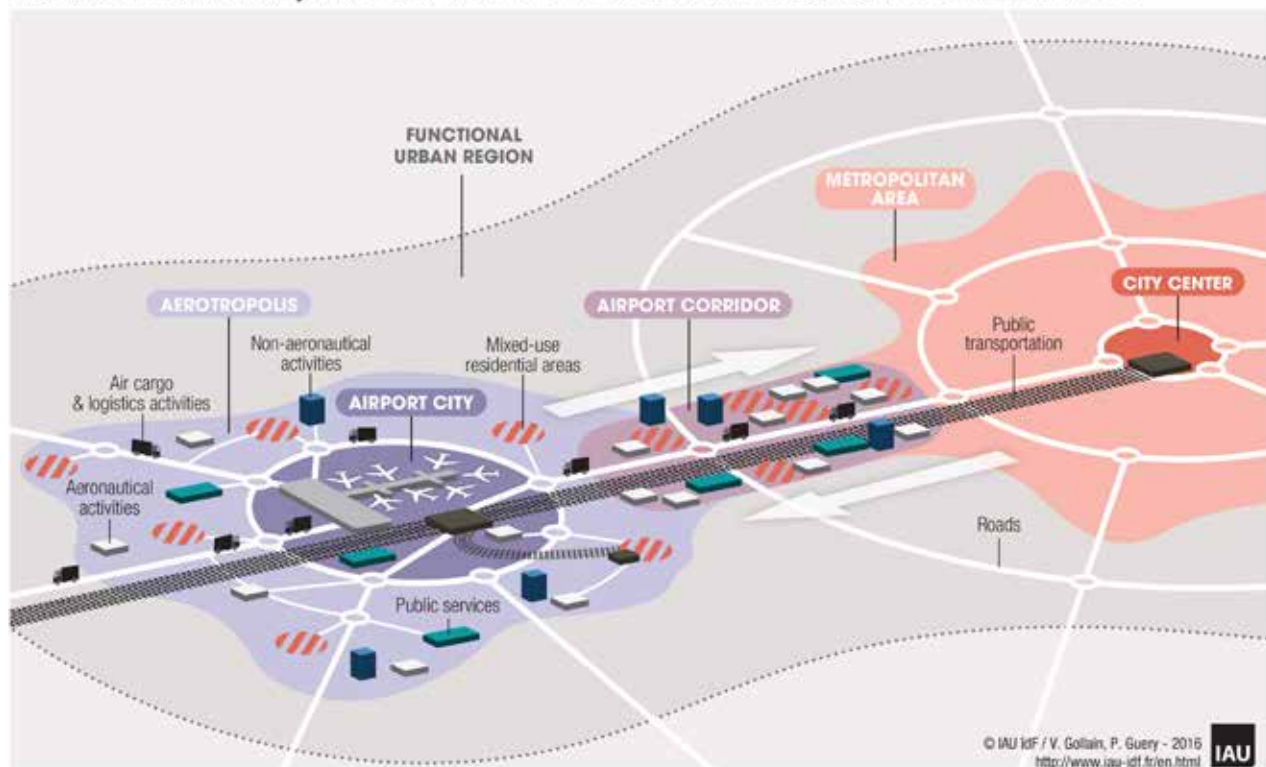


Figure 9. Conceptual illustration of airport city, airport area and airport corridor. Source: IAU

3. Airport area case studies

3.1. Atlanta

3.1.1. Description of the airport area

Hartsfield Jackson Atlanta International Airport is located south of the city of Atlanta, in Fulton and Clayton Counties, as well as within the cities of College Park and Hapeville. It is located at the headwaters of the Flint River, one of the most impacted waterways in the state of Georgia. Expansion of the airport is limited by several factors, including the location of interstate highways immediately to the east, west and south of the airport; the location of multiple jurisdictions around the airport; and the existing development around the airport. These jurisdictions and the existing development, as well as the development market, are all affected by the presence of the airport. This is due to the flight paths, noise impacts and land use restrictions.

During the Aerotropolis Atlanta Blueprint study, an area was designated as the “Aerotropolis market”. This area is roughly delineated by a 20-minute, peak hour “drive-shed”. There is no formality to this boundary, and it has thus far been used only as a starting point to define the area. Jurisdictions within this 20-minute “drive shed” were included in the Aerotropolis Blueprint and were invited to join the Aerotropolis Atlanta Board at its inception.

Land access and mobility

ATL is well connected to the City of Atlanta and the entire region via interstate highways, state highways and local roads. The airport has a direct public transportation link to the city of Atlanta and a few other areas within the core of the region, but is limited in transit access to the rest of the region.

Economic Activity Areas

The area around ATL has generally lagged behind the rest of the region in terms of economic activity. The area’s median income, home value, educational attainment level and other economic indicators all demonstrate this fact. ATL area employment is dominated by jobs in the

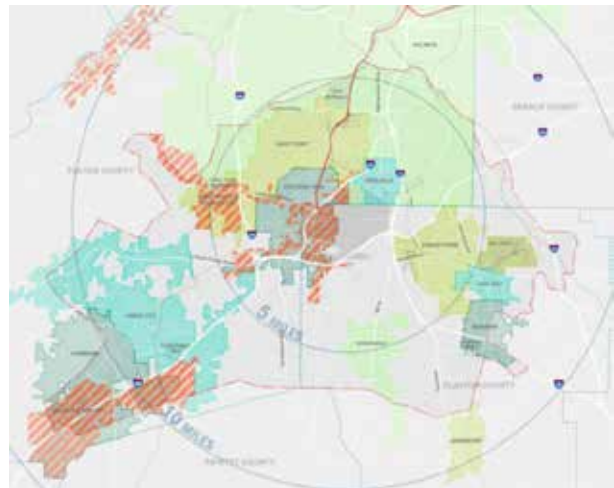


Figure 10. Aerotropolis Atlanta Blueprint study area
Source: Atlanta Regional Commission

transportation and warehouse industries. This includes airlines, trucking companies, warehouse and distribution facilities, etc. Currently, the development around the airport is comprised of single-family homes, commercial development and warehouse facilities. Recently, several new office and hotel projects have opened in the area, and there has also been a recent influx of film and television studios. Mixed-use developments have been proposed as well.

The Aerotropolis Atlanta Blueprint identified several “catalytic sites” around the airport. These sites are large undeveloped or underdeveloped properties that have the potential to attract large-scale, high-profile investment. The Alliance and partners should focus their joint efforts on these areas where possible.

The following existing and planned developments are found within the catalytic sites.

- Porsche Cars North America Headquarters and Experience Center
In 2015 Porsche Cars North America opened a new headquarters and experience centre. This facility is located just north of the airport within the City of

Hapeville and the Corporate Crescent. The headquarters and experience centre are 250,000 square feet (23,000 sqm), including office space, a restaurant, a coffee shop, meeting space, museum space, training space and customer experience space. The headquarters hosts approximately 500 employees and the experience centre has welcomed 150,000 visitors since it opened in 2015.

- College Park Airport City

Located within the “airport city” catalytic site, Airport City College Park represents one of the largest development opportunities within the Aerotropolis. This 320-acre (129.5 ha) site is slated to include between 2.5 and 7.5 million square feet (0.2-0.7 million sqm) dedicated to office, retail, hotel and residential uses. The total cost of the project is estimated to be between \$1.5 billion and \$3 billion. The site is currently owned by the City of College Park and is located west of Downtown College Park, the College Park MARTA station and the airport. It is located north of the Gateway Center development, which includes offices, hotels and the Georgia International Conference Center.

- ATL Airport City

The proposed ATL Airport City is located immediately adjacent to the domestic terminal of the airport. The proposed \$250 million project will include a 440 room

Intercontinental Hotel, as well as 60,000 square feet (5,600 sqm) of office, restaurant and retail space.

- Fort McPherson

The redevelopment of Fort McPherson is an interesting case study in large-scale, urban redevelopment of an underserved area. The current master plan proposal includes: 441,900 square feet (41,000 sqm) of existing buildings of various uses; 127,700 square feet (12,000 sqm) of civic space; 150,500 square feet (14,000 sqm) of retail; a 36,300 square-foot (3,400 sqm) grocery store; 35,400 square feet (3,300 sqm) of restaurant space; 130,200 square feet (12,000 sqm) of office space, one hotel with 98 Rooms; 2,482 apartments; 114 attached townhomes; 24 duplexes; and 21 detached single-family homes.

- Film and Television Studios

Due to recent tax incentives offered by the state of Georgia, the state has become a key market in the film and television industry, with Atlanta serving as the main focal point of the industry in the state. As a result, several film and television studios have opened in the Metro Atlanta area, primarily on the south side of the region. Within and just outside the Aerotropolis area, there are four major film studios: Blackhall Studios, Metro South Studios, Pinewood Studios and Screen Gems. In addition to the film studios, a large mixed-use development is under construction across the street from Pinewood Studios. The hotel, retail and office space being built, as well as some of residential space, are expected to support the operations of the film studio across the street.



Figure 11. Porsche Experience Center
Source: Ignasi Ragàs



Figure 12. ATL Airport City
Source: Ignasi Ragàs

3.1.2. Land planning and governance

The Aerotropolis Atlanta area is one of the most complex planning challenges in the Atlanta Region. Included in the area are the interests of seven local jurisdictions, the Georgia Department of Transportation, the Federal Aviation Administration and the Army Corps of Engineers (waterways). Prior to the creation of the Aerotropolis Atlanta Blueprint, there was no overall vision for the area. Each jurisdiction and state or federal organisation had its own goals and priorities for the area and its own independently active authorities. In the State of Georgia, each local government is required to submit a comprehensive plan every five years (historically the requirement had been every 10 years). Additionally, each county creates a Comprehensive Transportation Plan, and each city is empowered to create a transportation plan as well. While it was encouraged, there was no requirement that these plans work together coherently or that they form part of any existing regional plan.

While the Aerotropolis Atlanta initiative does not require local governments to work toward interjurisdictional consistency, it does encourage coordination. Additionally, the Atlanta Regional Commission has several programmes that support coordination among neighbouring jurisdictions, where appropriate. The Liveable Centers Initiative (LCI) is one such program, and the AeroATL Greenway study is another example of excellent coordination. In the latter case, of the core jurisdictions within the Aerotropolis area contributed financially to an application for study funds. This aim of the study was to consider possible regional and local bicycle and pedestrian connections within the Aerotropolis area. The end result is a plan that sets priorities for each jurisdiction, but overall has helped to create a larger interjurisdictional bicycle and pedestrian system.

3.1.3. Economic development and jobs

The airport area’s population is slightly younger than that of Georgia or the United States as a whole, with over half of residents below the age of 35. However, this area is troubled by multiple socio-economic issues and lags behind the city and the state of Georgia in some aspects. For example, the unemployment rate in Atlanta’s airport area is 81 % higher than the national average and 43 % higher than the city average. Unemployment in the area is also more than 50 % higher than the average rate found in other US airport areas. Meanwhile, Atlanta’s airport area residents are nearly twice as likely as the national average to be living below the poverty line, with one in five households earning under \$15,000 per year. Additionally, the figure for the percentage of impoverished families in the Atlanta airport area is nearly 50 % higher than the data for other airport areas.

Of about 180,000 people employed in the area, 85 % commute to and from the area, while only 15 % of those employed are area residents. Interestingly, 73 % of the area residents who are employed commute to jobs outside the area. These data show that there is a great opportunity to improve the links between job opportunities in the airport area and its residents.

Three initiatives have been launched to deal with these issues:

1. Aerotropolis Atlanta Alliance

The Aerotropolis Atlanta Alliance (the Alliance) and the Aerotropolis Atlanta Community Improvement Districts (see below) act as the primary “champions”

for the airport area, in partnership with the local governments. The Alliance is a non-profit focused on economic development, marketing and branding, and intergovernmental coordination. The Alliance does not have any direct authority over land use, transportation or development of land. The board and the general membership of the Alliance are comprised of representatives of public and private organisations. Several other public and private entities played key roles in the formation of the Aerotropolis Atlanta initiative. The Atlanta Regional Commission (ARC) has acted as founding partner and has provided staffing as well as administrative and financial support. In addition, the ARC has provided study funds for the Aerotropolis Atlanta Blueprint, the AeroATL Greenway study and several other sub-area plans. Georgia Power, Porsche Cars North America, Delta and Woodward Academy, among other private organisations, have provided key leadership from the first days of Aerotropolis Atlanta.

2 Aerotropolis Community Improvement Districts (CIDs)

CIDs are created by state law and local enabling legislation. CIDs do not have any direct authority over land use, transportation or the development of land. They operate as “special tax districts”, that invest additional public funding. CIDs are formed and led by the private sector, with public sector organisations represented on the board. The local municipalities and counties around the airport are the primary partners within the Alliance and the CIDs. The local governments have direct authority over land use, transportation and development within their jurisdictions. The CIDs focus primarily on infrastructure, planning, public safety and beautification.



Figure 13. Existing CID’s in Metro Atlanta
Source: ARC

3. Aerotropolis Workforce Collective

The Aerotropolis Workforce Collective (later Workforce Aerotropolis) was formed in 2016 with a mission to develop and implement workforce solutions that unite Aerotropolis businesses with prospective employees, in order to increase economic growth and prosperity in the region. The objectives of the Workforce Collective are:

- To organise employers to co-design training and recruitment programs and to fill job vacancies.
- To deliver consistently coordinated services and to implement streamlined services to meet employers' current and future workforce needs.

- To develop a competitive, productive talent pipeline to support continued business growth.
- To develop partnerships and infrastructure to ensure programs are sustainable and provide equitable access across Aerotropolis footprint.

Workforce Aerotropolis's, initial focus was on construction and hospitality, but it will soon expand to five other key industry clusters.

3.2. Barcelona

3.2.1. Description of the airport area

Barcelona airport is mostly within the borders of the municipality of El Prat de Llobregat. The airport occupies the right bank of the Llobregat River delta, and thus it is partially surrounded by protected wetlands and coastal areas, placing constraints on any further expansion. While most of the airport site of about 15.33 sqkm lies within the municipality of El Prat de Llobregat, minor parts lie can also be found within the municipalities of Sant Boi de Llobregat and Viladecans, while Gavà hosts the ATC centre, and part of its built-up area lies below flightpaths. For its part, Barcelona's areas close to the airport and affected by flightpaths are mostly industrial or port zones.

There is as yet no formally defined perimeter of what should be considered the area of influence of the airport, nor is there any stable cooperation or partnership between municipalities and other stakeholders involved in the airport areas. However, we will consider for the sake of this study that the airport area includes the municipalities of El Prat, Sant Boi, Viladecans and Gavà, plus part of some industrial and mostly non-residential areas in Barcelona, L'Hospitalet and Castelldefels.

Land access and mobility

Barcelona's airport is well-connected by road with the city of Barcelona and with the metropolitan area, although some congestion does happen, especially on the C31 motorway and the coastal ring road. The airport is also well-served by public transport links to Barcelona and to El Prat. However other destinations in the airport area suffer from poor services.



Figure. 14 Location of the airport and protected areas
Source: AMB

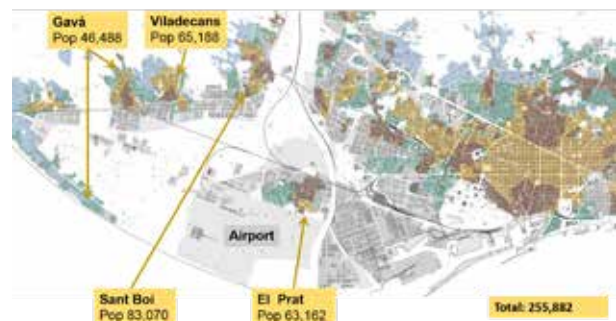


Figure 15. Main residential areas affected by the airport
Source: AMB



Figure 16. Road access to the airport
Source: Barcelona Regional authorities



Figure 17. Existing rail and Metro access to the airport (*)
(* New rail link to T1 under construction)
Source: AMB, based on data from RENFE, FGC, TRAM and TMB.

Of the people travelling to the airport for any purpose, 75 % use private cars. However, these data were collected prior to the opening of the new metro line linking the two terminals.

Economic activity areas

Barcelona airport is surrounded by various industrial and business parks with a total surface area of 880 ha, most of it fully developed and occupied. As the airport is in a central location within Barcelona’s metropolitan area and very close to the port, the airport area is experiencing a strong demand for logistics warehouses.

In addition, the airport operator (AENA) planned an Airport City in the early 2000s, with a total surface area of 261 ha of airport-owned land. This airport city has seen only very limited progress since then for a variety of reasons, not least because the new main terminal T1 was built far from the projected airport city land. Thus, although most urban infrastructure has been put in place, just a few mostly logistics companies, mostly from the logistics sector, have set up shop within the Airport City.

Elsewhere, the Mas Blau business and industrial park (110 ha), located just outside the airport property, has been in successful attracting “airport city” activities such as airline headquarters (Vueling), aviation-related companies, freight and logistics hubs (Amazon), and hotels. Currently, there are about 250,000 sqm of developed hotel and office space in Mas Blau, while about 736,000 sqm planned for the airport city remain undeveloped so far.

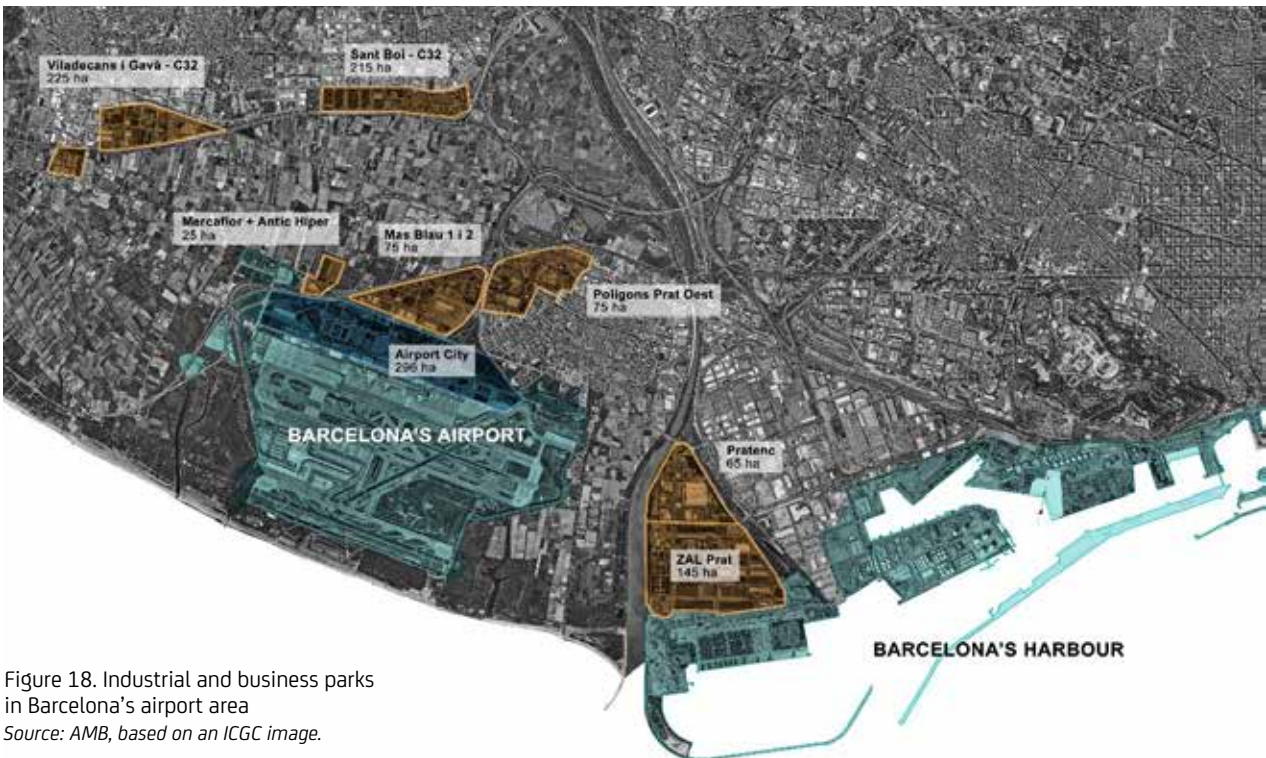


Figure 18. Industrial and business parks in Barcelona’s airport area
Source: AMB, based on an ICGC image.

Additionally, other economic activity developments are planned around the airport, which together would add a further 635,000 sqm, mostly for office space and commercial activities.

There are nine hotels in the airport area, with an estimated 1,000 rooms. Many other hotels can be found along Gran Via in L'Hospitalet, close to the Fira Exhibition Centre and on the way from Barcelona to the airport.

The airport area hosts five shopping malls and hypermarkets, with a combined floor space of 156,700 sqm. This is in addition to the 32,500 sqm of retail and food service space within the airport's terminals. Another 50,000 sqm of retail space is planned in the airport city.

3.2.2. Land planning issues

The airport area and existing planning regulations

The airport is located in an area where a number of urban/land planning regulations sometimes overlap, and where stakeholders with diverse interests collide. On the one hand, the area is next to the port and a large industrial zone (Zona Franca) that has a number of road and rail infrastructures and transport flows associated with it. On the other hand, the airport is located on the Llobregat River delta, an area containing wetlands, a high degree of biodiversity, and a significant portion of land devoted to agricultural activities. Moreover, the territory spans five municipalities, with the closest urbanised zones to the airport belonging to the city of El Prat de Llobregat.

The main urban planning regimes in force in the metropolitan area are: the *Pla General Metropolità* (PGM), which was approved in 1976 and defined the land uses for the metropolitan area, and the *Pla Territorial de la Regió Metropolitana de Barcelona* (PTMB), passed in 2010 and aimed at regulating urban growth on a broader territorial scale (governing a region larger than the metropolitan area). Additionally, there are other regulations, including conservation plans for nature preserves (PEIN and Xarxa Natura 2000), wildlife reserves for birds (ZEPA), the coastal protection plan (PDUISC), and the agricultural land plan for the delta area (Pla Especial del Parc Agrari). Finally, a number of strategic plans have been implemented to foster economic activities, and a range of infrastructural projects undertaken (e.g. Pla Delta, Estratègia Delta) with specific planning implications that can affect land use.

Over the past two decades, the area has been greatly influenced by two major expansions. First, the Port of

Barcelona occupied the river mouth (in a project that diverted the actual river's course towards the south) with new container and logistics terminals. Second, the airport built a third runway and a new terminal (Terminal 1). The airport expansion also brought with it new key transport infrastructure investments, such as the new underground line (L9) and the new rail station, still under construction at the time of writing. (See figures 18 and 19).

Planning overview and lessons learnt

Over the past 60 years, the amount of land in the Metropolitan Area of Barcelona devoted to agricultural use has shrunk by 80 %. This former farmland, most of it in the alluvial plain, has been occupied by infrastructures and industrial areas, despite its high ecological value (fertility, aquifers, biodiversity, etc.).

Gradually, the construction of new infrastructure (especially highways) created pieces of land that municipalities redeveloped into warehousing and industrial areas in search of economic benefits. Unfortunately, this process did not take into consideration the area as a whole and its characteristics, instead striving only for increased activity. There was little concern in zoning decisions for the type of activity or the relationship with surrounding spaces. The result is what we have today: a zone with high concentration of heterogeneous economic activities planned without an overarching structure or purpose.

The Delta Plan in 1994 represented an effort to address the main infrastructural needs of the Llobregat Delta and to reclaim land for economic activities. To these ends, the Llobregat River's mouth was moved to the south, allowing for the expansion of the port area (new docks, a new breakwater and a freight village). The plan also defined the airport area and its expansion in the form of a new terminal and a new runway. Although there were some criticisms levelled at the project to move the river's mouth, it allowed the area to gain a sewage water treatment plant and a water desalination plant. The river engineering project was also accompanied by several environmental compensation measures that resulted in the creation of new wetlands. The plan also defined the region's agricultural areas, which helped to ensure their preservation. The Delta Plan was the fruit of an agreement between several municipalities, as well as the regional and national governments.

In the last few years, during the economic recession, there was an intense debate as to whether to build *Eurovegas*: a large leisure and gambling resort. In the end, the project did not move forward. After that, a special plan to protect

the agricultural land was put into place (Pla Especial del Parc Agrari), along with a strategic urban plan aimed at promoting economic activities in several sectors within the delta area (PDU Delta). Finally, very recently, the three municipalities sharing the Zona Franca (Barcelona, El Prat de Llobregat, L'Hospitalet de Llobregat) defined the Delta Strategy, a set of measures and projects intended to improve the whole area.

In short, the Zona Franca and the delta area have been greatly influenced and shaped by different land uses and infrastructures, operating under a range of separate rationales and lacking a clear and comprehensive vision of the region as a whole. In recent years, though, cooperation between municipalities and government bodies has brought a clearer structure and led to a series of actions that have improved the area.



Fig 19. The Llobregat delta area and the airport in 1992
Source: AMB

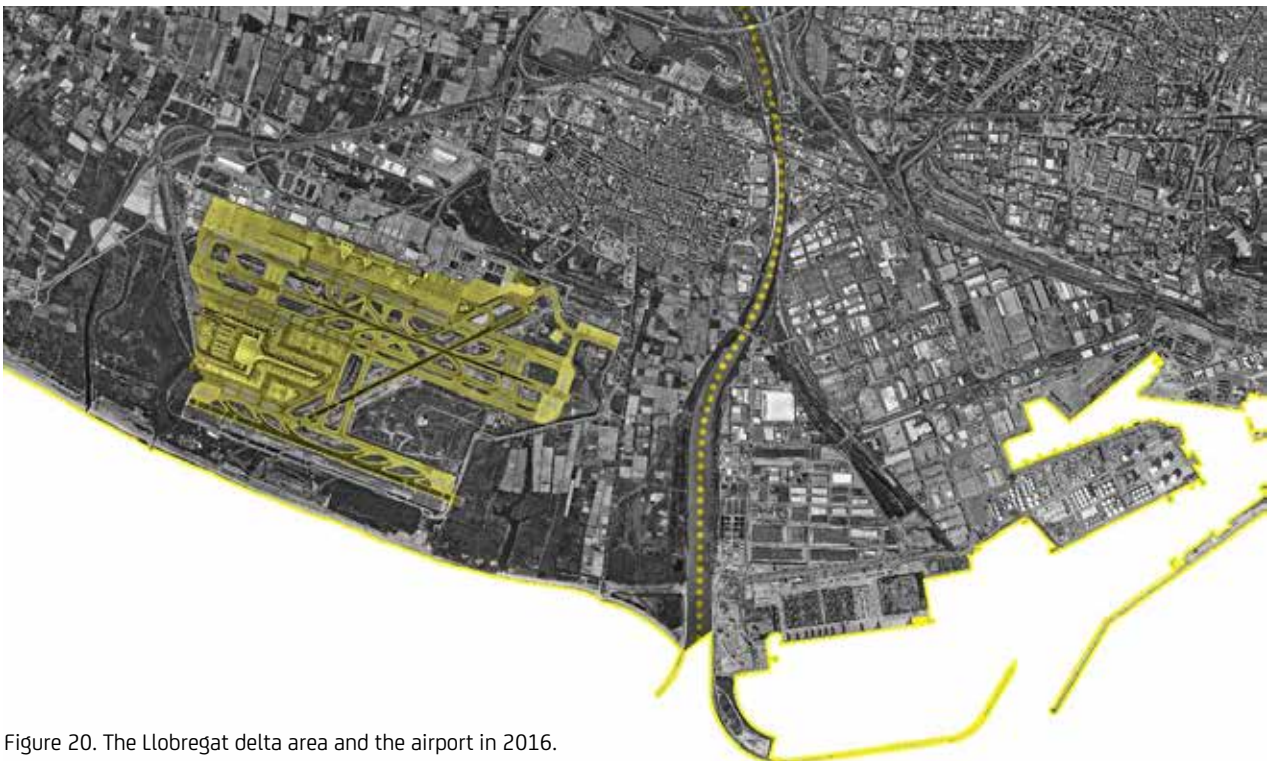


Figure 20. The Llobregat delta area and the airport in 2016.
Source: AMB, based on an ICGC image.

Barcelona's new Urban Master Plan (PDU)

In this context, the AMB is drafting a new urban master plan. The Metropolitan Urban Master Plan (PDU) covers the whole metropolitan area and the 36 municipalities that compose it. This plan is particularly focused on the airport's area of influence and the open spaces of the delta, as well as the area's different urban fabrics and infrastructures. The new plan will attempt to produce more comprehensive regulations for the future of land use in the area. In other words, the PDU wants to define the overarching future vision for the area as a whole that has until now been lacking.

As regards the airport and the surrounding areas more specifically, the aim of the PDU is to improve physical integration and promote sustainable urban growth that is respectful of the area's natural and agroforestry spaces. The main objectives are the following:

1. Synergies and conservation of natural and agroforestry spaces

The rich ecosystems of the Llobregat Delta need to be preserved, as do the agricultural activities of the area. These are special traits of the Delta territory and key assets of the metropolitan area of Barcelona. As such, the

economic activities carried out in this area not only need to ensure this conservation, but can be designed so as to benefit from and seek out synergies with conservation measures.

2. City-building

Instead of sealed off areas devoted to specific activities (e.g. logistics areas, technological parks, etc.), the plan will seek to create an urban fabric that integrates the airport facility with the nearby cities. Evidently, these fabrics will play a key role in economic activities related to the airport, but they will also have their own urban and mixed land uses such as residential or leisure activities.

3. Physical integration: Street networks and infrastructure

The PDU calls for the creation a street network to structure the metropolitan area and to promote more sustainable mobility and better integrated urban fabrics. This plan is based on a network of "Metropolitan Avenues and Streets", aimed at reducing the space allotted to private motorised mobility and increasing public transport and active mobility. These streets will form the backbone of any new developments in the airport area. Of course, that also means moving toward improved integration of existing and future segregated infrastructures.

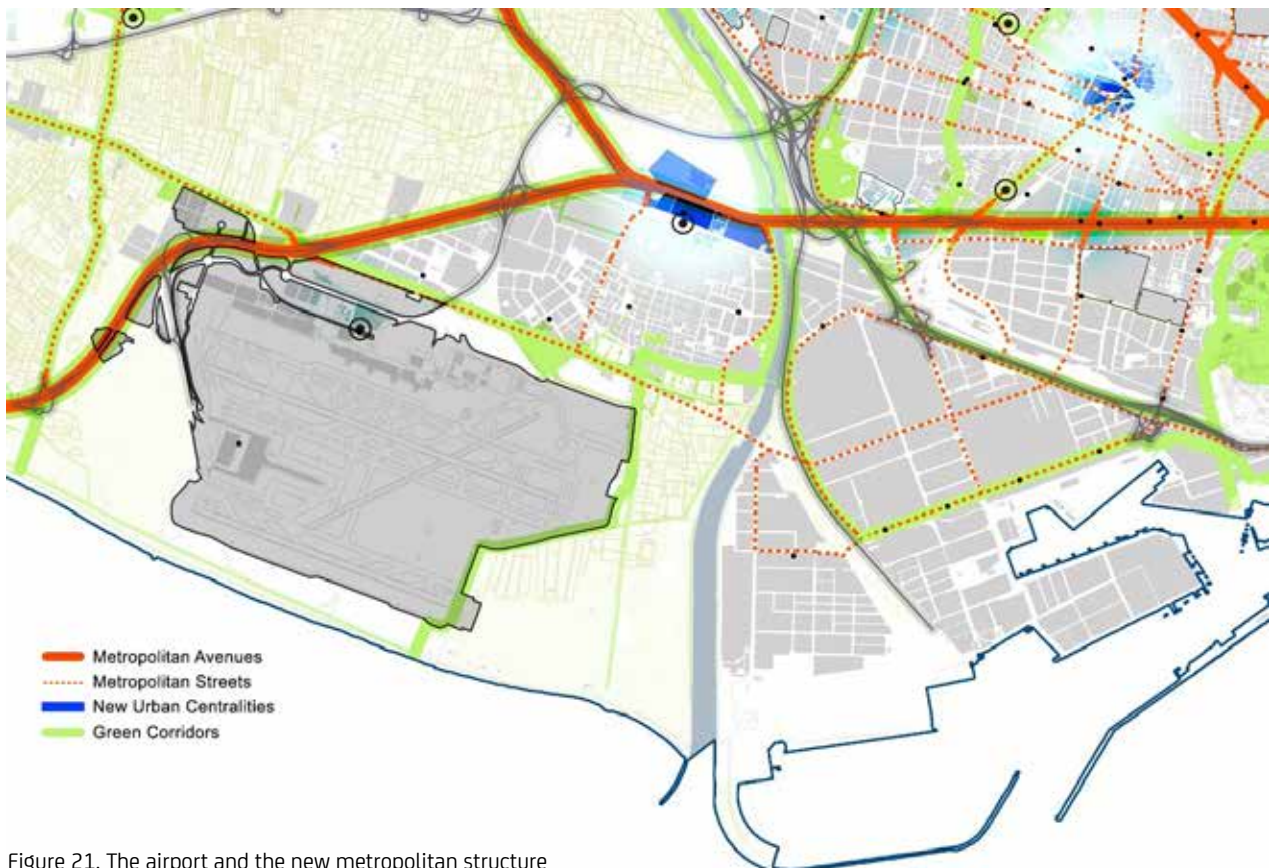


Figure 21. The airport and the new metropolitan structure according to the PDU.

Source: AMB

3.2.3. Governance

The airport of Barcelona is managed by AENA, a company that operates most of the civil aviation airports in Spain. The Spanish government owns a 51 % stake in AENA, while the rest is private. AENA is characterised by two special features:

1. Since it operates a network of 46 airports wherein a few profitable airports cross-subsidise a larger network of non-profitable ones, the decision-making power of any given airport is limited, with most decisions made at the group level.
2. Until it was partially privatised in 2015, AENA was characterised by a technical/bureaucratic management style with a limited commercial vision. As an example, in 2016 real estate revenue represented just 1.6 % of AENA's business, compared with 19 % for Frankfurt or 14.35 % for Amsterdam.

AENA owns 261 ha of commercial property in the “airport area”, land that gained zoning approval in 1999 for logistics, industry, commercial and business activities. However, the two factors mentioned above, along with the effects of the economic crisis that began in 2008, explain why to date there have been very limited developments in these territories.

Currently, there is a formal committee, the **Comité de Coordinación Aeroportuaria**, whose members include representatives of the airport, local authorities and economic stakeholders. However, this committee has proved to be mostly ineffectual, since it has seldom met and has not served as a forum for negotiations.

In addition, there is an **Air Route Development Committee** made up of members of AENA's marketing team and representatives of the Barcelona and Catalonia tourism boards, as well as the Chamber of Commerce and local government. This committee focuses on attracting and promoting new air services.

Apart from these committees, there is no formal body that brings together the visions of the airport authorities and the visions of local communities to collaborate on the development of the airport or on other planning and economic development issues.

3.2.4. Economic development and jobs

In the four municipalities that make up the core of the airport area, the total number of jobs is 103,000, while it has been calculated that about 18,000 people are directly employed at the airport, in other words accounting for 17.5 % of the total jobs in the airport area.

Of the airport's workers, 40 % commute from Barcelona, 37.5 % come from the four municipalities in the core airport area, 16.5 % from other neighbouring municipalities and the rest from other places.

Although they host some socially depressed neighbourhoods, taken as a whole the municipalities forming the airport area do not have average incomes significantly different from the overall average in the metropolitan area (median family income in the airport area is Euro 14,900, which is 92 % of the median for Barcelona's metropolitan area).

Some challenges to the promotion of airport employment have been identified:

- The available data on airport-related employment opportunities tend to be insufficient and obsolete, hampering the implementation of meaningful policies in this field.
- There is no sufficiently visible communication channel to publicise the airport-related labour market within the airport area. This makes it difficult for residents of the airport area to take advantage of airport-related job opportunities.
- Companies surveyed by the Barcelona Chamber of Commerce suggest that priorities should be:
 - Improvements in public transportation.
 - Creation of an airport-related jobs exchange.
 - More professional training in airport-related fields.

The city of el Prat, where most of the airport's land is located, has been active in promoting vocational training in aeronautical mechanics. Also, the Universitat Politècnica de Catalunya · BarcelonaTech (UPC) offers graduate and postgraduate programmes in aeronautical engineering at its campus in Castelldefels, close to the airport. However, these initiatives do not form part of a comprehensive strategy to coordinate the professional training on offer to meet airport area companies' demands for skilled workers.

3.3. Paris

3.3.1. Description of the airport areas

There are three international airports in the Paris Region.

Paris Charles de Gaulle Airport (also known as Roissy Airport) is located about 25 km north-east of central Paris. Paris CDG is the largest of the three airports in terms of surface area (32.4 km²), passenger traffic (72 million in 2018), cargo traffic (2.2 million tons in 2017), and of number of jobs (about 90,000). It is Europe's second busiest airport in terms of both passenger traffic (after London Heathrow) and of cargo traffic (after Frankfurt Airport). It serves as the global hub for Air France. It has four runways and three terminals. A new Terminal 4 is expected to be built by 2028, with the capacity to serve 30-40 million passengers a year.

Paris Orly Airport is located about 10 km south of central Paris. It is France's second busiest airport and Europe's 12th busiest airport (33 million passengers in

2018). It specializes in point to point traffic to domestic destinations, Europe, North Africa and overseas. It has two runways and two terminals.

Paris-Le Bourget Airport is the smallest of the three in surface area, traffic and jobs. It is mostly dedicated to business aviation and air shows, most notably the Paris Air Show. It is Europe's busiest business airport. It is 11 km north-east of central Paris, halfway between Paris and CDG airport.

All three airports are operated by Groupe ADP through its passenger brand "Paris Aéroport". As of March 2019, Group ADP was still a public limited company, with the French state its majority shareholder (50.6 %). Other shareholders include Schiphol Group (8 %), the major infrastructure company Vinci (8 %), and institutional investors (22 %). However, the French government wishes to privatize ADP, and a government-promoted bill that would allow for partial or total privatisation of ADP by 2020 is currently being debated in the French Parliament.

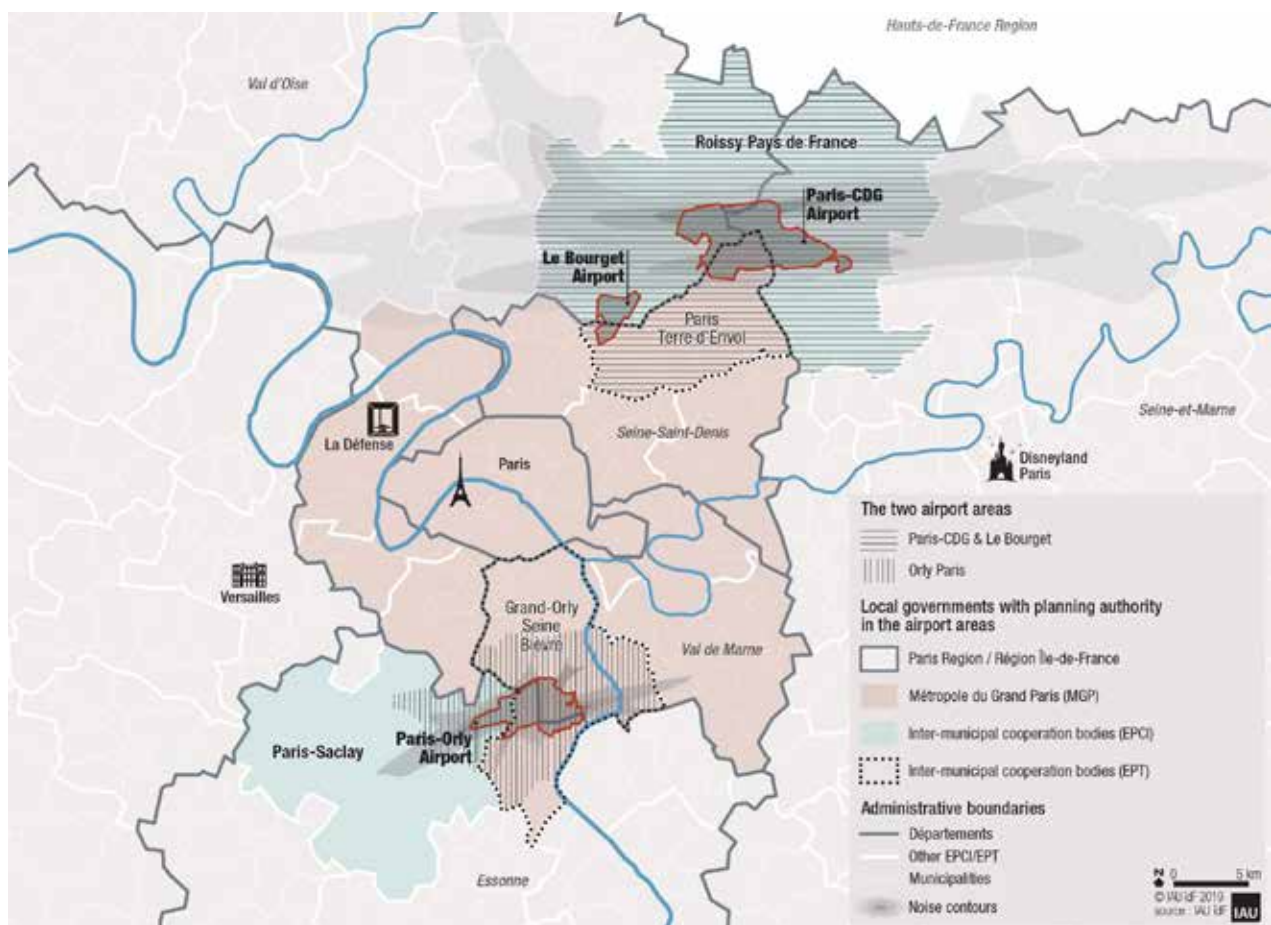


Figure 22: The two airport areas in the Paris Region
Source: IAU

These three airports have given shape to two airport areas:

Paris-CDG & Le Bourget airport area, around both the Paris-CDG airport and Le Bourget airport, is located north-east of the City of Paris. This airport area is also referred to as “Grand Roissy – Le Bourget” in French. Roissy is one of the six municipalities which host parts of the Paris-CDG airport.

Orly Paris® airport area, around the Paris-Orly airport, is located south of the City of Paris. Orly is one of the seven municipalities in which the Paris-Orly airport is located.

As detailed below, several collective initiatives have combined to advance the agenda of airport-centred governance arrangements and planning efforts in the Paris Region over the last 20-25 years. The most successful of these initiatives in promoting the concept of airport area and in defining the geographical perimeters of both Paris airport areas, are three PPPs which were created between 1998 and 2009 by ADP, the central government, the regional government, local governments, and other public

and private partners. These partnerships are devoted to employment, training, and marketing/branding:

- Orly International (2006) for The Orly Paris® airport area,
- GIP Emploi Roissy CDG (1998) and Hubstart Paris Region Alliance (2009) for the Paris-CDG & Le Bourget airport area.

The Orly Paris® airport area

The Orly Paris® airport area covers 105 km² (an area equivalent to the city of Paris). The contiguous area spans two different *départements* (Val-de-Marne & Essonne) and 19 municipalities totalling more than 400,000 inhabitants and 190,000 jobs.

Orly Paris® is the territorial brand that was created by Orly International (OI) to promote and market the Paris-Orly airport area as an international destination. It is also the core area in which OI carries out its activities with all its local partners. From 2009 to 2017, the region

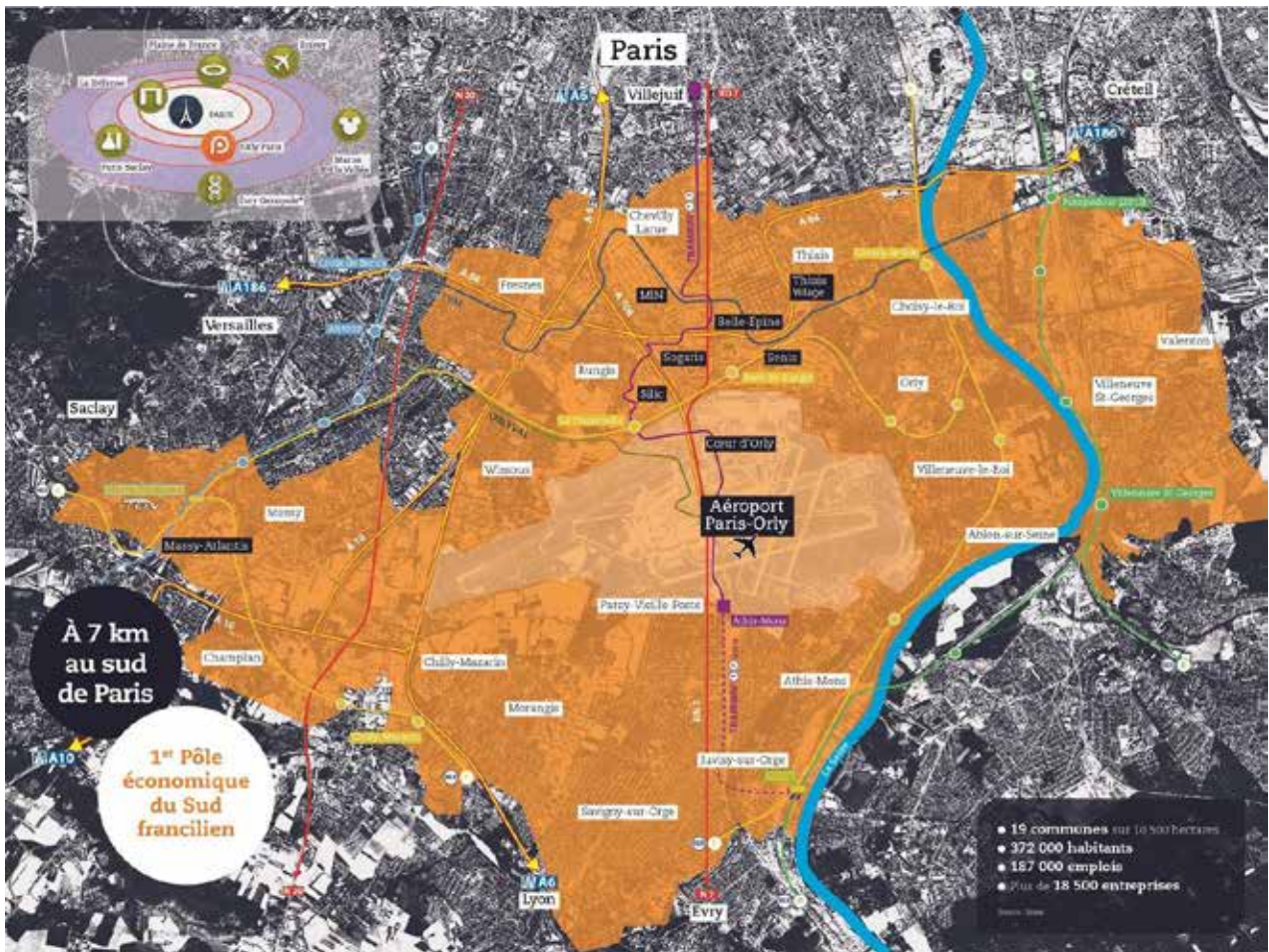


Figure 23. The Orly Paris® airport area
Source: Orly International

entrusted OI with the mission of implementing the *Pacte Orly Paris@* policy. Starting in 2008, the *Pacte* became the Region's main tool to localise the implementation of its regional strategy for economic development and employment, in partnership with local public and private actors. More than a dozen of these agreements between the region and local partners were signed all across the regional space, and *Pacte Orly Paris@* was one of them.

However, with the arrival of a new Regional Council following regional elections in December 2015, the *Pacte* policy was replaced by a new "employment area" policy: the regional and central governments have come together to create 25 employment areas called *bassins d'emploi* all across the regional space, with the goal of fostering the localised implementation of the new regional strategy for economic development, employment and innovation in the Paris

Region. For political and administrative reasons linked to the concomitant creation of the Métropole du Grand Paris (MGP) in 2016, the Orly Paris@ airport area is now divided into two *bassins d'emploi*, each of which corresponds to one of two new inter-municipal bodies: 15 municipalities make up Grand Orly Seine Bièvre (which is a subdivision of the MGP), while four municipalities make up Paris-Saclay (which is outside the MGP) (see Figure 21). This means that even though Orly International is still active, the Orly Paris@ airport area has been *de facto* weakened by the recent institutional evolutions.

The Paris-CDG airport area

With a land area of 420 km² (3.5 % of the Paris Region's land area), the Paris CDG & Le Bourget airport area is the larger of the two airport areas. It hosts 700,000 inhabitants (6 % of the Paris Region's population) and

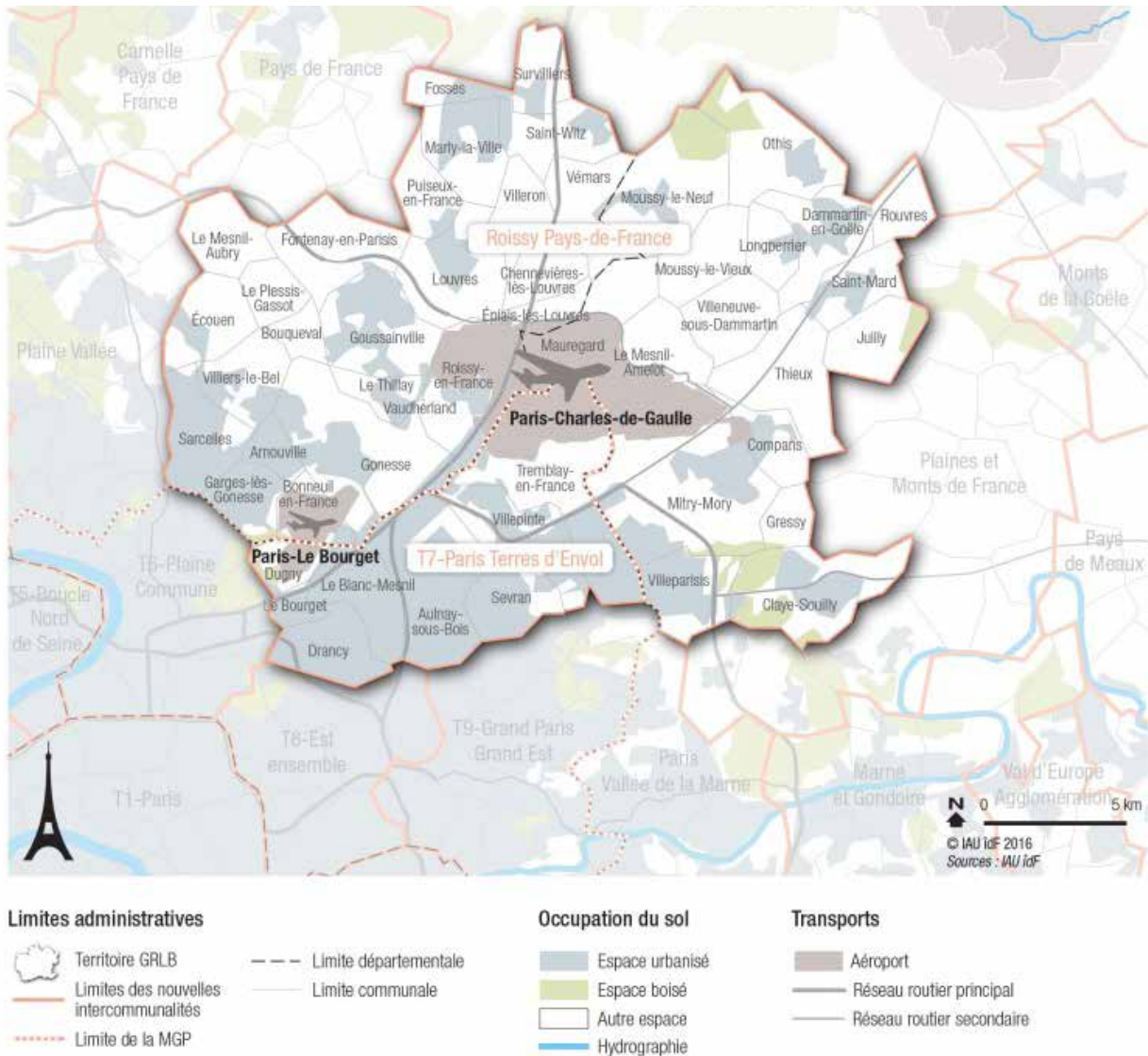


Figure 24. The Orly Paris@ airport area
Source: Orly International

nearly 300,000 jobs (5 % of the total jobs found in the Paris Region). It covers the territories of two inter-municipal bodies:

- Roissy Pays de France, which includes 42 municipalities from the Val d'Oise and Seine-et-Marne *départements*.
- Paris Terres d'Envol, which includes eight municipalities from the Seine-Saint-Denis *département*, and is a subdivision of the Métropole du Grand Paris (MGP).

Unlike in the Orly Paris airport area, the regional and national governments selected the Paris-CDG airport area as the perimeter of the Grand Roissy le Bourget *bassin d'emploi*, one of the 25 employment zones that were created by the region in 2016-2017 as explained above.

In both cases, it could be argued that the actual areas under the influence of the airports are even larger. A significant number of employees at Paris-CDG airport, for instance, live further north in the neighbouring Oise *département*, which is part of another region called Hauts-de-France. The areas affected by airplane noise also expand beyond the two airport areas as defined here.

Both airport areas are characterised by a highly fragmented and complex urban structure (reflecting a largely under-controlled and under-planned urbanisation process that was the norm for decades), with a juxtaposition of large business parks, logistics parks, malls and retail parks, social housing blocks, suburban single-family homes, and large-scale transport infrastructure (motorways, railways) that cut through the urban fabric and connect the airports to central Paris (forming airport corridors) and to other parts of the Paris region.

One major difference between the two airport areas is the rural/urban divide. Approximately half of the Paris-CDG & Le Bourget airport area is still rural and/or agricultural. The Paris-CDG airport platform largely straddles the limits between the densely urbanised areas to the south-west, and mostly rural areas to the north-east; whereas the Paris-Orly airport, located closer to central Paris, is almost entirely surrounded by urban areas (mostly business and logistics parks to the west and north, and mostly residential areas to the east and south).

Land access and mobility

Paris CDG airport is well-connected to central Paris and to the metropolitan area, in spite of road congestion issues. The airport is also well-served by public transport services.

The system of ground access to the airport was defined by the 1976 Paris region master plan (SDAURIF, 1976), which sketched the airport's current motorway access and its connections to the regional express railway network (RER).

Road access: Two motorways (A1 and A3) connect Paris directly to the airport. However, poor traffic conditions limit their performance. These traffic issues are caused by the convergence of the flows generated by the airport, the surrounding residential areas and other local polarities, plus transit vehicles and the many trucks that use this key logistics axis, which connects the Paris Region to the major ports of Northern Europe (such as Antwerp and Rotterdam).

Railway access: The airport is connected to the national and regional rail network. Its TGV station is located on a railway line that bypasses Paris. The RER B regional train is the only mass rapid transit option for travellers between Paris and the airport. However, there are only a few nonstop trains between Paris and the airport per day, as this often-overcrowded line is also used to serve the densely populated areas between Paris and the airport. ADP and SNCF (the French national railway company) are currently developing a new high-speed railway line called CDG-Express, which will offer international travellers a direct connection between Paris and the airport. CDG-Express is scheduled to open in 2024 (best case scenario).

Unlike CDG, Paris-Orly does not currently have a direct mass-rapid transit connection to central Paris. The airport is served by the light rail shuttle Orlyval, which connects the terminals with the Antony RER B station, located 4 km west of the airport. However, by 2024, the extension of Line 14 South of the Grand Paris Express automated underground line will directly connect the Paris-Orly airport terminals to central Paris. This will greatly improve the airport's regional and international accessibility and its appeal.

Paris-Orly is also served by several tramway and bus lines, as well as by the A6/A106 motorways to and from central Paris.

3.3.2. Governance and Land planning issues

Governance and planning issues are closely intertwined in the Paris Region - and even more so in its two airport areas. In both airport areas, the progressive (and still fragile) emergence of governance arrangements and planning efforts has mostly revolved around three interrelated issues: addressing airplane noise, increasing the insufficient community benefits and working towards more spatial coherence.

Included in the two areas are the interests of dozens of municipalities (50 municipalities in Paris-CDG airport area, including six on which the airport sits; and 19 municipalities in Orly Paris airport area, including seven on which the airport sits), five *départements*, the Paris Region, the French central government, ADP (the Paris airports operator, which also owns and develops the land of the platforms), Air France, and many other private and public partners.

The municipal level

On one end of the spatial planning spectrum is the municipal level. Mayors have a strong degree of local democratic legitimacy, as they are directly elected by universal suffrage. Each municipality has legal authority over local land use (through the creation and implementation of a local land-use plan called a PLU), and over the issuance of building permits. For decades, many municipalities have used their planning powers to develop industrial and logistics estates, with the aim of increasing tax revenues and providing employment to their residents. This local fragmentation of land-use planning “led to the proliferation of large activity zones, loosely, if at all, related to the airport; lacking any overall spatial vision, and increasing (the number of) populations subjected to nuisances”².

The central government level

On the other end of the planning spectrum, the French central government is also a major actor. It exerts a strong degree of control over the Paris airports (through its five-year Economic Regulation Contract with ADP), and over the civil aviation transport and security activities (through the central government agency called DGAC). It is also involved in land-use governance, primarily through its shaping of the legal framework governing land-use planning, environmental policy and other policy fields. It plans and finances infrastructure and urban projects of national importance, such as the Grand Paris Express new rapid transit lines. It also co-plans and co-finances, together with the Paris Region, infrastructure and urban projects of regional importance, under the auspices of a five-year joint action plan called the CPER (State-Region Plan Contract), in line with the priorities of the SDRIF, the regional Master Plan.

The central government also controls several urban development agencies (EPA: *Établissement Public d'Aménagement*) that develop key areas of the Paris Region, such as La Défense business district and the Paris-Saclay R&D cluster. Two of these agencies are active in

the airport areas, even though they were not created with an “airport-centred” planning approach in mind:

- From its creation in 2002 to its merger with Grand Paris Aménagement (GPA) in 2017, EPA Plaine-de-France carried out a number of urban development programs in partnership with local governments, all within a large territory called Plaine de France that stretches from the northern suburbs of Paris to the CDG airport (but does not include the eastern parts of the airport area).

- Created in 2007, EPA-ORSA is active in several sectors of the Orly airport area but the airport is not its central focus, as the agency is dedicated to redeveloping and improving the urban quality of a larger suburban, de-industrialised area that stretches north along the Seine River from Orly airport up to the southern boundary of the City of Paris. EPA-ORSA stands for *Etablissement Public d'Aménagement Orly-Rungis Seine-Amont*.

Up until the mid-1990s, the central government was also responsible for preparing and implementing the regional Master Plan. From the 1965 SDAU to the 1994 SDRIF, the major planning decisions related to the airports (and particularly to Paris-CDG airport) were:

- To prevent any new urbanisation in the immediate vicinity of the Paris-CDG airport in order to enable future airport expansion.

- To develop an airport corridor between Paris-CDG and central Paris, including large-scale transport infrastructure (motorways, mass rapid transit railway lines), business parks, logistics zones, the Villepinte Convention Centre, etc.

- To curb urban growth to the south of the Paris-CDG platform and preserve agricultural land and rural areas beyond the platform to the north and north-east.

The 1994 SDRIF, which called for a polycentric model of spatial development for the Paris Region, acknowledged Roissy-CDG airport (but not Orly airport) as a regional “centre of European importance”, destined to accommodate high-value businesses with international accessibility needs. In the 2008 SDRIF, the identified sub-regional “strategic territories” and “priority sites” overlapped only partially with the current airport areas and were not really airport-centred.

² Eirini Kasioumi (2015) Emerging planning approaches in airport areas: the case of Paris-Charles de Gaulle (CDG), *Regional Studies, Regional Science*, 2:1, 408-414.

In 2000, the French Parliament passed a law to promote the creation of inter-municipal spatial plans called SCoT (Schéma de Cohérence Territoriale), in order to foster more strategic and better integrated planning efforts, to be undertaken on a larger scale than the municipal land-use plans (PLUs). PLUs that are within the spatial jurisdiction of a SCoT must be “compatible with” its strategic orientations and regulations. If not, they must be revised and modified accordingly.

Major governance and planning initiatives in the Paris-CDG airport area

Since the 2000s, several initiatives from both public and private actors have emerged to foster collective governance of the Paris-CDG airport area. In 2003, the major private operators in the airport area (Air France, ADP, ACCOR, FedEx, EDF, etc.) created Pays de Roissy-CDG, a non-profit organisation aiming at “fostering and promoting a collective territorial dynamic for the development of the Roissy area”, as well as “improving social acceptability” of the airport. Another major step was the creation in 2011 of the Association des

Collectivités du Grand Roissy (ACGR), an organisation that brings together all the area’s local governments in a greater Grand Roissy airport area (69 municipalities across three départements). It was created in order to foster cooperation among members and to weigh in on political decisions related to the area’s development. One of its objectives was to create a SCoT du Grand Roissy that would cover the 69 municipalities.

A 2012 study by Acadie, Atelier Christian de Portzamparc and Agence Güller & Güller for the state agency DRIEA, generated similar recommendations about creating a SCoT for the whole Grand Roissy territory in order to foster the spatial coherence of present and future developments in the area.

However, with the creation of the Métropole du Grand Paris (MGP) in 2016, the Paris-CDG airport area is now administratively divided into two parts, each preparing its own SCoT:

- The southern part of the airport area (8 municipalities from the Seine-Saint-Denis département) was legally

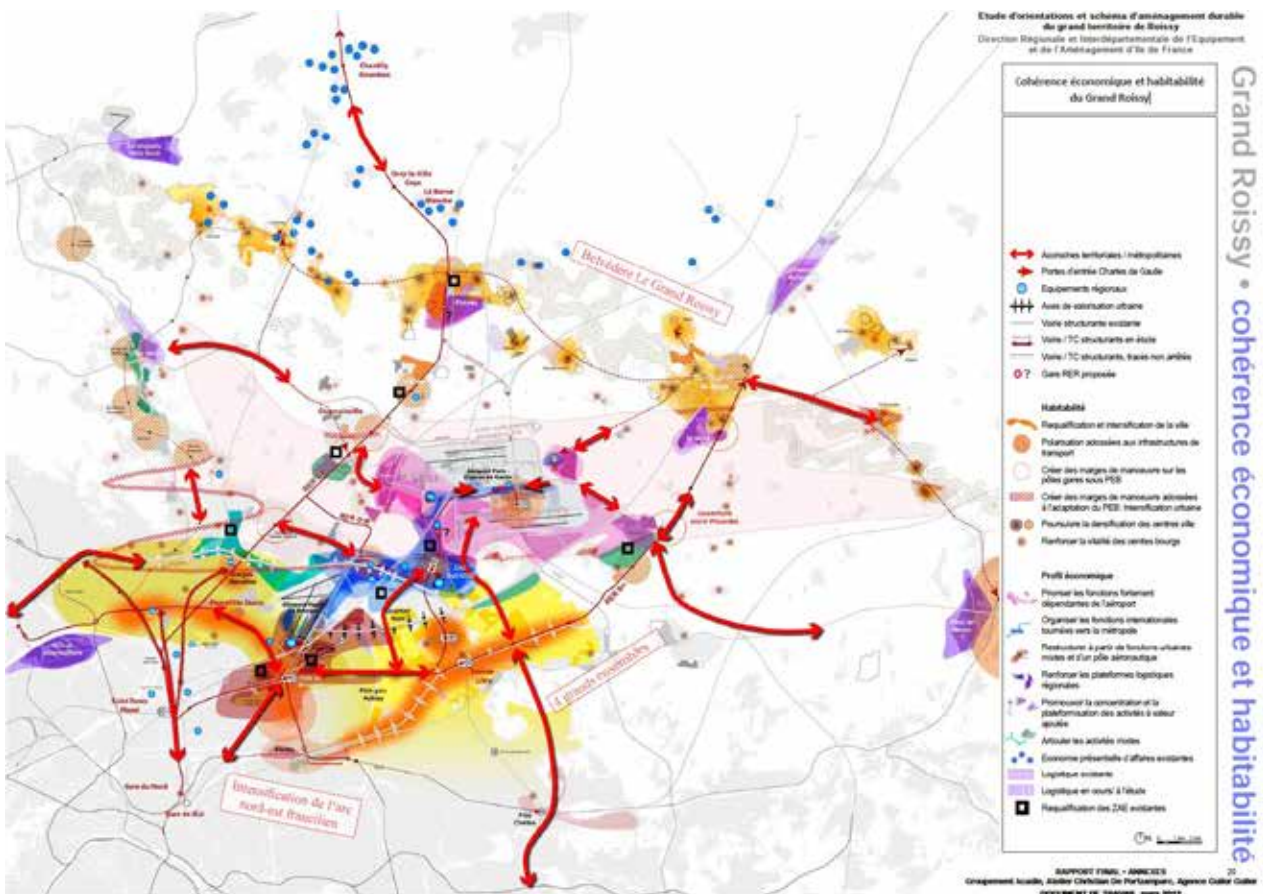


Figure 25. Map from the 2012 “Sustainable planning of Grand Roissy” study
 Source: DRIEA, *Etude d'orientations et schéma d'aménagement durable du grand territoire de Roissy*, 2012

obligated to enter the MGP, as the law provides that the core perimeter of the MGP is composed of the City of Paris and the three *départements* around it. The MGP is currently preparing its metropolitan SCoT (including, consequently, the southern part of the Paris-CDG airport area).

- The northern part of the airport area (42 municipalities from the Val d’Oise & Seine-et-Marne *départements*) are outside of the MGP. The law provides that the municipalities immediately adjacent to the core perimeter of the MGP could decide to join the MGP, but most of them refused, as they feared being stripped of their political and fiscal power if they were incorporated into the MGP. These 42 municipalities have formed a single inter-municipal cooperation structure called Roissy Pays de France, which is currently preparing its own SCoT.

In 2018, Pays de Roissy-CDG and ACGR merged into the Club des Acteurs du Grand Roissy, a non-profit organisation that aims to be “a forum for debating and exchanging ideas and concrete actions for a sustainable and balanced development of the Grand Roissy area regarding economic development, employment, training, transport, housing, environment, governance...”

Local governance initiatives in the Orly Paris airport area

For a long time, most municipalities in the Orly Paris airport area did not feel the need to cooperate on airport-related issues, and even sometimes had diverging interests. More specifically, there was a divide between those municipalities enjoying the benefits of tax revenues and job creation from the airport, and others that were heavily affected by noise nuisances but did not benefit economically from the airport’s presence.

In the early 2000s, air traffic, and consequently employment, were both declining at Orly airport. Major reasons were the failure of the Air Liberté/AOM Airlines merger in 2001, and Air France’s decision to transfer its headquarters and a significant portion of its traffic from Orly to CDG (its new international hub).

This prompted a growing awareness of shared interests among local public and private partners in the Orly airport area, leading to several initiatives, such as:

- In 2002, the creation of the ADOR (Association for the Economic Development of the Pôle d’Orly-Rungis) by the major private operators in the area (including ADP, MIN de Rungis, logistics operator SOGARIS, SILIC/cade business park), to promote the Orly-Rungis area, enhance

its appeal, foster economic development and help businesses set up and develop in the area.

- Between 2005 and 2011, the Pôle d’Orly” initiative was a joint initiative by the presidents of the *départements* of Val-de-Marne and Essonne (on which the airport platform lies). It was the first governance initiative to really include all major stakeholders (the central government, the region, 17 municipalities around the airport, ADP, socio-economic partners such as the chambers of commerce, business organisations, professional organisations, local communities...), and to include the whole geographical area around the airport. The aim of the Pôle d’Orly initiative was to “federate all the actors of the pole and affirm their common desire to act jointly for the economic and social development of this territory and to improve the quality of life. It involves the economy of resources, taking into account social welfare, as well as control and reduction of nuisance sources and pollution that the territory produces and undergoes.” This initiative has had a crucial role in promoting the airport area as a major development area in the Paris Region, in giving a territorial identity to the Orly airport area, and in imbuing in its partners a sense of belonging and shared interests.

Between 2011 and 2014, the central government and 14 municipalities also engaged in the preparation of a common strategy and action plan called Contrat de Développement Territorial (CDT) du Grand Orly, aimed at co-developing urban, transport, housing and economic projects, especially around the future Grand Paris express underground stations.

However, the CDT could not be signed before the creation of the Métropole du Grand Paris (MGP) in 2016, which has *de facto* divided the Orly Paris airport area into two parts:

- 15 municipalities that make up most of the airport area (in terms of surface area, population and number of jobs) have been incorporated into the MGP. They are now part, along with eight other municipalities located between Paris and the airport area (and one municipality south of the airport area), of a territorial subdivision of the MGP called Grand Orly Seine Bièvre. As such, they are currently engaged in both the preparation of the metropolitan SCoT (together with the 115 other member municipalities in the MGP), and the preparation of a “territory project” for Grand Orly Seine Bièvre, which includes a large part of the airport area but is not limited to it, nor is it centred on the airport.

- The four municipalities forming the westernmost parts of the airport area are outside of the MGP and have

joined the new Paris-Saclay inter-municipal cooperation structure, which is mostly centred on the Saclay research & innovation development area, located 10 km west of Orly airport. No SCoT is currently being prepared in Paris-Saclay.

Airport areas in the regional Master Plan: the case of “Grand Roissy” / Paris-CDG airport area

The SDRIF (Schéma Directeur de la Région Île-de-France) is the regional Master Plan. Since 1995, the responsibility to design the SDRIF has been transferred from the central government to the regional council. The SDRIF is the long-term strategic planning document for regional spatial policies and investment priorities in the Paris Region. Its purpose is “to control the demographic and urban growth and the use of space, and to contribute to strengthening the international influence of the region”. It also sets policies to protect and enhance the environment, and places major transport infrastructure and amenities, as well as industrial, agricultural, forestry, industry and tourism activities. PLUs and SCoTs must be “compatible with” the SDRIF.

The preparation of the SDRIF is carried out by the Regional Council, with the technical assistance of IAU, and is the result of a long process of consultations with all the major public and private stakeholders, including the local governments, the business communities, local communities, and the central government.³ The current version of the SDRIF has been in force since 2013. The Region is also responsible for planning, financing and organising the regional public transport system.

The SDRIF identifies 18 sub-regional strategic areas, called Territories of Metropolitan Interest (TIM), which cover the entire regional space. TIMs represent the territorial implementation of the region’s strategic orientations on the geographical scale of “catchment areas” (*bassins de vie*) that have strong development potential and challenges. For each TIM, the SDRIF sets out “general development objectives” and identifies “specific development sectors” for the implementation of these objectives, which involve the regional and national governments as well as other local public and private partners.

One of the TIMs is the Grand Roissy area, which is defined as “a major development pole that must strike a balance between international attractiveness, nuisance mitigation, and valorisation of agriculture”. This is a witness to the efforts made by the local partners in the Paris-CDG airport area towards a more airport-centred planning approach, as described above. The SDRIF has underlined

that the Grand Roissy territory “suffers from a lack of overall coherence as regards the major development and planning issues”. These issues include a multiplicity of urban projects that are sometimes in competition with one another, road congestion, overconsumption of farm land and of open spaces, poor access to jobs for many residents due to lack of training and lack of local public transport, and the need to build new housing programs in order to contribute to the regional housing-building effort, all while respecting building constraints related to the noise contours.

“These findings confirm the need to put in place a coordinated and coherent mode of governance, essential to the balanced development of Grand Roissy, involving all the players in the region, in order to reduce the risks of saturation and to overcome competition and spatial fragmentation.”

To this end, the SDRIF sets out three **general development objectives** for the Grand Roissy area:

- To improve both regional and local public transport networks.
- To ensure balanced and controlled urban development by fostering the area as a major international transport hub and logistics/industrial area, striving for the creation of denser urban areas (especially near suburban train/metro stations), and preserving agricultural land, natural areas and ecological continuities.
- To promote economic attractiveness and access to local jobs for the residents.

Four **specific development sectors** are identified:

- North and east of the Paris-CDG airport platform: urban pressure (housing and logistics) is strong in these mostly rural areas. New urban developments must occur in already urbanised areas in order to preserve farmland and natural areas.
- West and south of the platform: consolidate and develop the airport corridor, and densify and upgrade existing business parks.
- Le Bourget area: strengthen its positioning as a major hub for high-tech aerospace industries.

³ For more details on the SDRIF in English, see: https://www.iau-idf.fr/fileadmin/NewEtudes/site_anglais/KnowHow/Studies/Study_1296/NR712__3_web.pdf

- Triangle de Gonesse: a strategically-positioned farmland area, halfway between Paris-CDG and central Paris along the airport corridor. 300 ha are open for urbanisation, while the remaining 400 ha are to be preserved as agricultural land.

The figure below is an extract from the 2013 SDRIF's "Map of the general destination of the different parts of the regional territory", with a zoom-in on the Grand Roissy / Paris-CDG airport area. The outline of the area is not in the original map and was added by IAU for the purpose of this publication. Each one of the larger-size coloured circles indicates an urbanisation potential of about 25 ha. These circles are not precisely localised on the ground, thus allowing municipalities or inter-municipal associations to determine their exact localisation in their respective land-use plans (PLU/PLUi/SCoT). Dark red circles indicate urban areas with high densification potential. Orange-red circles indicate preferential urbanisation areas. Yellow-orange circles indicate conditional urbanisation areas, meaning areas where any new urban development is subject to strict conditions such as the creation of new public transport facilities (bus lines, metro stations...) to ensure improved access to and from the area.

The location, number and type of circles are the results of long (and sometimes difficult) negotiations between the regional and local governments during the preparation of the SDRIF in 2012-2013.

The case of the Triangle de Gonesse project area

As mentioned above, the Triangle de Gonesse (TdG) area is one of the four development sectors identified in the SDRIF for the Grand Roissy area. This 700 ha farmland area is strategically positioned on the north side of the airport corridor (A1 & A3 motorways), halfway between Paris-CDG and central Paris. Due to noise nuisance from both Le Bourget airport and motorway traffic, building residential areas there is not possible. However, the development of economic activities in the TdG has been heavily promoted by the central, regional and local governments and by private actors, with the aim of boosting economic development and the attractiveness of neighbouring areas, which suffer from high unemployment rates and socioeconomic difficulties.

Partial urbanisation of the area has thus been planned since the 1994 SDRIF, and there are renewed calls for this development in the current SDRIF. As shown in the figure

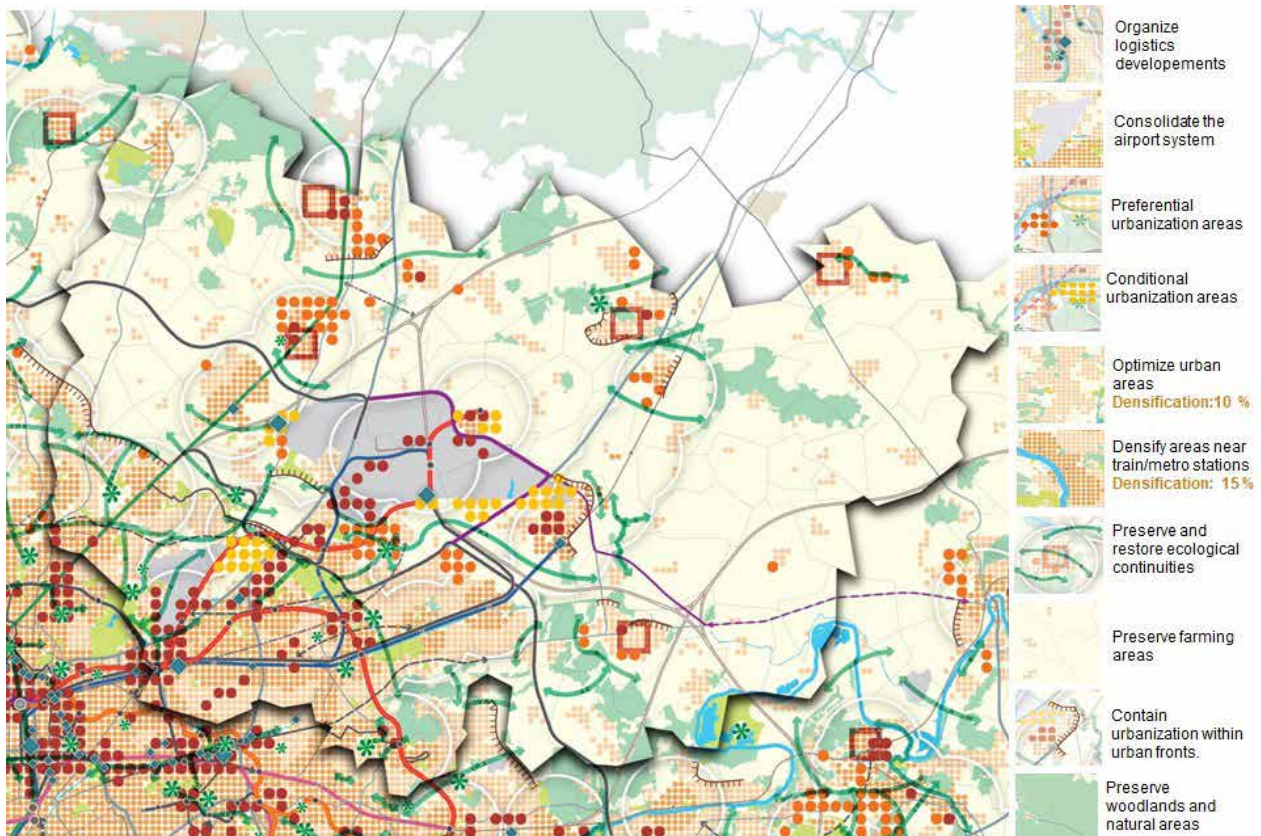


Figure 26. The Grand Roissy / Paris-CDG airport area in the regional Master Plan (SDRIF)
Source: IAU

below, 300 ha are open for urbanisation in the southern part of TdG (as shown by the 12 yellow-orange circles of 25 ha each), provided that:

- the area is served by high-capacity public transport; this has led the State to plan the construction of an underground station dedicated to serving the TdG area. This station will be part of line 17 of the Grand Paris Express automated underground system that will connect Paris-CDG to central Paris by 2027/2030.

- the remaining 400 ha (to the north) is preserved as agricultural land.

The development of the 300 ha sector is under the responsibility of Grand Paris Aménagement (GPA), the major public urban development agency in the Paris Region. The GPA is co-managed by the central, regional and local governments. The organisation's board is composed of 10 central government representatives

and 10 representatives from local governments, and it is chaired by the regional president. The general director is nominated by the central government.

Part of the 300 ha area is to be developed as a 1 million m² business district, while 80 ha are reserved for EuropaCity, a large-scale *retailtainment* project jointly developed by the French real estate company Ceetrus (a subsidiary of retail company Auchan) and the Chinese investment company Dalian Wanda.

Development of the area is currently being delayed by court action from various groups opposed to the TdG project (and particularly to the EuropaCity project). Two major critiques have been levelled against the project:

- Many actors in the local retail sector (including two large malls located just across the motorway from the TdG area: O'Parinor and the recently opened Aéroville shopping center) fear the future competition of EuropaCity

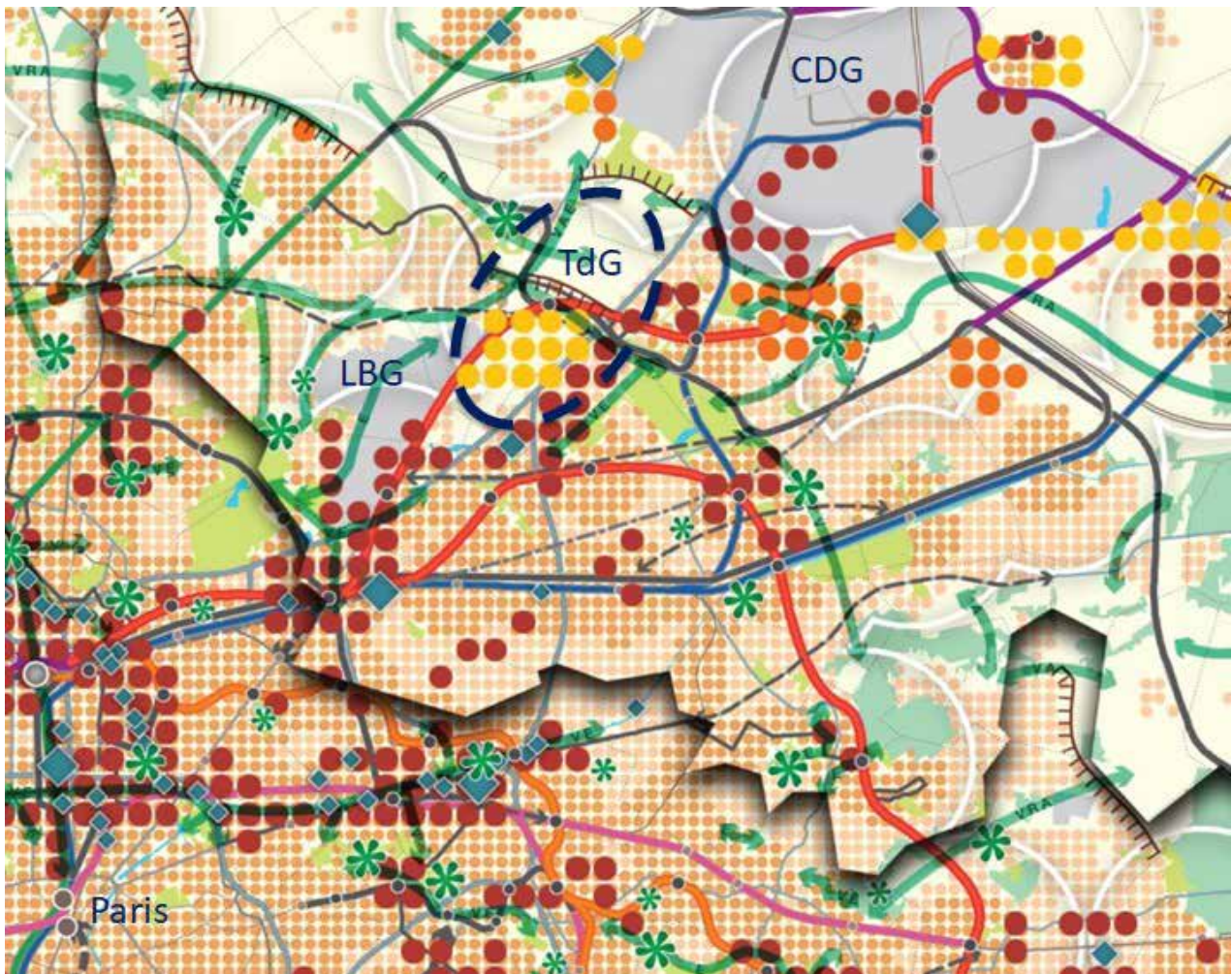


Figure 27. The Triangle de Gonesse (circled in blue) in the regional Master Plan (SDRIF)
Source: IAU

and contend that there is already too much commercial space in the area. They also contest the projected number of about 10,000 jobs that would be created by EuropaCity, arguing that this number does not include the jobs that may be destroyed in other businesses affected by this new competitor. Several elected officials from the municipalities where these malls are located share these concerns. A divide has thus emerged between municipalities located south of the airport corridor (in the Seine-Saint-Denis *département*), which fear the negative repercussions of the EuropaCity project on their retail businesses, and the municipalities located north of the airport corridor (in the Val d'Oise *département*), which hope that the EuropaCity project will create jobs for the many jobseekers among their population.

- Several environmental organisations, with the support of various elected officials and citizens, oppose the project on the grounds of its environmental impact, the loss of fertile agricultural land, and the “mass consumption” model of the project.

3.3.3. Economic development and jobs

In both airport areas, the relatively low skill level among many residents is one of the main factors explaining the high rates of unemployment in several neighbourhoods, especially among youth. This is the case in spite of the job opportunities offered by the many companies located in the two airport platforms as well as across the airport areas, spanning a wide variety of industries (airlines, airport services, logistics, catering, hospitality, etc.).

The map in Figure 28 superimposes, for each municipality of the Paris Region:

- The total office space (m²), as an indicator of both economic attractiveness and concentration of high-skilled jobs.
- The percentage of higher education graduates among the residents.

The map clearly illustrates that both office developments and higher education graduates are concentrated in central Paris and in the west of the Parisian agglomeration, including major business districts such as La Défense (Global 500 headquarters) and Issy-Boulogne (media, communication). It also clearly shows that the Paris-CDG airport area is in a diametrically opposed situation: it is outside of the central office market and has a high concentration of residents with no higher education. Several of the neighbourhoods with the highest rates of youth unemployment and the lowest average incomes in the Paris Region are in the Paris-CDG airport area.

The Orly Paris airport area is in an intermediate situation: the majority of the municipalities within the airport area have a higher percentage of higher education graduates than in the Paris-CDG airport area, although it is still lower than regional average.

Training is thus a critical issue shared by many municipalities and private businesses in both airport areas, which explains why the most active and most durable partnership projects in both airport areas (GIP Emploi Roissy CDG and Orly International) are centred on training and employment.

In the Paris-CDG airport area, GIP Emploi Roissy-CDG was created in 1998 as a private-public partnership between the central and regional governments, the three *départements* that host the airport platform, ADP and Air France. Many other private and public partners (including the training programme providers in the airport area) have joined the PPP since its creation. GIP Emploi Roissy CDG funds, pilots and coordinates partnership actions and projects in workforce development, in order to meet the jobs and training needs of the residents, and the qualification needs of the local businesses in the airport area. It is organised in three main working groups:

- A working group called Observatory. The objective of this working group is to build a shared vision of the territory based on today's data, but one that also produces and takes into account estimates of the employment and skills needs of tomorrow. It provides quantitative and qualitative elements that guide the work of the other groups, and it issues calls for projects and the production of deliverables, such as the Key Figures of the Grand Roissy-Le Bourget area (with IAU support).
- The Employment and Training working group, whose mission is to promote the access of local populations to jobs through experimentations and solutions that combine support and training. It is centred on three major airport-related industries: airlines and airport industries, hospitality, and logistics/supply chain. A platform dedicated to professionals was created in order to co-elaborate experiments on these issues in the Grand Roissy - Le Bourget area. The working group organises events such as job fairs and job meetings that attract hundreds of jobseekers.
- The Apprenticeship working group, which promotes apprenticeship among local companies and residents as a training solution with a high level of professional success.

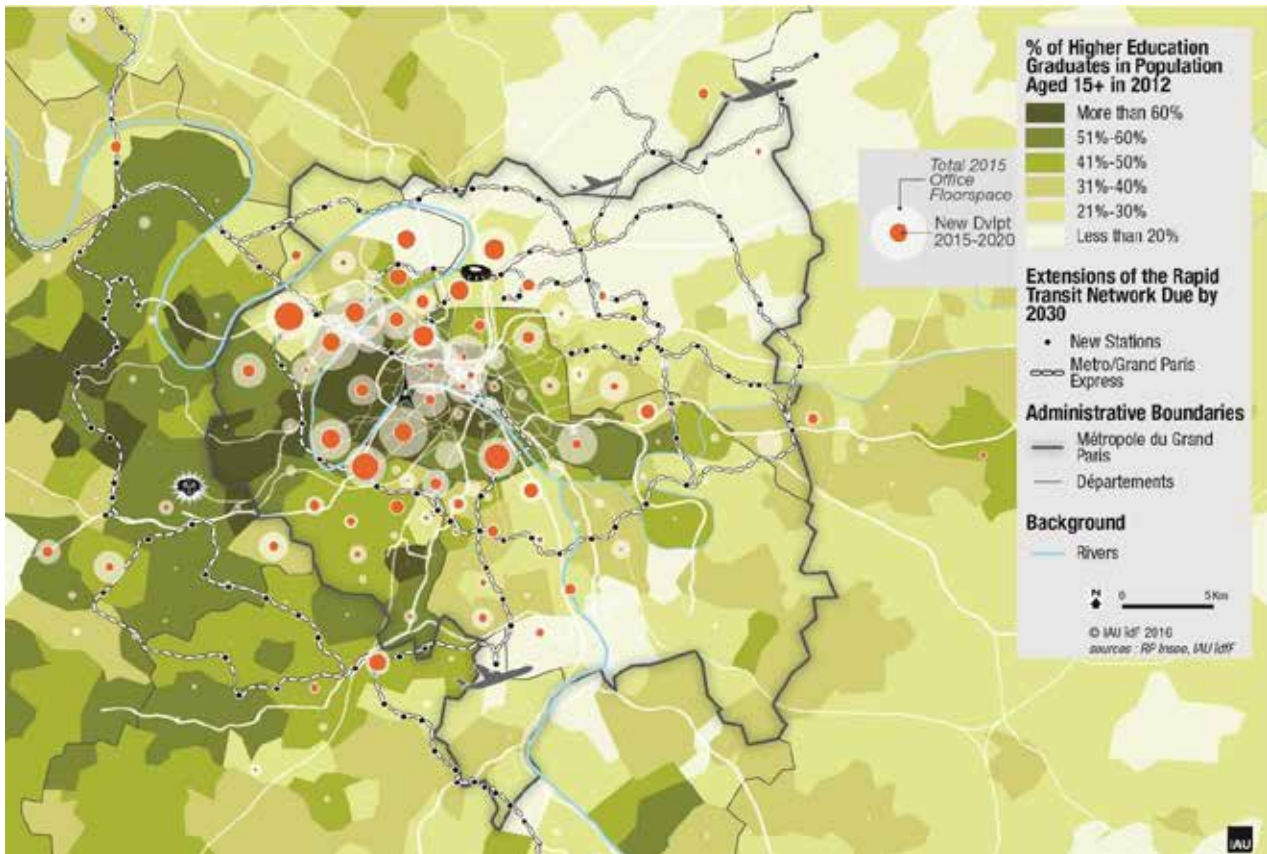


Figure 28. Office space and percentage of higher education graduates in Paris Region
Source: IAU

The GIP Emploi Roissy CDG works also closely with the Hubstart Paris Region Alliance on place marketing, promoting the airport area and developing its international attractiveness. They are located on the same premises in Roissypole (Paris-CDG’s business district), and are in the process of merging their activities into a single entity.

As mentioned previously, GIP Emploi Roissy-CDG and Hubstart have been instrumental in promoting the concept of the Grand Roissy Le Bourget airport area and in specifying its geographical perimeter. This denomination and this perimeter were thus selected as one of the 25 *bassins d’emploi* that the Region created in 2016 in order to locally implement its regional strategy for economic development, employment, innovation and international attractiveness (SRDEII). Building on the action and experience of GIP Emploi Roissy-CDG, the region aims to coordinate all the local partners involved in workforce development and training in the Grand Roissy Le Bourget *bassin d’emploi*.

In the Orly Paris airport area, a private-public partnership called Orly International was created in 2006 by the region, the two *départements* on which the airport platform sits, and ADP. Its main missions are:

- To improve access to jobs offered by the airport and the other major economic drivers in the area for the local residents.
- To promote the airport area and attract investors.

Orly International works closely with all the main local training program providers, professional organisations, companies and private operators (MIN de Rungis, Icade business park, SOGARIS, etc.).

Similarly to GIP Emploi Roissy-CDG, Orly International has several main lines of activities:

- As the Observatory of the area, it documents the present and future trends in the recruitment needs of local companies. It identifies the professions that are in tension/on the rise/in decline and points out any skill gaps or mismatches among the local residents and jobseekers and the job vacancies, etc.
- It organizes many events such as job meetings, job fairs (Les Rendez-Vous pour l’Emploi d’Orly Paris®), business creation fairs, dedicated training programs such as professional English in airport-related jobs, etc. (See

p.88-89 of the *Sustainable Airport Areas* report for more details).

- In 2011, it enabled the creation at Orly airport of a local establishment of Pôle Emploi, the French governmental agency that helps unemployed people find jobs. This local Pole Emploi agency is dedicated to airport-related jobs. Prior to its creation, local jobseekers looking for airport jobs had to go to the Pôle Emploi office at Roissy-CDG airport.

Orly International has been instrumental in promoting the Paris Orly airport area. However, its geographical perimeter was not selected by the Region as one of its 25 *bassins d'emploi*. For the sake of simplicity, the region (and the central government) decided that within the MGP, the *bassins d'emploi* would coincide with the 12 administrative subdivisions of the MGP. The Paris Orly airport area is therefore divided into two *bassins d'emploi*. Most of the area is in Grand Orly Seine Bièvre (within the MGP), but its westernmost area is within the Versailles-Saclay *bassin d'emploi*.

3.4. Comparing Atlanta, Barcelona and Paris Airport Areas

	ATLANTA
GENERAL FEATURES	
Area	Aerotropolis Atlanta
Airport area surface (sqkm) / (sqmi)	427 / 164.87
Surface occupied by the airport (sqkm) / (sqmi)	19.02 / 7.34
Population of airport area	310,567
Density (inh. /sqkm) / (inh. /sqmi)	727 / 1,884
Average family income in airport area compared with average in metropolitan area	Lower
Passenger traffic (2018)	107m
EMPLOYMENT	
Airport direct jobs	63,291
Airport indirect + induced jobs	95,059 (metro), 481,000 (statewide)
Jobs in the airport area	193,591
Airport direct jobs/total jobs in airport area (in %)	32.6 %
Share of airport employees living in airport area (in %)	15.9 %
MOBILITY	
People going to the airport to work (daily average)	n.a.
% using public transport	n.a.
Travelers/visitors going to the airport (daily average)	275,000
% using public transport	n.a.
ECONOMIC ACTIVITY AREAS	
Industrial, logistics and business parks	105.8 m sqft / 9.8 m sqm in the Aerotropolis area (outside airport)
Developed office space	13.2 m sq. ft. / 1.2 sqm (outside airport)
Projected office space	60,000 sqft / 5,600 sqm ATL Airport City 701,242 sq. ft. / 65,000 sqm (Gateway Center II and Airport City College Park)
Hotels	46 within 3 miles of the airport. 148 in the Aerotropolis area.
Commercial space in existing retail areas in sqm (only large surfaces considered)	31.2 m sqft / 2.9 m sqm outside airport
Number of major malls	3
Number of convention centres	1 (Georgia International Convention Center)
Floor space in convention and exhibition centres	400,000 sqm / 4.3m sqft

BARCELONA	PARIS	
Municipalities of El Prat, Gavà, Sant Boi and Viladecans	Grand Roissy-Le Bourget	Orly Paris[®] Airport Area
115 / 44.40	420 / 162.16	105 / 40.5
15.33 / 5.92	32.4 / 12.5	15.3 / 5.9
255,882	693,400	411,680
2,225 / 5,763	1,651 / 4,276	3,800 / 9,876
Average to lower	Lower	Average to lower
50m	72m	33m
18,000	90,000 (includes CDG and LBG)	28,000
33,200	149,000	47,500
103,000	287,100	191,400
17.5 %	30 %	15 %
37.5 %	47 %	About 40 %
18,000	n.a.	n.a.
n.a.	12 %	5 %
100,000	n.a.	n.a.
25 %	46 %	37 %
296 ha / 731 acre only partially developed inside airport premises 880 ha / 2,174 acre fully developed outside airport premises	3,770 ha / 9,316 acre (including inside airport premises)	2,000 ha, including about 130 ha inside airport premises
250,000 sqm / 2.7 m sqft (Mas Blau 1&2)	2.1 m sqm / 22.6 m sqft	1.7 m sqm / 18.3m sqft
1.8m sqm / 19.9 m sqft (Airport City) 635,000 sqm / 6.8m sqft (PDU Àrees Econòmiques Delta)	300,000 sqm / 3.2 m sqft (projected for 2020)	0.1 m sqm / 1.07m sqft
9 Hotels (None within walking distance) About 1,000 rooms	11,600 rooms	3 hotels on airport premises, 16 hotels within 2 km of the airport.
156,700 sqm / 1.7m sqft outside airport 32,500 sqm / 349,827 sqft inside airport terminals	580,000 sqm / 6.2m sqft outside airport	280,000 sqm / 3m sqft
5	5	2
1 (Fira Granvia), located outside but near the defined airport area	2 (Paris Nord Villepinte and Paris Le Bourget)	0
240,000 sqm / 2.6m sqft	380,000 sqm / 4.1m sqft	0

4. Challenges and lessons

4.1. Planning airport areas

4.1.1. Challenges

Airport areas are territories where local priorities, those related to the wellbeing of residents and preservation of local resources and assets, tend to conflict with national and even international priorities, as airports are the gateways for the people and goods brought by globalisation.

Although many airports were initially built far from major cities, urban sprawl has meant that they are currently located within dense urban/metropolitan areas, a reality that increasingly imposes constraints. Thus, struggles over the scarce available land involve all major stakeholders in airport areas. Too often, local communities see the airport more as a nuisance than an opportunity and hence take a “no growth” position regarding airport issues.

Planning airport areas involves matching regional/national transport policies with land planning and zoning regimes. An airport can quite often become one of the major, if not the biggest, multimodal transport hub in a whole region. Moreover, planning airports and airport areas requires dealing with the specificities of air transportation, land transportation, and safety and security issues. Quite often, specialists in these fields (airport engineers, motorway engineers, security experts, etc.) have neglected other aspects such as aesthetics and urban quality. Fortunately, this is changing in most parts of the world, but the legacies of ugly structures and poor urban quality still tarnish most airport landscapes.

A substantial portion of land in airport areas is controlled by the airport company, which sometimes acts as an “extraterritorial” entity, in that it may enjoy certain exemptions from compliance with all the planning regulations that apply to other undertakings. This may eventually be a source of litigation.

Airport cities pose a particular challenge in airport area planning. Most often they are planned on airport land and may benefit from airport “fast track” planning procedures.

However, many (if not most), of the business located in “airport cities” usually have a faint relation with air transportation. Moreover, airport city developments may compete with CBD and other suburban business parks. Hence, planning airport areas involves addressing the size, vocation and sequence of airport-promoted urban developments with those from the private sector and other stakeholders.

In summary, airport areas are unusual places where a delicate balance between development of activities and land/environmental protection needs to be struck, often under lobbying pressure from many of the airport-related stakeholders that will be further described in the next section.

Summary of major airport area planning challenges identified

Reconciling local and supra-local logics in airport planning.

Ensuring urban quality in airport areas.

Coordinating infrastructure planning (airport, roads, railway, etc.) and urban planning.

Integrating airport cities into metropolitan planning.

Striking a balance between development and protection.

Integrating the airport into a broader network of land transportation.

Dealing with the coexistence of commercial and office space in airport cities and that in other centralities on a metropolitan scale.

4.1.2. Lessons learnt

Land planning in airport areas is hindered by complex and fragmented institutional landscapes. Each of the three airport areas studied has a multiplicity of jurisdictions covering the airport and its surroundings. Planning authorities on the metropolitan level provide a more comprehensive vision of the complex interactions of large airports with their immediate areas of influence. Planning also requires the integration of the airport node into a constellation of other nodes, polarities and corridors on the metropolitan level. The Paris metropolitan authority and AMB in Barcelona provide good examples of this metropolitan approach, although they are subject to some limitations in their powers.

Where an authority with legal planning powers is non-existent, as is the case in Atlanta, an institution such as the Atlanta Regional Commission represents an excellent example of inter-jurisdictional and multi-stakeholder cooperation within an airport area, but also illustrates the limits of such a voluntary approach.

The proximity of the airport and the infrastructure serving it may enable the development or re-development of areas to provide new opportunities for business, employment and diversification beyond aviation and related sectors in airport areas (e.g. Atlanta's media studios and Fort McPherson). However, airport areas may also be the target for "opportunistic" projects that propose fill the "gaps" (i.e. non-developed or protected areas) with land uses than bring little functional value and risk adding more congestion and pressure to the existing infrastructure and to the bearing capacity of the territory. Weak planning authorities may struggle to address these challenges.

Another typical issue is the integration of the airport into surface transport networks. Quite often, airports are the last stop in transport networks. However, this has been changing quickly, with some airports becoming integrated multimodal nodes. Paris CDG has a strong intermodal station, but not to the same extent as other airports such as Frankfurt and Schiphol, whose railway stations are among the busiest in their countries. Intermodality exists in Barcelona to some extent, and it will be furthered by the rail link to the main terminal. Atlanta also offers rail connection to the airport (MARTA) and is clustering some of the new business developments close to stations (e.g. Fort McPherson).

Airport areas are becoming attractive places for logistics and distribution centres, even beyond airfreight. This is

because airports typically sit in well-connected places close to major metropolises. The Atlanta airport area has become a hub for distribution centres. The same phenomenon is being experienced in Barcelona, where the attractiveness of the airport area for distribution centres is enhanced by the proximity of the port. Logistics and distribution businesses are also clustered near ORY and CDG

Recommendations stemming from the experiences studied

Integrated land planning of airport areas is recommended so as to facilitate the coordination of infrastructure planning, integrate the airport and airport cities on a broader urban and territorial scale and strike a balance between development and protection.

Airport and territorial logics need be expressed together in joint dialogue that avoids unilateral impositions. Airport-related developments should avoid becoming extra-territorial. In particular, developments that involve high-volume mobility of people should be clustered around intermodal transport nodes.

As airport areas become more attractive places for distribution centres and logistics, appropriate planning and connections to these freight areas is to be encouraged.

4.2. Governance of airport areas

4.2.1. Challenges

As stated in the **Sustainable Airport Areas** report:

“(...) Airport areas rarely constitute specific jurisdictions with defined borders, separate institutions or administrative bodies. Instead, they are generally characterised by a complex and fragmented institutional landscape that involves multiple stakeholders, both private, and public, with differing and sometimes competing interests, values and policies on many issues and across a variety of geographical scales. This institutional fragmentation can hinder the elaboration and implementation of efficient development strategies for the airport area.”

The governance of airport areas requires identifying the various stakeholders active in this environment and understanding their values, priorities, powers and interactions. The table below is designed to shed some light on this issue.

Summary of major challenges in the governance of airport areas

Identifying and mapping the most relevant stakeholders.

Managing the institutional complexity and fragmentation of actors with structures with which most stakeholders feel comfortable.

Establishing forums for dialogue and the management of conflicts between the airport and the surrounding area.

Building a shared vision for the long-term development of the airport area and for how to foster strategic alignment and cooperation among the stakeholders involved.

4.2.2. Lessons learnt

Atlanta (Aerotropolis) and Paris (Hubstart) have taken initiatives that bring together the most relevant stakeholders listed in the table above. Most of these initiatives have a special focus on strategy coordination and economic promotion. In most cases, their structure and staff are minimal and normally supported by one of the founding organisations (the Atlanta Regional Commission or Aéroports de Paris). Another oft-cited example of such structures is the Schiphol Area Development Company (SDAC) in the Netherlands.

It is worth noting that difficult decisions on planning, zoning, tax and other incentives normally fall beyond the scope of the partnerships described here. In spite of their limits, however, these organisations play a positive role in bringing together actors that seldom meet and that sometimes are suspicious of one another. They can help a range of parties to arrive at a common vision, coordinate their strategies and avoid overlapping efforts.

Barcelona airport area lacks such structures, apart from its ineffectual Airport Coordination Committee and the Air Routes Development Committee (whose scope is limited to airline marketing and which includes the airport operator, Chamber of Commerce, tourism board and local and regional authorities).

Recommendations stemming from the experiences studied

Partnerships bringing together most airport area stakeholders play a positive role in promoting constructive dialogue among sometimes conflicting stakeholders and building a common vision for the airport area.

It would be advisable for these partnerships to move beyond economic promotion and help build consensus on hard decisions on planning, zoning, incentives, etc.

These partnerships should not be limited to marketing the airport and the airport city, but aimed at building an integrated vision for an extended airport area.

Stakeholders in airport areas

STAKEHOLDER	PURPOSE
Airport operators	Operate the airport in an efficient, safe and profitable manner
Airlines	Operate profitable flights
Travelers	Travel cheaply and have a wide range of options available
Airfreight and logistics community	Move airfreight cheaply and with reliable air services
People working at the airport	Decent salaries, working conditions and timetables
Local elected authorities surrounding the airport	Exercise their powers to maximize the social benefits stemming from the airport but minimise the negative externalities
Local elected authority central city	Ensure that the airport becomes an asset that reinforces the attractiveness of the city to visitors and business
Neighbouring communities	Ensure that quality of life and property values are not damaged by the proximity of the airport
Tourism promotion boards / hospitality industry	Facilitate inbound tourism
Business community/chambers of commerce / local economic promotion agencies	Enhance business opportunities in the region
Civil Aviation and Security Authorities (national)	Ensure safe and secure air transport

Source: the authors

PRIORITIES	CAPACITY TO INFLUENCE	COMMON ISSUES
<ul style="list-style-type: none"> • More flights. • More car parks. • More commercial facilities on premises. • More real estate revenue. • Possibility to expand infrastructure. 	Very high	<ul style="list-style-type: none"> • With airlines, disagreements on operational matters and airport charges. • With local elected authorities surrounding the airport, disagreements on planning and environmental issues. • Neighbouring communities often complain about noise and congestion.
<ul style="list-style-type: none"> • More inbound and outbound passengers. • Low airport charges. • Easy and flexible operational arrangements at the airport. • More slots at peak times. 	Very high	<ul style="list-style-type: none"> • Airlines try to prevent competition from other airlines at the airport specially LCC. • Tourism boards / hospitality industry, chambers of commerce, etc. are usually partners in marketing for inbound visitors.
<ul style="list-style-type: none"> • More flights at convenient times. • Cheaper flights • Convenient options for surface access to the airport and car park. • Little hassle at the airport 	Low	<ul style="list-style-type: none"> • Often complain about hassle and poor airport experience. • Their first impression at the airport may influence their experience at destination.
<ul style="list-style-type: none"> • More airfreight facilities at apron and on landside. • Easy and efficient customs and clearing procedures. 	Low	<ul style="list-style-type: none"> • For most airport operators, airfreight is a minor business that causes serious interference with passenger traffic. • Since airfreight often travels by night and uses noisier planes, conflicts with neighbouring communities are common.
<ul style="list-style-type: none"> • Frequent and affordable public transport to the airport, including at night. • Flexibility of public transportation to adapt to unusual working times. 	Low	<ul style="list-style-type: none"> • Often public transport offer is good between the downtown and the airport but less so with the airport's neighbouring areas.
<ul style="list-style-type: none"> • More taxes paid from airport business. • More people from the local community employed at the airport. • Less noise and pollution from airport operations. • Prevent local roads to suffer from congestion caused by airport access. • Public transport. 	Medium	<ul style="list-style-type: none"> • Local authorities usually want to maximise the attraction of high value-added business because of the airport proximity (e.g. corporate HQ, IT, etc.), but avoid what they perceive as low value-added business (e.g. logistics, car parks).
<ul style="list-style-type: none"> • More flights (in particular long-haul) and more destinations. • An attractive and efficient airport. • Easy and frequent transportation to the downtown and major attractions. 	Medium	<ul style="list-style-type: none"> • Quite often, airports are located beyond the central city boundaries, and so the capacity to influence the airport is limited. This explains why many big cities are directly involved as major shareholders in their airport operators. However, the views and values of local governments and airport operating companies are sometimes complex, and a clear separation is usually imposed by law to avoid conflicts of interest.
<ul style="list-style-type: none"> • Restrictions on airport operations and airport expansions to avoid increases in noise, congestion and other nuisances. • Good accessibility to the airport. • Profit from airport-related job opportunities. 	High	<ul style="list-style-type: none"> • Common issues are: night flights curfews, noise abatement schemes, explicit limits to further airport expansions.
<ul style="list-style-type: none"> • Increase inbound visitors, often with a preference for professional/business visitors. • Attract transfer passengers to visit. • Increase the length of stay and money spent during visit. • All this involves more flights and bigger planes. 	Medium	<ul style="list-style-type: none"> • In some areas that have become major tourist attractions, the issue of limits to tourism has been raised by city residents.
<ul style="list-style-type: none"> • Increase the number of business travellers, destinations and long-haul links, especially to the major business centres around the world. • More business in the region. • Attract investment especially in high value sectors and HQ. • Profit from the airport to enhance the attractiveness of the region as a logistics node. 	Medium	<ul style="list-style-type: none"> • Business communities tend to ally with airport operators for airport expansion and less planning and operations restrictions.
<ul style="list-style-type: none"> • Minimisation of all hazards towards zero. • Ensure government control of critical activities (e.g. air traffic management, immigration, terror prevention, etc.) 	Very high	<ul style="list-style-type: none"> • Quite often, these agencies' approach is non-flexible and may impose substantial burdens on airport and airline operations. • Complaints from airlines, travellers and airfreight actors often have to do with the imposition of regulations by these agencies.

4.3. Economic development and employment policies in airport areas

4.3.1. Challenges

Airport areas are increasingly becoming drivers of metropolitan and regional economic development. They not only attract jobs in airport-related industries, but increasingly have become hotspots attracting business in many other sectors. However, airport areas and airport cities are not automatically attractive per-se. As discussed in the *Sustainable Airport Areas* report, “fostering a distinctive development strategy that builds on key assets of the airport area” is often an essential factor for success.

A major issue for jobs in airport areas is transportation. Typically, airports have frequent transport links with the downtowns of central cities but much poorer links with residential areas in their surroundings. Some airport jobs have unusual timetables and are performed by people with low educational qualifications. Thus, public transport is an issue that involves social and even gender dimensions. The lack of transport gives rise to a typical complaint in neighbourhoods around airports: “we get the noise but do not get the jobs”. The fact that 85 % of jobs in Atlanta’s airport area are done by people living outside it is a good illustration of this paradox.

Another issue regards the “visibility” of airport-related jobs. Much too often, the employment opportunities in airport areas are not well communicated to people living near the airport, and at the same time business at the airport struggle to find suitable staff. Some efforts to address this issue have been made at some airports.

As a matter of fact, some airport cities are becoming bigger in terms of on-site jobs than the airport itself. And airport areas defined as a second circle beyond airport cities are still bigger. This broader picture is to be integrated in schemes targeted at matching airport related business with jobseekers.

Summary of major challenges for economic and employment policies in airport areas

Matching of airport related employment opportunities and job seekers in airport areas.

Identifying opportunities for low-skilled workers in airport areas.

Assessing the implications of airport city projects and their impact on the job markets in neighbouring communities.

Adapting training to job requirements.

Improving public transport and access to airport jobs. Good transport links to central city but less to neighbouring towns.

Addressing gender issues. Barriers such as limited transportation or insecure environments may influence gender gaps in airport-related jobs.

4.3.2. Lessons learnt

Both Atlanta and Paris CDG airports are located in low income areas. In the case of Atlanta, the efforts to attract business to the airport area amount to a strategy aimed at rebalancing the poorer southern part of the metro region (where the airport is located) with the wealthier northern part. In the Paris region, the northern part of the agglomeration (where CDG is located) also houses some socially deprived areas. Both Atlanta and Paris authorities have been promoting new development nodes in the airport areas, e.g. Porsche, College Park or Fort McPherson in Atlanta and Roisypôle in CDG, in an effort to drive business in these areas.

In the case of Barcelona, the airport is not located in an area significantly different from the average of the metropolitan region as a whole, meaning that rebalancing efforts have not been needed. In addition, developments on airport property have been minimal so far. The effect is that to date most developments in the airport area have been led by the private sector.

Regarding employment policies in airport areas, again Atlanta and Paris regions have undertaken a number of initiatives such as the Aerotropolis Alliance, the Community Improvement Districts and the Worksource Aerotropolis initiatives in Atlanta, and the GIP Emploi in Paris. Interestingly, the GIP Emploi was born as a scheme to match airport employment opportunities with jobseekers, but went on to become a scheme dealing with job opportunities in the broader airport area. All these initiatives feature the active involvement of the airport operator, airport businesses and government agencies involved in employment and career development. Again, there is not a similar scheme in Barcelona, where some surveys have shown that the visibility of airport-related employment opportunities is rather limited in some of the communities surrounding the airport.

Recommendations stemming from the experiences studied

Provide public transport linking residential and business areas in airport areas as it is critical for facilitating the access of people living near the airport (and suffering its nuisances) with job opportunities.

Promote schemes to enhance the visibility of employment opportunities in the airport area and bring them closer to communities around the airport. These schemes require an active involvement of the airport operator, business in the area and employment agencies. Such schemes should not be restricted to on-site airport jobs but have a wider perspective covering the airport area.

5. Final remarks

This MetroAirports project has offered the opportunity to further explore the interactions of airports within the territory where they are located. This project has tried to further conceptualise the notion of “airport area” and zoom out to take in a broader view than that of previous research, which had focused mainly (but not exclusively) on airports and airport cities.

This report is to be considered an initial step in the exploration of these lesser explored territories. Experiences and inputs from Atlanta, Barcelona and Paris have provided a lot of interesting information from airports of different scales located in different geographic, historic, political and social environments. However, having studied the areas surrounding only four airports (ATL, CDG, ORY and BCN), this report is limited

by definition, and it would be wise to seek confirmation for the conclusions stemming from this research by examining experiences elsewhere.

To this end, the dissemination and networking capacities of Metropolis and the Airport Regions Conference may prove useful in promoting exchanges and discussions with other airport areas.

We would like to close by thanking all the partners for their cooperation. Atlanta Regional Commission, Àrea Metropolitana de Barcelona, IAU d’Île-de-France, Airport Regions Conference and Metropolis have all been instrumental in organising meetings, providing input and contributing to the discussions that have been summarised in this report.

